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THE PALGRAVE HANDBOOK OF CREATIVITY AND CULTURE RESEARCH

Edited by Vlad Petre Glăveanu



Palgrave Studies in Creativity and Culture

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Aims of the Series

Both creativity and culture are areas that have experienced a rapid growth in interest in recent years. Moreover, there is a growing interest today in understanding creativity as a socio-cultural phenomenon and culture as a transformative, dynamic process. Creativity has traditionally been considered an exceptional quality that only a few people (truly) possess, a cognitive or personality trait 'residing' inside the mind of the creative individual. Conversely, culture has often been seen as 'outside' the person and described as a set of 'things' such as norms, beliefs, values, objects, and so on. The current literature shows a trend towards a different understanding, which recognises the psycho-socio-cultural nature of creative expression and the creative quality of appropriating and participating in culture. Our new, interdisciplinary series *Palgrave Studies in Creativity and Culture* intends to advance our knowledge of both creativity and cultural studies from the forefront of theory and research within the emerging cultural psychology of creativity, and the intersection between psychology, anthropology, sociology, education, business, and cultural studies. *Palgrave Studies in Creativity and Culture* is accepting proposals for monographs, *Palgrave Pivots* and edited collections that bring together creativity and culture. The series has a broader focus than simply the cultural approach to creativity, and is unified by a basic set of premises about creativity and cultural phenomena.

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Vlad Petre Glăveanu
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The Palgrave Handbook of Creativity and Culture Research

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For Constance

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1

Introducing Creativity and Culture, the Emerging Field

Vlad Petre Glăveanu

Creativity and culture, in their own right, are expanding fields of study within the social and human sciences. They are both highly popular notions in a world defined by unprecedented rates of technological progress, connectivity and mobility, as well as existential questions regarding the threats and benefits of globalisation. How do we build cultures that are, at once, global and local, shared yet unique? What is the role played by creativity in this process? How do acts of creativity use culture while, at the same time, renewing it? These are all rather new and yet timely questions. They are new for a field of creativity studies usually concerned with individual-level variables. They are equally new for scholars of culture who tend to find creativity too individualistic and ‘psychological’ and replace it with other notions. A creativity and culture focus is timely considering not only the societal challenges of today, but also the scientific benefits for both fields. Creativity researchers would gain a deeper understanding of what it means to create as a person who, at the same time, belongs to a society and culture. On the other hand, researchers of culture would benefit both conceptually and practically from recognising many of the change processes they study as the work of creativity.

Nonetheless, creativity and culture researchers also face great difficulties (see also Glăveanu 2014). First and foremost, these are arguably two of the

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most complex phenomena approached by science. Such complexity made both topics attract very little attention during the heyday of behaviourism and in the early years of the cognitive revolution (Gardner 2008). Positivist approaches pursuing simple causal models are bound to make little progress in these fields. Similarly, the quest for predictive laws will be frustrated by the complexity and non-linearity of both creativity and culture. These ‘shortcomings’ are, for some, a sufficient reason to avoid approaching any of the two topics taken separately, even more together. Second, creativity and culture researchers seldom have opportunities to talk to each other. There are very few common journals or conferences that regularly include contributions from both areas. Moreover, their contributors tend to belong to different disciplines. While creativity is extensively investigated in psychology, education, and design studies, among others, culture is of concern primarily for sociologists, anthropologists, and the growing interdisciplinary field of cultural studies. Despite these difficulties, more and more disciplines, particularly within applied areas, are acutely aware of the need for a unitary framework; examples range from social activism (Jasper 2008) and technology (Hayward 1990) to developmental research (Tan and Perleth 2015).

The Palgrave Handbook of Creativity and Culture Research marks a premiere in this regard. It is among the first large-scale publications to consider creativity and culture as a unitary research area. In doing so, it brings together scholars who made important contributions to this emerging field as well as researchers whose work in either creativity or culture encourages them to reflect on the multiple relations between the two. While many of the contributors to this Handbook are psychologists, a discipline that counts both creativity and culture among its key research topics, they represent different orientations (cognitive, social, evolutionary, cultural, critical, developmental, and organisational, among others) and work within a variety of applied fields (education, marketing, business, engineering, etc.). Experts in sociology, anthropology, media, policy, literary studies, and creative industries join them, in an effort to make this editorial project truly interdisciplinary. The outcome: a unique collection of chapters that both review and advance the state of the art within the area of creativity and culture, legitimising it as one of the newest and most promising multidisciplinary fields of investigation within the social sciences and humanities. Its expected readership is equally wide. It includes psychologists, educators, managers, economists, artists and designers, technology experts, sociologists, ethnographers, advertisers, linguists, philosophers, political scientists, and literary scholars, as well as all those people who share a vivid interest for the cultural dimensions of creativity and the creative aspects of culture. These readers will find in the present Handbook a credible source of scholarly information that goes beyond simply placing creativity and culture side by side—*it engages with their relationship*

and transforms both through this relationship. In summary, a handbook is that takes culture and creativity seriously. In this brief introduction, my aim is to consider this ambitious aim and the way it is reflected in the general organisation of the volume.

Taking Culture Seriously in Creativity Research

What does it mean to take culture seriously in creativity research? For a field traditionally dominated by the study of individual-level variables—from genes and brains to personality structures, cognitive styles, and so on—this means first of all to consider culture important for creative expression. However, adding culture as just one more variable to the mix doesn't suffice. Correlating cultural dimensions with individual variables might be the first step in research but one whose success is, at best, partial. This is because turning culture into one more variable that impacts the creative mind from the 'outside' completely misses the foundational role played by culture in the very construction of this mind. Culture is not an isolated factor that can be easily grouped under the general label of 'environment' but a *condition of possibility* for creativity. How could anyone create in the absence of cultural material to work *on* (knowledge, objects, norms, etc.), cultural tools to work *with* (language, technology, etc.), and cultural audiences to work *for* (from close others to institutions and the general public)? How could we recognise anything as creative without reference to a broader cultural context made up of existing artefacts, traditions, and institutional arrangements? Above all, how could creative ideas originate in a non-acculturated mind or flourish in a world that doesn't produce and accumulate culture?

Different meanings of the term culture are packed within the questions above. And, indeed, multiple definitions of it are possible (for comprehensive reviews, see Valsiner and Rosa 2007), so many in fact that one might wonder if it's even worth talking about culture anymore (Jahoda 1984). Culture can designate the socio-material context of human actions, made up of objects, places, and institutions. Culture is also constituted by a variety of symbolic forms, from language and representations to discourses and ideology. Culture exists as well in interaction and communication, in forms of political organisation, in educational practices, and in the traditions that bring together communities and societies. In fact, it is this latter understanding of culture—as that which is shared by people and transmitted more or less faithfully to future generations—that discouraged many creativity researchers from engaging with it. If culture is stable and common while creativity is dynamic and unique, what do they have in common? This false opposition is inscribed, for instance, in romantic views of geniuses as highly gifted individuals who

struggle with and against the conformist societies and cultures of their time in order to create (Montuori and Purser 1995). How can this view account for the notion of ‘cultures of creativity’ we often hear about nowadays? Culture, in fact, is equally oriented towards stability and change, tradition and novelty, past and future. All cultures are, in the end, *cultures of creativity*; we just need the adequate lenses to study them as such.

And these lenses necessarily take us back to the way we conceive and study both culture and creativity. Recently, I have listed a number of approaches creativity researchers use to theorise the social—as gatekeepers, consensus, clusters, boxes, shopping lists, and onion layers (for details see Glăveanu 2015). In many ways, this typology applies to culture as well. What I propose here is another perspective on culture, one that focuses on key *metaphors* for this phenomenon. The four examples I will briefly discuss next are by no means the only ones possible, but they seem to me particularly adequate for creativity studies. Each one of them captures a specific ‘reading’ of culture and is indicative of its strengths and shortcomings.

Culture as Achievement One of the most common ways of approaching culture in the field of creativity is in terms of its highest achievements in selected domains such as the arts, science and technology, and the social and political sphere. This is the culture embodied within galleries and museums, awards and patents for innovation, academic citations, and Nobel Prizes. Each of these is important for the social validation of creativity, and in turn, revolutionary creative acts make culture itself one of the highest forms of human achievement. Among the most prominent lines of research in this area is represented by historiometry (Simonton 1999) or the study of creativity patterns across historical time. This is creativity with a capital C, considered as such precisely because it leaves its mark on ‘high culture’. However, there surely is more to both culture and creativity than great achievements; how to account for that?

Culture as a Toolbox The second metaphor of culture focuses precisely on its everyday expression and highlights its functionality. Culture is not only related to the macro social system but represents a set of resources creators use, mix and match, keep and change. Most cognitive approaches to culture, dominant today in psychology and connected fields, propose a definition of this phenomenon based on the association or combination of existing elements (Finke et al. 1992). While these cognitive elements are rarely acknowledged as cultural, they do point us towards the pragmatic use of culture within creative work. However, is culture nothing more than a set of sophisticated tools?

Culture as a Garden The third metaphor highlights the formative and developmental role of culture in relation to creativity and the human mind more generally. Cole (1996) discussed this metaphor as foundational, taking us back to the etymological roots of culture and particularly its relation with *cultivation*. Indeed, like fish in the water of culture, we are often unaware of how cultural environments structure our thinking and our behaviour. While this metaphor is gaining ground in creativity and education, especially under the influence of Vygotsky's (1978) thought, it is rarely used to understand adult creativity. How does culture cultivate the creativity of adults?

Culture as Dialogue The fourth and last metaphor takes further the idea of cultivation by placing dialogue at the core of culture and its creative dynamic. Against static and structuralist perspectives, this approach brings to the fore exchanges and interaction in the constant (re)making of culture within everyday life. Informing most cultural psychological studies of creativity (see Glăveanu 2010), this view is particularly sensitive to acts of small c creativity and their role in fostering psychological health and prompting cultural renewal. A key question here is how to relate back the micro-creativity of dialogues with the macro-historical achievements of the first metaphor.

The metaphors of culture proposed here do not oppose but complement each other. Moreover, more than one metaphor might guide one and the same research project. There can be cases as well in which, at a theoretical level, authors operate with one conception while, methodologically, their work enforces another. Whereas only together they offer a full picture of human culture, it is of vital importance to combine these approaches in a reflective, critical manner. This is because they reflect different epistemologies (see Marková 2003). Some postulate the separation between person and culture (e.g., culture as achievement and as a toolbox); others see the two as deeply interconnected (e.g., culture as a garden and as dialogue). These epistemological differences are important for how we consider creativity either as a property of the mind or as a property of social and cultural relations ('in-between minds'). They also impact on the way we define creativity itself, a topic I go on to discuss.

Taking Creativity Seriously in the Study of Culture

Just as in the case of culture, creativity research is familiar with multiple paradigmatic approaches. Sternberg and Lubart (1999) defined, in this context, six approaches to creativity based on their scientific value: mystical, psychoanalytic, pragmatic, psychometric, cognitive, and social personality. In previ-

ous work (Glăveanu 2010), I identified three paradigms, the He (genius), the I (creative person), and the We (creative collaboration), grouped around the relation between person and sociocultural context. Arguably, both could be used to guide culture researchers in their exploration of the creativity literature. However, a more basic question emerges here: why should scholars of culture be interested to know more about creativity in the first place?

The reason this question is asked rests on the fact that very few studies of creativity, particularly within the psychology of creativity, are of real interest for cultural theorists. Not only are they generally silent about the social and cultural environment, but their methodology is often considered reductionist (Montuori and Purser 1997). This comes as a consequence of the fact that, in dealing with creativity, psychologists tend to reduce it to the smallest components they can measure or control in research. These components (such as personality traits, divergent thinking, neural activation patterns, group organisation, etc.) are relevant for creativity, but, taken separately, they are all insufficient. The *systemic* perspective that underlines most investigations of culture reminds us that the whole has emergent properties and should never be reduced to its parts. Another problem of creativity research, from a cultural perspective, is its quest for ‘parsimonious models’ (see Runco 2015) that typically separate person from context and consider the latter secondary. The metaphor of culture as achievement might be at work here, focusing our attention on issues related to social validation and recognition, at the expense of other dimensions and functions of culture. Engaging with different views of culture would greatly enrich creativity studies, and the reverse is equally valid.

Culture researchers would gain from a deeper consideration of creativity a sense of how *mind actively creates culture*. Established intellectual traditions within sociology and anthropology have studied extensively the ways in which cultural contexts shape individual thinking and behaviour through processes of socialisation and acculturation (for a classic example, see the work of Durkheim 1893/1960). What is the contribution of individuals themselves to this process? Most theories of development and education nowadays recognise the relation between mind and culture as *bidirectional* (Kuczynski and Navara 2006). Moving away from an understanding of education as the simple internalisation of cultural content, the work of creativity in the realm of culture is precisely that of *appropriation*—transforming cultural content in the process of assimilating it. The study of how exactly this is achieved constitutes a key concern for the emerging field of creativity and culture. The first step in this process is to consider how creativity is defined in relation to culture; in other words, what are the key metaphors of creativity cultural researchers operate with? In the following, I will briefly describe four such metaphors. Just as in the case of culture, these are not the only ones possible, and they are not

mutually exclusive. Their role is to capture paradigmatic positions in the field and make readers sensitive to their implications.

Creativity as a Label The first approach to creativity considers it as a historical construction; a label assigned to certain actions, people, and products, one whose meaning is constantly being negotiated. This metaphor is thus not concerned as much with what creativity *is* but rather with what it is *made to be* by society. Underpinned by a constructionist approach, this paradigmatic view encourages researchers to explore creativity as a modern value alongside its economic and social implications (see Mason 2003). However, creativity as a label can be investigated as well at the level of the person. Semiotic theories of culture begin their study of creativity from the signs constructed by individuals to interpret and regulate creative behaviour (Valsiner 2013). At both levels, the cultural construction of creativity has important consequences.

Creativity as an Engine of Culture The consequences mentioned above are materialised in new cultural forms and the renewal of old ones. From this perspective, creative processes, at both individual and group levels, are among the most effective engines of culture. This second metaphor of creativity postulates a direct link between creative action and cultural change, a link that stands at the core of today's booming cultural and creative industries. However, despite its popular appeal, this basic idea needs further theoretical elaboration in order to explain how creative processes contribute to cultural value. In particular, it is important to gain an appreciation of collective forms of creativity, above and beyond the actions of recognised individual creators. Such an expanded view would start from processes rather than people, a focus established by the next metaphor.

Creativity as Diffusion The diffusion metaphor is concerned with the creative nature of cultural transmission. At the centre of any cultural system are processes of transmission and accumulation, and they involve creativity on the part of both creators and their audiences. Bartlett's (1932) serial reproduction experiments evidenced the constructive nature of memory in the transmission of content from one person to the other. Sperber (1996) famously proposed an epidemiology account for the spread of representations within cultural contexts. Without referring to creativity specifically, both these lines of research suggest its important cultural role. What the diffusion metaphor makes us sensitive is precisely the creativity involved in the interpretation, use, and transmission of cultural forms. Nevertheless, by focusing on what is being transmitted and how, it generally fails to ask what creativity means for culture itself.

Creativity as the Fabric of Culture If creativity is a cultural sign in the label metaphor, a condition of culture in the engine one and its key process in diffusion, the fourth metaphor proposes it as the very fabric of culture. According to this view, creative acts are always cultural in nature and culture itself is constituted by individual and collective creations (we can be reminded here that the most mundane cultural artefacts surrounding us today have been, at some point in time, new and appreciated as useful at least by some people). Even those cultures defined as traditional or archaic require creativity in order to continue existing seemingly unchanged. Equally, today's globalised cultural practices find forms of local expression that individualise them (see Willis's 1990, insightful study into the common culture of the young and its intrinsic creativity). If creativity and culture are so tightly connected though, is there anything cultural but not creative and the other way around?

In summary, the four metaphors above are meant to structure our reading of creativity within culture studies and to raise new questions concerning this phenomenon. Connections can be made as well with the four metaphors of culture from the previous section although there is no one-to-one correspondence between them. Nonetheless, the metaphor of culture as achievement often supports a view of creativity as the engine of cultural evolution while the last metaphors (dialogue and fabric) locate both phenomena within everyday social interaction. At the same time, the metaphor of culture as a garden and of creativity as diffusion share a focus on growth and creativity as a label can be considered part of the toolbox of culture itself.

The Content and Organisation of the Handbook

A first invitation for readers is to consider the different chapters of the present Handbook through the conceptual lenses of the eight metaphors discussed above. In other words, to reflect in each case on what view of creativity and culture, respectively, is proposed by the author(s), what kind of methodologies are specific for different approaches and, most of all, what are their practical consequences. The notion of metaphor is used here to designate the symbolic name given to the eight approaches mentioned above. Beyond this, the set of assumptions these metaphors carry and their impact on theory, method, and application is very much 'real' in a pragmatic sense.

Mindful of these important conceptual debates, the Palgrave Handbook of Creativity and Culture Research aims to offer a comprehensive view of the emerging field of creativity and culture without favouring a particular epistemological perspective or paradigm. It includes 35 chapters organised within five main parts.

The first one, '*Creativity and culture in the psychology of creativity*', contains contributions from established creativity scholars who consider the role played by culture within their particular area of investigation. The chapters in this part cover a variety of topics including: the four-c model of creativity, psychometric research, East—West differences in creativity, creative cognition and intelligence, motivation, diversity and group creativity. With a few exceptions, traditional research within these areas rarely takes culture into account; as such, the first seven chapters of the Handbook are meant to systematise existing findings and, above all, consider future directions for research.

The second part, '*Creativity and emergence in cultural psychology*', turns towards a disciplinary approach concerned with the study of culture—cultural, sociocultural or cultural-historical psychology, broadly defined. This approach has been consistently applied in the last decade to the study of creativity (see the recent volume edited by Glăveanu et al. 2015). In this part, prominent cultural psychologists discuss key topics of interest for creativity: semiotics, imagination, action, position exchange, collaborative creativity, play and everyday life, authorial agency, and dialogism. It is to be noted that, with a few exceptions again, most of these topics are rarely discussed by 'mainstream' creativity studies focused primarily on intra-psychological variables. The chapters in this part thus offer us the opportunity to expand our traditional understanding of creativity while exploring various facets of culture.

Part three is dedicated to '*Creativity in cultural context*'. The chapters here uncover the meaning and practice of creativity within different cultural spaces around the world. Though every country and, undoubtedly, each community within it can teach us something significant about creativity and culture, only seven cases are discussed within the present Handbook due to space limitations. They offer examples from Europe, east (Poland) and west (Denmark), the Middle East (Turkey), Asia (India and Singapore), South America (Colombia), and Africa. While not claiming national representativeness, these chapters are meant to problematise universal definitions of creativity, general models, and the use of global measuring instruments. Being sensitive to local, indigenous ways of being creative is part and parcel of the creativity and culture agenda.

The fourth part is concerned with '*Creativity and culture in applied domains*'. As such, it includes contributions from a range of more or less established domains of creative activity: organisations, marketing and consumption, education and the digital world, media and technology, engineering, art, and everyday life. Contributors to this part hold extensive expertise in these areas

in addition to the topic of creativity. Each chapter explores the ways in which the inclusion of culture can enhance our understanding of and possibilities to act creatively in a variety of fields.

Last but not least, part five is dedicated to ‘*Cross-disciplinary perspectives on creativity and culture*’. As a multidisciplinary field of inquiry, creativity and culture is open to a variety of conceptual contributions; the fifth part of the Handbook outlines seven of these—anthropology, sociology, visual studies, creative industries, literary studies, systems, and complexity theory. Each discipline has a distinctive addition to make to an expanded theory of creativity and culture. It is my hope that, in the future, more disciplinary perspectives will be added to the field, opening new conceptual and methodological horizons and informing practice for both individuals and society.

Acknowledgements In the end, a more personal note. My own journey into the area of creativity and culture formally began in 2008, when I started working on this topic as part of my doctoral research at the London School of Economics and Political Science (LSE). I am deeply grateful for the encouragement and support I received in those years from my supervisor, Sandra Jovchelovitch, as well as numerous colleagues and friends including Helen Green, Fryni Mylona, Saadi Lahlou, Martin Bauer, Carolin Howarth, and Ivana Marková. While the idea of a Creativity and Culture Handbook first originated during that period, it took several years and many more conversations and fortunate encounters to reach this point—writing the introduction. There are too many people whose input has been substantial for this project to be able to thank them all within such a limited space. Many of them kindly agreed to take part and contribute chapters to the Handbook. Among them, I would like to express my deep gratitude towards close collaborators—Jaen Valsiner, Lene Tanggaard, Todd Lubart, Maciej Karwowski, Alex Gillespie, Tania Zittoun, Zayda Sierra, Marie Taillard, Benjamin Voyer, Ron Beghetto, and James Kaufman—and, of course, to extend my thanks to each and every contributor for their time and effort and for making this work possible. Another great supporter of the present Handbook, who enthusiastically joined the team from the very beginning, was late Professor Anna Craft (1961–2014). Her intellectual legacy inspired both myself and my colleagues who are writing today about creativity and culture, and it will continue to do so for many years to come. This project would not have been possible without the careful guidance and inspired advice of Palgrave editors Nicola Jones, Eleanor Christie, and Elizabeth Forrest. As always, my parents, Corina and Petre Glăveanu, have offered me continuous support and towards them I express my deepest gratitude for first introducing me, as a young child, to the fascinating world of creativity and the arts.

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Part 1

Creativity and Culture in the Psychology of Creativity

2

The Four-C Model of Creativity: Culture and Context

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There has been a broad consensus on the definition of creativity for more than 60 years, with most researchers agreeing that creativity represents to some degree of a combination of two core elements (Barron 1955; Guilford 1950, 1957). The first is newness, novelty, or originality. The second is task appropriateness, usefulness, or meaningfulness. In more recent years, these two elements have been defined within a particular sociocultural and historical context (Beghetto 2013; Glăveanu 2013; Plucker et al. 2004). This context is not separate from other aspects of creativity, such as task appropriateness and novelty; rather, context establishes the criteria for what counts as original and task appropriate. This interdependent relationship among originality, task appropriateness, and context has been represented in the following notation (Beghetto and Kaufman 2014):

$$C = [O \times TA]_{\text{Context}}$$

As illustrated in the above formulation, creativity requires both originality and task appropriateness as defined within a particular context. Something

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that is deemed as original in one context (e.g., primary school science fair) may, for instance, be judged as quite mundane in a different setting (e.g., university science lab). In this way, judgments of creativity are determined by a particular sociocultural and historical context. Creativity and context are inseparable.

Theoretical explorations of creativity have continued in many different directions since these initial definitions. The particular framework that will be explored in this chapter is the Four-C model of creativity (Beghetto and Kaufman 2007b, 2009, 2013; Kaufman and Beghetto 2009, 2013b). There are, of course, many other notable theories that could form the basis for a discussion of creativity, ranging from the four P's (Rhodes 1961) or the five A's (Glăveanu 2013) to the investment model of creativity (Sternberg and Lubart 1996) and the componential model of creativity (Amabile 1996).

This chapter will also take a cultural perspective on creativity, which opens discussion immensely for talking about creativity on all levels (Glăveanu 2011). Furthermore, as Glăveanu notes, creativity is a social, cultural, and psychological process, meaning that we create on multiple dimensions at once and all of those influences need to be considered.

Expanding Conceptions of Creativity

Creativity research has traditionally focused on two major types of creative expression: Big-C creativity and little-c creativity. The first type, “Big-C creativity,” describes eminent creativity. Comprising groundbreaking artists, scientists, and world leaders, Big-C creativity is likely what most people think of when it comes to creativity (see Simonton 2009, for a review of many of these studies) with research topics such as exploring creative genius and how a creative work becomes legendary (e.g., Simonton 1994). Membership into such an elite group of creators may be dependent on tangible achievements, such as Nobel Prizes or Academy Awards, or on less noticeable accomplishments, such as Stephen Sondheim's influence in the shifting style of musical theater or how Ernest Hemingway's curt, utilitarian voice affected writing as a whole. Visionaries of this magnitude are remembered for years after their works have been released. For instance, almost every child in America has read a book by Charles Dickens or seen a high school production of *Oklahoma* or *West Side Story*. Big-C creators usually spend ten or more years of intense study to reach just the point of professionalism required to contribute influential works (Ericsson et al. 2007; Simonton 1997). Researchers typically formulate these studies by analyzing the lives of creative geniuses, either through direct interviews or through analysis of biographical materials.

The second type of creativity, labeled “little-c creativity,” addresses less prominent creative acts (Richards 2007, 2010), namely the creativity exhibited in everyday life (e.g., decorating a dorm room, finding efficient ways to pack for a trip, or combining articles of clothing into a brand new outfit). In education, this type of creativity translates to making addition fun for elementary students or offering an original analysis of a classic Shakespeare play. Creativity experts know that these relatively small contributions, albeit not illustrious, are highly creative and deserve as much recognition as Picasso or Elton John (e.g., Richards 2007; Richards et al. 1988). Participating in creativity unlocks knowledge about oneself, others, and the world around them, providing an immense benefit to even those who do not consider themselves creative (Silvia et al. 2014). Such research can also include observation of the layperson’s perception of creativity (e.g., Kaufman and Beghetto 2013b) and experiments using students of all ages. Even people who do not consider themselves creative experience creative moments. Indeed, those in traditionally non-creative professions experienced little-c creative acts nearly one-fifth of the time, as recorded by Silvia et al. (2014). These smaller bursts of creativity were linked significantly to positive emotions, openness to experience, and conscientiousness, all of which can help one’s pursuit of life goals and personal fulfillment.

The difference between Big-C and little-c allows researchers to identify truly groundbreaking luminaries in comparison to the lesser, though still vital, gains of everyday creative contributors. These types of creativity are distinct from one another and Big-little classifications prevent psychologists from lumping all creativity into one amorphous construct. However, such a dichotomy can discourage studies of the intricacies of creativity on all levels. For instance, elsewhere Kaufman and Beghetto (2009) have argued that the Big-C/little-c distinction used in creativity research has impeded studies aimed at examining the more intrapersonal (and developmental) nature of creativity. Additionally, although both creative categories are equally important, Big-C contributions draw the spotlight and can discourage little-c discoveries.

The Big-little distinctions seen in creativity are hardly rare in society, regardless of the field. If you watch the nightly news, for example, you will see two kinds of stories. Half of the broadcast spends time on the mundane events and notable people of the town who may hold little importance elsewhere. Consider stories about a superintendent who implements a new teaching model, a mayor who officiates the opening of a new hospital, or a young man who saves a girl who fell in a pond. The other half of the news presents stories of national or international relevance, featuring eminent figures such as the current president attending an international summit or Katy Perry at the Super Bowl halftime show. This half of the broadcast holds relevance everywhere and to everyone.

Even within these two broad categories, researchers overlook many details of an individual's creative contributions. How would we catalog the creative interpretations made by students or employees as they learn something new? What if these insights are only innovative for the individual? Should those discoveries still be considered creative? Such simple dichotomies can be seen at the larger level of culture—think of the split between “highbrow” and “low-brow” entertainment. It is easy to fall into a “museums versus wrestling” mindset, which is unfair to both consumers and practitioners (Tu et al. 2015).

Four-C Model of Creativity

How about individuals with highly creative achievements that do not reach eminence? Should we label them as “little-c” creators simply because they are not legends? If we place all of these types of creativity into one large category, none have proper identification and distinction; the little-c title becomes inclusive to the point of becoming useless. Big-C and little-c are too wide to cover all the nuances of the creative process and how we assess creative value. This gap was a driving force behind the Four-C Model of Creativity (Kaufman and Beghetto 2009, 2013a, b; Beghetto and Kaufman 2007a, b, 2013), which proposed two additional categories: “Pro-c” and “mini-c.”

Mini-c Creativity

Mini-c construct refers to new and personally meaningful interpretations, ideas, and insights (Beghetto and Kaufman 2007b). Mini-c highlights the “personal” (Runco 1996, 2004), “internal” (Stein 1953), “expressive” (Taylor 1959), and “developmental” (Cohen 1989) aspects of creativity. Mini-c creativity emphasizes the subjective and introspective side of creativity, featuring the personally meaningful way that individuals grow. The novelty of this form lies in the detraction of emphasis from the creative product. Instead, the focus is on the process, which does not require outside judgment. Such creativity need not even be shared or acknowledged by anyone but the creator. This type of creativity can be observed most easily within education, where students constantly expose themselves to new material and make personally meaningful advances, although anyone can experience mini-c creative thought. These might include a child learning how to draw 3D shapes in his art class and using the skill to create drawings of buildings in new ways or a student who discovers that he can use his love of history books to improve her vocabulary on tests.

Their inclusion of mini-c in the creativity model helps eliminate the problem of lumping less original forms of creativity into the little-c category. For example, the traditional Big-C/little-c dichotomy would classify into little-c both an eighth grade art student (who learned a new and personally meaningful use for a particular shadowing technique, albeit one that may already be well known in the art world) with a more accomplished amateur artist (who has won a local competition for her improving existing shadowing techniques to create pieces of art that advance the field). The construct of mini-c is useful for recognizing and distinguishing between the genesis of creative expression (mini-c) and the more readily recognizable expressions of creativity (little-c).

Related to mini-c creativity are students' self-assessments of creative abilities and teacher perceptions of creativity. With respect to self-assessments, students' judgments about their ability to generate ideas and willingness to take intellectual risks play a role in determining whether students will share and develop their mini-c ideas into little-c contributions (Beghetto 2013; Beghetto 2016). In this way, ability alone is not sufficient for creative performance. One must have the confidence and willingness to express and develop their creative ideas. Of course, self-assessments are prone to over and underestimation (see Kaufman et al. 2015; Kruger and Dunning 1999; and discussion of creative metacognition [CMC] below).

With respect to teacher conceptions of creativity, such beliefs tend to veer away from explicit, research-based definitions to the point of including misinformation. Notable misconceptions include the ideas that creativity is solely novel and not germane, that it is rare, that it only applies to certain subjects, and that it has little relevance to academic performance (Zhou et al. 2013). Indeed, such beliefs were consistent across cultures in three diverse countries (China, Japan, and Germany), despite being incorrect. Additionally, each culture had specific nuances in their views of creativity. For example, Japanese teachers had the lowest value of the plasticity of creativity; Chinese teachers had the highest scores of valuing divergent thinking; and German teachers scored the lowest on relating creativity to intelligence. Furthermore, Chinese teachers highly valued promoting critical thinking and inquiry whereas German teachers valued independence and general encouragement.

Pro-c Creativity

Even with the addition of mini-c, there remains a gap. Individuals who are professional creators but not eminent creators or "household names" would be classified along with the amateur or everyday creator. For example, within the field of baseball managing, Big-C would include standouts such as Tony

La Russa and Connie Mack whereas your little league coach, despite being inspiring and hardworking, would end up as little-c. But what of managers like Dave Miley, Baseball America's 2012 Manager of the Year and a professional coach for almost 30 years? He is likely not accomplished enough to garner the distinction of Big-C, but nonetheless coaches professionally at the minor league level. Miley represents an incremental step above someone coaching a basic little league squad, yet is also a notch below the all-time greats. The concept of Pro-c creativity fills this void and rounds out the Four-C model.

Pro-c creativity focuses on individuals who are successful, but have not reached a level of prominence that would lead to immortality (Kaufman and Beghetto 2009). Dave Miley would be a Pro-c manager. Pro-c creators put in hard work to develop their skills and have far surpassed little-c, but have not reached and may never achieve the lasting fame of Big-C. Not all working professionals have attained Pro-c status, as many people can do a fine job but not necessarily innovate (a contractor may build and paint a house skillfully, yet always creates the same basic house with little change). However, most individuals working with a professional level of knowledge of their field can be classified as Pro-c. On the other side of the spectrum, many creatively talented individuals just don't choose to pursue their passion as a means of making money or may not make enough to focus on their passion alone. These "amateur" creators have the potential to be more creative than some of their "professional" counterparts and shouldn't be frowned upon simply because their creative outlet isn't their main source of income.

To offer another example for those who are not baseball junkies, consider historians. Little-c historians would read lots of books and bring historical tidbits up to their friends in conversation, connecting the current political situation to those of the past, for example, but won't make much of a contribution outside of that. Big-C historians, like Robert Caro or Arthur Schlesinger, win awards and release highly popular historical research. Mini-c historians, like an eighth grader learning American history for the first time, make contributions on a personal level. The Pro-c historian, different from all three, would have numerous papers published and be well versed in his or her field of study, but without a level of eminence that would be associated with immortality. Most academics are Pro-c.

In looking at Pro-c creative professions a trend unearths: women are consistently underrepresented (and consistently underpaid). The societal issue of gender inequality is equally true for creative contributions. In a notable longitudinal study, Lubinski et al. (2014) observed the differences of life achievements and values between males and females who scored exceptionally on a test of mathematical skill at age 13. Interviewing participants 40 years later,

a few trends emerge. First, women in the study made significantly less than their male counterparts. For those participants actively working full-time, the difference between males and females ranged from 42 to 50 %, depending on the cohort, which translated to a difference of at least \$42,000 in annual income. Furthermore, despite nearly identical educational backgrounds, males occupied more tenured professorships, more CEO positions, and were awarded more grants and patents than their female counterparts. These trends continue cross-culturally, as in a study of women in advertising in both the USA and Spain (Grow et al. 2012). The women of this study reported that men's ideas are prioritized in advertising teams and that the best advertising assignments (beer and cars) are rarely given to women. Women, the study found, are streamlined into advertising female-oriented products, where less accolades are given and where many advertisers' careers end. Even in graduate schools, the faculty are predominantly male. These factors make it difficult for women to succeed in advertising, despite the large creative contribution they could achieve. Such discrepancies have been noted in Big-C accomplishments as well (Helson 1990; Piirto 1991).

Gender aside, the struggle of attaining Pro-c is difficult for everyone. Pro-c creativity takes time to develop. The creator must become competent in his field in order to make a groundbreaking contribution, and even then, what appears creative at that time may turn out to be merely average in the context of history. It takes approximately ten years to excel in a given field (e.g., Gardner 1993; Hayes 1989; Kaufman and Kaufman 2007; Martindale 1990; Simonton 2000). This accomplishment alone, however, does not place a creator at the level of Big-C. This intermediate level, which requires training (usually formal) and some substantial achievement (the performance of a play or a published book or research study), can occur for many individuals in a field. To name it, this level constitutes Pro-c creative genius. Given the sheer time and effort, it takes a creator to reach just Pro-c; it's nearly impossible to conduct a living study of creative genius.

Furthermore, Big-C genius is incredibly difficult to predict. Creations that are highly popular and critically acclaimed for one generation may simply be forgotten by the next. For example, although Tony-Award-winning musical *The Music Man* is performed to this day in high schools across America, few people, aside from diehard fans, will recognize even the names of fellow nominees *New Girl in Town* or *Jamaica*. Due to these variables, Big-C is measured posthumously in most cases, making it a less useful measure in the present-day evaluation of creative talent. Pro-c thrives on this hole in research and allows us to label successful creators as such in their own time. Not knowing who will ascend to immortality or become a footnote, we can safely say that these individuals created at a professional, Pro-c level while they lived.

This idea of categorizing creativity along different dimensions is common in many theoretical perspectives. Ideas present in the Four-C model also surface in other theories. For example, Doyle's Dimensions of a Creative Episode (2011) acknowledge that a creative contribution ranges in recognition (from the Nobel Prize in Physics to a mini-c realization about Newton's laws), the degree of transformation (from shifting an entire domain to simply a change of perspective or mental structure in a mini-c innovator), motivation (how intrinsically motivated a creative action is), contribution to the person's identity, the back and forth between creative "flow" and reflection, and the multiple processes that stem from a larger creative idea (labeled "subepisodes"). Doyle argues that a creative episode functions on multiple levels and that every creative episode has importance, regardless of whether the creator is a seasoned veteran or a novice simply exploring. Furthermore, Doyle emphasizes the importance of viewing the unique traits of each creative episode and recognizing them as creative across all levels of creative contribution.

Another example of a theory that supports the idea of a "creative spectrum" including Pro-c is the Propulsion Theory of Creative Contributions (Sternberg et al. 2002, 2004), which examines how creative acts affect their respective fields. This theory outlines eight possible types of creative contributions. The first four types focus on what a domain already is and what its contribution already looks like. Replication, the first and likely most common contribution copies and regurgitates past work. A reboot of a movie like *Dawn of the Dead* or *King Kong* which recreates but doesn't reinvent its predecessor, would classify as replication. The second contribution, redefinition, turns the idea of a domain on its head. Redefinitive contributions don't advance a field but simply offer a new perspective of it (e.g., a new staging of a Shakespeare play). A third contribution, forward incrementation, moves the domain marginally forward but results in prompt successes for the creators. Usually, these contributions keep a field moving in the same direction it was already headed and aren't earth-shattering (e.g., the teenage literary work of authors like James Dashner and Veronica Roth built off of Suzanne Collins' *The Hunger Games*). The last of the creations that work with the existing structures is advance forward incrementation. These creators move the industry further forward than in forward incrementation but still don't radically change the domain. Think of this as taking two steps versus one. These creative products feature works too new for their time period and appreciated long after their creation (e.g., the works of Franz Kafka were not fully recognized for their brilliance until after his death).

The other set of four contributions attempt to reject the current domain and reshape it completely. Redirection moves the domain in a new direction (e.g.,

a researcher suggesting a new methodology for studying a topic). Unlike most of these changes which create a new domain, reconstruction rewinds to a past paradigm. Reconstructive changes place a field at a point in the past so it can rebuild from there, dismissing the direction that the domain took (consider many retro movements, from fashion to music, which take old ideas or trends and reimagine them in the present day with current values). Reinitiation, the most radical of the paradigm-destructive changes, advances to an undiscovered starting point and lets the field take off from there (any completely new approach, such as the first use of Computer Generated Imagery (CGI) instead of models for special effects). Finally, in integration two different domains fuse into a new domain (e.g., the combination of quality restaurants and entertainment into dinner theater or restaurants like Ellen's Stardust Diner).

The Influence of Culture

It is important to note at this point that the work discussed so far has been rooted in the Western perceptions of creativity, emphasizing the benefits of novelty and bringing a new direction to a domain. Indeed, the levels of the Propulsion Theory depend on the newness of the contribution. Some scholars take issue with the creativity models that have been proposed thus far, stating that there is a focus on Western values and trying to apply these values to the world overall (Westwood and Low 2003). Simply put, these scholars argue that Western conceptions of creativity are taken as the only conceptions, inadvertently excluding other, equally valid creative ideas. Consequently, growing theoretical and empirical work has challenged Western individualist conceptions of creativity (Hennessey *in press*), highlighted the benefits of bicultural experiences (Viki and Williams 2013), and even worked toward establishing a cultural psychology of creativity (Glăveanu *in press*).

Some of the earliest and most extensive work exploring cultural differences has focused on Eastern versus Western conceptions of creativity. Scholars exploring such differences have examined both implicit (e.g., Tang et al. 2015) and more explicit conceptions of creativity (Niu and Sternberg 2006). Eastern culture, for instance, considers appropriate creativity to build upon past work and not to be completely novel (Niu and Sternberg 2006; Kozbelt and Durmysheva 2007). Additionally, many Eastern value systems such as Taoism and Confucianism believe in a singular truth that makes up the universe (Niu and Kaufman 2013). This "*dao*" or nature of being makes up people and environment alike and to create one must tap into both. Thus, all creative expressions are not entirely new but come from tradition. Westwood

and Low argue that, due to this mindset, creativity is viewed as unearthing the truth that has already been discovered. Western conceptions of creativity, on the other hand, emphasize novelty and encourage a clear departure from tradition. Furthermore, Western creativity tends to value the creative product more than the creative process, whereas Eastern creativity focuses on the process, personal fulfillment, and enlightenment. Additionally, although both perspectives started historically with a belief in goodness as a quality of creativity, only Eastern culture still values morality as a part of the process. These perspectives offer different definitions of creativity, and therefore, there is no “one-size-fits-all” model for measuring creativity.

Out of these concerns have come expanded theories of creativity that account for both Eastern and Western values. For example, acknowledging the differences between cultures and their perceptions of creativity, a recent study based off of Hofstede’s Dimensions of Culture (1983) explored the relationship between a nation’s values and structure and creativity (Rinne et al. 2013). After analyzing the different traits of countries through the lens of Hofstede’s research, Rinne et al. found that the only significant dimension of the Dimensions of Culture was individualism. They argued that a country needs to value the ideas of “learning how to learn” (p. 134), autonomy, and freedom to unleash its potential creativity. It would be interesting, however, to see how researchers in Eastern cultures might tackle the same question.

Another theory rooted in cross-cultural issues is the Four-Criterion Construct of Creativity (Kharkhurin 2014). This theory argues that Western conceptions of creativity, such as complete breaks with tradition, should be complemented by Eastern conceptions of creativity, such as ideas of authenticity and morality. Building off of the traditional standards of novelty and degree of applicability to the task, Kharkhurin adds aesthetics and authenticity, hallmarks of Eastern creativity. This theory goes on to address major divides between the two worldviews, acknowledging the moral aspect that Eastern culture brings to creativity (a requirement that creative contributions help someone or some group). Kharkhurin’s theory also recognizes the focus on fitting into the existing paradigm that pervades Eastern culture as opposed to the desire for radical change in the West.

Another theory built off of the important differences in the perception of creativity is Glăveanu’s five A’s Framework (2013). Glăveanu highlights what he believes to be a major hole in the four P’s model of creativity (Rhodes 1961): its dimensions (person, process, product, and press) neglect the cultural impact upon creativity. These factors, due to no fault of the creator, are often viewed through the lens of the individual. Glăveanu argues that creativity should be viewed within the context of culture and redefines the strains

of creativity as such: Actor, Action, Artifact, Audience, and Affordances. Replacing the person, viewed as a lone creator with little outside influence, is the actor who has personal traits which are shaped by social conventions and cultural traditions. The actor is just as important as every other part of the creative entity, but not more important, a view which a “person-first” perspective can sometimes obscure. Glăveanu changes process to action, noting that “process” usually denotes the internal workings of a creator, whereas his “action” incorporates this inner view of creativity with the external manifestation of behavior and the different factors that each individual brings into a scenario. Instead of product, which is usually analyzed separately from the environment, the process, and even the creator, Glăveanu proposes the concept of artifact. An artifact, he argues, must be viewed in the context of all other creative ideas and realizations and that the meaning of an artifact in reference to action, actor, and environment is just as important as the artifact itself. Finally, replacing the idea of press comes audience and avoidances. The “press,” both social and material, imply a forcing of ideas and limitations on creators, when in fact they contribute to and collaborate with the creator herself. In place of the social press is “audience,” recognizing the importance of reception to any creative act. Every creation is shaped by the people who receive it and their ideals and cultural backgrounds, making the audience vital to creativity. Further, every artist is influenced by the other artists working in his domain, making the role of an audience member an important part of every creator’s creative action. To replace the material side of press, Glăveanu argues for affordances, the resources offered by the environment to creators (Gibson 1986). This view looks at the full influence of the environment on the actor, especially the ways in which creators locate and utilize the affordances of their environment. The five A’s model accounts for the effect of culture in all aspects of creativity, providing a new path for research to follow, one that readily acknowledges the importance of context in creative theories.

Such views about the link between culture and creativity have also been expressed by novice creators, such as high school students. In a study of adolescent perceptions of creativity, participants from selective high schools in Australia articulated that all creative work is founded on the work that comes before it, much as Eastern cultures believe; they also acknowledged the huge role that culture plays in all creation (Lassig 2013). Further, the four types of creations that the students identified all featured the combination of existing ideas. They also identified that different levels of creativity existed in each type of creation, as we will discuss later.

It is reasonable to argue that the best that researchers can do is accurately describe and measure their own culture’s creativity with the awareness that

other cultures may have different values. The factors that apply to one culture's creative thought may or may not apply to all cultures. The Four-C model presents a broad developmental trajectory that is present in multiple cultures. Such concepts as the learning inherent in the creativity process or having a hierarchy of valued creative ideas may not be universal but are certainly represented in a wide variety of cultures. Indeed, the Four-C Model has been applied as part of an educational intervention in Korea (Cho et al. 2013).

That said, one of the future goals of the Four-C model can be to better integrate cultural perspectives. How would more Eastern values such as social harmony, collaboration, and adaptation (e.g., Niu and Kaufman 2013) be woven into the theory? Can a group of people working together be said to have reached Big-C? If someone perfects a physical manifestation of someone else's idea, who gets "credit" for the Big-C contribution? These are all issues to be explored further.

The Developmental Trajectory of the Four C's

The Four-C model provides a developmental framework to illustrate how creative thinkers progress and grow (Beghetto and Kaufman 2014). Creators pass through each "c" or stage as is fit for their individual path to success and growth. This theory provides a basis for the study of creativity on multiple dimensions and an outline for creative growth over the course of our lifespan.

Consider that as children, individuals explore their world and discover new things, leading to mini-c developments. Most people will have mini-c discoveries early in life, although these contributions can be made at any time in our life. Mini-c can be fostered by teachers, parents, and mentors to help kids think divergently by giving them freedom to create new ideas, encourage them to engage in imaginative thought and play, and emphasizing the benefits of the creative process (Beghetto et al. 2012). As creators grow up and discover new interests, they will experience mini-c creative development aligning with their new passions. With healthy doses of curiosity, learning, feedback, and encouragement, individuals could move to the level of little-c creativity (Beghetto and Kaufman 2007b, 2014). One prime area for future research is how culture intersects with this transition. Do different cultures respond differently to feedback? Are there different "best practices" to help a Western child grow into little-c versus an Eastern child?

Some creators choose to stay at the little-c level for the duration of their lives whereas others continue to strive for the upper echelons of creative contribution in subjects of interest to them (e.g., a brilliant manager who becomes

a Pro-c creative businessman, but remains a little-c chef for his husband and family). At the stage of little-c, experiencing creativity on an everyday level, creators may fall in love with certain fields and wish to make larger strides in this passion.

With advanced training, mentorship, practice, and hard work, the creator can move to the Pro-c creative level. The individual will still have smaller creative insights and learnings about her field, but the creator can focus on larger issues surrounding her field as a whole. The Pro-c expert will continue to produce quality work at this stage, and possibly, after time has judged their contributions, they may be deemed contributors on a Big-C level, garnering praise, prizes, and more. Again, this journey needs to be studied within a cultural perspective. For many domains in the Western world, Pro-c growth is only possible in specific paths. So, for example, a budding physicist is virtually required to go to school and earn a PhD (and spend more years doing postdoctoral work) if he/she wants to be Pro-c. What would this trajectory look like across the world? In the USA, an aspiring filmmaker may go to college as much to make connections as to learn. Is the same networking system present everywhere?

Within creative growth, the Four-C model also highlights transitional periods that occur as part of the developmental trajectory of creativity (Beghetto and Kaufman 2014; Kaufman and Beghetto 2009).

Mini-c Transitions

Everyone starts at “square one” with mini-c creativity. At this stage, the creator will benefit from honest and supportive feedback from teachers, coaches, and mentors (Beghetto and Kaufman 2007b). The creator will also need to use two vital abilities to make the jump from mini-c to little-c: creative self-efficacy and CMC. Creative self-efficacy refers to the confidence that people have in their ability to generate new and meaningful ideas (Beghetto 2006; Tierney and Farmer 2002). Creative self-efficacy is an extension of Bandura’s concept of self-efficacy (Bandura 1997) and highlights the importance of developing the confidence and willingness to express one’s ideas and engage in creative behaviors. In order to move from mini-c ideas to little-c contributions, people need to be willing to share and receive feedback on their personally meaningful insights and ideas (Beghetto 2007a; Beghetto and Kaufman 2007b).

Along these same lines, people need to know when and when not to be creative. CMC refers to this knowledge. More specifically, CMC refers to having the self and contextual knowledge necessary to know when, where, and why

creativity might be beneficial, strategies on how to be creativity in specific contexts, and knowledge about oneself (to recognize the creative strengths and weaknesses one has), in addition to the classic traits of metacognition such as self-reflection, self-regulation, and self-monitoring (Kaufman and Beghetto 2013a). Finally, CMC comes with the benefit of possible application to both domain-specific and domain-general theories (Baer and Kaufman 2005; Beghetto et al. 2011; Plucker and Beghetto 2004).

CMC also includes recognition of the risks and constraints that accompany higher levels of creativity. In other words, creative works that affect more people and have higher stakes (e.g., a major motion picture produced by a large studio) are less likely to have creative freedom. Creative contributions that affect less people and have lower stakes, on the other hand (a self-financed independent film with a small crew and cast), have more room to be creative. There are potential dangers that come with disrupting the norm (e.g., Mueller et al. 2012), and creators need to know when it is best to conform and when it is best to express innovation. Without having a foundation of knowledge about the best times to be creative, it can be difficult to judge. Students need these skills developed by their teachers. Good bosses should look to enhance these skills in their employees. Recognizing when a situation is prime for creative expression can optimize the odds of getting reinforcing feedback from an audience.

It may be the easiest to teach CMC within the realm of mini-c, however, CMC impacts creation at all levels of creativity. At the Big-C level, for example, there must be a high level of CMC to avoid creators wasting valuable time and resources on long-shot projects (e.g., Sternberg and Lubart 1996). Kozbelt (2007) shows that Mozart had a high level of self-awareness in judging his own work. Even simpler, creative geniuses who excel in multiple fields or genres know where to pursue work and where to step away. Marie Curie, for all her advances in physics and chemistry, never tried to pen a novel or epic poem.

Pro-C creators should display a similar development of CMC. A good musician knows which venues are pushing the envelope and which ones simply aren't a good match. Skilled scientists know that a research study can only encompass so many topics and points to be coherent and direct. Kozbelt (2008) found that artists rated as more creative spent more time editing, erasing, and revising their work than did their less creative counterparts. Zeng et al. (2011) found evidence for CMC in engineering and technology; meta-cognitive processing was significantly related to creative contributions.

At the little-c and mini-c levels, creators are still developing CMC. They may have the basic knowledge of what they can do within their field (e.g., a

poet knows to not use a grocery list as a topic unless the goal is to be avant-garde), but they lack self-assessment skills. In order to become higher-level innovators, they must learn how to use their creativity to the most effective outcomes.

Through an understanding of CMC, educators, bosses, students, and workers can all emphasize the positive side of creativity and reap as much benefit as possible. CMC can be boosted by constructive criticism from mentors that can help students or workers identify their true creative strengths and weaknesses. Furthermore, teachers and bosses can help cultivate CMC by giving feedback about which contexts facilitate creativity and which do not. This response requires both defining these limits and explaining why they are in place (e.g., “I am asking you to write the essay in this format so you can understand the basic construction of persuasive writing. Later, once you have mastered this format, we will explore other outlines that you can use. The best way to demonstrate creativity is in how you structure your argument”).

It is also important to note that although many people need to be given the tools to discover and express their creativity, others do not. Some people need to learn restraint. Everyone knows a child with a boundless vault of energy accompanied by endless original ideas who may not be able to focus on the task at hand. CMC can be essential in these cases. Without direction and instruction, such young creators may simply distract, blinding others to the benefits of their creative prowess. But with strong CMC, they can identify the line between a creative contribution and an unwanted disruption and contribute in a way that their individuality gets fully expressed and appreciated without dominating or draining the people around them. Once a creator has acquired CMC, she can move from mini-c into little-c, prepared to utilize her creativity in the most efficient ways.

Larger-C Transitions

In the subsequent journey from little-c to Pro-c, most creators will experience a transitional period. *Formal* and *informal apprenticeships* often take the form of a graduate degree or on-the-job training (although, as we have discussed, other pathways may be more common in other cultures). Other methods include *tinkering*, in which the creator develops his skills by exploring on his own, trying new things, and trial and error. Another possibility is that a creator may choose to stay at the little-c level and engage in *reflection*. Not everyone decides that their creative passion should be the focus of their work life. Many creators use their talent to sort through feelings or simply express themselves in their spare time, an equally valid use of creative energy.

The Pro-c individual is again presented with distinct paths. Some creators will continue to invent and test the limits of their creativity for the length of their lives. The especially creative geniuses that take this path are greeted with the ultimate reward: *greatness* and the designation of Big-C for generations to come. True luminaries continue to contribute and break the mold. On the other side of the spectrum, some Pro-c contributors may not continue to grow and, thus, become stagnant in their work. For instance, legendary authors like J.D. Salinger and Harper Lee abruptly stopped writing books, and barring heretofore undiscovered great work, they entered *g stasis*.

Finally, a Big-C creative genius can reach the pinnacle of her craft, known as a household name and becoming synonymous with the domain itself. She becomes legendary. Consider, for example, Vice President William R. King or Attorney General John Berrien. They are still remembered today and would be considered Big-C, but they are footnotes. Henry Clay and John Calhoun are still celebrated by political science scholars, and even higher, someone like Abraham Lincoln is a prototype for the idea of a creative genius in the field of politics.

Concluding Thoughts

Creativity and culture are inextricably connected. Creativity is defined within particular cultural contexts and, in turn, contributes to those contexts. Traditional conceptions of creativity obscured this relationship by representing creativity in an overly narrow, either/or dichotomy. Prior to the Four-C model, creativity tended to be categorized as either the legendary accomplishments of creative geniuses (Big-C) or the mundane creative contributions of everyone else (little-c). Such conceptions failed to provide a way of understanding whether and how these different manifestations might be connected and how they could emerge within and across cultural contexts.

The Four-C model has helped to bridge this gap. The addition of mini-c and Pro-c, for instance, helps to situate creativity in a cultural context and clarify the developmental trajectory of creativity. This conceptualization can help connect what otherwise seems like disconnected programs of research (e.g., exploring everyday vs. eminent creativity). The depth offered by this four-pronged approach to creativity allows more questions to be asked and answered, shedding new light on many different potential debates in the field (see Kaufman and Beghetto 2009, for more examples).

Finally, work guided by the Four-C model can complement research that has examined and started documenting the benefits of multiculturalism in

creative thought. Indeed, such work has grown exponentially with increasing globalization. Cultural proficiency can lead to increased creativity across all levels. Evidence is mounting that demonstrates how exposure to other cultures can increase creativity (Leung et al. 2008). Traveling abroad can also increase creativity (Lee et al. 2012), and complete immersion in another culture seems particularly beneficial (Leung and Chiu 2010; Maddux and Galinsky 2009). Most of these studies have been conducted on college students, or those at the little-c level. We would love to see an analysis of the benefit of multicultural knowledge, travel, and life experiences across all levels of the Four C's. It is possible that learning from other cultures may enhance CMC and provide other stepping-stones to help people better explore their creative potential. As technology allows cross-cultural communication, friendships, and collaborations to be easier to maintain, the true impact of culture on all levels of creativity may not be felt for generations to come.

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3

When East Meets West

Pinar Celik and Todd Lubart

One of the goals of creativity research has been to foster and stimulate creativity in individuals. Creativity, as a personality trait and skill, at least in Western cultures, is commonly considered a positive asset (but see Kampylis and Valtanen 2010). Creative products—whether they are ideas, behaviours, technological devices, artworks, and so on—are highly valued because of their adaptive properties that solve old or newer problems in original and novel ways. When a creative product has no value, either to the individual or to the social group, the product can hardly be called creative (Chon and Hahn 2001). Essentially then, a creative product is positively valued, because of its merit to the individual and to social groups and society as a whole. Of course this does not mean that all socially valued behaviours are creative; a mother's love and care for her child can hardly be called creative, although it is universally valued as having merit for the child and society as a whole. This is the reason why Western creativity researchers insist usually on the fact that a product has to be original and appropriate to be called creative (Kharkhurin 2014; Runco and Jaeger 2012; Simonton 2012; Sternberg and Lubart 1995). Because of the positive valence of creativity, more and more research is conducted on understanding the factors that facilitate or inhibit creativity, that

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is, the ability to create products that are original and appropriate (Nickerson 1999). Cross-cultural study endeavours are part of this development.

Creativity as an asset is highly valued in the Western world and by many other people around the world, but it is important to note that the word 'creativity' did not exist before 1870, and only entered mainstream discourse from about the 1950s (Weiner 2012). For such a concept, young as it is, it stands to reason that substantial cultural differences exist in definitions of it and that these definitions are in constant flux. In any case, our current Western 'attachment' to creativity as an almost core value seems strongly related to other high held values in our society: democracy, secularism, individualism, and capitalism (Weiner 2012).

Ideally, one of the ultimate goals of cross-cultural research on creativity might be the identification of both common features (universal and culturally independent) and unique cultural features (local and culturally dependent) that facilitate or inhibit creativity. Studying the same phenomenon in different contexts and cultures may indeed facilitate the identification of the necessary conditions of creativity. In other words, finding similarities across cultures allows understanding the necessary conditions under which creative achievement is possible and to suggest ways of improving it.

Cross-cultural research might also reveal cultural differences that make one culture more creative than another one in a given domain. In this case, a goal of cross-cultural creativity research could be to transfer and promote proactively these unique features in another culture in order to stimulate creative potential in a given domain.

However, cross-cultural research in creativity is confronted with a challenge regarding creativity conceptions across cultures. To be able to compare creative potentials of different cultures, it is necessary to come up at least with a universal definition of what creative ability is (Kampylis and Valtanen 2010; De Sousa 2008). Cross-cultural creativity research has shown repeatedly that this requirement is not fully met because Western and Eastern conceptions of creativity do not completely overlap (Lau et al. 2004).

The aim of this chapter is to review the main cultural differences regarding conceptions of creativity as a preamble to cross-cultural comparisons in terms of creative potential. We review literature on Western and Eastern conceptions of creativity and the attempts to reconcile East-West differences. The East-West distinction globally refers to the USA/Europe versus East Asia, notably China. This reconciliation implies recognizing the differences in creativity conceptions by contrasting a process-oriented conception of creativity (i.e. gradual change, recombination of traditional ideas) with a conception focused on novelty and rupture, and then finding the commonalities within

the differences. Essentially this can be viewed as an endeavour that ultimately tries to find fitting phenomena that support our Western construct of creativity. In the second part of this chapter, we investigate the possible effects of cultures on creative potential through the impact that cultures have on cognitive and conative characteristics of their members.

In the last part of this chapter, we adopt a different perspective on cultural differences that takes into account the on-going process of globalization. We ask the question whether it is still relevant in today's globalized world to compare cultures, when there is more and more multicultural exposure through digital media. We propose a new focus that emphasizes the cultural diversity in our contemporary world—in which East *really* meets West—as a construct that might be more relevant than the traditional opposition between East and West.

Western versus Eastern Conceptions of Creativity

It was noted several times in Kaufman and Sternberg's (2006) International Handbook of Creativity that research on creativity in various parts of the world has often been dominated by Western paradigms. Western researchers' definitions of creativity tend to focus on a capacity to produce work (ideas or productions of all kinds) that is both novel-original and adaptive-useful given the task or situational parameters (Kaufman and Sternberg 2006). According to this conception, central features of a creative production are originality and adaptiveness. More specifically, it has been suggested that conceptual rupture is an essential element in the Western understandings of novelty (Lubart 2010). Conceptual rupture means that a novel idea is the result of a radical rupture with the past, resulting in a surprising and categorically new and different idea or product (see Simonton 2011, 2012). In contrast with the above more or less Western conception of novelty, Eastern conceptions of what it means to be creative are based on a model of progressive improvement, modification, and adaptation (Puccio and Chimento 2001), instead of a radical rupture of the 'old'. In this view, being creative is the result of *gradually* increasing and continuing levels of novelty. It has been put forward that in Eastern cultures starting off from an existing idea, perfecting it, and then gradually improving it is the general understanding of what it means to be creative (Lubart 2010).

What is interesting to see here is that the concept of radical rupture from the 'old' somehow implies a certain mystery in the creative process (Niu and Sternberg 2006; Lubart 2010). A product or idea that suddenly appears

and that is radically different from everything that existed before is a necessary requirement to call this product/idea creative. Indeed creativity is often seen as a gift, given from God or another higher power (Niu and Sternberg 2006). One could say that, compared to the West, conceptions of creativity in Eastern cultures imply more strongly hard work, dedication, and even respect for tradition and the 'old' (Lubart 2010).

One can wonder whether this difference in conception of what it means to be creative has a reflection on actual ideas and/or products. If we were to look at the past 100 years, is there more continuity—that is, less radical breakthroughs—in products/ideas developed in this time span in, for example, a country like China or Korea, compared to, for example, Germany? One may equally wonder what 'continuity' means, and whether creative ideas in Western countries really came about suddenly. Granted, the industrial and digital revolutions arguably started in the West. But were not these revolutions the culmination of centuries of gathering knowledge? It seems that in Western cultures the collective and gradual aspect of creation is less valued, or perhaps recognized, than seemingly sudden leaps of progress and change (Lubart 2010). This seems to be even to the extent that in some cases the history of important discoveries is rewritten in popular media. This practice re-infuses the culture with a concept of creativity that is only reserved for sudden and mainly individual breakthroughs. But what about the *creation* aspect of creativity; the process itself? Indeed the word creation derives from the verb-creating, which is a process. One could say that the process is necessarily more continuous and gradual, involving an accumulation—a *tradition*—of knowledge and skills, that is interwoven with the cultural context in which the creation takes place.

An excellent example of this tendency of the West to celebrate individual breakthrough work over collective and gradual innovation is the recent Morten Tyldum's movie about the life of famous mathematician Alan Turing (1912–1954) entitled *The Imitation Game* (2015). Alan Turing was a brilliant mind, a computer scientist and mathematician who worked for years on the Turing machine. This machine can be considered as a model of a general-purpose computer. Alan Turing is therefore generally recognized to be one of the founding fathers of theoretical computer sciences and artificial intelligence. At the onset of the World War II, Alan Turing started working at Bletchley Park with a team of cryptographers to decipher Enigma, the machine that the Nazi's used for secret communication during World War II. The movie is about this period and several years after the war and revolves around a small group of 'codebreakers' who, after many challenges and obstacles for the first few years of the war, managed to break the Enigma code with a spectacular and sudden breakthrough.

Interestingly, in popular culture—that is, in the above-mentioned motion picture—it was mainly Alan Turing to whom the victory is ascribed, who seemingly against all odds, and facing big scepticism from his fellow colleagues, proved that the (Turing) machine actually worked. In reality, progress was made even before the beginning of the war in 1939, and more importantly, the breakthrough was the culmination of the collective work of literally thousands of men and women. In fact, throughout the war, there were breakthroughs and setbacks because the Germans regularly made changes to the Enigma machine and the codebreakers at Bletchley Park had to adapt.

Furthermore, in the movie, Turing is portrayed as an eccentric, intellectual snob, possibly autistic, who has no sense of how to work cooperatively with others and who considers his colleagues inferior. The movie thus mostly emphasizes the individual struggle of Alan Turing (which no doubt is also true), who at one point is even refused funding for the construction of the machine (the latter being not actually true, see Hodges 2012; O’Connell and Fitzgerald 2003). Indeed, the uniqueness of Turing’s personality as well as his work is highlighted in the film. In reality, Alan Turing is documented to be a sociable individual who had friends, and who had no problematic working relationships with his colleagues.

Now, one could claim that this is an ordinary dramatization and adaptation of a real life story into film and is common practice in Western and Eastern cultures alike. But, looking at it with the glasses of a cross-cultural psychologist, it becomes immediately clear how culturally coloured the dramatization is. The Turing machine, the breaking of Enigma, the personality of Turing himself, his way of working, and social relationships within the team are all reflections of the Western conceptions of the creative person, eccentric and individualist; the creative product, unique and seemingly unrelated to any other idea or work before; and creative process, a sudden illumination of the breakthrough solution for how to break the Enigma code.

We do not deny that individuals can have the experience of sudden insight, but would this experience be a merely Western experience, unknown to individuals from Eastern-oriental cultures? Studies investigating specifically this question in Eastern cultures are non-existing, but we would expect that the ‘aha experience’ is a universal experience. Granted, this experience may, or may not, be labelled as explicitly related to creative thinking in different cultures, but we believe it is very important to distinguish between social constructions of what it means to be creative, and the underlying subjective emotional, cognitive, and/or perceptual experiences that are labelled differently in different cultures. In the West, the ‘aha’ insight signifies often that a new link has been found or invented, whereas in the East, the ‘aha’ may rather mean that an idea

has been revealed. This small but meaningful distinction can be linked to the question which sometimes arises in the West on whether acts of discovery, in particular scientific discovery, are creative in the same way as artistic creativity.

More generally, creativity may be valued differently in the East. In the East, our western conception of what it means to be creative may be seen as an act of proud self-expression. Whereas, in the West, we celebrate our individuality, Eastern social norms emphasize it less (Schwartz 1992; 1994), although on a more personal level people may have their individualistic needs and wishes as well in Eastern cultures (Lau 1992).

In other words, what we call creativity in the West might be related to pride, hubris, non-conformism (egocentrism) in the East. Although Easterners also acknowledge novelty as an important aspect of a product in judging it as positive, it is nevertheless essential for them to respect traditions to a certain extent when designing new products (Li 1997). Therefore, there is no reason to assume that there is less 'objective creativity' (arguably as defined in the West) in the East; maybe it is simply labelled differently than in the West, with more emphasis on the fact that the product is the result of a collective effort and on the authenticity of the process, instead of on the product's uniqueness (Li 1997; Lubart 2010).

To describe Eastern conceptions of creativity, Li (1997) talks about creativity within constraints. Li (1997) compared Chinese ink-brush painting and modern Western painting, a domain that is considered in both cultures to be related to creativity. Different domains of creativity allow for different levels of novelty. In the West, the domain of art—and thus also painting—allows typically for a 'horizontal' exploration of novelty. In the West, artists are encouraged and even required to be as unique as possible, to break existing rules, and to follow the only rule, which is to go beyond existing rules. In a horizontal tradition, the aims, methods, and symbols used in art are subject to radical change. In Chinese art—and notably in Chinese ink-brush painting—novelty is only allowed 'vertically', and content, method, and aims are highly constrained. This means that some elements are essential in each work, and only a limited number of aspects can be modified. For example, in Chinese ink-brush painting, the tools used are set, the artist is not allowed to use personalized tools, only the tools that have long been prescribed by the tradition of the art. The creativity of one's work is judged by how one's brush touches the paper, and how one's emotions and state of mind are reflected and captured in the image.

Zong (1981), a highly respected Chinese artist, said: '*If Western art discovered infinity in the universe, Chinese art discovered the universe within the boundary*'. It is interesting that according to Chinese observers of art one can

discover the soul of the painter in the image. This idea suggests that the artist's own values and beliefs should be present in his or her work, resulting not only in a novel work, but also in an *authentic* work. Authenticity is implicit in Western judgments of art, but in the scientific conception of what constitutes creativity authenticity as a component is lacking (Chon and Hahn 2001). Authenticity is difficult to define, but perhaps a comparison with the work of a computer-generated design/image can explain that no matter how novel and original such a design is, few would call this work authentic. Authenticity requires a 'soul'. Because computers are lifeless, they can have no inner vision. Arnheim (1966) describes creativity as involving the 'the pregnant sight of reality' (p. 66). Arnheim (1966) continues further that seeking novelty for the sake of difference is harmful (and borders on the neurotic) and does not always lead to creative products.

Thus, in modern Western paintings, novelty can occur in 'all directions', whereas in Chinese ink-brush paintings, novelty can only be introduced in certain ways. In other words, Chinese arts would have less degrees of freedom compared with Western arts. The question is then: Would novelty within boundaries be sufficient as a criterion for creativity in the West? To use a metaphor, Eastern cultures seem to be more prone than Western cultures to label as creative a chess player that musters up an ingenious move, whereas in the West such a skill would label as talent or intelligence. The point is that it is at the heart of our Western conception of creativity that creative products be out of the ordinary, and not bound by constraints. Or, differently said, given equal utility/effectiveness of a product, the more rules were broken in the process (i.e. the more original it is) the more creative Westerners think the product is. Thus, the Eastern approach to creativity described here would not fully echo with Western conceptions of creativity.

A second main definitional component of a creative product generally described by Western scholars is its adaptive value (Sternberg and Lubart 1995). The term 'value' is used here to cover the notions of usefulness, constraint satisfaction, adaptiveness, appropriateness, effectiveness, and relevance within the context in which the novelty is generated (Weisberg 2015). Paletz and Peng (2008) explored the relative weights of novelty and appropriateness in judgements of creativity by university students in China, Japan, and USA; scenarios concerning creative products in which novelty and appropriateness varied, showed that both novelty and appropriateness influenced judgements in all three cultural samples, but the American and Japanese groups were particularly sensitive to variations in appropriateness compared to Chinese participants.

The notion of adaptive value has another facet, which is the societal utility of the creative act. This trend appears most clearly in studies of creativity in Asian and African settings; creativity involves novelty that contributes

positively to society (Niu and Kaufman 2005; Mpofu et al. 2006). Some debate on novel thinking and productions, such as inventions for evil purposes referred to as the dark side of creativity (Cropley et al. 2010), may not necessarily be classified as creative acts in all cultures because they lack moral validity. For example, in Kenya, creative storytelling should be both imaginative and provide an ethical message (Gacheru et al. 1999).

In sum, we should acknowledge that producing ideas and products that are valuable as well as unique and novel is an important human ability that the West has labelled as ‘creativity’. In the East, this behaviour exists as well, as it is evolutionarily essential for human survival but is perhaps conceptualized, valued and labelled slightly differently than in the West. If we were to simply translate our conception of creativity or even the word ‘creativity’ to, for example, Chinese, we would perhaps tap into a slightly different construct that is locally valued and conceptualized differently than creativity in the West. Therefore, it seems crucial to distinguish social conceptions of creativity from our scientific definition of creativity which should be a meta-cultural construct. Therefore, one possibility for creativity research would be to focus on behaviours that we define as creative and investigate whether these behaviours emerge in Eastern cultures as well. Conversely, behaviours that are considered as highly valuable in the East, in the sense that they contribute to personal and societal growth could be researched among Western individuals. It is possible that behaviours that we relate to creativity—individualism, free thought, uniqueness, and so on—because of the negative social meaning it is given to by culture, are suppressed, perhaps even to the extent that they simply do not exist. However, it is more likely that these behaviours or the tendencies towards these behaviours might still be seen in the individual sphere where the watching eye of social norms is less present. In the same way, striving for authenticity, collective work, and respect for tradition are perhaps not strongly encouraged or emphasized in the public sphere in Western cultures, but on an individual level they might still play an important role.

Possible Explanations of West versus East Differences in Creative Potential

Our analysis suggests that cultures differ on how they shape social norms regarding the value and the appropriateness of certain behaviours in different social contexts. We are now going to explore the impact this could have on differences in creative potential when Western and Eastern individuals are

compared using the Western scientific definition of creativity. We talk specifically about creative ‘potential’ and not creative accomplishment, as in the current (psychological) scientific approach, measures of creativity mostly tap into a potential, a latent skill, that individuals may be aware of and/or utilize when they are afforded the opportunity (Lubart et al. 2013). Because cultures tend to value, encourage, and strengthen different skills and cognitive processes, they have a direct impact on how individuals invest their time and energy in one domain compared to another one, which leads us to believe that cultures may have an indirect impact on creative potential as well. In other words, specific cultural features might have an impact on various basic components of creative abilities, such as the development of creativity (Yi et al. 2013), conceptions of creativity (Wong and Niu 2013), or the causal attribution of creative performance (Paletz et al. 2011) and, indirectly, on the ultimate outcome, creative potential (Kharkhurin 2012; Lubart 2010).

This idea can be found in several empirical studies. For example, the fact that Chinese students have better performance than American students in international competitions on mathematics and natural sciences could be the result of the emphasis that the Chinese educational system puts on analytical skills (Niu and Sternberg 2003). Culture has therefore an indirect impact on creative achievement through the emphasis that it puts on different domains. This implies that we do not need to assume that West and East necessarily differ so much on what they understand to be creative. Cultural differences regarding creative achievement may not be related to differences in the definition of creativity; social expectations about how and when people should engage in creativity could explain these differences. In a similar vein, Western measurements have the form of a test in which participants are instructed to find as many creative ideas as they can or to design a product as creatively as they can. In all these tasks, there is the implicit message that creative potential is going to be quantified and that there will be a scoring system. Creativity tests are thus not very different from school tests. It might be less common in Eastern cultures to engage in such tasks at school in which individuals are instructed to be creative, which could in turn impair Eastern participants when taking typically Western creativity tasks.

Cultural differences in terms of values regarding the notion of respect for tradition and gradual change, instead of radical rupture may also contribute to lower scores on classic divergent thinking tasks. Implicit in the use of these tasks is that our current conception of creativity is not exclusively reserved to the Einstein’s, Newton’s, and Mozart’s. Big life-changing inventions are rare, but individuals can nevertheless be creative in their daily life. This is sometimes referred to as ‘small-c’ creativity—as opposed to ‘Big-C’ creativity—in

the literature (Kaufman and Beghetto 2009). ‘Small-c’ creativity describes the small ideas and ‘aha’s’ that enhance and enrich our lives—like creating a new recipe, teaching a dog a new trick, or coming up with a new way to format a professional report—but which rarely bring us instant fame or fortune. In fact, many people might not even consider these accomplishments as a form of creative thinking. What individuals are essentially asked to do in divergent thinking tasks is to let go of inhibitions and let the ideas flow. The assumption behind these tests is that when a person is good at letting go and generating lots of unusual ideas, this person is probably a creative problem solver in his/her daily life as well. Because letting go and being uninhibited regarding traditional standards could be seen as going against respect for tradition, Eastern cultures might be impaired in such tasks (Kim 2006).

Sagiv and Schwartz (1995) studied the impact of cultures on values. The impact of cultures on values might have an indirect effect on individual behaviours regarding creative activities. For example, Westerners tend to score higher on individualism and self-direction and lower on conformity compared with individuals from Eastern cultures (Sagiv and Schwartz 1995). As we mentioned before, these values are important for the definition of creativity in the Western world. Value differences in this area might determine in turn the extent to which individuals invest in creative performance across cultures. Cultures seem to have an indirect impact on creativity through the impact that they have on values and social expectations. Exploring this idea, Wong and Niu (2013) hypothesized that differences in performance expectations across Western and Eastern cultures (China vs. USA) could explain observed differences across cultures regarding creative potential. Specifically, they hypothesized that cultures have an impact on stereotypes and social expectations, which can, in turn, influence creative performance. The results of their study supported partially this hypothesis showing the relevance of taking into account the indirect effect of culture on creative potentials. It has also been shown that cultural differences are related to personality differences (Schmitt et al. 2007). Note, however, that current models of personality are the work of mostly Western scholars. Eastern individuals tend to score lower on openness than Western individuals (Schmitt et al. 2007). As openness is known to be a predictor of creative performance according to the Western definition of creativity (Feist 1998), it is therefore easy to infer that cultures may have an indirect impact on creative potential through the impact that they have on personality traits.

To summarize, the literature seems to indicate that observed cultural differences regarding creative achievement, as it is defined by Western scientists, might be explained by differences regarding value systems and cultural

preferences. One might wonder whether cultural differences will remain relevant in the near future as the world is in a phase of globalization and individuals are confronted with diverse cultures and develop more complex cultural identities as a result. West meets East on a daily basis, and it would be interesting to investigate how cross-cultural creativity researchers could shift to new paradigms taking into account multiculturalism, cultural diversity, and cultural friction.

Shifting Paradigms: When East Really Meets West

Globalization and the digital revolution increased the amount of contacts between Western and Eastern cultures and made the differences smaller and smaller (Putnam 2007). For example, in recent years more than half of China's 1.6 billion people have been connected to the Internet via mobile phones and/or personal computers. This number is still exponentially rising. Although there is still a gap in Internet access between rural and urban areas, this gap is rapidly closing. Contrary to the commonly held view that China lags behind the world on leading digital innovations, the country is actually catching up rapidly. This phenomenon is not only specific to China and can be observed in the rest of the world as well.

These technological developments in telecommunications, alongside with cheaper travel, increased cross-national flexibility regarding work and study, have a profound impact on nations' social, cultural, political, and economic development. In addition, needless to say, these developments must have an impact on the individual's psychosocial development as well.

Therefore, because the West actually meets East, it seems relevant to move beyond the question of whether the East and the West differ regarding creativity and to focus on the impact of being confronted with several cultures on creativity. Because this perspective aims at investigating what happens when individuals with different cultural backgrounds meet (i.e. in for example culturally diverse cross national organizations), or when individuals integrate and blend different and initially juxtaposed cultural identities in one harmonious bicultural or multicultural identity (i.e. when individuals have prolonged and extensive exposure to several different cultures), this perspective might be referred to as the 'multicultural', as opposed to the comparative cross-cultural approach to studying creativity. In the multicultural approach, the focal aim is to uncover how contact between cultures can enrich its members.

Several empirical studies showed that being in multicultural settings has a positive impact on basic cognitive functions that are involved in creative

performance such as integrative complexity, idea flexibility, awareness of connections and associations and functional fixedness (Tadmor et al. 2012; Maddux and Galinsky 2009). Therefore, multiculturalism has a positive impact on creativity. Many eminent artists, inventors, and scientists are first- or second-generation immigrants (Simonton 1999).

In the literature, broadly speaking, two perspectives exist concerning how multiculturalism enhances cognitive functioning in general and creativity, supporting cognitive processes like divergent thinking for example. There is the spreading activation perspective, which can be linked to Mednick's (1962) work on associative thinking, and the executive functions perspective. Following Mednick's (1962) classic association model of creativity, some researchers have proposed that multicultural experiences lead to an expansion of the semantic network, such that boundaries of existing concepts are extended by adding to it attributes of other seemingly irrelevant concepts, which in turn increases the ability to think in a divergent way and ultimately the ability to create. Studies showed that bicultural individuals rely less on a single culture's conventions (Leung and Chiu 2008; Wan and Chiu 2002; Saad et al. 2013). According to this view, multicultural individuals are more creative because elements from different cultures exist in juxtaposition in their semantic field, resulting in a more complex organization of the semantic network from which creative ideas can emerge. In line with this idea, Leung and Chiu (2010) found that after being shown a dual culture slide show (with images of American and Chinese cultures side by side or fused into a Chinese/American concepts), European American undergraduates' creative performance was higher than after just being shown a slide show of Chinese culture (or American culture). The authors concluded that cognitive juxtaposition of seemingly non-overlapping, contrasting ideas from two cultures activates a creative mindset.

Other researchers focused more on the effect of multiculturalism on cognitive functioning and conflict resolution skills and consider that repeated exposure to multiple cultures benefits creativity because it makes the incompatibilities and conflicts between cultural practices and values less threatening. This allows individuals to draw inspiration from incompatibilities and conflicts (Leung and Chiu 2010). Gocłowska and Crisp (2014) consider that experiencing cultural conflict is even a necessary precondition for cognitive growth. When deeply processing the norms and values of several cultural groups that are in conflict, traditional assumptions are challenged, and usual cultural responses are destabilized (Leung and Chiu 2008). Because destabilizing routinized knowledge structures is one of the main processes of creative thinking, individuals with extensive multicultural experiences are

theorized to frequently train and enhance conflict resolution skills (Leung and Chiu 2008). In line with the above, studies suggest also that multicultural individuals who resolved cultural conflicts on a meta-cognitive level—that is, those who achieved a true multicultural identity and who experience no conflict between the cultures with which they are confronted—are more creative, compared to those who report less harmony between the cultures to which they are exposed (Cheng et al. 2008).

Notably, relevant to our earlier discussion on the opposition between conceptions of creativity in the East versus the West, embedded within a broader context of differences in cultural *values*, a recent study involving participants from a wide range of non-Western ethnic minorities suggests that the further away people’s culturally shaped values are from the values of close others’ in their direct social environment, the more this may increase the potential for unique thought and ideation for these individuals (Celik et al. 2016).

Supporting above findings, other studies revealed that general conflict resolution skills might be related to enhanced creative thinking (Benedek et al. 2012; Nusbaum and Silvia 2011; Scibinetti et al. 2011). Studies reported enhanced performance on the Stroop color-word test, which is generally accepted as a measure of flexibility, and conflict resolution skills among more creative individuals (Benedek et al. 2012; Groborz and Necka 2003; Zabelina and Robinson 2010); bilinguals seem to have an enhanced ability to resolve conflict and/or ambiguity as well (e.g. Bialystok and Craik 2010; Costa et al. 2008; Kessler and Quinn 1981). Multicultural exposure has been shown to alter the brain structure in general, and specifically basic perceptual tendencies and attentional control (Hedden et al. 2008; Kitayama et al. 2003). Because divergent thinking is considered to rely on fundamental executive functions as well (Beaty and Silvia 2012), it is indirectly influenced by multicultural experiences.

Using cognitive-consistency theories (e.g. Roccas and Brewer 2002; Tetlock 1986), the Acculturation Complexity Model (ACM; Tadmor et al. 2009) provides some interesting elements to understand how the effect of multiculturalism on creativity may come about. According to the authors, the more an individual feels pressure from several culturally incompatible backgrounds, the more one experiences cognitive dissonance and needs to construct integratively complex solutions. This capacity of ‘integrative complexity’ consists of managing to combine and integrate competing perspectives on the same theme. Integrative complexity has been shown to be related to creativity (Suedfeld and Bluck 1993; Tuckman 1966; Tadmor et al. 2009). The extent to which an individual experiences several accountability pressures depends partly on the individuals’ ability and motivation to synthesize different cultural

knowledge networks (i.e. sets of norms, values, and behaviours) into one behavioural repertoire (Rotheram-Borus 1993), and partly depends on the specific characteristics of the individuals' social environment (Phinney et al. 2001). In other words, one source of cognitive challenge may come from the characteristics of the individual—that is, his/her level of openness to new experiences, his/her need for closure, and so on. Another source of cognitive challenge to one's personal beliefs may come from the individual's direct social environment in which others' overt expressions of lack of understanding and challenge towards one's personal values and lifestyle.

Note that cultures may differ with regard to how much diversity in value expressions they tolerate (Citrin and Sides 2008; Huntington 2004). In 'loose' (vs. 'tight') cultures (Gelfand et al. 2006), there are few binding norms and expectations, meaning that individuals can freely express their personal values in their lifestyle without encountering much intolerance. The ACM implies that conflicting and incompatible demands from others that challenge the individual's personal belief systems lie at the heart of the benefit of multicultural experiences to integrative complexity. The subjectively felt pressure to explain, negotiate, or perhaps even change or abandon one's values and conform to other values and lifestyles might thus be specifically related to creative potential.

To conclude, individuals are more and more confronted with other cultures, and multiculturalism is becoming the new standard. Individuals may vary in the extent to which they are multicultural based on the intensity and frequency of their multicultural experiences. We reviewed several theories that aim at explaining the impact of multicultural experiences on creativity. The mechanisms that they described are very different from those that are investigated in cross-cultural creativity research, opening the way to new theories and experimental paradigms to understand the effect of culture on creativity.

Conclusion

We started this chapter by outlining the differences in conceptions of creativity in the East versus West. We saw that (partly implicit) collective conceptions of creativity shaped by different cultural value systems may encourage and shape individual creativity in different ways, at least when measured against our Western standard of what creativity is. However, the two forms of creative behaviour—that is 'horizontal' in the West, versus 'vertical' in the East—may simply be two aspects of the creative process inherent to human nature and cognitive functioning, and reflect the age-old challenge that societies, and

thus individuals, constantly face: navigating and finding the balance between ‘innovating’ and ‘conserving’. Cultures may perhaps differ in the emphasis they place on innovating versus conserving, but no product or idea can truly advance individual and collective growth if it did not have the right balance between innovating and conserving. Therefore, in our opinion, in becoming aware of the differences that exist between the Eastern and Western conceptions of creativity, we actually become aware of the importance of guarding the balance in our scientific and public discourse regarding what creativity is and should be. Striving for authenticity, collective work, and respect for tradition are perhaps not as much encouraged and part of the collective mind in Western cultures, compared to Eastern cultures, on an individual level they are important basic and universal human needs (Deci and Ryan 2000), indispensable for creativity.

In sum, differences in creativity conceptions between the East and West should enrich creativity research, not stifle it, all the more because the world is becoming more and more a multicultural melting pot, and an ever-growing amount of research suggests that this melting pot may be at the heart of challenging people to be creative. The fact that East really meets West nowadays has to be taken into account by creativity researchers and may even lead them to shift to new paradigms, paradigms that may enable them to investigate the new challenges of the globalized world (Anderson et al. 2014). Multiculturalism now plays a central role in understanding the complex relationships between culture and creative achievement, which should challenge and engage the creativity of researchers in the coming years.

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4

Cultural Diversity and Team Creativity

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With increasing pressures for innovation, there has been an increased emphasis on using teams to collaborate in the innovative process. Since many innovations require knowledge in multiple areas, diversity of expertise in such teams is an obvious benefit. Some projects are only possible with complementary expertise. There is also an increased emphasis on diversity in organizations which inevitably results in greater diversity in team membership. Thus, team members may vary on a variety of personal characteristics such as age, gender, ethnicity/race, and cultural or national background. We will examine the theoretical basis for team creativity related to diversity of personal characteristics, with a particular focus on the role of cultural differences. Thus, this chapter will build on the literature on collaborative or team creativity, diversity and teamwork, and cultural diversity to develop a broad perspective on the role of cultural diversity and creativity in teams.

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Team Creativity

Creativity can be defined in many ways, but a commonly accepted definition is that it involves the generation of novel ideas that are useful (e.g., Amabile 1996). This can be measured in a variety of ways such as the number of creative products or ideas and the quality of the products (e.g., their novelty and utility). Quantity can be measured objectively in teams that are observed under controlled conditions. Quality can also be measured objectively, as in the number of reported problems with new cars. However, in many cases, quality measures are based on judges' ratings of the creative products. Many studies of team creativity in work contexts rely on surveys of team members and their supervisors. This is understandable given the difficulty of obtaining objective data in those situations. Although there is some evidence that survey measures of team members and internal team leaders reflect reality to some extent (van Dijk et al. 2012), there are a number of studies that suggest some potential biases in these measures or inconsistencies between survey or subjective measures and objective ones (Reiter-Palmon et al. 2012b). For example, perceptions of creative performance in groups tend to be inflated relative to objective outcomes (Paulus et al. 1993). There also appears to be a bias in ratings against the positive impact of demographic diversity (van Dijk et al. 2012). However, a review of the team innovation literature which relies primarily on surveys in comparison to controlled studies that use objective measures suggested that the findings in the two areas are quite consistent (Paulus et al. 2011).

There are a number of literatures relevant to understanding the role of cultural diversity in team creativity. Some scholars have focused on experimental studies of collaborative ideation in short-term settings (cf., Paulus and Coskun 2012; Paulus and Nijstad 2003). These studies have often used the brainstorming paradigm in which participants are assigned a topic on which to generate as many ideas as possible (Osborn 1963). Research on collaborative ideation has focused on ways to enhance ideation in groups. Studies have found that collaborative ideation is more effective with paradigms that allow efficient communication such as electronic brainstorming and writing (cf., Paulus et al. 2015). Also explicit instructions for effective interaction, facilitators, training, low degrees of evaluation apprehension and providing some task structure, such as dealing with one subtopic at a time, appear to be important for optimal group performance (see Paulus and Coskun 2012 for a review).

There is also a significant literature under the heading of “team innovation” (Hülshager et al. 2009; Paulus et al. 2011). Innovation is often used to refer to the actual implementation of new ideas in the workplace (West and Richter 2008). However, in many cases, the term is used for judgments of the extent to which teams generated creative products by team members or supervisors. Few studies allow for a clear distinction between a creative idea generation phase and an implementation or innovation stage. So we will use the terms “creativity” and “innovation” interchangeably to refer the development of creative products. Research on team innovation has found that higher levels of innovation appear to be related to such factors as support, psychological safety, team cohesion, appropriate task orientation, and effective communication (Hülshager et al. 2009; Paulus et al. 2011). Thus, both the team innovation and collaborative ideation literature suggest that team creativity requires a positive context and effective processes.

Cultural Diversity and Collaborative Ideation

Cultural diversity should enhance the number and quality of ideas generated by groups of teams. Cultural diversity refers to the extent to which team members differ in nationality, subculture, ethnicity, native language, geographic location, or origin (e.g., Connaughton and Shuffler 2007). Teams with people who have different cultural experiences and backgrounds should have a broader range of ideas that can be shared. Moreover, if people from the different cultural backgrounds also have different language backgrounds and are multilingual, they may be individually more creative and thus have more unique ideas to share with the group (Blot et al. 2003). Of course individuals from different cultures can vary along many dimensions such as values, status, and knowledge or experience (Harrison and Klein 2007). Although each of these dimensions may be relevant for team creativity, our theoretical focus will be on the knowledge or experience dimension since it is the one that seems to relate directly to the creative potential of teams. Unfortunately, there have been only a small number of studies that have enabled an evaluation of the impact of cultural diversity. We will summarize briefly the studies that have examined demographic and cultural diversity.

There is little evidence of beneficial effects of demographic and cultural diversity on team performance in general (Bell et al. 2011). A review of team innovation found some evidence for a beneficial effect of functional or expertise diversity but not demographic diversity (Hülshager et al. 2009). The positive effect of functional diversity appears to be limited to complex

tasks (van Dijk et al. 2012). In contrast, studies that have used objective measures to evaluate team creativity show a somewhat different pattern of results. Although we could not find any evidence for positive effects of gender and age diversity, other culturally relevant dimensions such as race and ethnicity and have been related to enhanced team creativity (Paulus and van der Zee 2015). Similarly, multicultural diversity may produce process losses because of increased conflict but process gains because of increased creativity (Stahl et al. 2010). McLeod et al. (1996) found that ethnically diverse brainstorming groups generated more effective and feasible ideas than homogeneous ones. Cady and Valentine (1999) discovered that racial diversity in groups was related to the generation of more ideas but not the quality of ideas. Interestingly, these positive effects were obtained even though members of diverse teams had more negative perceptions of their team. In a study with teams over the course of a semester it was found that racial/ethnic diversity was related to a broader range of perspectives on business cases toward the end of the semester (Watson et al. 1993). Giambatista and Bhappu (2010) showed that the effects of ethnic diversity on the quality of ideas for a commercial were more positive with the use of a nominal group technique or a computer-mediated interaction technique compared to face-to-face groups (see also Staples and Zhao 2006).

Although these studies have demonstrated some positive effects of culturally relevant diversity, a number of studies have not found such effects. For example, ethnic diversity did not influence creativity for groups tasked with generating endings for a short story (Paletz et al. 2004). We are also aware of unpublished studies that have not been able to demonstrate positive effects of cultural diversity on creative performance. It is obviously not feasible to assess the factors that differentiate studies with these discrepant outcomes since studies with null results are typically not published.

The finding of positive effects of cultural diversity for team creativity in a number of studies is of particular interest in that for team performance in general there is no clear benefit of cultural diversity. Why would a benefit be evident with creativity and not with other types of team performance? One reason is that many group tasks may not effectively tap cultural differences. That is, a physical performance task or computational task would be sensitive to differences in physical or computational skills but should not be influenced by cultural diversity unless this diversity was in fact related to one of those task-relevant dimensions. Consistent with that perspective, we have noted previously in several reviews that differences in task or job relevant expertise related to team functioning do enhance team performance. Thus, Paulus and van Der Zee (2015) have argued that cultural diversity will enhance team

performance to the extent that the diversity is relevant to the task. That may not be easy to determine a priori unless one has a solid grasp on culturally relevant dimensions of a task and the extent to which the cultural diversity involved in a particular case is related to variations of expertise and perspective related to that task. However, in the case of creativity, for tasks that tap social and cultural issues, one would predict that cultural diversity would in fact enhance team creativity. For example, the study by Nakui et al. (2011) was able to demonstrate an effect for cultural diversity using a task in which participants were asked to come up with ideas on how the university could attract different types of students. However, even relatively mundane creativity tasks can apparently benefit from cultural diversity. For example, Tadmor et al. (2012b) found an effect of diversity with the “uses for a brick” task. So although the creative benefits of cultural diversity may be most evident with culturally relevant tasks, even tasks that have little obvious relevance may benefit provided that the people from varying cultures can come up with different types of ideas. One way to determine this a priori would be to have individuals from the different cultures generate ideas individually for a particular task. If there is a great discrepancy in the types of ideas being generated across cultural differences than for individuals within a particular cultural group, one would expect that this task would demonstrate benefits of cultural diversity.

Since there are only a limited number of studies that have examined cultural diversity in relation to team creativity, our perspective is based in large part on the broader literature on diversity and creativity. There is compelling evidence that diversity of background, knowledge, and perspectives can enhance creativity in teams (Paulus and van der Zee 2015). In this chapter, we will highlight the processes that are related to such collaborative creativity and the factors that influence the extent to which such processes result in positive outcomes.

Cognitive Processes

Collaborative creativity obviously involves a number of key cognitive processes that have been highlighted by several theoretical models (Nijstad and Stroebe 2006; Paulus and Brown 2007). Team members need to attend to each others’ ideas or contributions. Shared ideas may stimulate additional ideas by means of associative processes. The idea generation process requires that group members search their memory for relevant knowledge. Certain categories of knowledge may be readily accessible for a particular issue, but other categories may be less salient. Others’ ideas may remind team members

of their own related knowledge and lead them to share this with the team. Thus, team exchanges can help the team members to more effectively tap their knowledge related to a particular problem. Furthermore team members can build on the shared ideas by combining various ideas or modifying them in some way. Thus, the result should be an increase in the number of ideas generated, their novelty, and their potential utility. However, this type of outcome is not often observed in studies that use noninteractive control groups. For example, a group of four generating ideas verbally in a group setting may generate only about half as many ideas as four individuals generating ideas in isolation. One obvious reason for this is that group members have to share the “floor” (production blocking, Diehl and Stroebe 1987) when sharing ideas, whereas individual performers have no such limitation.

Although exposure to the ideas of others can be stimulating, it can also lead to premature fixation on a limited range of issues (Larey and Paulus 1999). Groups tend to converge in their discussions to a limited set of topics. These topics are likely to focus on issues that they have in common rather than their unique perspectives (Stasser and Titus 2006). Moreover, it is easier to build associatively on ideas or topics that overlap with one’s own knowledge base or associative network (Paulus and Brown 2007). Thus, tapping of diverse perspectives in groups requires a conscientious effort of the team members to share their unique perspectives and to build on the shared perspectives. This may be facilitated when members in diverse groups strive to maintain their unique identities in groups (Crotty and Brett 2012; Swann et al. 2003). Obviously, maintaining distinctive identities should be related to individuals being more willing to share their unique perspectives. Group members may then become more aware of the diversity of perspectives available in the group and thus more likely to tap this diversity.

Maintaining unique identities in diverse groups may be challenging. Usually, when new members enter groups, the group identity is imposed on individual members, requiring them to conform to existing shared norms and values. Individuality has even been regarded as irreconcilable with the formation of a social identity in a group. Recent work has proposed that social identities can also be induced from individual qualities within the group (Postmes et al. 2005). For example, intragroup interactions inform the content of social identity, and group norms are inferred from individual expressions within the group. This may occur naturally, as in groups of friends, or by means of a consciously induced process, in which individuals start the process of identity formation by sharing their individual contribution with the group (Jans et al. 2011). This process may also occur when subgroups influence the formation of superordinate identities (Haslam et al. 2003). A recent study by (Jans et al.

2013) suggests that when group identities are formed inductively rather than deductively, group members are more likely to express their unique ideas, which may ultimately enhance the creative potential of the group. In sum, having diversity represented in a group in itself may not be sufficient for creativity: group identities need to be formed in ways that actually foster the expression of unique ideas. This can be reached by taking individual identities as a starting point for group identities, rather than the other way around.

Another area of research that links culture to creativity focuses on multicultural experience at the individual level. It has been suggested that multicultural experience may provide an opportunity to acquire new ways of thinking (Leung et al. 2008). Through multicultural experiences, individuals typically acquire new cultural scripts (Weisberg 1999) and learn that the same surface behavior can have different meanings (Chiu and Hong 2006; Galinsky et al. 2006). This may lead to novel combinations in idea generation and hence higher creativity. Foreign cultures also confront individuals with conflicting values and beliefs. Learning to resolve incongruent ideas may lead to higher cognitive complexity (Tadmor et al. 2012a; Wan and Chu 2002).

Multicultural experience generally evokes actually having experiences in two cultures. Relevant in this regard is work on biculturalism. Biculturals are individuals who have been exposed to and have internalized two or more sets of cultural meaning systems. They are assumed to navigate between their different cultural orientations by a process of cultural frame switching (Hong et al. 2000). The individual difference dimension underlying biculturalism has been captured by the concept of bicultural identity integration (BII) (Benet-Martínez 2012), referring to the degree to which “biculturals perceive their mainstream and ethnic cultural identities as compatible and integrated vs. oppositional and difficult to integrate” (Benet-Martínez et al. 2002, p. 9). Biculturals high on BII perceive *overlap* rather than *disassociation* between their two cultural orientations, and perceive *harmony* rather than *tension* between their two cultures (Benet-Martínez and Haritatos 2005). Biculturalism predicts cognitive complexity (Benet-Martínez et al. 2006) and creative performance (Tadmor et al. 2012a).

Motivational Processes

A positive impact of diverse perspectives in groups requires that group members are motivated to share such perspectives. Some of this motivation can derive from personal characteristics. Team members that are extraverted, open to experience, experienced in multiple cultures, and positively disposed to

diversity in teams are more likely to attend to perspectives of those who are from different cultures and to build on those perspectives (Paulus et al. 2011; Reiter-Palmon et al. 2012a). In contrast, individuals who are uncomfortable or socially anxious in groups tend to limit their interactions in collaborative settings (Camacho and Paulus 1995). De Dreu et al. (2011) have similarly emphasized the importance of a social orientation to collaborative creative settings.

Motivation can also result from external factors such as setting performance goals, holding group members individually accountable for their performance, or feelings of competition with other group members or teams (Paulus and Dzindolet 2008). Without such external motivation, group members may be prone to social loafing or may match their performance to that of the low performers in the team (Paulus and Dzindolet 2008).

One key factor in motivating creativity in teams is the extent to which the group members feel it is safe to express their unique ideas. Psychological safety has been emphasized as a key factor in team creativity (Edmondson and Mogelof 2006; West & Richter 2008). Expressing novel ideas or ideas which are very different from those of other group members may lead to negative reactions (Mueller et al. 2012). People are generally biased in favor of ideas or perspectives that are similar to their own. Thus, it is important for members in diverse teams to feel that sharing unique perspectives will not lead to negative social outcomes.

The cognitive and motivational processes in teams are influenced by a broad range of personal, social, situational, and contextual factors. We will highlight the role of four key factors illustrating the fact that creativity requires both a positive context and intellectual challenges—team experience, climate, conflict, and inter-team relations.

Experience as a Team

The broader team performance literature emphasizes the importance of shared experiences as a team (Salas et al. 2009). Teams whose members get to know each other well can more effectively tap each other's unique experience/knowledge since team members will know better who knows what about different topics or areas of expertise. This has been termed transactive memory in some of the relevant research (Ren and Argote 2011). Transactive memory is enhanced by experience and collaborative training on tasks (Liang et al. 1995). Teams with higher levels of transactive memory should be able to be more creative since they can more effectively tap the unique knowledge

capabilities of the various team members. For example, members of interdisciplinary science teams are more effective in generating scientific products if they have more experience as a team (Cummings and Kiesler 2008).

Cultural differences among team members may inhibit interactions and communication in the early phases of team development (Watson et al. 1993). However, as team members become more familiar with each other, they develop a sense of trust and psychological safety. Feelings of cohesion and trust may also be increased if team members initially focus on areas of interest that they have in common. Once this has been attained, team members may be more receptive to various unique perspectives held by group members (van der Zee and Paulus 2008).

Team Climate

We have already alluded to the importance of a positive atmosphere for team creativity. The potential discomfort related to group member differences, conflicts that may arise from differing perspectives, and perceived intergroup differences and faultlines may result in negative effects in culturally diverse teams. Thus, it is important for teams to have shared positive experiences and to develop trust based on past interactions. If group members feel mutual acceptance and psychological safety in the team, they will be more likely to share their unique perspectives. The positive moods that may accompany such a positive team climate may also enhance the generation of creative ideas (Baas et al. 2008).

Although much of the literature supports the benefits a supportive and congenial climate in teams (Hülshager et al. 2009), there is also evidence that some degree of stress can be beneficial. In subsequent sections, we will discuss the role of cognitive conflict and intergroup conflicts in yielding creative outcomes. Others have suggested that some degree of stress related to external demands and task constraints may also motivate creative efforts (e.g., West and Richter 2008). When one is under pressure from external sources, deadlines, limited budgets, and various task goals or constraints, team members may be highly motivated to develop creative solutions. Too much time and too much social comfort and support may reduce the persistent efforts required to develop high-quality solutions and focus on the task at hand. Consistent with this perspective, negative moods have been shown to increase creativity based on task persistence (Baas et al. 2008). This paradoxical aspect of team innovation and suggests practitioners or team leaders should seek a balance in the supportive and demand or stress aspects of team climate

(Bassett-Jones 2005; Buijs 2007). A generally supportive and positive team atmosphere is obviously desirable, but periodically teams will need to be challenged to exceed expectations with deadlines or specific and demanding goals.

Conflict

When diverse perspectives are shared in teams it may often result in conflicts. In part, the creative potential of diverse groups has been linked to task-related conflicts (e.g. Jehn et al. 1999). Constructive confrontation of conflicting ideas may stimulate idea generation (Chen et al. 2005). A review of the literature suggests that such creative outcomes of cultural diversity in a work context are oftentimes not realized (McLeod et al. 1996; O'Reilly et al. 1998). Observable differences between employees, such as race and gender, are often associated with stereotypes and prejudice, which hamper interactions on the work floor (Milliken and Martins 1996) and provide a source of relational conflict (Jehn et al. 1999). Outcomes of relational conflicts in organizations are generally negative (e.g., De Dreu and Weingart 2003; De Wit et al. 2012; Jehn et al. 1999). Negative effects of conflict on creative outcomes may extend to indirect interaction partners. In this regard, Chua (2013) introduces the construct of ambient cultural disharmony, which in his definition includes both interpersonal tensions (strained relationships) and interpersonal conflicts (overt disagreements) within an individual's immediate social environment. Such tensions and conflicts are ambient to individuals to the extent that they are aware of them but not personally involved. Studying the impact of ambient cultural disharmony on creativity in a series of studies, Chua (2013) finds that ambient cultural disharmony, as indicated by a high density of negative ties among others in one's social network, lowers creativity. Interestingly, this effect was not found for conflicts in which one is personally involved, nor is it present among individuals who believe that cultures are incompatible. Although ambient conflict was bad for creativity, creativity did not benefit from cultural harmony.

We have suggested that the outcome of conflicts will depend on the type of conflict. However, a meta-analysis by De Dreu and Weingart (2003) suggests that there is not much evidence for positive outcomes of conflict in organizations. Consistent with this idea, a study among members of project teams (Langfred and Moye 2014) found that whereas relationship conflict undermined intragroup creative processes and task conflict did not. Task conflict *did have* a negative effect on the creativity of the group's final outcomes. Inspired by the work by De Dreu and Weingart, as well as more

recent empirical studies on the conflict–performance relationship, De Wit et al. (2012) performed a new meta-analysis. Their study did not replicate the consistent pattern of negative outcomes of task-related conflict reported by De Dreu and Weingart (2003). Moreover, De Wit et al. (2012) identified conditions under which task conflict has positive effects on performance. Task conflict and group performance were more positively related among studies where the association between task and relationship conflict was relatively weak, in studies conducted among top management teams, and in studies where performance was measured in terms of financial performance or decision quality rather than overall performance. The meta-analysis was not specifically focused on creativity. Linking this work to the work by Chua (2013), it seems that the absence of relational conflict is an important condition for groups' creativity to occur. DeChurch et al. (2013) suggest that it is not so much the content of a conflict that determines its outcomes, but rather the way a conflict is processed. In a meta-analytic study, these authors show that conflict styles of collaborating (+), avoiding (–), and competing (–) significantly predict team performance above the nature of the conflict. Moreover, whereas conflict processes in which the concern is about *individuals* are negatively related to team performance and affective outcomes, conflict processes where the concern is about the *collective* are positively related to team performance and affective outcomes. This finding is consistent with the study by Chua who found effects of cultural disharmony, regardless of the content of the conflict. That is, the outcomes generalized to conflicts that did not involve intercultural issues. In intercultural conflict, the processes rather than content of the conflict may determine whether creativity is facilitated or undermined. Interesting in this regard is a model suggested by Paletz et al. (2014). These authors suggest that it is the extent to which conflict in diverse groups is perceived as a threat that determines whether individuals will adopt a promotion focus (facilitating creativity) or a prevention focus (undermining creativity). According to the authors, it is culture in itself that influences tolerance for conflict via its set of cultural norms and beliefs. This assumption poses interesting questions regarding conflict dynamic in groups with members from different cultural backgrounds.

Inter-Team Dynamics

One of the effects of cultural diversity within teams is the emergence and consequences of *faultlines*. Researchers use the term faultlines to refer to a team situation in which differences along at least one variable or attribute, such as

a demographic category like gender or ethnicity, lead to a split in the team along that line. Faultlines may emerge either naturally (e.g., when individuals strongly identify with their category or cultural background, or when the presence of a visible minority makes a grouping salient) or by design, or when task requirements lead to such divisions.

Faultlines have been shown to result in generally worse group processes and outcomes (e.g., Bezrukova et al. 2012; Jehn and Bezrukova 2010). A meta-analytic review of the faultlines research (Thatcher and Patel 2011) indicated that faultlines increase both task and social conflict and reduce or prevent team cohesion. These processes have negative effects on team performance outcomes, such as decision-making (see Homan et al. 2007b). There have been only a few studies showing that faultlines can negatively impact collaborative creativity (e.g., Ellis et al. 2013; Pearsall et al. 2008), but in these studies, the effects are clearly negative as well, unless certain factors are put into place to mitigate or reverse the effects. Several studies have shown the value of creating or imposing cross-cutting role structures (e.g., Pearsall et al. 2008; Rico et al. 2012; Sawyer et al. 2006; van Oudenhoven et al. 2009). When the salience of the faultline categories is reduced or absent, this can also lead to improved outcomes (e.g., Jehn and Bezrukova 2010). Another variable that has been shown to reduce the negative effects of faultlines is the perception of a superordinate category, goal, or shared objective (Homan et al. 2008; van Knippenberg et al. 2010). There are even some individual difference variables that seem to reduce the impact of faultlines, such as valuing diversity (Homan et al. 2007a) and openness to experience (Homan et al. 2008).

Another kind of cultural diversity that exists within an organization is the diversity that occurs between or among different teams or units, rather than within them. Here, the faultlines approach can be useful in understanding how different teams might collaborate or compete in a context where creativity and innovation are important. However, we note that the research on faultlines concerns the fracturing of a one-team structure into subgroup categorizations within the same team. Inter-team research begins with two or more pre-existing teams or units and examines what factors contribute to creativity or weaken the intergroup effects. The analogy to faultlines research is that theoretically a unit structure of two or more pre-existing teams might be able to improve their collaborative innovation by cross-cutting roles across the existing teams and by the creation of a superordinate team identity. We note, however, that this has yet to be explored in the empirical literature.

Since people tend to sort and categorize themselves based on similarity, most groups or teams have important characteristics in common. They may have shared values, beliefs, and cultural identities which lead to positive

feelings about one's team and potentially negative feelings about teams with different characteristics, values, and beliefs or cultural identities. This type of inter-team diversity may be a source of both social and intellectual conflict, but may potentially be a source of expanding resources and contributions to the overall task.

Inter-team competition for organizational resources will likely lead to mistrust and mutual separation and isolation. Based on prior research and theory, these negative processes might be prevented or reduced if there is prior contact and mutual respect between members of competing teams, or if teams are part of a superordinate, noncompetitive structure. A competitive goal structure may motivate teams to be more innovative (e.g., Baer et al. 2010), but may reduce their willingness to build on the ideas of other teams. Being in a cooperative inter-team structure in which roles, knowledge, skills, and expertise are crossed between groups may lead to a greater number of quality ideas due to the greater exposure to other ideas and perspectives. However, if inter-team differences remain salient and important, additional motivating factors may be necessary in order for team members to take advantage of those benefits.

Because there is very little existing research examining the intergroup or inter-team dynamics that might impede or facilitate collaborative creativity within groups, there is much work to be done in this area, both in developing theoretical frameworks and in creating viable applications. This will be important for future applications in organizations that require not just team innovation, but the collaboration among multiple teams in pursuit of larger organizational goals.

Practical Implications

Our review suggests that cultural diversity can indeed be beneficial for team creativity. Such benefits are most likely if the tasks involved are relevant to the knowledge and experiential diversity present in the team. The creative potential of culturally diverse teams requires effective exchange of unique perspectives. Thus, team members must be highly motivated to take advantage of the diversity and use efficient interaction processes that effectively tap the cognitive resources of the team. The creative potential of culturally diverse teams appears to be enhanced if the team members worked together for some period of time and thus have developed some level of cohesion, trust, and knowledge about the distribution of expertise in the team. Although a positive team climate appears to enhance team creativity, situations that involve cognitive conflict and intergroup contact and high task or resource demands may also

stimulate creativity in teams. Diversity training also appears to have some promise for enhancing the benefits of cultural diversity on creativity (Homan et al. 2015). It is clear from our review that culturally diverse teams with the right composition and size, team processes, experience, climate, and leadership can achieve high levels of creative performance and synergistic outcomes.

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5

Creativity, Intelligence, and Culture

Robert J. Sternberg

What Is Creativity? What Is Intelligence?

Creativity is a set of habits (Sternberg 2006a). The problem is that schools, and sometimes, entire societies, may treat it as a set of bad habits. And the world of conventional schools and standardized tests we have invented often does just that. Too many times, people in a society will be slapped down for being creative. That experience teaches them not to do it again (Sternberg and Lubart 1995; Sternberg et al. 2005).

The manifestations of intelligence as well as of creativity differ across cultures (Cole et al. 1971; Gladwin 1995; Greenfield 2014). But some things remain the same. Intelligence, or at least its analytical part, comprises a set of skills. Schools and many societies value these skills because they are important for adaptation to the schools and societies as they exist (Sternberg 2006b). Standardized tests are measures of some of these skills and exist to predict success in adaptation, although how well they work and what they show depend on the cultures to which they are applied (Laboratory of Comparative Human Cognition 1982; Matsumoto and Juang 2012; Nisbett 2004).

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The problem is that intelligence as it is usually defined and creativity, as it is usually defined, do not always form an easy alliance. Their interests are, potentially, in opposition. Intelligence is used to adapt to the way things are; creativity is used to shape things into the way they could be. When there is tension, as there usually is, between the ways things are and the ways they could be, intelligence and creativity can go into opposition to each other (cf. Sternberg and Kaufman 2011).

It may sound paradoxical that creativity—a novel response—is a set of habits—a set of routine responses. But creative people are creative largely not by any particular inborn trait, but rather, because of an attitude toward life: They habitually respond to problems in fresh and novel ways, rather than allowing themselves to respond mindlessly and automatically or even dogmatically (Sternberg 2012). Acting intelligent can also be habitual, but the habit is dependent on a set of analytical skills, such as analyzing, comparing and contrasting, critiquing, evaluating, and assessing (Sternberg 2003).

Like any habit, creativity can either be encouraged or discouraged. The main things that promote the habit are (a) opportunities to engage in it, (b) encouragement when people avail themselves of these opportunities, and (c) rewards when people respond to such encouragement and think and behave creatively. You need all three. Take away the opportunities, encouragement, or rewards, and you will take away the creativity. In this respect, creativity is no different from any other habit, good or bad (Sternberg and Williams 1996).

Intelligence also can be either encouraged or discouraged. It might seem odd that any society would discourage intelligence but there are any number of societies that do. There is really only one major factor that leads to discouragement of intelligence, and that is autocracy of some kind. When there is a dictatorship, whether explicit or, more often implicit, leaders do not want citizens to question or analyze what is being done. In that way, the dictators (usually under the name of “president” or “prime minister” or whatever) encourage mob mentality and discourage critical thinking. Such thinking is fatal to dictatorships of the kind that exist in the world today. Instead, the government encourages dogmatic thinking (Ambrose and Sternberg 2012). In almost every instance, there are sham elections to encourage the pretense that citizens actually get to think for themselves and make choices. In fact, the outcomes are predetermined. In essence, smart people can act in ways that are foolish in order to advance their own ends (Sternberg 2004b).

Educational practices that may seem to promote learning may inadvertently suppress creativity, for the same reasons that environmental circumstances can suppress any habit. These practices often take away the opportunities for, encouragement of, and rewards for creativity. The increasingly massive and far-reaching use of conventional standardized tests is one of the most effective,

if unintentional, vehicles societies have invented for suppressing creativity. I say “conventional” because the problem is not with standardized tests, *per se*, but rather, with the kinds of tests we use and the ways in which they are interpreted, whatever the culture (Sternberg and Grigorenko 2007a). And teacher-made tests can be just as much of a problem.

Standardized tests may or may not encourage the development of intelligence. To the extent that they encourage analytical thinking, they encourage the development of intelligence. But to the extent that standardized tests encourage rote learning, they do not. Many schools around the world essentially indoctrinate students—teach them what to think—rather than teaching them how to think. Dictatorships, hard or “soft,” cannot tolerate much in the way of critical thinking, although they usually disguise themselves to create the pretense that they encourage people to think. They do, so long as people think the “right” things. In short, dictatorships can afford to encourage neither critical (analytical) nor creative thinking, unless it is in some abstract domain that is not politically threatening. For example, engineering can be safe; philosophy cannot be unless done in a highly prescribed way that makes a mockery of what it is really about.

Conventional standardized tests encourage a certain kind of learning and thinking—in particular, the kind of learning and thinking for which there is a right answer and many wrong answers (Koretz 2009; Lemann 2000). To create a multiple-choice or short-answer test, you need a right answer and many wrong ones. Problems that do not fit into the right answer—wrong answer format do not well lend themselves to multiple-choice and short-answer testing. In our experience, multiple-choice testing lends itself poorly to measuring creativity (Sternberg and the Rainbow Project Collaborators 2006). Put another way, problems that require divergent thinking are inadvertently devalued by the use of standardized tests. This is not to say knowledge is unimportant. On the contrary, one cannot think creatively with knowledge unless one has the knowledge with which to think creatively. Knowledge is a necessary, but in no way sufficient condition for creativity. The problem is that schooling often stops short of encouraging creativity, being content if students have the knowledge.

Examples are legion. If one is studying history, one might take the opportunity to think creatively about how we can learn from the mistakes of the past to do better in the future (Sternberg and Grigorenko 2007b). Or one might think creatively about what would have happened had a certain historical event not come to pass (e.g., the winning of the Allies against the Nazis in World War II). But there is no one “right” answer to such questions, so they are not likely to appear on conventional standardized test. In science, one can design an experiment, but again, designing an experiment does not neatly

fit into a multiple-choice format. In literature, one can imagine alternative endings to stories, or what the stories would be like if they took place in a different era. In mathematics, students can invent and think with novel number systems. In foreign language, students can invent dialogues with people from other cultures (Sternberg and Grigorenko 2007b). But the emphasis in most tests is on the display of knowledge, and often, inert knowledge that may sit in students' heads but may at the same time be inaccessible for actual use.

Oddly enough, "accountability" movements that are being promoted as fostering solid education are, in at least one crucial respect, doing the opposite: They are discouraging creativity at the expense of conformity. The problem is the very narrow notion of accountability involved (Sternberg 2006b). But proponents of this notion of accountability often make it sound as though those who oppose them oppose any accountability, whereas, in fact, they instead may oppose only the narrow form of accountability conventional tests generate. The tests are not "bad" or "wrong," per se, just limited in what they assess. But they are treated as though they assess broader ranges of skills than they actually do assess. Curiously, governments may have a stake in such narrow, but not broad, forms accountability.

Intelligence and conformity can go together if authorities circumscribe the domain of critical thinking. For example, deductive reasoning is an advanced intellectual skill. But one can be an excellent deductive thinker and get deductively correct answers even when all the premises are false. In a dictatorship, people are permitted to think analytically and deductively, but they are provided with the only allowable premises.

Whereas creativity is seen as departure from a mean, conformity is seen as adherence to that mean. Societies often speak of the "tall-poppy" phenomenon, whereby tall poppies—those that stick out—are cut down to size. If one grows up in a society that cuts down the tall poppies, or does what it can to ensure that the poppies never grow tall in the first place, it will be difficult to generate creative behavior. People in such societies will be so afraid of departure from the mean that they will be unwilling to be creative, whatever their creative abilities might be. Individuals also can be struck down by the tall poppy phenomenon for being too intelligent. In a society that emphasizes conformity, there truly is an extremely high regard for the "golden mean" and people who depart too much from it are devalued. Why is creativity even important? It is important because the world is changing at a far greater pace than it ever has before, and people need constantly to cope with novel kinds of tasks and situations. Learning in this era must be lifelong, and people constantly need to be thinking in new ways. The problems we confront, whether in our families, communities, or nations, are novel and difficult, and we need to think creatively and divergently to solve these problems.

The technologies, social customs, and tools available to us in our lives are replaced almost as quickly as they are introduced. We need to think creatively to thrive, and, at times, even to survive.

Creativity and analytical intelligence are not at odds with each other. To be creative, one must be able to critique one's own (as well as others') ideas. One cannot be creative in the absence of some kind of filter that distinguishes one's truly excellent ideas from one's not so great ones. And even the most creative thinkers have ideas that are "clunkers."

Unfortunately, the way children are taught to think is often neither creative nor analytically intelligent. So we may end up with "walking encyclopedias" who show all the creativity of an encyclopedia. In a bestseller of a few years ago, a man decided to become the smartest person in the world by reading an encyclopedia cover to cover (Jacobs 2005). The fact that the book sold so well is a testament to how skewed our conception has become of what it means to be smart. Someone could memorize that or any other encyclopedia, but not be able to solve even the smallest novel problem in his or her life.

If we want to encourage creativity, we need to promote creativity habits. That means we have to stop treating it as a bad habit. We have to resist efforts to promote a conception of accountability that encourages children to accumulate inert knowledge with which they learn to think neither creatively nor critically. And if we want to teach children to be intelligent, we need to encourage them to develop the critical-thinking skills that underlie intelligence.

How Can We Develop Creativity and Intelligence?

Consider 12 keys for developing intellectual skills and creativity habits in children. Whereas some techniques work only in some cultures (Sternberg 2004a), these keys should work, pretty much without regard to culture. Compare and contrast what works for intelligence versus what works for creativity.

Problem Definition and Redefinition

Intelligence: Define Problems

Tests often ask students to solve problems. But most problems in life are not presented in clear form to us. In our work, in our relationships, and in other aspects of our lives, figuring out what the problem is—defining it—is often the hardest part of the total problem-solving process.

For example, when something goes wrong in a relationship, people are usually aware that something is wrong; it is much harder to figure out what is wrong. When we teach a class, we often can tell if it is not going well. But figuring out why it is not going well is harder. In sum, the most challenging part of the problem-solving cycle is not even in problem solving, but in figuring out what the problem is to be solved.

Creativity: Redefine Problems

Creativity goes one step beyond intelligence from definition of a problem to redefinition of a problem. Redefining a problem means taking a problem and turning it on its head. Many times in life individuals have a problem and they just don't see how to solve it. They are stuck in a box. Redefining a problem essentially means extricating oneself from the box. This process is the synthetic part of creative thinking.

There are many ways teachers and parents can encourage children to define and redefine problems for themselves, rather than—as is so often the case—doing it for them. Teachers and parents can promote creative performance by encouraging their children to define and redefine *their own* problems and projects. Adults can encourage creative thinking by having children choose their own topics for papers or presentations, choose their own ways of solving problems, and sometimes having them choose again if they discover that their selection was a mistake. Teachers and parents should also allow their children to pick their own topics, subject to the adults' approval, on projects the children do. Approval ensures that the topic is relevant to the lesson and has a chance of leading to a successful project.

Adults cannot always offer children choices, but giving choices is the only way for children to learn how to choose. Giving children latitude in making choices helps them to develop taste and good judgment, both of which are essential elements of creativity.

Analyzing Information and Assumptions

Intelligence: Question and Analyze the Information Given

Standardized tests used for various kinds of university admissions often present information and ask students to analyze it. The good tests require students not just to remember the information given, but also to make sense of it. Analytical skills are key in this endeavor.

Creativity: Question and Analyze Assumptions

Tests of creativity need to go one step further. They need to assess whether an individual is able to question the assumptions underlying the information that is given. Highly creative people are questioning of assumptions. Everyone has assumptions. Often one does not know he or she has these assumptions because they are widely shared. Creative people question assumptions and eventually lead others to do the same. Questioning assumptions is part of the analytical thinking involved in creativity. When Copernicus suggested that Earth revolves around the sun, the suggestion was viewed as preposterous because everyone could see that the sun revolves around Earth. Galileo's ideas, including the relative rates of falling objects, caused him to be banned as a heretic.

Teachers can be role models for questioning assumptions by showing children that what they assume they know, they really do not know. Of course, children shouldn't question every assumption. There are times to question and try to reshape the environment, and there are times to adapt to it. Some creative people question so many things so often that others stop taking them seriously. Everyone must learn which assumptions are worth questioning and which battles are worth fighting. Sometimes it's better for individuals to leave the inconsequential assumptions alone so that they have an audience when they find something worth the effort.

Teachers and parents can help children develop this talent by making questioning a part of the daily exchange. It is more important for children to learn what questions to ask—and how to ask them—than to learn the answers. Adults can help children evaluate their questions by discouraging the idea that the adults ask questions and children simply answer them. Adults need to avoid perpetuating the belief that their role is to teach children the facts, and instead help children understand that what matters is the children's ability to use facts. This can help children learn how to formulate good questions and how to answer questions.

Selling Ideas

Intelligence: Good Ideas Tend to Sell Themselves if They Are Well Presented

Intelligent ideas are ones that are adaptive—that solve problems within an existing paradigm or *Zeitgeist*. As a result, intelligent ideas tend to be appreciated if they are well presented so that people can understand them. The

greatest challenge is presenting them in a way such that people do indeed understand them. In the absence of such presentation, people may be suspicious about the ideas—whether they are good and whether they even are ideas of any substance.

Creativity: Do Not Assume that Creative Ideas Sell Themselves; You Have to Sell Them

Everyone would like to assume that their wonderful, creative ideas will sell themselves. But as Galileo, Edvard Munch, Toni Morrison, Sylvia Plath, and millions of others have discovered, they do not. On the contrary, creative ideas are usually viewed with suspicion and distrust. Moreover, those who propose such ideas may be viewed with suspicion and distrust as well. Because people are comfortable with the ways they already think, and because they probably have a vested interest in their existing way of thinking, it can be extremely difficult to dislodge them from their current way of thinking.

Thus, children need to learn how to persuade other people of the value of their ideas. This selling is part of the practical aspect of creative thinking. If children do a science project, it is a good idea for them to present it and demonstrate why it makes an important contribution. If they create a piece of artwork, they should be prepared to describe why they think it has value. If they develop a plan for a new form of government, they should explain why it is better than the existing form of government. At times, teachers may find themselves having to justify their ideas about teaching to their principal. They should prepare their children for the same kind of experience.

Idea Analysis and Generation

Intelligence: Encourage Idea Analysis

It is one thing to be able to analyze ideas; it is another actually to do it. One reason that tests of intelligence and related constructs are imperfect predictors of everyday life performance is that the tests measure maximum performance whereas everyday life “assesses” typical performance. In a repressive society, the IQs are no lower than in any other society. People are able to analyze what is going on. But they do so at their peril and hence often simply hold their analytical skills in abeyance. If they do not, they risk prison or worse.

Creativity: Encourage Idea Generation

As mentioned earlier, creative people like to generate ideas. The environment for generating ideas can be constructively critical, but it must not be harshly or destructively critical. Children need to acknowledge that some ideas are better than others. Adults and children should collaborate to identify and encourage any creative aspects of ideas that are presented. When suggested ideas don't seem to have much value, teachers should not just criticize. Rather, they should suggest new approaches, preferably ones that incorporate at least some aspects of the previous ideas that seemed in themselves not to have much value. Children should be praised for generating ideas, regardless of whether some are silly or unrelated, while being encouraged to identify and develop their best ideas into high-quality projects.

The Role of Knowledge

Intelligence: Recognize that One Cannot Analyze Knowledge if One Lacks Knowledge

There was a period during the 1960s, at least in the USA, where a new wave of textbooks encouraged students to think critically from Day 1. The idea was good but its implementation was not, because somehow the authors failed to realize, or forgot, that one cannot analyze knowledge if one has no knowledge to analyze. Intelligent people need to be knowledgeable in order to be able to apply their analytical skills. Another reason that IQ tests often do not predict as well as one might hope is that much of the analysis is on rather abstract concepts rather than on the kinds of concrete, emotionally laden concepts one encounters in everyday life.

Creativity: Recognize that Knowledge Is a Double-Edged Sword and Act Accordingly

On the one hand, one cannot be creative without knowledge. Quite simply, one cannot go beyond the existing state of knowledge if one does not know what that state is. Many children have ideas that are creative with respect to themselves, but not with respect to the field because others have had the same ideas before. Those with a greater knowledge base can be creative in ways that those who are still learning about the basics of the field cannot be.

At the same time, those who have an expert level of knowledge can experience tunnel vision, narrow thinking, and entrenchment (Frensch and Sternberg 1989). Experts can become so stuck in a way of thinking that they become unable to extricate themselves from it. When a person believes that he or she knows everything there is to know, he or she is unlikely to ever show truly meaningful creativity again.

The upshot of this is that I tell my students and my own children that the teaching–learning process is a two-way process. I have as much to learn from my students and my children as they have to learn from me. I have knowledge they do not have, but they have flexibility I do not have—precisely because they do not know as much as I do. By learning from, as well as teaching to, one’s children, one opens up channels for creativity that otherwise would remain closed.

Surmounting Challenges

Intelligence: Encourage Children to Surmount Challenges

Dweck (2000) and her colleagues have studied individuals with different kinds of folk conceptions about intelligence. She has found that individuals who believe that intelligence requires them to keep learning and often to make mistakes in the process do better in confronting challenging tasks than do individuals who are uncomfortable with tasks that present a difficult challenge. The two groups of individual do not necessarily differ in their intelligence. They differ in how they deploy their intelligence. The ones with the “incremental” folk conception of intelligence—who are willing to seek out and surmount challenges—end up in a better position to confront life’s challenges than do the ones who expect things to come easily to them.

Creativity: Encourage Children to Identify and Surmount Obstacles

Being creative involves more than confronting challenges; it involves confronting obstacles, often purposely put in one’s way by the less creative. Buying low and selling high means defying the crowd. And people who defy the crowd—people who think creatively—almost inevitably encounter resistance. The question is not whether one will encounter obstacles; that obstacles will be encountered is a fact. The question is whether the creative thinker has the fortitude to persevere. I have often wondered why so many people start

off their careers doing creative work and then vanish from the radar screen. I think I know at least one reason why: Sooner or later, they decide that being creative is not worth the resistance and punishment. The truly creative thinkers pay the short-term price because they recognize that they can make a difference in the long term. But often it is a long while before the value of creative ideas is recognized and appreciated.

Teachers can prepare children for these types of experiences by describing obstacles that they, their friends, and well-known figures in society have faced while trying to be creative; otherwise, children may think that they are the only ones confronted by obstacles. Teachers should include stories about people who weren't supportive, about bad grades for unwelcome ideas, and about frosty receptions to what they may have thought were their best ideas. To help children deal with obstacles, teachers can remind them of the many creative people whose ideas were initially shunned and help them to develop an inner sense of awe of the creative act. Suggesting that children reduce their concern over what others think is also valuable. However, it is often difficult for children to lessen their dependence on the opinions of their peers.

When children attempt to surmount an obstacle, they should be praised for the effort, whether or not they were entirely successful. Teachers and parents alike can point out aspects of the children's attack that were successful and why, and suggest other ways to confront similar obstacles. Having the class brainstorm about ways to confront a given obstacle can get them thinking about the many strategies people can use to confront problems. Some obstacles are within oneself, such as performance anxiety. Other obstacles are external, such as others' bad opinions of one's actions. Whether internal or external, obstacles must be overcome.

Risk-Taking

Intelligence: Take Small Risks

Schools encourage a relatively modest level of risk-taking. A child scarcely can take too large a risk in taking a standardized test, for example. Risky answers, especially on essay tests, risk disaster. Does one really want to challenge the assumptions of the graders and end up possibly with a very low grade? Even in choice of courses, students often are afraid to take risks because it has become so competitive to find places in selective institutions of higher education. Taking a risk with a course, and possibly receiving a low grade, may mean the end of one's chances for one's dream college, graduate, or professional school.

Creativity: Encourage Serious Risk-Taking

When creative people defy the crowd by buying low and selling high, they take risks in much the same way as do people who invest. Some such investments simply may not pan out. Moreover, defying the crowd means risking the crowd's wrath. But there are levels of sensibility to keep in mind when defying the crowd. Creative people take sensible risks and produce ideas that others ultimately admire and respect as trendsetting. In taking these risks, creative people sometimes make mistakes, fail, and fall flat on their faces.

I emphasize the importance of serious (but sensible) risk-taking because I am not talking about risking life and limb for creativity. To help children learn to take sensible risks, adults can encourage them to take some intellectual risks with courses, with activities, and with what they say to adults—to develop a sense of how to assess risks.

Nearly every major discovery or invention entailed some risk. When a movie theater was the only place to see a movie, someone created the idea of the home video machine. Skeptics questioned if anyone would want to see videos on a small screen. Another initially risky idea was the home computer. Many wondered if anyone would have enough use for a home computer to justify the cost. These ideas were once risks that are now ingrained in our society.

Few children are willing to take many risks in school, because they learn that taking risks can be costly. Perfect test scores and papers receive praise and open up future possibilities. Failure to attain a certain academic standard is perceived as deriving from a lack of ability and motivation and may lead to scorn and lessened opportunities. Why risk taking hard courses or saying things that teachers may not like when that may lead to low grades or even failure? Teachers may inadvertently advocate children to only learn to “play it safe” when they give assignments without choices and allow only particular answers to questions. Thus, teachers need not only to encourage sensible risk-taking but also to reward it.

Dealing with Ambiguity

Intelligence: Resolve Ambiguities

The College Board, one of the two most far-reaching college admissions testing organizations in the USA, recently has announced that the new version of their college admissions test, SAT, is going to change the way the vocabulary section works. Instead of having very difficult vocabulary words, test-takers

will have to resolve ambiguities in texts where words can have multiple meanings. Similarly, the mathematical section of the test requires test-takers to resolve ambiguities regarding mathematical problems in order to reach the one correct answer. Much of intelligence is about resolving ambiguities, not only on tests but also in life.

Creativity: Encourage Tolerance of Ambiguity

People often like things to be in black and white. People like to think that a country is good or bad (ally or enemy) or that a given idea in education works or does not work. The problem is that there are a lot of grays in creative work. Artists working on new paintings and writers working on new books often report feeling scattered and unsure in their thoughts. They often need to figure out whether they are even on the right track. Scientists often are not sure whether the theory they have developed is exactly correct. These creative thinkers need to tolerate the ambiguity and uncertainty until they get the idea just right.

A creative idea tends to come in bits and pieces and develops over time. However, the period in which the idea is developing tends to be uncomfortable. Without time or the ability to tolerate ambiguity, many may jump to a less than optimal solution. When a student has almost the right topic for a paper or almost the right science project, it's tempting for teachers to accept the near miss. To help children become creative, teachers need to encourage them to accept and extend the period in which their ideas do not quite converge. Children need to be taught that uncertainty and discomfort are a part of living a creative life. Ultimately, they will benefit from their tolerance of ambiguity by coming up with better ideas.

Self-Efficacy

Intelligence: Help Children Build Self-Efficacy

Many people often reach a point where they feel as if no one believes in them. I reach this point frequently, feeling that no one values or even appreciates what I am doing. Because creative work often doesn't get a warm reception, it is extremely important that the creative people believe in the value of what they are doing. This is not to say that individuals should believe that every idea they have is a good idea. Rather, individuals need to believe that, ultimately, they have the ability to make a difference.

Bandura (2007) has shown that self-efficacy is a releaser for intelligent behavior. The main limitation on what children can do is what they think they can do. All children have the capacity to be creators and to experience the joy associated with making something new, but first they must be given a strong base for creativity. Sometimes teachers and parents unintentionally limit what children can do by sending messages that express or imply limits on children's potential accomplishments. Instead, these adults need to help children believe in their own ability to be creative.

Creativity: Help Build Constructive Self-Doubt

Creative individuals display self-efficacy up to a point, but more importantly, perhaps, they at the same time display self-doubt. They are never quite sure that they can figure out whatever it is they need to figure out—and this self-doubt metaphorically drives them nuts. They have to succeed in their creative accomplishments because if they do not, they never will get over their self-doubt. The problem, of course, is that once they succeed in one creative quest, the self-doubt returns as they seek the next creative quest.

Doing One's Best

Intelligence: Teach Children that They Must Do Their Best on What They Need to Do

In school and on standardized tests, children encounter large numbers of tasks that interest them little or not at all. But when students are considered for admission to college and university programs, their overall grade-point-average plays a major part in the decision: How well did the students perform not only in the subjects they took to and liked but also in the subjects they did not take to and did not particularly like? Indeed, a cornerstone of intelligence theory dating back to Spearman is that all aspects of intelligence tend to be positively correlated with each other: People who are good at some intellectual tasks tend also to be good at other intellectual tasks

Creativity: Help Children Find What They Love to Do

Teachers must help children find what excites them to unleash their children's best creative performances. Teachers need to remember that school work is what really excites them. People who truly excel creatively in a pursuit, whether vocational or avocational, almost always genuinely love what they do.

Helping children find what they really love to do is often hard and frustrating work. Yet, sharing the frustration with them now is better than leaving them to face it alone later. To help children uncover their true interests, teachers can ask them to demonstrate a special talent or ability for the class, and explain that it doesn't matter what they do (within reason), only that they love the activity.

In working with my children and my students, I try to help them find what interests *them*, whether or not it particularly interests me. Often, their enthusiasm is infectious, and I find myself drawn into new areas of pursuit simply because I allow myself to follow my children rather than always expecting them to follow me.

I often meet students who are pursuing a certain career interest not because it is what they want to do, but because it is what their parents or other authority figures expect them to do. I always feel sorry for such students, because I know that although they may do good work in that field, they almost certainly will not do great work. It is hard for people to do great work in a field that simply does not interest them.

Delay of Gratification

Intelligence: Teach Children the Importance of Delaying Gratification over the Moderate Term

Walter Mischel (2014) and his colleagues did a set of studies showing that children who are able to delay gratification do better not only in early schooling but in later schooling than children who have difficulty delaying gratification. The kind of gratification they were talking about was relatively short term—actually, a matter of minutes. By the time students become high school and college students, they need to learn to delay gratification until they get their scores on tests or even to the end of the semester when they get their term grades. Other students may have more fun but may not find the time to study in ways that will get them top grades. Intelligent people often have to wait over the moderate term to reap the rewards of their intelligence.

Creativity: Teach Children the Importance of Delaying Gratification over the Long Term

With creativity, the time period in which one has to wait to obtain gratification is much greater than with intelligence. Often, creative people never even get recognized for their work until after they die!

Part of being creative means being able to work on a project or task for a long time without immediate or interim rewards. Children must learn that rewards are not always immediate and that there are benefits to delaying gratification. The fact of the matter is that, in the short term, people are often ignored when they do creative work or even punished for doing it.

Many people believe that they should reward children immediately for good performance, and that children should expect rewards. This style of teaching and parenting emphasizes the here and now and often comes at the expense of what is best in the long term.

An important lesson in life—and one that is intimately related to developing the discipline to do creative work—is to learn to wait for rewards. The greatest rewards are often those that are delayed. Teachers can give their children examples of delayed gratification in their lives and in the lives of creative individuals and help them apply these examples to their own lives.

Hard work often does not bring immediate rewards. Children do not immediately become expert baseball players, dancers, musicians, or sculptors. And the reward of becoming an expert can seem very far away. Children often succumb to the temptations of the moment, such as watching television or playing video games. The people who make the most of their abilities are those who wait for a reward and recognize that few serious challenges can be met in a moment. Children may not see the benefits of hard work, but the advantages of a solid academic performance will be obvious when they apply to college.

The short-term focus of most school assignments does little to teach children the value of delaying gratification. Projects are clearly superior in meeting this goal, but it is difficult for teachers to assign home projects if they are not confident of parental involvement and support. By working on a task for many weeks or months, children learn the value of making incremental efforts for long-term gains.

The Environment

Intelligence: Provide an Environment that Fosters Intelligence

Oddly enough, schools do not always provide environments that foster intelligence. In some schools, for example, students do endless memorization, whether of textbooks or religious books. In either case, the students may not even understand what they are memorizing. Sometimes, group norms discourage the display of intelligence. Teachers and many parents know how to

cope with students who are near the middle of the bell curve of intellectual skills but dread or resent those who depart too far in either direction. Many schools do not even have special programs for the gifted, suggesting that those students have no special needs at all. The students may sit through years of classes that thoroughly bore them and that are way too easy for them and the school does not view the students' lack of being challenged as its responsibility. Schools need to provide an environment that encourages students to develop and display their intellect rather than to suppress it.

Creativity: Provide an Environment that Fosters Creativity

There are many ways teachers can provide an environment that fosters creativity. The most powerful way for teachers to develop creativity in children is to *role model creativity*. Children develop creativity not when they are told to, but when they are shown how.

The teachers most people probably remember from their school days are not those who crammed the most content into their lectures. The teachers most people remember are those teachers whose thoughts and actions served as a role model. Most likely they balanced teaching content with teaching children how to think with and about that content.

Occasionally, I will teach a workshop on developing creativity and someone will ask exactly what he or she should do to develop creativity. Bad start. A person cannot be a role model for creativity unless he or she thinks and teaches creatively him- or herself. Teachers need to think carefully about their values, goals, and ideas about creativity and show them in their actions.

Teachers also can stimulate creativity by helping children *to cross-fertilize in their thinking* to think across subjects and disciplines. The traditional school environment often has separate classrooms and classmates for different subjects and seems to influence children into thinking that learning occurs in discrete boxes—the math box, the social studies box, and the science box. However, creative ideas and insights often result from integrating material across subject areas, not from memorizing and reciting material.

Teaching children to cross-fertilize draws on their skills, interests, and abilities, regardless of the subject. If children are having trouble understanding math, teachers might ask them to draft test questions related to their special interests. For example, teachers might ask the baseball fan to devise geometry problems based on a game. The context may spur creative ideas because the student finds the topic (baseball) enjoyable and it may counteract some of the anxiety caused by geometry. Cross-fertilization motivates children who aren't interested in subjects taught in the abstract.

One way teachers can enact cross-fertilization in the classroom is to ask children to identify their best and worst academic areas. Children can then be asked to come up with project ideas in their weak area based on ideas borrowed from one of their strongest areas. For example, teachers can explain to children that they can apply their interest in science to social studies by analyzing the scientific aspects of trends in national politics.

Teachers also should *instruct and assess for creativity*. If teachers give only multiple-choice tests, children quickly learn the type of thinking that teachers value, no matter what they say. If teachers want to encourage creativity, they need to include at least some opportunities for creative thought in assignments and tests. Questions that require factual recall, analytic thinking, and creative thinking should be asked. For example, children might be asked to learn about a law, analyze the law, and then think about how the law might be improved.

Teachers also need to *reward creativity*. It is not enough to talk about the value of creativity. Children are used to authority figures who say one thing and do another. They are exquisitely sensitive to what teachers' value when it comes to the bottom line—namely, the grade or evaluation.

Creative efforts also should be rewarded. For example, teachers can assign a project and remind children that they are looking for them to demonstrate their knowledge, analytical and writing skills, and creativity. Teachers should let children know that creativity does not depend on the teacher's agreement with what children write, but rather with ideas they express that represent a synthesis between existing ideas and their own thoughts. Teachers need to care only that the ideas are creative from the student's perspective, not necessarily creative with regard to the state-of-the-art findings in the field. Children may generate an idea that someone else has already had, but if the idea is original to the student, the student has been creative.

Teachers also need to *allow mistakes*. Buying low and selling high carries a risk. Many ideas are unpopular simply because they are not good. People often think a certain way because that way works better than other ways. But once in a while, a great thinker comes along—a Freud, a Piaget, a Chomsky, or an Einstein—and shows us a new way to think. These thinkers made contributions because they allowed themselves and their collaborators to take risks and make mistakes.

Although being successful often involves making mistakes along the way, schools are often unforgiving of mistakes. Errors on schoolwork are often marked with a large and pronounced X. When a student responds to a question with an incorrect answer, some teachers pounce on the student for not having read or understood the material, which results in classmates snickering. In hundreds of ways and in thousands of instances over the course of a

school career, children learn that it is not all right to make mistakes. The result is that they become afraid to risk the independent and the sometimes-flawed thinking that leads to creativity.

When children make mistakes, teachers should ask them to analyze and discuss these mistakes. Often, mistakes or weak ideas contain the germ of correct answers or good ideas. In Japan, teachers spend entire class periods asking children to analyze the mistakes in their mathematical thinking. For the teacher who wants to make a difference, exploring mistakes can be an opportunity for learning and growing.

Teachers also can work *to encourage creative collaboration*. Creative performance often is viewed as a solitary occupation. We may picture the writer writing alone in a studio, the artist painting in a solitary loft, or the musician practicing endlessly in a small music room. In reality, people often work in groups. Collaboration can spur creativity. Teachers can encourage children to learn by example by collaborating with creative people.

Children also need to learn how *to imagine things from other viewpoints*. An essential aspect of working with other people and getting the most out of collaborative creative activity is to imagine oneself in other people's shoes. Individuals can broaden their perspective by learning to see the world from different points of view. Teachers and parents should encourage their children to see the importance of understanding, respecting, and responding to other people's points of view. This is important, as many bright and potentially creative children never achieve success because they do not develop practical intelligence. They may do well in school and on tests, but they may never learn how to get along with others or to see things and themselves as others see them.

Conclusion

Given the content of this chapter, it might seem that the argument is that creativity and intelligence should be negatively correlated. That is not the argument. In fact, they are positively correlated (Park et al. 2008). Rather, the argument is that creativity must build on intelligence but society is often constructed so that this building never occurs. It is hard to be creative unless one is reasonably intelligent because, in general, creativity requires what intelligence requires but more. However, creativity is not just about having more intelligence. Rather, it represents a departure in direction. Hence, someone could be highly intelligent but not very creative or very creative but only moderately intelligent. What is not likely is to find someone highly creative

who is not very intelligent at all. The two can work together but schools must prepare students in ways that help them work in concert rather than in opposition to each other. In particular, they must go beyond rote to teaching students to think critically, and then beyond teaching them to think critically toward teaching them to think creatively as well.

Cultural Implications

Societies differ in the extent to which they encourage creativity. At least as measured by indices such as Nobel Prizes, some societies (e.g., the USA) are over-represented and others under-represented. Indeed, some societies seem to arrest their Nobel Prize winners (e.g., Liu Xiaobo in China) or, at best, to shun them, and sometimes their families (e.g., the brother-in-law of Liu Xiaobo in China), hardly good signs for the development of creativity. But why are some societies so under-represented and others so seemingly over-represented, at least in statistical terms?

Attitudes toward creativity are embedded in cultures. Although cultures generally say they support and encourage creativity, a lot depends on what they mean by their support and encouragement. For some teachers, supporting creativity may mean essentially agreeing with what the teachers or the cultural conventions dictate. The problem is how far one can go outside those cultural conventions before one finds oneself in trouble.

The way repressive societies deal with the strict limits they place on ideas and speech is to say that you can say whatever you want, so long as it is within circumscribed domains. Thus, for example, you might be allowed to be creative in engineering but not in politics. A number of societies, again including China, spend enormous amounts of money on censoring freedom of speech, with potentially dire results for those who fall outside the often vague limits the society imposes. The goal is for people to learn self-censorship, realizing that the penalties are so severe that one does not even want to take the chance of arousing the ire of the censors and those who employ them.

This does not work. The reason it does not work is that creativity is not merely a skill that can be turned on and turned off. As discussed above, it is a set of attitudes toward life. And if one learns that creative attitudes lead to censure, prison, and possibly even death, then one is unlikely to develop creative attitudes, or if one does, to exercise them.

Some years ago I was consulting in a country (not China) that was placing enormous effort into developing the creativity of its people. The effort, I found, was hugely unsuccessful. The government comprised one of those

many so-called democracies where the same political party just always happened to win the elections. And when I spoke to people in schools, virtually no one took the governmental effort to encourage creativity at all seriously. Their interpretation was that the mandate of the government was to act as though one were creative without actually being it. That was a while ago, and of course the same political party just happens to be in power in the country. The pretense of developing creativity does not create the reality of developing it.

Cultural conventions are more likely to tolerate the development of parts of intelligence because a large part of intelligence is crystallized—it inheres in the knowledge base—and even that part that is analytical easily can be applied in the abstract. But the most repressive dictatorships (usually called “democracies” or “democratic republics” or whatever other pretend labels they happen to use) cannot even afford the development of much of fluid or analytical intelligence because that too can be dangerous to the continuation of the repressive regime. Such regimes are not limited to Asia. They have popped up in Europe, South America, and with all the surveillance the current US government is doing of its citizens, one has to worry about the future of the USA as well.

In any culture, there are some highly creative people and multitudes of potentially creative people. Why do people put up with all this? In some cases, they don't. They are merely arrested or stopped before they exercise their creativity in ways the government considers unacceptable. But there is another factor.

As discussed earlier, creative people defy the crowd: They think and often act in unconventional ways. And crowd defiers, almost by definition, make other people uncomfortable. They do not do things in the ways others do. Whether in China or the USA or anyplace else, groups will try to cut tall poppies down to size, or simply excise them from the poppy field. So inevitably, the suppression of creativity actually comforts many people. It prevents them from having to deal with, and acknowledge, diversity of views.

In a US university with which I had some involvement, when I suggested the creation of a vice president for diversity, those at the top of the governance structure for the university looked at me as though I were from outer space. Why in the world would one want to ensure diversity? Those individuals were not trying to be difficult or ornery: They just didn't get it. From their point of view, diversity in any meaningful form was not something particularly to be welcomed, and the extremely uniform composition of the university reflected it. No Nobel Prize winners are likely to come from that university. So even within a culture that in general prizes diverse views, there are large pockets

where diversity of people and views is not particularly welcome. And even in those universities or other institutions where diversity of viewpoints is welcome, one has to ensure that the welcoming is in deed as well as in word.

Creative people automatically create their own opposition. When opposition of viewpoint is considered a threat, creativity will not thrive. Different cultural and subcultural groups have different levels of tolerance for diversity of viewpoints. For those that do not encourage such diversity, don't waste your time and money talking about the need for creativity. It won't happen. There is a cultural cost to creativity and a society has to be willing to pay the cost of dissent in order to reap creativity's benefits.

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6

Creative Cognition: How Culture Matters

Alessandro Antonietti and Barbara Colombo

In order to understand how culture affects cognitive processing involved in creativity, we need to identify the basic mental mechanisms underlying the generation of new and meaningful ideas and artefacts, namely, the core of creativity. If we take into consideration the main theoretical perspectives elaborated about the processes underpinning creative thinking, we realise that three main sets of mental operations can be found: widening, connecting, and reorganising (Antonietti and Colombo 2013; Antonietti et al. 2011). *Widening* concerns the disposition to keep an open mind, to be aware of the great number of elements that can be identified in a given situation, to recognise possible, not obvious, meanings, to discover hidden aspects, and to overcome apparent constraints. *Connecting* refers to the capacity to establish reciprocal relationships among different elements, to draw analogies between remote things, to combine ideas in odd ways, and to synthesise the multiplicity of disparate elements into an overall structure. *Reorganising* consists of changing the perspective, assuming a different point of view, seeing things by inverting relationships between their elements, asking original questions, and

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imagining what should happen if unusual conditions occurred. Hence, we have to address each of these mental operations to get a better comprehension of the grounds of creative cognition.

Widening

The first mechanism that we see operating in creative thinking—that is, *widening*—consists of coming out from the limited conceptual framework within which people spontaneously pigeonhole situations and breaking the “thinking bonds” that often restrain them. To produce something new and original, it is important to move in a wider mental field which mobilises ideas and leads people to explore new directions of thinking, thus helping them to find new opportunities.

A number of authors have stressed that creativity is supported by mechanisms of thought unified by the fact that widening the mental outlook should increase the likelihood of devising and imagining new and interesting things. Starting from Guilford (1950), creativity is linked to the ability to produce many ideas, thus leading individuals to assume a broader mental set. This ability is characterised by the richness of the thinking flow (fluidity) and the ability to follow new directions (flexibility) in order to achieve uncommon and original outcomes. How can such a goal be achieved?

According to Weisberg (1993), a mental framework can be widened by search processes that increase the variety of the ideas to be considered. This author highlighted that creativity always starts from existing ideas which have been modified to fit the specific problem or goal in question. This existing knowledge provides the basic elements with which we construct new ideas. However, so that such a construction can take place, the old ideas should be changed in order to allow persons to have a higher number of ideas, hopefully different from each other. In fact, the pieces of information that the persons gradually get while trying solutions that come to mind lead them to change the direction of reasoning. Creative thinking is based on a search process which draws from its continuity with the past. We face new situations based on what we have done previously in similar or identical situations and novelty arises in the form of variations of old themes, broadening our mental perspective.

Variation is a strategy used to make changes in existing ideas. In fact, by varying an existing idea, a person can create new ones, widening the range of opportunities at his/her disposal. Back in 1880, William James wrote that new concepts arise from accidental variations of mental activity, which can be either accepted or rejected. This view was taken by Campbell (1960), who

claimed that creativity involves variation, selection, and retention. According to Campbell, in fact, the basis of creative thought is a process similar to that underlying evolution. The production of an innovative idea follows the previous generation of many inadequate ideas. As a consequence, the greater the number of ideas found—most of which can prove later to be unsuitable for solving the problem at hand—the greater the probability that an interesting idea emerges.

Such an “evolutionary” view of creativity, which leads us to conceive it as a process of change and selection, has been recently revived by Johnson-Laird (1998). According to this author, creative products result from pre-existing elements which are varied in order to create something new. The changes that are produced are subject to three types of selections neo-Darwinian, neo-Lamarckian, and multi-stage. The first type of procedure that governs creativity is defined as *neo-Darwinian* since ideas are generated randomly in a first stage and they are evaluated according to certain criteria in a second stage. Only the ideas that pass this evaluation, namely, which meet the restrictions placed on this second phase, “survive”. According to the *neo-Lamarckian* procedure, instead, the production of ideas is guided by a criterion. In this case, ideas are generated only within a predetermined domain. There is also the possibility of a *multi-stage* procedure when certain criteria are used to generate ideas and others to select them.

Individual differences associated with widening processes concern categorisation styles (Narayanan 1984; Wallach and Kogan 1965). In order to organise the reality conceptually, some people prefer to apply *close* categories (i.e., well-defined categories based on narrow criteria), whereas other individuals tend to use *open* categories (namely, broad categories that because of their vagueness, include a high number of items). Creativity skills are possessed by the second type of persons. A situation similar to that previously described and likely to bring out individual differences in “style” of thought is made up of a task of conceptualisation in which, faced with images of everyday objects, people have to group them into classes and justify their choices. In this task, people may adopt different criteria. There are, first of all, those who classify objects on the basis of *descriptive* and *analytical* criteria, that is, on the basis of physical characteristics and perception of common aspects (such as shape, colour, and material). Then there are those who group objects based on *conceptual-inferential* criteria, that is, criteria based on the fact that certain objects are all examples of a given concept (e.g., the objects “fork”, “glass”, and “cup” are grouped into as members of the category “dish”). Finally, there are those who divide the objects on the basis of *thematic-relational* criteria, inserting objects into broad, ill-defined, and not obvious categories (e.g., the

objects “comb”, “watch”, “port”, and “lipstick” are grouped as representatives of the concept “ready to go out”). It was observed that individuals with high intelligence and low creativity prefer the conceptual-inferential criterion and exclude the thematic-relational one, whereas individuals with low intelligence and high creativity employ the relational-thematic criterion but not the conceptual-inferential one (Kelemen and Carey 2007).

Connecting

Already in 1932 Vygotsky formulated a view of creativity based on the concept of “association”, thanks to which parts of the original material are re-elaborated so to produce workable products which can be communicated to others. This perspective was resumed by Mednick (1962), who claimed that creativity results from so-called *remote associations*, which allow individuals to connect ideas that are distant from each other. According to him, creativity is the ability to combine, in a new and unusual way, disparate elements that apparently have little in common. For example, Henry Ford succeeded in reducing the production cost of the Model T, an innovative car that was launched on the market, demanding that the goods supplied to the factories were packed in boxes of a defined size and with the screw holes made in specific locations. The walls of the boxes were actually used, being designed with the right dimensions, as the floors of the cars that were built in the factory. The ingenious idea was to establish a relationship between two elements usually conceived as distinct: packaging material and the product inside the package.

Other authors have also recognised association as the fundamental process of creativity. For example, Koestler (1964) called *bisociation* the operation consisting in bringing together two reasoning structures commonly regarded as incompatible, or finding similarities between different fields of knowledge. Innovation emerges as soon as two different levels of reasoning overlap, thus producing something that did not exist before. In support of his view, we can remind that technologies for radar devices were inspired by the mechanism of emission and reception of ultrasounds by bats. Current research aimed at improving the systems for humidification of the passenger compartments of cars have been inspired by studies on the anatomical structure of the nose of the camel. Again, the design of a house roof that was white to repel heat in summer and dark in winter to absorb heat was inspired by the analogy with the scales of a fish. The flounder, when swimming in the water, takes on the colour of the surrounding environment. This happens thanks to the chromatophores, vesicles of dark pigment which is retained when pressure

exerted on the skin of the animal is low (as when the fish swims close to the surface of water) and is released when pressure increases (as when the fish moves to deep water). This phenomenon suggested the idea of building a roof completely covered with black plastic small white spheres. The heat dilates the spheres (as it happens in the summer), making the roof lighter, whereas winter weather, which is cold, restricts them, making the roof darker (Gordon 1961).

Another form of connection involved in creative thinking is described by Rothenberg (1979). He proposed the existence of a form of thought—called *Janusian* (from Janus, the Roman divinity with two faces looking in opposite directions)—which marks the genesis of artistic and scientific products. It consists in composing the terms of an antithesis, namely, in being able to hold simultaneously two opposite elements and attempting, against the initial inconsistency or paradox, to integrate them. Rothenberg cites, as evidence of his theory, autobiographical accounts of scientists and artists, the analysis of the preparatory notes or pre-release versions of literary works and paintings, and a long series of interviews with artists and scientists relating to the mental processes activated during their work.

In order to give an account of the creative process, in recent times Simonton (1999) postulated the existence of *mental elements*, that is, the fundamental psychic units, such as feelings, emotions, concepts, and ideas. Combinations of well-organised and stable mental elements give rise to *configurations*. Following a process of “consolidation”, configurations can become so cohesive that they can be treated as a unit. The more configurations are integrated, the more psychic functions are consistent and organised. Units are usually combined together permutations. In these permutations what is relevant is not so much the elements which are combined, but the way in which they are combined. Simonton argued that creative people have, first of all, many mental elements available. The greater the number of these elements, the greater the number of possible permutations. In other words, creative people are those who have a greater chance of producing new combinations of mental elements. Secondly, creative people have a particular skill in performing random permutations. This should help them to create a rich mental structure of interconnected elements.

This aspect of creativity is stressed in the *Geneplore* model (Finke et al. 1992; Smith et al. 1995; Ward et al. 1995), according to which original and innovative outcomes can result by a process in two phases: the *generative* phase, in which an individual constructs mental representations, and the *exploration* phase, in which these representations are interpreted in order to lead them to suggest creative discoveries. In the generative phase, the representation results as a consequence of an associative process through which elements are combined together.

Reorganising

If we were asked to determine the volume of a ball, we could use our school memories trying to recall the formula to calculate the volume of the sphere. But if we were required to determine the volume of an irregular solid (e.g., a small rock), there would be no formula or past experience that could help us. Instead, we might think to immerse the rock in a graduated jug, partially filled with water, and measure the resulting increase in the level of the liquid. The increase corresponds to the volume of the dipped rock. In this case, success is caused by setting the problem in different terms: not related to formulas, but as a practical-operational problem. Reorganising the starting representation of a situation, in order to assume a new perspective, allows one to find an original and effective response.

The idea that a reversal in the mental framework is a psychological mechanism that underpins creativity emerged early in the history of psychology. Some suggestions coming from the Gestalt psychology tradition can be interpreted along this perspective, according to which new ideas come from a restructuring act. It consists in the transformation of the point of view from which the current situation is analysed, thus leading people to identify new properties of the given elements and/or new relationships among them or new functions of the available materials (Wertheimer 1959).

The restructuring act appears to be the core of what De Bono (1967, 1990) calls *lateral thinking*. Lateral thinking is opposed to vertical thinking. The latter consists in the application of rigid reasoning patterns related to consolidated habits, routines, previous experience. It is characterised by sequential and systematic processing procedures in which the various steps are connected to each other on the basis of logical links. Vertical thinking may be associated to the image of the ascent of a staircase (where each step rests on the previous one) or to the construction of a tower by means of the superposition of many cubes. In contrast, lateral thinking moves from one pattern of reasoning to another one, induces people to look at problems in new ways, to follow directions not explored previously and not usually considered to overcome the obstacles, to examine all alternative forms of reasoning. As an example of the application of lateral thinking, consider the following. A person, equipped with a barometer, has to find the height of a skyscraper. The person may implement vertical—namely, not creative—thinking. He or she might use the barometer, the length of which is known, as the unit of measure and, descending the stairs of the skyscraper's external service, count how many times the length of the barometer is reportable on the length of the wall. The person, drawing on his/her knowledge of physics, could also throw the barometer

from the top of the skyscraper and count the time it takes to reach the ground. By knowing the acceleration of gravity, he or she can obtain, from the time of the fall and through the formula “space = acceleration of gravity time squared divided by two”, the measure of the distance travelled by the barometer, that is, the height of the building. The barometer may also be used as an altimeter: Calculating the difference in air pressure between the base and the top of the skyscraper (as it is known, the pressure gradually decreases if we rise above the sea level), that person can convert that difference in metres using a formula. The person could then tie a string to the barometer so he or she can use it as a pendulum. Once on top of the skyscraper, the person will hold the string and let the barometer go: As a direct consequence, the barometer will oscillate. The oscillation period (equal to the time it takes for the pendulum to go from one end of its trajectory to the other end) can then be traced and, through an appropriate formula, the length of the rope, and then the height of the building, might be computed. In all these cases, the person comes to “vertical” solutions using laws and knowledge previously known. Such solutions always refer to the idea of measurement metrics. What could be a solution suggested by lateral thinking? Giving the barometer to the porter of the skyscraper and obtaining the requested information in return! In this case, thinking does not follow what mathematics or physics can suggest, but “jumps” into a quite different representation of the situation.

The reversing of a mental framework can also follow another path, that is, trying to apply a mental framework outside its normal scope. This is what Schank (1988) suggested. According to this author, to understand reality we must have *knowledge structures*, which are generally derived from repeated experiences. A knowledge structure which was used several times to give an account of events constitutes a *pattern of explanation*. A parsimonious strategy is to treat a new situation as not so different from the previous ones, that is, to apply a pattern of explanation that we applied to other known situations. This prevents us from performing all the processing that would be necessary if we treated the situation as if we encounter it for the first time. Creativity emerges when, in order to face the new situation, we adapt a pattern of explanation, originally set for another situation, to the current situation. Creativity consists in applying a pattern of explanation which is not expected to be applied to that situation. In other words, creativity comes from the misapplication of a pattern of explanation. Faced with an unusual event, we fail to apply the typical pattern of explanation for that situation, but we apply another pattern of explanation. The patterns of explanation, when applied outside of their familiar context, may produce creative results. The creative attitude is what allows the individual to leave the patterns of explanation to be applied

to apparently not relevant situations so that they can lead to the discovery of useful properties.

Some cognitive styles are linked to the cognitive capacity to perform mental reorganisations. The field-independent cognitive style—detected by the ability to locate hidden figures in more complex images—was shown to be related to creative thinking and to the insightful solution of problems (Martinsen 1997). Consider the shapes reported in Fig. 6.1. The complex picture (Fig. 6.1b) contains the simple shape (Fig. 6.1a). Field-dependent subjects hardly identify the simple shape because they are “overwhelmed” by the complex shape, in which the simple shape is not evident. The perceptual organisation of the complex shape is that of a species of gallery divided into sectors so that the simple shape (a kind of house with a domed roof), which is included in the complex shape and all its elements are actually visible, can be hardly detected. In front of figures like Fig. 6.1b, field-independent subjects can take a point of view different from the common one. Their perceptual organisation does not remain bound to what is imposed. They succeed in “breaking” the dominant perspective and discovering what is hidden in the overall figure. Those skilled in overcoming the forces in the perceptual field and organise it according to alternative principles tend to employ a similar strategy in situations where the answer requires a reorganisation of the cognitive field and the identification of relationships and structures not immediately obvious.

The ease, in front of ambiguous figures (i.e., figures that can be interpreted in more than one way or where you see more than one object), to switch from the other interpretation was found to be related to creativity. For instance, the shape reported in Fig. 6.2a (the so-called Necker’s cube) can be seen in two ways: either with face down, as if it were in the foreground (and thus with the cube which develops in perspective towards the top, from right to left, as if it were seen from below: Fig. 6.2b) or with its face up, as if it were to be in the

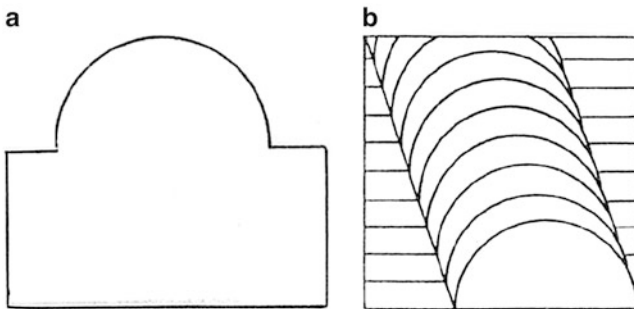


Fig. 6.1 An example of hidden shapes

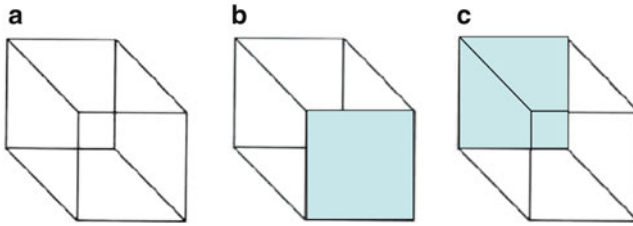


Fig. 6.2 Example of an ambiguous figure

foreground (and thus with the cube which develops in perspective from top to bottom, from left to right, as if it were seen from below: Fig. 6.2c). Creative people can in a given time change the two perspectives in their mind a greater number of times than non-creative people.

Are Widening, Connecting, and Reorganising Universal Cognitive Mechanisms?

In order to assess if the core mechanisms underpinning creative cognition can be detected in different cultural settings, we can look for examples of their implementation outside the environments in which the theories mentioned before were developed; otherwise we can infer that they are limited to the context where they have been identified. In other words, if we assume that widening, connecting, and reorganising the mental framework are three basic processes which fuel creative thinking, we are expected to find that they are operating (i) not only in eminent people—as those often taken into consideration, as we saw, to support a given theoretical perspective—but also in non-eminent people; (ii) not only in recent years, when researchers began investigating creativity and elaborating theories about it, but also in the past; and (iii) not only in Western countries but also elsewhere. In this section, some instances of the application of the three creative mechanisms in question by ordinary persons, many centuries ago, and in non-Western contexts, are reported to support the alleged pervasiveness of widening, combining, and reorganising as core cognitive operations involved in creativity.

As far as widening is concerned, two ingenious ways to prevent thieves to steal a car devised by laypersons are reported in Fig. 6.3. In the absence of the suitable instrument, the owner of the first vehicle presumably wondered if something else can be used to reach the goal. By keeping an open mind, he or she was reminded that a tool which is used typically to ensure a bicycle to

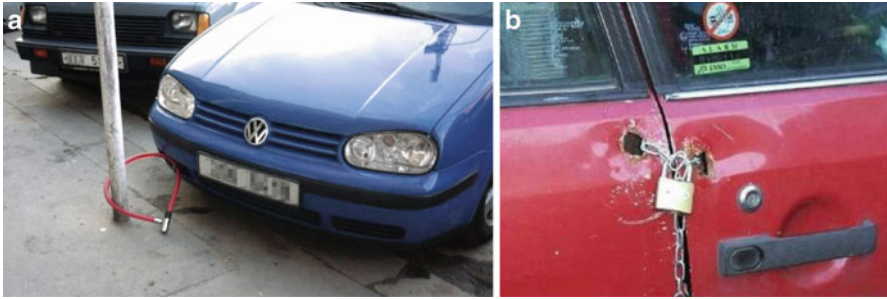


Fig. 6.3 Examples of application of the widening mechanism by ordinary people

poles or bars can be, in the absence of better ways, applied to the car (3a). In the second case (3b), by broadening the mental set of the tools which can be employed to the purpose of closing the car doors, an object (the lock), which is routinely used for other purposes, was found. As another example, consider the way a person found to repair a chair whose leg detached (Fig. 6.4). In all these cases, if people's thoughts would be restricted to the narrow range of the proper objects to be used (which were unavailable in those contexts), a satisfactory solution could not be achieved. So, it seems that the ability to have a wide mental perspective about the situations to be addressed help people to discover unusual but productive ways to face them.

If we focus on what happens in non-Western socio-cultural settings, we find that a similar mechanism is operating in other situations. Let's consider some examples. The biologist Stephan Jay Gould collected a wide set of shoes he bought in different countries of the world during his travels (e.g., in Ecuador, Nigeria, and India). All these shoes had in common the fact that were produced by recycling materials originally devised for other aims (for instance, sandals had been produced with rubber derived by abandoned tyres) (Johnson 2010). In Indonesia in 2005, a large set of incubators was offered to be employed in paediatric hospitals, but the technology was too sophisticated to work in that context, where the climate is dangerous for electric circuits and replacement pieces were not available and, for this reason, in a short time span the incubators were out of action (statistics show that 95 % of the technology donated to the Third World fails to work after five years). Thus, in a hospital, a different way to build incubators was designed, by using mechanical pieces coming from cars fallen into disuse (Johnson 2010). In India, a potter, Mansukh Prajapati, transformed the local art to shape crockery so to use clay to create a sort of refrigerator which was working without electricity (Radjou et al. 2012). In the same country, it is reported that people share a code, based on the number of rings before the call begins, to communicate by



Fig. 6.4 A further example of application of the widening mechanism by ordinary people

using the phone without spending money (Radjou et al. 2012). In all these cases, persons succeeded in either solving a problem or innovating something since they were not restricted to the habitual ways of using materials and procedures (tyres and car motor engine are only for cars, clay has to be shaped to produce pots only, the phone is meant to communicate by speaking) but enlarged their vision of what was available in their environment and thus found a larger set of opportunities.

As an older instance of the creative power of widening the mental field, we can mention the case of Leonardo da Vinci (1452–1519), who designed a system to automatically move a rotisserie. Instead of focussing on the spit, Leonardo looked at what is around it. When we cook a dish stuck on the spit over the fire, it produces smoke. Would it not be possible to turn the smoke into something useful? If smoke is conveyed in a hood at the end of which it is placed a windmill, the smoke, going up, will set it in motion. Such bloodstream motion of the whirlwind can be transmitted, with appropriate couplings, to rotate the spit without any human intervention. The same process can be identified as the source of the invention of mills. The problem was to find a way to rotate a mechanism and the solution was found by looking at the surrounding environment and finding something (water or wind, according to the country) which can be conveyed to produce rotation. This is a case which testifies that widening the mental perspective, so as to identify possible alternative resources

and suggest creative ideas, is an operation which is performed by both eminent and non-eminent people in different countries and ages.

Now we can consider the second mental operation in question, namely, connecting. Indeed connecting can contribute to creativity in two ways: either by leading people to find shared aspects between two (or more) usually unrelated entities or by suggesting people to arrange available things differently than how they are normally found. As an example of the former, we can mention how the Velcro closure system for clothes was designed by George de Mestral. During a trip, he noticed that his socks were covered with berries with spikes, coming from the bushes he walked through, which were attached to the tissue of the socks. He thought that, in analogy to what happened to the socks, a closure system might be devised consisting of a strip of fabric with small hooks to be superimposed to another strip of furry fabric (McSweeney and Raha 1999). Realising a possible connection between the berries attached to the socks and human cloths led de Mestral to conceive a germinal idea which was at the basis of a huge commercial success.

The second way combining may produce creative outcomes is exemplified well by an artefact produced by Pablo Picasso in 1942 (now exhibited in the Musée Picasso in Paris) called *Tête de taureau* where two pieces of a bicycle (namely, the handlebars and the seat) have been rearranged in an order which does not correspond to the manner in which they are combined in a typical bicycle, so as to represent the head of a bull¹. In the same vein also people with lower artistic reputation than Picasso combined different common materials in an original way so to represent a fantastic animal (Fig. 6.5: The object was included in an exhibition of anonymous authors within the marble mine of Fantiscritti, near Carrara, Italy).

As a more “exotic” example of the use of connecting, we report an anecdote coming from the Zen tradition (Reps and Senzaki 1998). There was a famous wrestler called O-nami (the name means Great Waves). He was the strongest but, when he had to compete in front of an audience, his shyness made him weak enough to be defeated by the worst of his students. O-nami was entrusted to the wisdom of his Zen master, who thus thought of solving the problem: “Your name is Great Waves—the master told him—So, this night you will stay at the temple and you will imagine to be those waves, those enormous waves that destroy any what they meet in front of them. Do so and you will be the greatest wrestler in the country.” O-nami meditated all night by imagining being no longer a fighter but a big wave. In the morning, O-nami participated in the fight and won all the fights. And since then, no

¹ See https://en.wikipedia.org/wiki/Bull%27s_Head



Fig. 6.5 Creative combinations of elements

one in Japan could any longer beat him. In this case the connection, suggested by the name of the protagonist of the story and stressed by the Zen master, between the fighter and the wave led the wrestler to perceive himself much stronger than he believed before and, thanks to such a change in his self-representation, to take advantage of his potentialities.

The process of relating an entity to something else, which apparently has no connection, had been often applied in the past to solve practical problems. For instance, ancient Romans found a less expensive way to construct pipelines within their towns by using a series of amphorae inserted one into another one so to constitute a long duct (Fig. 6.6). The link between the problem of finding a way to transport flowing water and the practice of using amphorae to transport goods suggested a cheap solution to the first problem. A case of creative use of connections, defined here as arranging pieces in a different way compared to the common one, was documented in the past, when people were used to copy on a booklet some selected passages of the book they were reading and then combing them in a different order to try to find new insightful ideas (Johnson 2010).



Fig. 6.6 Pipelines constructed with amphorae

The last mental operation underlying creativity is reorganising. A folk implementation of this mechanism can be identified in the anonymous invention of a new way to produce butter by shaking milk. The usual procedure consisted in pouring milk into a vertical container and then shake it thanks to a stick which had to be moved up–down (Fig. 6.7a). This was not a comfortable movement. At a given time, someone thought that the container might be placed in horizontal and let rotate thanks to a crank, so requiring a less fatiguing movement (Fig. 6.7b). Reversing the axis of the movement to be carried out resulted in an improvement of the production process.

Reorganising the mental representation of a process is acknowledged as a strategy that can produce innovative solutions also in Eastern countries. In a tribe of Central Malaysia (the Senoi) telling and re-elaborating dreams is viewed as an important part of the education of youth. Every morning, starting with the children and then moving to the adults, each member of the tribe tells the community what he or she dreamed during the previous night. Following this, the senior wise men of the tribe gather in a board where they discuss the most impressive dreams they heard. The aim is to help those who have made a dream in which there is evidence of adverse factors (fear, hatred, accidents, death) to take advantage of these experiences to turn it towards

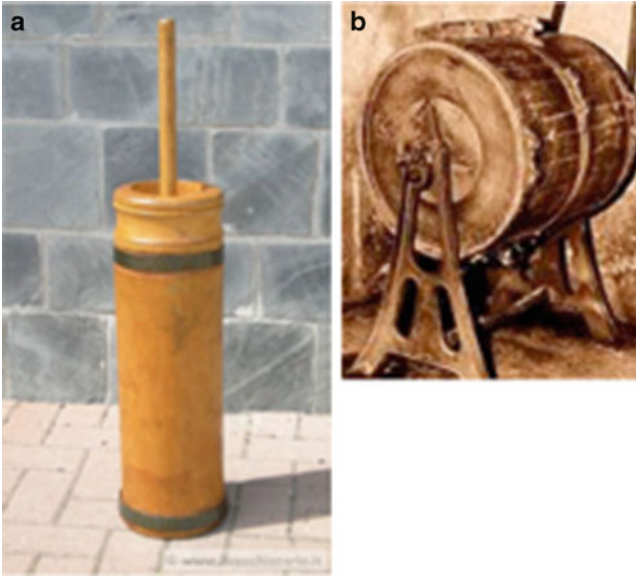


Fig. 6.7 The evolution of the way to produce butter by shaking milk

positive goals. In fact, the person who tells the dream that is later the subject of discussion is invited to dream it again but in a different way during the day, in a relaxed state. From this day-dream process, the dreamer has to come back with something creative that can be communicated to others: an action to be taken, an inspiration for an artistic product (a poem, a song, a dance, a sculpture, a tale), or the solution of a problem. For example, it was reported that a child dreamed of meeting a scorpion on the path and escaped. The child was then asked to re-elaborate the dream during the day. After several mental visualisations of the dreamlike scene, the child communicated to the elders of the tribe that he achieved a satisfactory outcome. By reviewing in his mind the scorpion that obstructed the passage, the child realised that he would go to call his older brother and ask him to take the scorpion by the tail and so clear the path. Using this approach, after various attempts, a person can learn to reorganise a situation in his mind until he or she reaches an effective solution to the problems he or she encounters (Hester et al. 2012; Matos 1985).

Also some historical cases highlight how useful it is to conceptualise in a different manner the critical situations we live in, sometimes reversing the starting condition and so behaving in a way which is just the opposite of what common sense suggests. During the Thirty Years' War (in the seventeenth century), the Spanish army had defeated the French and was spreading out into French territory, destroying villages and pillaging the population.

A small village received the news of the arrival of the Spanish army and the people gathered to decide what they could do to defend themselves. It was clear that trying to oppose the enemy troops with barricades would be futile, given the disproportion between the number of attackers and the villagers. Hence, the men of the village decided to do just the opposite of what people would expect. Rather than trying to resist the enemy and defend their home and family, they escaped, leaving only children and women in the village. This reversal of attitude—to leave their loved ones and their properties rather than defend them—proved to be a winning solution. When the Spanish army reached the village, they entered it without a fight. If the soldiers had fought, they would then have had the “right” to persecute the losers, but since they did not “earn” the looting right, according to their military code they would have been men without honour if they used violence without having to fight for this right. So the Spanish army passed over, respecting the people and properties in the village (Langer 1980).

The three basic mechanisms of creativity that we considered—widening the mental field, connecting disparate elements, and reorganising the point of view—are also expressed in some ancient Chinese military strategies, such as those included in the collection entitled *The 36 stratagems*. As an example of widening, it is worth mentioning stratagem VII, which reads: “Create something from nothing”, which was applied to find this expedient. We are in 755 AD and the army of An Lushan is besieging the city of Yongqiu. The besieged at some point have no more arrows. Where could they find arrows? They broaden their mental outlook. They do not think only of the arrows that they could find within the city. Where, widening the horizon, could there be other arrows? Among the enemies, of course. How then is it possible to seize the enemy’s arrows? The besieged build puppets with straw which then they let down the city walls with ropes. The attackers mistook the puppets for real warriors and then started throwing arrows at them. The arrows penetrated into the puppets. When the puppets were well filled with arrows, they were recovered and, once drawn into the walls, the arrows which were embedded in them were drawn, ready to be used by the besieged against the enemies.

The XXI stratagem says: “The golden cicada leaves its shell”. This is a case in which we see at work the mechanism of connecting. In the twelfth century BC, a city was besieged by the troops of Ningzong Jin. People living in that town understood that it was necessary to leave it, but the flight must take place without letting the besiegers notice it, otherwise they would block the fugitives. The inhabitants of Ningzong then came up with this trick. They hung some goats on the trees and put drums under their paws. Kicking the drums, goats produced a clamour that was interpreted by the besiegers as a

sign that the besieged were preparing an attack. They then closed ranks and prepared to fight by placing all the army in front of the main gate of the city, where they expected the besieged to go out. Once this happened, the inhabitants could well leave the city unmolested through a back door, no longer guarded since all troops of the besiegers had been concentrated elsewhere.

Finally, stratagem II provides us an example of the reorganising operation. It says: “Besiege Wei to rescue Zhao”. In 330 BC, the king of Wei Zhao was besieging the city. Allied to this was the kingdom of Qi, who sent General Tian Ji Zhao for help. Tian Ji, however, did not do what would be expected, that is, going to Zhao to attack the besiegers. Instead, he marched towards the capital Wei. Upon receiving this news, the army which was besieging Zhao left the siege to return to the capital rushed to help defend it. The action of Tian Ji reached the goal—to induce the enemy to raise the siege by Zhao—not pointing towards the goal that seemed obvious (Zhao), but away (thereby making a rollover) and moving towards an alternative target. The reorganisation of the field led Tian ji Zhao to save the city without fighting at all, thereby producing a creative solution to the conflict.

Cultural Variations in Creativity

The examples reported in the previous paragraph suggest that the basic mental mechanisms underpinning creativity are operating in different populations, cultures, and historical periods, but cannot support such a claim by themselves. We cannot know what had actually occurred in the mind of the persons who were involved in the mentioned cases. However, the fact that those stories have been passed down across different generations and countries and were considered worthy to be told and documented testifies to the fact that they have been perceived as representative of the process of innovation, creative problem solving, and decision making. In any case, further evidence is needed.

There is a widespread consensus that the basic grammar and logic of evolutionary thinking applies to human creativity (Kronfeldner 2010). It is also true that the neurological bases for creativity presumably are the same in different contexts and that creativity as a product should not differ across cultures (for reviews see, for example, Abraham 2013; Jung et al. 2013; Kaufman et al. 2010). Despite this shared starting point, research about cross-cultural differences on creativity reports somewhat mixed findings. On the one hand, studies focusing on naïve conceptions of creativity failed to highlight any differences between results collected in the West and results collected using a

similar methodology in the East (Ng and Smith 2004). Typically, self-report measures were employed, asking participants to provide synonyms of creativity, to list behaviours that belong to creative individuals, or to select the top characteristics of creative people choosing from a list of trait adjectives. For example, studies investigating teachers' naïve conceptions in the West (Barron and Harrington 1981; Montgomery et al. 1993; Runco 1984) and in the East (Rudowicz and Yue 2002), by asking participants to rate or suggest creative characteristics of students, found similar results. For all samples, regardless of their culture, a creative person tends to be seen as artistic, curious, imaginative, independent, innovative, and intelligent.

Yet, even if the conceptions are the same, the individual evaluation of these conceptions appears to be different (Palaniappan 2012). Teachers in Eastern cultures dislike personality traits associated with creativity in the West (Westby and Dawson 1995; Scott 1999), even if Asian students (e.g., students from China, Hong Kong, Taiwan, Japan, South Korea, and Singapore) are expected and encouraged to be creative by their schools (Ng and Smith 2004). This negative evaluation provided by teachers can be read in the light of what Torrance (1963) said about creative students. For their nature, they tend to have traits that are perceived by teachers as "obnoxious" (Pizzigrilli and Antonietti 2010). These "negative" traits have been associated with creative students also in a study by Davis (1986), where creative people were also described as lacking courtesy, refusing to take "no" for an answer, and with a personal tendency to be critical of others. These traits may be perceived more negatively in the Asian culture where, according to Confucian tradition, the teacher serves as a moral exemplar to students. In return, students show their reverence for their teacher by behaving with meekness and obedience (Jin and Cortazzi 1998; Ng and Smith 2004).

A similar line of reasoning could be applied outside the classroom. As Ng (2001) argued, creative thinkers should be dogmatic people. This is required by the fact that a creative act involves the introduction of new elements into an established domain. This action may threaten the conventional manner of doing things, leading to social resistance from the community. A creative person must hence be ready for conflict and confrontation (Ng and Smith 2004). Ng (2001) also suggested that dogmatic creators are more common in individualistic cultures, where individuals are psychologically prepared for conflict and confrontation, compared to collectivistic cultures that do not prepare their members for conflict and confrontation.

An analogous reflection could also be applied to the differences between Arabic and Western culture, starting from two other characteristics universally associated with creativity: curiosity and risk taking (Amabile et al. 1996).

These traits are perceived positively and lead to comfort in both educational and work settings for most Westerners but not for the typical Arab. Most Arabs feel that proven ideas are more comfortable and tend to avoid exploring risky options (Mosafa and El-Masry 2008). According to Barakat (1993), the traditional culture in the Arab world tends to support fatalism and shame, which lead to the psychological drive to escape or prevent negative judgement by others rather than conscious questioning. This cultural attitude seems to promote conformity more than creativity, in a similar way to how it happens, starting from different cultural values, in the case of Asian cultures. This parallelism is also supported by the fact that some Arabic cultures, for example, the Egyptians, are highly collectivistic (Hofstede 1980). A study that focused on the cultural difference between Arabic and Western culture explored the different attitudes towards organisational creativity barriers of Egyptian and British participants (Mosafa and El-Masry 2008). The authors proved that Egyptians differ from British with respect to their attitudes towards organisational creativity. The two subsamples had opposite scores in all the considered factors (commitment to organisation, management support, risk aversion, time, and work pressure). These findings suggest that attitudes towards creative cognition might vary across cultures, not in the sense that some environments inhibit or hinder and other ones elicit or urge the implementation of the basic processes outlined before, but that the goals which can be reached thanks to creative cognition are differently appreciated and therefore such processes can be differently prompted and orientated according to the values and needs stressed in a given culture.

How can we hence reconcile the idea that creativity may have a common cognitive basis, a common evolutionary function, and definitively is conceived similarly across culture, with data supporting the notion that culture does influence creativity in both educational and work settings? A possible reading of this apparent contradiction is suggested by Csikszentmihalyi (1996). He claimed that creativity concerns the cultural counterparts of genetic changes resulting from biological evolution. This means that if in biological evolution random variations may happen at the level of genes and chromosomes, things are quite different when we discuss cultural evolution. When this second type of evolution is involved, changes happen when units of information are created, maintained, and transmitted by the culture. Hence, creativity should not be isolated from the socio-cultural systems in which the individual functions, at least if we want to fully understand and predict the mental processes associate to it. This last reflection leads to a second important point: Can we derive from what we have been discussing that specific cultural elements may prevent people belonging to specific cultures to fully develop their creative

potential? Probably not, since, as the examples presented and discussed in previous sections suggest, as well as data from neurological research imply, it does not look like this assumed impairment strongly affect any specific culture. On the other hand, cultural difference could help understand and predict better specific creative outcomes. This happens if we read the cultural differences linked to conceptions of creativity not as a possible limitation, but as a different way of a specific culture to foster the common elements underlying creative thinking. Some cultures might prepare people to become innovators while other cultures will lead them towards the role of creative adaptors. In both situations a creative process will take place, relying on the same mechanisms identified above.

Conclusions

Creativity is usually associated to two features: novelty and social appreciation or usefulness (Sternberg 2001). Both these features do not have an absolute nature. In fact, how can I conceive that something is actually “new”, and not simply “different”, in comparison to the previously existing things? How different (and including what kind of differences) has an artefact or an idea to be labelled as a “novelty”? It seems that the attribution of novelty depends on the grain of the evaluation criteria we use. For instance, innovation in music in Western cultures is mainly grounded on changes in the structural aspects of the compositions (changes in the harmonic relationships, in the sequence and elaboration of themes, etc.), whereas in some Eastern or African context even slight changes in rhythm or pitch modulation are meant as innovation (Antonietti and Colombo 2014). Differences in the grain of the evaluation criteria may involve also duration. In some contexts, innovation is expected to occur in long time periods thanks to the accumulation of small, almost unperceivable variations, whereas in other contexts novelty is expected to emerge suddenly as a consequence of a dramatic change.

The same may be true of the notion of “socially appreciated”. What is conceived as useful or meaningful depends on the values we assume as reference points. For instance, many criminals might be considered “creative” on the basis of the novelty criterion since they devised ingenious ways to steal money that were not yet implemented before, but it is questionable if their “inventions” meet also the criterion of usefulness. Bizarre drawings produced by a child can be appreciated by parents or teachers who are convinced that personal expression has to be encouraged but not by adults who believe that pictorial artefact should always convey an interpersonally shared meaning.

Thus, it may be that differences in creativity across cultures do not depend on creativity itself, but on the manner creativity is conceived. In fact, creative skills and conceptions of creativity are not necessarily associated (Pizzingrilli and Antonietti 2011). A person might be able to manage mental operations which underlie creativity while failing to apply them since he or she does not think that they are relevant to perform the task in question. In light of this distinction, we can maintain that the basic mechanisms of creative cognition are activated differently according to the culture the individual belongs to. Beliefs about where and when it is relevant to implement such mechanisms—as well as about the expected frequency of their occurrence, their desirability, the aims they should address, how they should be activated (for instance, in isolation or collectively), the timeline of the expected outcomes (abruptly or through progressive adjustments), and so on—can vary from one environment to another. In addition, attributions concerning the merits and failures associated to creative cognition might vary, as well as the pedagogical support and the kinds of incentives and encouragements provided. In other words, culture leads societies to build different niches around creative cognition and modulate its application.

This perspective has some implications for practice. It stresses the need to devise measures of creative thinking skills that actually assess what is meant and appreciated as creative in a given culture (Villani and Antonietti 2013). Furthermore, also in experimental investigations aimed at assessing cross-cultural differences, tasks should be devised so as to match the interpretation of creativity that is currently shared in the environments where they take place. Finally, hints at fostering the creative potentials of students and workers should be tuned to the values of the cultural milieu they are addressed to.

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7

The Creativity–Motivation–Culture Connection

Beth A. Hennessey

How does creativity happen? This is a question that has long fascinated and mystified philosophers, psychologists, and laypersons alike. As early as 1874, Galton published a study of the biographies and autobiographies of well-known creative figures and set out to identify the unique qualities of intellect and personality that differentiate this group from their less creative peers (Galton 1874). Over time, this concentration on creative geniuses and individual difference variables has been gradually expanded to also include a consideration of everyday creativity and the environmental factors that might serve to impede or promote creative thinking. One conceptual model that has been especially useful in guiding my own thinking is the “Creative Intersection”. This approach first proposed by Amabile in the 1980s (see Fig. 7.1) proposes that there are three necessary ingredients for creative performance: Domain-relevant skills (i.e., knowledge or expertise in a given area or areas), creativity or problem-solving skills, and task motivation. In the context of schools or workplace environments where creative thinking and problem solving is desirable, the majority of educators and managers do a good job of equipping their students or adult workers with information and specific domain knowledge. And many schools and businesses also promote creativity-type, problem-solving skills as a formal part of their training. But

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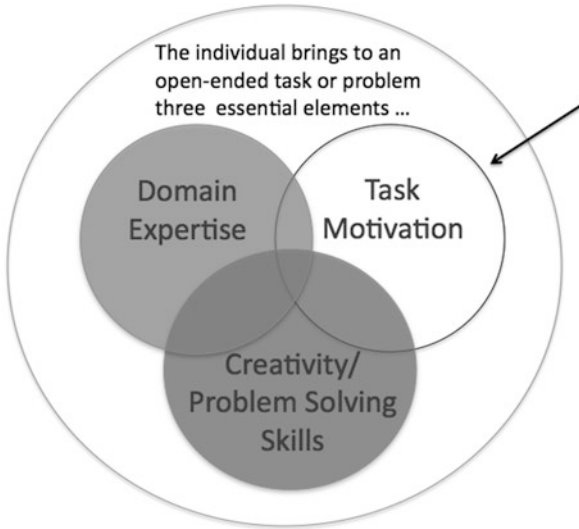


Fig. 7.1 The creative intersection

what most schools and businesses fail to do is to address directly issues of motivational orientation. This omission comes despite the fact that decades of careful empirical work show that motivation holds the key—the key to persons of all ages becoming fully immersed in a problem so that they can engage deeply and eventually perhaps come up with a creative idea, a creative product, or a long-awaited solution. Motivational orientation forms the boundary between what an individual is capable of doing and what that individual will actually do in any given situation. Without the appropriate motivation, each of us is unlikely to be willing to take risks or to playfully explore a variety of avenues and options.

Theorizing About Motivational Orientation

Psychologists have long been interested in, if not perplexed by, behaviors such as exploration and challenge seeking that have no clear external reinforcements. As far back as 1926, investigators like Cox (1983) were already theorizing about the importance of internal sources of motivation; and slowly, theorists began to view high levels of task motivation and the human capacity to become lost in a project or problem as central to the creative process. Kohut (1966) proposed that creativity and the motivation that drives it was a positive transformation of narcissism. Hebb (1955) and Berlyne (1960) offered

that the activities or questions most likely to capture and keep our attention are those that present an optimal level of novelty. And White (1959) and Harter (1978) suggested that a sense of competence and mastery are central components of the motivation behind creative behavior.

In the creativity literature and beyond, the bifurcation of motivational orientation into intrinsic and extrinsic components was driven initially by the work of Heider, who in the late 1950s, set out to explore individuals' explanations for their own and others' behavior (Heider 1958). The founder of the modern field of social cognition, Heider proposed an Attribution Theory designed to specify the circumstances under which behavior will be attributed to an individual's disposition (e.g., personality traits, personal motives, or attitudes) or to situational variables (e.g., external pressures, social norms, peer pressure, or environmental factors). Heider was the first to make the argument that when attempting to make sense of our own or another's behavior, we tend to overemphasize internal, dispositional causes over external causes—this phenomenon later became known as the “fundamental attribution error” (Ross 1977).

The use of the terms “intrinsic” and “extrinsic” began to appear with some regularity in the motivation literature around 1970; and today, when researchers and theorists attempt to model the association between motivation and creative behavior, this intrinsic/extrinsic distinction tends to dominate the discussion. Pioneering theorists in this area were deCharms (1968), Deci (1971), and Lepper and colleagues (1973) who placed their emphasis on a sense of control. According to this view, when an individual perceives their task engagement as externally controlled, they are driven by extrinsic rather than intrinsic motivation. Most contemporary theorists define extrinsic motivation as the motivation to do something for some external goal, a goal outside the task itself. Intrinsic motivation, on the other hand, is seen as the motivation to engage in an activity for its own sake, for the sheer pleasure and enjoyment of the task. Persons who approach an activity, question, or problem with an intrinsic motivational orientation are seen as being propelled by a sense of curiosity. In addition, they feel a certain degree of competence, believe that their involvement is free of external control, and have a sense that they are playing rather than working (Hennessey 2003b, 2004). Taken together, intrinsic and extrinsic motivational orientations have been shown in the social psychology literature to play a major role in determining whether a creative product will be produced or a creative solution to a problem will be generated. Motivational orientation marks the dividing line between what a creative individual is capable of doing and what he or she actually will do in a given situation (see Amabile 1990, 1996).

Importantly, motivation (and creativity for that matter) can be viewed either as a relatively enduring trait or as a situation-specific state. Bem's seminal work on self-perception (1967, 1972), for example, construes motivational orientation as a relatively stable individual-difference variable. DeCharms's (1968; deCharms et al. 1965) early studies of motivation and personal causation revealed that some persons reported that they often felt like pawns of authority, and that these same individuals tended to be primarily extrinsically motivated. On the other hand, persons who were more likely to feel like they were the origins of their own behavior tended to be driven by perceptions of self-investment and were most often intrinsic in their motivational orientation. Similarly, Deci and Ryan (1985a) also found individual differences in enduring motivational orientations. More recent empirical investigations of creativity in business (e.g., Amabile 1988, 1990; Dewett 2007; Shin and Zhou 2007) have also shown the utility of operationalizing the motivational orientation of adult workers as being relatively trait-like and stable across time. And, in fact, investigations involving samples of elementary school children, high schoolers, and college students have all yielded data arguing for such stability. In addition, a longitudinal investigation spanning the middle-elementary through high school years (Gottfried et al. 2001) showed continuity in the relation between levels of academic intrinsic motivation and demonstrations of creativity. Taken together, these studies and others like them offer considerable empirical evidence to suggest that both motivational orientation and creativity can be conceptualized as fairly stable individual difference variables. However, the bulk of the literature linking motivation and creativity has taken the opposite approach—operationalizing creative behavior and the intrinsic motivation that drives it as the result of fleeting and situation-specific states.

Empirical Investigations of the Social Psychology of Creativity

This second somewhat different theoretical orientation is typified in the social psychological study of the impact of extrinsic constraints on motivation. One of the first published studies in this now firmly established research tradition (Deci 1971) focused on the undermining effects of expected reward and was soon supplemented by other papers reporting similar declines in intrinsic task motivation subsequent to the offer of reward (Deci 1972; Kruglanski et al. 1971). In 1973, Lepper, Greene, and Nisbett expanded on this research paradigm when they set out to examine the effects of reward on both motivational

orientation and quality of performance. These researchers found that preschoolers who initially displayed especially high levels of intrinsic interest in drawing with magic markers showed significant decreases in their interest in and enjoyment of drawing when they made pictures in order to receive a “Good Player Award” certificate. When compared with an unexpected reward group and a control (no reward) group, the children who had made drawings for the experimenters in order to get the certificate spent significantly less time using the markers during subsequent free-play periods than did their non-rewarded peers. Moreover, this undermining of interest persisted for at least a week beyond the initial experimental session; and, importantly, the globally assessed “quality” of the drawings produced under expected reward conditions was found to be significantly lower than that of the unexpected reward or control groups.

Although this study was probably the first to demonstrate empirically the deleterious effects of expected reward on both intrinsic task motivation and quality of performance, speculations about the impact of extrinsic constraints on performance were not new. As early as 1954, Carl Rogers had talked about the “conditions for creativity” and the importance of setting up situations of what he called “psychological safety and freedom”. But it was this 1973 paper authored by Lepper and colleagues that captured the attention of researchers and theorists alike, and a wide variety of empirical investigations of reward contingencies and their impact on performance, most especially creativity ensued (e.g., Garbarino 1975; Greene and Lepper 1974; Loveland and Olley 1979; McGraw and McCullers 1979; Pittman et al. 1982; Shapira 1976). In a series of three experimental studies, Amabile et al. (1986) went on to show a negative impact of contracted-for reward when the reward was delivered *prior* to task engagement. In fact, one study in this series served to demonstrate that if it is described to subjects as a reward, an experimental task can itself serve to undermine subsequent motivation and creativity of performance.

Hundreds of published investigations have revealed that the promise of a reward made contingent on task engagement often serves to undermine intrinsic task motivation and qualitative aspects of performance, including creativity (for a more complete review of the literature, see Amabile 1996; Deci et al. 2001; Hennessey 2000, 2003b; Hennessey and Amabile 1988). This effect is so robust that it has been found to occur across a wide age range, with everyone from preschoolers to seasoned business professionals and retired R&D scientists experiencing essentially the same negative consequences.

Importantly, reward has not been the only extrinsic constraint to be manipulated experimentally. Amabile et al. (1976) reported a negative impact of time limits on subsequent task motivation; and investigations focused on

situations of competition have shown that the expectation that one's work will be judged and compared to products produced by others may well be the most deleterious extrinsic constraint of all. In one study, Amabile (1982a) showed that competitive elements were especially harmful to children's intrinsic task motivation and creativity on an artistic activity; and Amabile et al. (1990) found similar findings for college students.

Proposed Mechanisms

Expected reward, expected evaluation, competition, and time limits have each been shown to be dangerous killers of intrinsic task motivation and creativity of performance. In an effort to explain the mechanism behind the powerful undermining effects, the Intrinsic Motivation Principle of Creativity was developed: Intrinsic motivation is conducive to creativity, and extrinsic motivation is almost always detrimental (Amabile 1983, 1996). According to this model, in the face of an expected reward, evaluation, or other extrinsic constraint, the goal is to "play it safe"—to generate a suitable idea or solve a problem as quickly and efficiently as possible. The most straightforward path to a solution is likely to be the one chosen, as risk taking might result in a less than acceptable outcome. For a creative idea or solution to be generated, however, it is often necessary to temporarily "step away" from environmental constraints (Newell et al. 1962), to become immersed in the task or problem, to suspend judgment, to experiment with alternative pathways, and to direct attention toward the more seemingly incidental aspects of the task. The more focused an individual is on a promised reward or evaluation, the less likely it is that these alternative paths will be explored. This tendency to avoid potential pitfalls and opt instead for a safe albeit mediocre solution appears to capture the thought processes and behavior of the majority of persons who approach an open-ended, "creativity-type" task in the face of extrinsic constraints.

As empirical investigations of the impact of extrinsic constraints on motivation and qualitative aspects of performance have become increasingly finely tuned over the years, researchers now have a far more sophisticated and nuanced understanding of reward and evaluation effects. Investigations reveal that under certain specific conditions, the delivery of a competence-affirming evaluation or reward or the expectation of an evaluation can sometimes increase levels of extrinsic motivation without having any negative impact on intrinsic motivation or performance. In fact, some forms of evaluative feedback and reward expectation can actually enhance creativity of performance. These complex effects have been demonstrated empirically in several

laboratory studies focused on what has come to be termed a sort of “motivational synergy” (e.g., Amabile 1993; Jussim et al. 1992; Harackiewicz et al. 1991). Evidence from nonexperimental field studies coupled with observations of and interviews with persons who rely on their creativity for their life’s work echo these results. For example, in an investigation of commissioned and noncommissioned works done by professional artists, the extrinsic incentive of a commission was seen by some respondents as a highly controlling constraint; and the creativity of their work plummeted. Yet for those who viewed the commission as an opportunity to achieve recognition or a confirmation of their competence by respected others, creativity was enhanced (Amabile et al. 1993).

How can these individual differences in response to extrinsic constraints be explained? Researchers and theorists exploring the relevance of self-perception processes to motivational orientation report that in situations where both a plausible intrinsic and extrinsic explanation for our actions are available, we tend to dismiss the internal cause in favor of the external cause. Early theorizing carried out by social psychologists variously referred to this process as “discounting” (e.g., Kelly 1973) or “over-justification”, a formulation derived from the attribution theories of Bem (1972), Kelley (1967, 1973) and deCharms (1968). Later research efforts in this area supplemented these discounting and overjustification models with Cognitive Evaluation Theory or CET (Deci 1975; Deci et al. 1975; Deci and Ryan 1985a); and building on this work, Deci and Ryan more recently offered a conceptual refinement of the CET Model in the form of Self-Determination Theory (SDT) (Deci and Ryan 1985a, b, 1996, 2000, 2008a, b).

SDT focuses on innate psychological needs and the degree to which individuals are able to satisfy these basic needs as they pursue and attain their valued goals. Integrating a variety of literatures, this model offers a long overdue ambitious synthesis of what up until recently had been a conglomeration of related but distinct motivational approaches (including areas of intrinsic motivation and internalization). SDT places the focus on causality orientations, or characteristic ways that each of us develops for understanding and orienting to inputs. More specifically, Deci and Ryan have hypothesized that individuals vary in the degree to which they exhibit three such orientations (“autonomy”, “control”, and “impersonal”), and they have argued that these individual differences have important implications for a variety of motivationally involved processes, including creative performance. Within this SDT framework, extrinsic motivation (termed “controlled motivation” by Deci and Ryan) and intrinsic motivation (termed “autonomous motivation”) are viewed as the anchors of a highly complex and multilayered continuum.

Affect and Individual Differences

In addition to individual differences in cognition, affect too may play a pivotal role in determining whether an anticipated reward, evaluation, or other extrinsic constraint will serve to undermine or enhance intrinsic motivation and creativity. One hypothesis is that the reduction in intrinsic interest that comes with the imposition of extrinsic incentive may be driven primarily by the learned expectation that rewards and evaluations are usually paired with activities that need to be done, activities that are often not fun and sometimes even aversive. The undermining of intrinsic interest may result as much from emotion or affect as it does from thoughts or cognitive analysis. Persons of all ages may learn to react negatively to a task as “work” when their behavior is controlled by socially imposed factors (such as rewards), and they may react positively to a task as “play” when there are no constraints imposed. Negative affect resulting from socially learned stereotypes or scripts of work (see Ransen 1980; Morgan 1981; Lepper et al. 1982) may be what leads to decrements in intrinsic interest (see Hennessey 1999).

In fact, a review of the literature reveals that contemporary views of intrinsic motivation frequently include an affective component. One group of theorists, for example, has concentrated their attention on the relation between positive affect and intrinsic motivation (e.g., Isen and Reeve 2005). Others have focused specifically on the affective components of interest and excitement (e.g., Izard 1977). Some researchers have presented data emphasizing the link between intrinsic motivation and feelings of happiness, surprise, and fun (Pretty and Seligman 1983; Reeve et al. 1986). And the prolific and influential work of Csikszentmihalyi and colleagues (Csikszentmihalyi 1997; Csikszentmihalyi et al. 2005; Nakamura and Csikszentmihalyi 2003) has brought to light the elation that can result from deep task involvement in the state they call “optimal experience” or “flow”. Taken together, these scholarly explorations make a strong argument for the connection between motivational orientation and emotion, culminating with Izard’s argument (1991) that like motivation, emotions too can function as both traits and states.

A Sampling of More Recent Investigations

Researchers have found it all too easy to undermine intrinsic motivation and creativity of performance with the imposition of extrinsic constraints. For the majority of persons in the majority of situations, intrinsic motivation has

been shown to be a most delicate and fleeting entity. The Intrinsic Motivation Principle of Creativity (Amabile 1983, 1996) assumes that intrinsic and extrinsic sources of motivation can be expected to work in opposition to one another. Working much like a hydraulic water pump, this formulation predicts that when the “flow” of intrinsic motivation is decreased, the level of extrinsic motivation will necessarily be increased. Indeed, many researchers and theorists have operationally defined intrinsically motivated behaviors as those that occur in the absence of extrinsic motivators (e.g., Deci 1971; Lepper et al. 1973). Yet, over time, theorists, investigators, and practitioners including teachers in the classroom and managers in the workplace have come to understand that the relation between environmental constraints, motivational orientation, and creativity of performance is not nearly as straightforward as was once believed. As outlined by Deci and Ryan in their SDT (1985a, b, 1996, 2000), extrinsic motivation must be understood as far more than the simple absence of intrinsic motivation and researchers continue to uncover important and not entirely infrequent exceptions to the hydraulic system.

A review of the newer experimental literature in this area reveals few recent investigations modeled after the original basic experimental paradigm contrasting the creative behavior and motivation of persons randomly assigned to constraint and no-constraint conditions. Instead, researchers interested in the effect of environmental factors on creativity have turned their attention to a variety of new, more nuanced questions. Rather than attempt to construct a “one-size-fits-all” model of the impact of extrinsic constraints on intrinsic motivation and creativity of performance, more recent studies have tended to explore individual difference variables and to measure more directly the cognitive, affective, and emotional impacts of a variety of factors in the creator’s environment.

Joussemet and Koestner (1999), for example, explored the possibility that the impact of an expected reward contingency might transfer to a subsequent no-reward situation. Isen and Reeve (2005) carried out two experiments showing that positive affect not only fosters intrinsic motivation and enjoyment of novel and challenging tasks but also promotes extrinsic motivation and responsible work behavior in situations where less interesting tasks need to get done. Reporting data that appear to contradict these findings, Kaufmann and Vosburg (1997) found in two separate studies that positive mood led to significantly poorer creative problem-solving performance, whereas no significant effects of positive or negative mood states were found for analytic problem-solving tasks. Building on these initial studies, Kaufmann (2003) provided additional evidence showing that under certain routine conditions, positive mood can impair creativity, whereas negative and neutral moods can

sometimes promote insight and solutions to problems. And related findings from three experiments carried out by Friedman et al. (2007) offered a motivationally based account for the influence of mood on creative generation. Taken together, these studies at least partially supported the prediction that positive and negative moods should enhance effort on creative generation tasks construed as compatible with the motivational orientations they elicit. Specifically, positive moods were observed to enhance effort on tasks construed as fun and silly, whereas negative moods tended to bolster effort on tasks construed as serious and important.

Putting the “Social” Back into the Social Psychology of Creativity

Just like each of the hallmarks of intrinsic and extrinsic motivation outlined earlier, this focus on mood also rests on the individual’s inner psychological state. Both motivational orientation and affect / mood are seen to arise from an internal, entirely individualized, and especially complex process. Researchers ask why the expectation of a reward or an evaluation to be delivered by a teacher or employer might undermine an individual’s intrinsic motivation and creative performance, and they explain this phenomenon via internal cognitive mechanisms. While this approach has proven useful to some extent, the localization of motivational orientation (and creativity) entirely within the individual is problematic at best. It is high time that researchers and theorists put the “social” back into the study of the social psychology of creativity (see Hennessey 2003a). In the words of Markus and Kitayama (2003), we must become “really social social psychologists” (p. 277). We must start at the most basic level and ask how the culture into which we are born impacts our creative development, and, perhaps even more importantly, we must set out to examine how our cultural background serves to frame the very way we conceive of creativity and motivation, ask our investigative questions and construct and conduct our experiments.

Experimental studies and theorizing in psychology have, since their inception, been dominated by a Western bias. The vast majority of data upon which psychological theories and models are built has been collected on university students living and learning in the USA (see Arnett 2008; Henrich et al. 2010). As a field, psychology has been far too quick to assume that much of human behavior and the motivations behind it are universal. The majority of psychological theorists have long taken for granted that the responses of

study participants in the industrialized West will mirror nicely the responses of persons living, learning, and working all around the world. Yet this is a serious and dangerous mistake. Take, for example, the Fundamental Attribution Error mentioned previously (Ross 1977). For many decades, psychologists in the West have assumed that when trying to make sense of their own or another's actions, all of us have a common tendency to overemphasize internal, dispositional causes of behavior and underestimate external, environmental causes. Even the name given to this phenomenon, the *FUNDAMENTAL* Attribution Error, presumes that this correspondence bias is universal. And, certainly, the creativity and motivation literatures have long been dominated by this tendency to stress what is seen as a universal drive for individual autonomy and perceive persons as independent and self-contained. Yet investigations conducted in more interdependent/collectivist societies reveal important cultural differences in the ways knowledge about the self or the other is processed, organized, and retrieved (Markus and Kitayama 1991). In studies carried out by Miller (1984) and Shweder and Bourne (1984), for example, Americans were found to focus on dispositions when describing close acquaintances or explaining the behavior of others, while descriptions and explanations made by study respondents in India were more situational, context-specific, and relational. The Fundamental Attribution Error may not be nearly as fundamental or universal as once thought. Moreover, many of the emotional and motivational models underpinning the creativity literature may also be culture-specific and biased toward what might be termed a European–American theory of mind (see Markus and Kitayama 1991; Lillard 1997).

Csikszentmihalyi (1999, 2006) has been a pioneer in the effort to conceptualize and investigate creativity from a cultural perspective. Toward this end, he was one of the first theorists to propose a systems model of creativity, examining simultaneously interactions among individuals, social contexts, and cultural domains. In fact, his three-part model proposes that it is the cultural context that will both determine the domain knowledge, tools, values, and practices that fuel the creative process and decide which innovations will be retained and which will be discarded. Glăveanu also includes a consideration of culture in his own theorizing (Glăveanu 2010a, b). In Glăveanu's view, cultural expression and the process of enculturation impact every stage of the creative process. While psychologists have long tended to view creative breakthroughs as stemming from the talents and efforts of idealized lone “geniuses”, creative behavior never occurs in isolation (see Purser and Montuori 2004). Moreover, research and theorizing must in no way be limited only to considerations of “Big C” creativity manifested by wildly successful inventions

or groundbreaking paradigm shifts. Also in need of exploration are creative breakthroughs at the professional level and instances of everyday, or “little c”, creativity (see Kaufman and Beghetto 2009).

Whatever the level of creativity being examined, as explained by Csikszentmihalyi (1999), the creative act is as much a product of social and cultural influences as it is cognitive or psychological. The background knowledge and domain skills necessary for a creative breakthrough are the result of decades, maybe centuries, of cultural evolution. Consider one operationalization of creativity commonly employed in contemporary investigations. Amabile (1996) stipulates that a product can be deemed creative only if it is both a novel and appropriate response to an open-ended task. Embedded in this definition is an implicit assumption that some group, some community of persons beyond the individual creator him or herself, or perhaps even some centuries-old cultural tradition, will be the arbiters for judgments of appropriateness and, ultimately, creativity. Taking this argument one step further, Csikszentmihalyi (1999) requires that a creative idea, product, or problem solution be both novel and socially valued. According to this view, the society or culture in which a product is produced will serve as the gatekeeper and decide which ideas will be celebrated and which will be ignored or even squelched. In short, it is impossible to make judgments about creativity without a consideration of cultural context.

But what exactly do we mean when we talk about culture? As defined by Lubart (1999), culture refers to a shared system of cognitions, behaviors, customs, values, rules, and symbols that are learned and socially transmitted. Pursuing these ideas further, the interface between the preservation of cultural traditions and the infusion of new, creative breakthroughs is captured in a framework offered by Greenfield (2009) who suggests that even as cultural values, expectations, and practices are learned in social contexts and passed down from generation to generation, they are modified by persons within that culture and in interaction with persons from other cultures and in the face of new needs. In a complex sort of symbiotic relationship, creativity moves cultures forward and cultures place boundaries on what will be deemed innovative and appropriate and what will be discarded as bizarre, worthless, or even dangerous (see Cohen 2012). Yet cultures must be seen as far more than gatekeepers, because without culture, there would be no artifacts, no materials with which to innovate and create. A review of the literature reveals that, until recently at least, little attention was given to the question of how culture might impact the link between motivation and creative behavior. In fact, the infusion of culture into this theoretical mix necessitates a re-examination of how both motivational orientation and creativity itself should best be operationalized.

Cultural Considerations in the Understanding of Motivation and Creativity

Scholarly explorations of the impact of culture have long been dominated by a distinction made between individualistic and collectivist traditions. Individualist cultures, typified by the USA, Canada, and many Western European nations, tend to value personal achievement over group goals, resulting in a strong sense of competition. Conversely, collectivist cultures, like those of India, China, Korea, and Japan, tend to emphasize the needs and well-being of one's family, business organization, or work group over individual needs or desires. This dichotomy has for some time been influential in both the creativity and intrinsic/extrinsic motivational literatures (e.g., Deci and Ryan 2008a, b; Hernandez and Iyengar 2001; Ng 2001, 2003). When applied to theorizing about motivation, this individualist/collectivist paradigm's emphasis on "self-construal" highlights important parallels between the interaction between the individual and the situation and the interaction between the self and the prevailing culture. There are a number of significant differences between Eastern and Western perspectives of the self, and nowhere are these differences more striking than in cross-cultural comparisons of assumptions about control. In the East, emphasis tends to be placed on forces of control imposed by the environment, or the culture at large, wherein the individual is expected to adapt. Persons raised in collectivist cultures, in other words, are thought to exercise what Ng (2001) terms "secondary control", shaping their internal needs and desires in order to maximize the goodness of fit with existing reality. In the West, on the other hand, people are socialized to rise above and even bristle at externally imposed constraints and are driven to alter their environment so as to better meet their own, personal needs. In these Western cultural contexts, children from an early age are socialized to exercise "primary control". As characterized by Ng (2001), these two very different orientations lead Eastern societies and citizens to place more value on extrinsic motivation, while Western societies and citizens tend to value intrinsic motivation.

Although researchers and theorists must be careful not to oversimplify the pervasive impact of culture with this individualist/collectivist distinction, this rubric does, in fact, suggest a host of applications to study of the social psychology of creativity. The social psychology literature is replete with claims about the robustness of the Intrinsic Motivation Principle of Creativity: Intrinsic motivation is conducive to creativity, and extrinsic motivation is almost always detrimental (Amabile 1983, 1996). And, in fact, the

deleterious effects of extrinsic constraints on intrinsic interest and creativity of performance has been found to occur across a wide age range, with everyone from preschoolers to seasoned business professionals and retired R&D scientists experiencing essentially the same negative consequences. Yet the overwhelming majority of studies demonstrating these effects have been based on Western conceptualizations of motivational orientation and creativity and carried out in Western cultural contexts. Do these operationalizations of intrinsic and extrinsic motivation hold up in more collectivist societies? Do the creativity criteria of novelty and appropriateness fit conceptions of creativity worldwide? And when it comes to the creative intersection between domain-relevant skills, creativity-relevant skills, and task motivation, how, if at all, does culture enter the mix?

Most Western scholars of creativity appear fairly comfortable with a definition of creativity that incorporates both a novelty and appropriateness or usefulness component. But might there be important cross-cultural distinctions in the ways that individuals conceptualize creativity? Value creativity? Measure creativity? Exercise their own creativity? Psychologists, sociologists, and anthropologists report that creativity is an integral part of the human experience. Every cultural group incorporates some form of visual or performance art, literature, music, and even technology. Yet just because creativity is a universal phenomenon does not mean that it plays the same role in every culture, nor can it be assumed that creative efforts receive similar kinds of social support worldwide (Simonton and Ting 2010).

Researchers and theorists exploring the influence of culture on people's views of creativity have found important differences (most especially East/West differences) between groups. Contemporary Eastern conceptions of creativity often include the establishment of a connection between the old and the new (Niu and Sternberg 2006). The explicit definitions developed by Eastern researchers and theorists, as well as the implicit views offered by their non-academic counterparts, are more likely to emphasize the internal process of creativity and see the creative process as a vehicle for gaining a sense of personal fulfillment, enlightenment, or a feeling of connection between the inner and outer realms of reality (Lubart 1990; Westwood and Low 2003). Also central to many Eastern definitions is a consideration of whether a creative idea or solution fits with existing social and moral values and contributes to the greater good (Rudowicz and Yue 2000). Indian theories, for example, have been described to emphasize interpersonal skills such as sociability, compassion, and social responsibility. In India, imitation, repetition, and conventionality are not necessarily viewed as barriers to novelty and creativity. Rather, efforts to maintain tradition are seen to complement the drive toward new

and different modes of expression (Panda and Yadava 2005). In this Eastern sense, creativity encompasses the reinterpretation of existing ideas; whereas Western definitions of creativity tend to emphasize novelty, the special talents or characteristics of the individual viewed as responsible for the generation of a creative product or breakthrough, and the breaking with tradition (Niu and Sternberg 2002).

Philosophers and theorists continue to explore these culturally driven differences in the ways that creativity is viewed. For the time being, it seems fruitless and even inadvisable to seek a universal definition of creativity that would cut across time and place. Yet if researchers are to attempt an exploration of the interface between culture and creativity, some sort of conceptual framework upon which to base models and investigations is needed. Toward this end, my colleagues and I have suggested that creativity be viewed as an important vehicle for cultures to advance their purpose (Hennessey and Altringer 2014). Of course, one culture's purpose may be very different from another's; but in all cases, creativity can be used to tell stories that serve to pass on knowledge and values from one generation to the next. Creativity can be used both to preserve traditions and to modify or renovate those traditions. Creativity can provide entertainment, improve living conditions, and make possible economic and business gains. Creativity is what moves cultures forward. But at the same time, cultural norms, values, and expectations serve to dictate just what will be deemed acceptable, interesting, or exciting and what will be discarded as useless, inappropriate, or even profane.

Empirical investigations into the social psychology of creativity have long relied on the Consensual Assessment Technique (CAT) (Amabile 1982b, 1996; Hennessey 1994; Hennessey et al. 2011). This procedure recruits experts in the field in which products were produced or ideas articulated and asks them to use their own, subjective definitions of creativity as they rate these products relative to one another rather than against a set of criteria or norms imposed by the experimenters. Despite the fact that these judges have no opportunity to confer with one another nor are they trained in any way, high levels of consensus are almost always obtained. Although product creativity may be difficult to define, it is something that raters agree about when they see it. As originally conceived, the CAT was not necessarily intended to be employed cross-culturally. Yet happily for researchers, it has proven to be an especially useful research tool in this regard. Because the CAT enlists judges who are indigenous to the area in which products are produced and who share the cultural heritage of those doing the creating, this methodology allows for the unbiased assessment of product creativity—freed from the imposition of Western values or assumptions (Hennessey et al. 2008).

The impact of culture on creative behavior cannot be overstated. Yet when it comes to creative potential, there is no reliable evidence of widespread cultural differences. Stereotypes aside, comprehensive reviews of the literature (e.g., Leung et al. 2004) show that most psychologists and scholars focused on the components of the creative process agree that creative behavior results from a normative human cognitive capacity (see Ward et al. 1999; Weisberg 1993). All persons of normal intelligence are thought to be capable of producing creative ideas or products, and there is no reason to hypothesize that individuals of some cultural backgrounds would be inherently more (or less) likely to generate creative problem solutions than would others. Cultural norms help to determine when and in what form creative ideas and innovations will be accepted and adopted. But investigators have never identified innate differences in the fundamental capacity for creativity and innovation (see Hennessey and Altringer 2014); and recent comparisons of the R&D climate in the USA and Asia find few cultural differences (e.g., Nagaoka and Walsh 2009).

In fact, research indicates that certain key components of the creative process may best be viewed as culturally universal. The same quality/quantity relationship long documented in the West where fluency (sheer number of ideas generated) is positively correlated with originality (uniqueness of ideas) has also been shown to pertain to Eastern populations. Similarly, highly facilitative effects of mentoring or exposure to highly creative coworkers also appear to cut across cultures (Morris and Leung 2010). Importantly, however, there is also strong research evidence that cultures differ substantially not only in their social expectations but also in terms of the relative emphasis they place on certain personality factors, problem framing approaches, and solution “styles” (Westwood and Low 2003). In fact, it appears that while some specific cultural practices, socialization techniques, and expectations serve to inhibit the human capacity for risk-taking and creative inquiry, other cultural practices may serve to especially enhance these behaviors (see Hennessey and Altringer 2014).

The ways in which cultural elements can advance or constrain creative behavior are complex and varied. Popularized truisms proclaiming that Westerners are inherently better at innovation while their Eastern counterparts are relegated to imitation fall far short of capturing the rich diversities of creativity and innovation worldwide (Morris and Leung 2010). Japan’s rise to international prominence in areas of technological innovation flies in the face of East/West stereotyping. Moreover, an historical analysis of cultural contributions over time debunks any notion of a “creatively-challenged” Asian populace. But we have a long way to go before we can even begin to appreciate the many ways in which culture impacts creative cognition and behavior.

There Is No One Path to Creativity

The road to creativity in one cultural context may be very different from the road taken in another culture. In fact, recent research suggests that creative problem solving can proceed either from the kinds of loose, flexible inference strategies that characterize Western laboratories and think tanks or from a much more cautious, persistent inference strategy common to many Eastern institutions (Nijstad et al. 2010). As reported by Nagaoka and Walsh (2009), inventions result more frequently from projects with incremental objectives in Japan (66 %) than they do in the USA (48 %); while projects with breakthrough objectives succeed more often in the USA (24 %) than they do in Japan (8 %). What might be the explanation for these cultural differences?

Neuroscientific evidence points to socio-cultural influences that may serve to impact thinking, judgment, and behavior (including creative behavior) even at the most fundamental physiological level. Studies in developmental neuroscience reveal that both the structure and function of the human brain are shaped by the social environment (Miller and Kinsbourne 2012). And, in turn, the social environment is in large part dictated by culture. Cutting-edge investigations in the exciting new area of cultural neuroscience are now beginning to reveal just how many psychological processes, processes manifested by both overt behavior and brain activation that were once believed to be universal, are significantly affected by cultural experience. In fact, some recent papers point to the conclusion that even the most basic brain functions can show important underlying cultural differences at the level of the neuron (Rule et al. 2013). In an exploration of the role of language on brain function, researchers found that native speakers of Chinese, whose language focuses on images and writing, utilized distinctly different brain areas when solving simple mathematical problems, as compared to native English speakers, whose language focuses on letter-sound correspondence. Although study participants in both groups could easily come up with the correct numerical answers, the internal paths they took to get there appeared to be distinctly different (Tang et al. 2006). Performance differences on perceptual tasks have also been linked to study participants' culture. On the classic Rod-And-Frame Test, differences emerge in terms of visual attention and the neural circuitry that is recruited to complete the task (Hedden et al. 2008). Culture impacts how individuals see, what they pay attention to, and what they think they see (Freeman et al. 2009).

This influence of culture on psychological and cognitive processes is especially evident in relation to the ways in which individuals come to think about themselves and their relationships with others. As outlined earlier, persons from

more independent cultures have been found to emphasize their autonomy and uniqueness and typically value highly opportunities for self-expression. Individuals from more collectivist or interdependent cultures, on the other hand, tend to emphasize social harmony and conformity and strive to follow group norms (Gaur 2011; Hernandez and Iyengar 2001; Markus and Kitayama 1991, 2003). Intriguing examples of these group differences come from work carried out by Iyengar and colleagues. Iyengar and Lepper (1999) found, for example, that intrinsic motivation was maximized for Asian American children when choices were made for them by either their mother or a group of peers. European American children, however, showed a loss of intrinsic motivation under these conditions; and their motivation was highest when they were permitted to make their own choices. Studies such as this one that focus on the motivational orientation of persons raised in more interdependent cultures call into question the boundaries between intrinsic and extrinsic motivation. While in a more Western framework, working to please one's mother would be construed as an extrinsic orientation: If an individual's mother contributes significantly to one's sense of self, the motivation to please mom might well be seen as intrinsic. In fact, there is now some fMRI evidence to show that these cultural differences in the so-called self-system are, once again, reflected at the neuronal level of brain function. Zhu and colleagues (Zhu et al. 2007) reported that a portion of the brain implicated in processing self-referential information was activated in Western study participants only when deciding whether a given adjective described themselves; yet among Chinese participants, there was no difference in brain activation when processing adjectives describing oneself and one's mother.

How might this cultural difference in the ways that individuals construe the self inform our understanding of the interface between culture, motivation, and creative performance? In answer to this question, it would seem that the individualistic identity makes some motivational orientations and behaviors far more likely than others. With Westerners socialized from a young age to strive for their independence and autonomy, it is easy to understand why a teacher's, a manager's or an experimenter's imposition of an extrinsic constraint such as the promise of reward might have an especially deleterious effect. This Western orientation stands in direct contrast to more collectivistic permeable or fluid boundaries between the self and the other. For persons living, learning, and working in a more interdependent cultural environment where children are socialized to view themselves as part of a larger web of interrelations, the imposition of a reward or evaluation contingency might not be expected to undermine intrinsic task motivation or creativity of performance because intrinsic motivation is intertwined with the goal of meeting

the wishes of and achieving the shared goals of the entire group. In fact, the cross-cultural management literature highlights the fact that in some parts of the world, the maintenance of employees' sense of autonomy, an ingredient long thought to be essential to intrinsic motivation and creativity, may not be as important as the creation of a work setting that promotes an atmosphere of relatedness or the sense of personal security in relationship with others (e.g., Beswick 2013; Iguisi 2009).

As outlined earlier, SDT rests on the assumption that the psychological need for competence, autonomy, and relatedness is common to people of all cultures (Deci and Ryan 2007). According to this view, while cultures may shape people in fundamental and powerful ways, all humans are driven to fulfill certain basic needs. Culture, in other words, may influence the means by which these needs are met but it in no way determines these needs. A more culturally relativist view espoused by researchers and theorists like Markus and colleagues (see Markus et al. 1996) argues that these so-called “basic” needs, including autonomy and relatedness, are in fact culturally transmitted. Is autonomy a thoroughly Western construct rooted in cultures emphasizing the drive toward individualism and the need for control? Do East Asians and persons from other collectivist cultures find that they have little need to establish a sense of autonomy in their own lives? Or might cultures simply differ in the ways in which the need for autonomy and the development of a sense of agency are manifested? The proposal that a small number of universal psychological needs drive human motivation need not diminish the importance of culture, but it could provide a basic framework with which the complexities of cultural differences as well as individual differences in motivational orientation could be explored.

A thorough delineation of the social and cultural context driving motivation is essential to any investigation of the psychology of creativity. Researchers and theorists must determine how individuals view themselves and their possibilities. Do they feel comfortable pushing any and all boundaries and exploring the limits of their own creative potential, or are they looking for group consensus? Are they driven by an overwhelming need to feel autonomous and in control of their situation or are they more content to look within themselves for evidence of that control? Recent work carried out by Walker (2009) proposes that self-construal must be viewed as an important intervening variable between culture and motivation. Importantly, when we add considerations of culture and self-systems to our conceptions of the creativity-motivational orientation connection, we must revisit what were once considered to be basic assumptions about both motivation and creativity. For example, reflections offered by De Dreu (2010) explore the influence of culture not only on the

nature and number of creative insights achieved but also on the information processing strategies used to reach those creative solutions as well as cultural group members' motivation to explore certain domains in the first place. De Dreu reminds us that we have yet to understand how cultural differences may impact problem finding, idea generation and evaluation, and creative problem-solving strategies. Cultural background helps to determine what is salient, what will be considered important issues and interesting problems to be pursued, and what questions or opportunities will likely be avoided because they are seen as less interesting, potentially threatening, or even dangerous.

Studies of Achievement Motivation

An emphasis on the intrinsic/extrinsic distinction has long dominated discussions of the link between motivation and creativity. In fact, a careful review of the motivation literature reveals almost a complete rift between the social-psychological research and theorizing reviewed in this chapter and work being done on what has come to be termed Achievement Goal Theory. Like SDT and the modeling being done within the framework of a social psychology of creativity, Achievement Goal Theory (see Anderman and Wolters 2006; Meece et al. 2006; Pintrich 2000) is based on a social-cognitive view of motivation. While more than 25 years of research and theorizing has established this approach as an especially prominent and influential theory of motivation (Anderman and Wolters 2006; Pintrich 2000), its influence has been almost entirely restricted to work carried out in classroom settings. Rather than emphasize self-perceptions and causal attributions, Achievement Goal Theory focuses on the types of goals pursued in achievement situations, most especially goals involving the development and demonstration of competence (Maehr and Nicholls 1980; Nicholls 1984). Earlier applications of Achievement Goal Theory contrasted learning versus performance goals (Dweck and Elliott 1983), task-involved versus ego-involved goals (Nicholls 1984), and mastery versus ability-focused goals (Ames 1992; Ames and Archer 1988). More recent work has tended to subsume these categories into a more general mastery versus performance dichotomy. The parallels between these mastery/performance goal orientations and the operationalizations of intrinsic and extrinsic motivation are striking. So too are the similarities in the behavioral outcomes reported in the two literatures. Achievement-related behavioral patterns that come with a mastery orientation resemble closely attitudes and behaviors associated with high levels of creative performance. At all grade levels, students who focus on mastery goals persist at difficult tasks

(Elliott and Dweck 1988; Stipek and Kowalski 1989), show high levels of task involvement (Harackiewicz et al. 2000), effort, and persistence (Grant and Dweck 2003; Miller et al. 1996; Wolters 2004), and report enhanced feelings of self-efficacy (Meece et al. 1988; Midgley et al. 1998; Roeser et al. 1996; Wolters 2004).

Achievement Goal Theory has proven useful for categorizing individual differences in student motivation, and it has also provided researchers with a valuable framework for analyzing the impact of classroom environment on student motivation and learning outcomes. Yet even the most comprehensive reviews of Achievement Goal Theory fail to reference the complementary literature exploring the social psychology of motivation (and vice versa). One exception to this rule is an empirical research report authored in 2006 by Vansteenkiste, Lens, and Deci. This paper demonstrates unequivocally the fruitful insights that can come from a combination of these two theoretical viewpoints. Results from many studies reported in the Achievement Goal Theory literature underscore the important role played by students' perceptions of their learning situations, and researchers working within this tradition have recently come to understand that it is an individual's interpretation of a reward or evaluation contingency and not the reward or evaluation itself that will determine whether intrinsic motivation (and creativity) will be enhanced, undermined, or remain relatively unchanged. Moreover, an examination of the Achievement Motivation literature reveals that culture has frequently been demonstrated to influence this interpretive process.

Salili et al. (2001) argue that the impact of culture has received special attention from educational researchers due to the fact that Asian students, as compared to their Western counterparts, consistently evidence superior achievement on standardized tests. Many observers of this so-called "Asian advantage", both educators and lay persons alike, marvel at this phenomenon and look to genetic explanations and/or to cultural differences in parenting, teaching style, or overall societal expectations as sources of explanation. In fact, numerous studies reveal that cultural values and practices influence students' motivational orientation in a number of respects. Usher and Kober (2012) observe that children from different cultural backgrounds engage in school in a variety of different ways. The educational values of their culture are reinforced by their families with parenting behavior that serves to shape students' ideas about their own identities, abilities, and goals. Along these same lines, Tripathi and Cervone (2008) found that even among adult workers who scored equivalently on indices of motivational strength and motivational orientation, American and Indian employees differed substantially in motivational orientation, with Americans focused on self-promotion and Indians

tying their sense of achievement more strongly to concerns for extended family, coworkers and the wider community.

Traditionally, investigations of achievement motivation have focused on so-called task goals and performance/ability goals; and important differences have been found between cultural groups. Experimental work carried out by a variety of researchers (e.g., Duda 1986; Maehr and Nicholls 1980; McInerney 2008; Niles 1995) argues, however, that when considerations of culture are incorporated into research exploring achievement motivation, an examination of additional perspectives such as the motive to gain social approval and/or build or maintain social relationships with family is also essential. Finally, Moneta (2004) reports a cultural variation of the flow model with Chinese students experiencing the highest level of state intrinsic motivation in situations of mastery practice (low challenge/high skill) rather than in conditions combining high challenge and high skill that have come to characterize the flow state in the West. Moneta argues that this cultural difference is partially explained by the internalization of collectivist values and goes on to advocate for a multi-cultural revision of both Flow Theory (Csikszentmihalyi 1990, 1997) and SDT (Deci and Ryan 1985a, b, 1996, 2000, 2008a, b).

Taken together, these studies and others like them argue for a re-examination of existing motivational constructs as well as the incorporation of a variety of new dimensions into rubrics designed to model achievement motivation, and all types of motivation, across cultures. At present, neither cognitive dimensions nor cultural distinctions such as differences in the construal of the self have been sufficiently integrated into empirical investigations or the theory-building process.

Beyond Generalizations and Dualisms: Where Do We Go from Here?

By their very nature, the study of complicated constructs like motivation and creativity, not to mention culture, will always be messy and especially challenging. If we are to understand more fully the interface between culture, motivation, and creativity, we must work to develop far more precise and culturally sensitive definitions and operationalizations of creative behavior, performance goals, motivational orientation, and the like—operationalizations free of the Western cultural bias that plagues so many of the measurement tools and theoretical models currently employed (Panda 2011). Moreover, it will never be enough to “paint with a broad brush” in search of overarching models that

describe the dynamics at play for entire cultural groups. While such generalizations may initially prove useful as we begin to build systems models, researchers, and theorists must also strive to understand the interface between culture, motivational orientation, and creativity from each individual's own, unique perspective and experience. As evidenced by the research and theories summarized in this entry, we have already made considerable headway in many of these areas. A melding of what have remained up until this point parallel but isolated research traditions, theories, and findings is one obvious important next step. Also essential will be a reframing of the way in which investigators focused on the influence of culture pose their research questions and then go about answering those questions. As described by Raina (1991), the cross-cultural psychology literature has for far too long been dominated by mindless attempts to replicate around the globe findings from experiments originally conducted in North America.

Recent important work being done by persons indigenous to non-Western cultures argues that if any real progress is to be made, investigators must abandon altogether the dualism between intrinsic and extrinsic motivation or self and other. As argued previously, research on creativity and motivation coming from mainstream psychology is still very much tied to an individualistic framework (Purser and Montuouri 2004). And, in many respects, it may be this theoretical orientation that has prevented the majority of researchers from making serious attempts to infuse an examination of culture into their work. The adoption of a more holistic view of the self both necessitates a consideration of culture and leads directly to the understanding that creativity is both social and context-embedded. As explained by Panda (2011), for individualists, social and cultural factors are seen as epiphenomenal; but in the eyes of theorists adopting a more collectivist position, “the individual is simply expressing the social, political and economic forces of the times” (p. 469). In this view, it is the person, the creator, who is epiphenomenal—“the vehicle for social forces which play themselves out with or without any particular individual” (Panda 2011, p. 469).

Without exception, comparisons of creative behavior across cultures suffer from a fatal flaw in that the groups being compared may not share a common reference point. Panda (2011) explores these difficulties with a detailed account of conceptions of and beliefs about creativity in India. Like many definitions developed in the West, Indian conceptions of creativity also emphasize the new and the different. But implicit in the Indian viewpoint is the stipulation that in order to be deemed creative, ideas and products must digress from the usual in such a way that harmony with nature is maintained. Panda (2011) further explains that the creative product can never be

evaluated independent of the actions and social virtues of the creator him or herself. Both the finished product and the efforts that went into producing that product are seen as parts of a larger social process. In stark contrast to the Western view of the lone genius or creative rebel, in this Indian framework, creator and society are required to work in harmony (Panda 2011). In fact, in some indigenous Indian cultures, creators remain anonymous: Creative work is considered to belong to the entire community (Misra et al. 2006).

Panda (2011) goes on to report that many products deemed creative in Indian society are valued not because they offer new insights or solutions to a problem (as conceptualized in the West) but because they incorporate imitation and repetition, two hallmarks that in the West would be considered antithetical to creativity. In India, “imitation, repetition, novelty, conventionality or unconventional expressions all form a continuum of creative behavior” (Panda 2011, p. 479). Importantly, it is this notion of a continuum that may prove central to research and theorizing moving forward. Rather than focus their attention on dualisms like individual versus society, originality versus conformity, intrinsic versus extrinsic, or East versus West, investigators must strive to model motivational systems that move far beyond the boundary between self and “other”. As argued earlier, the dominant construct common to virtually every contemporary understanding of motivation coming from mainstream (Western) psychology is the quest for control—the individual’s need to control the environment rather than be controlled. This need for self-determination is assumed by Western theorists to be at the core of all human behavior. Yet scholars of Indian and Asian psychology report that in the East, the experience of control is distributed and located neither entirely within the individual nor entirely within the environment (Gaur 2011). Continuum rather than dualism. Distribution instead of dichotomy.

The study of creative behavior and motivational orientation across cultural and national contexts is highly complex. Researchers and theorists must be ever mindful of the potential for simplistic ethnocentric assumptions and cultural bias, most especially Western bias, to distort their work. Carefully controlled empirical studies that rely on cross-cultural comparisons and operationalize culture as an external force that works independently of persons to impact their motivation and behavior, while sometimes useful, must be supplemented with ethnographic investigations based on the view that culturally driven differences in a variety of psychological processes, perhaps most especially how individuals view themselves in relation to others, result in overt differences in all facets of human cognition and behavior, including creative behavior. The contributions of so-called indigenous psychology, a movement with roots outside of North America and Western Europe, will also be

important as we go forward. The goal of this group is to carry out research that is more appropriate and relevant to their native cultural contexts than are traditional Western approaches. Exciting work is being done in this area, yet even indigenous studies can fall prey to many of the same biases and problems of interpretation that plague more traditional cross-cultural investigations.

Individual difference variables and environmental factors that support a motivational orientation conducive to creative behavior in one cultural context may have no important effect, or even a negative effect, in another culture. There is nothing simple about culture, and the relation between culture, motivation, and creativity is multi-faceted. Cultural norms and expectations have important consequences at all phases of the creative process. Workplace environments as well as classrooms are becoming ever more culturally diverse; while at the same time, corporate managers and educational leaders are under increased pressure to push the creativity and innovation of employees and students. These multi-cultural contexts provide especially challenging and exciting research contexts for investigators and theorists.

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8

Culture and Psychometric Studies of Creativity

Maciej Karwowski

Edward Lee Thorndike [1874–1949], a classic psychologist, is known to have said that “everything that exists, exists in some quantity and can therefore be measured” (cited in Eysenck 1995, p. 83). Although this sentence forms a guiding thought for empirical psychology, its fallibility is best seen when we encounter two phenomena that make up the title of this chapter: culture and creativity. Attempts to measure them have been undertaken for decades (Cropley 2000; Morling and Lamoreaux 2008; Taras et al. 2009), yet it is hard to acknowledge that they are successful. Quite the opposite—despite empirical dominance practiced in the *etic* tradition of cross-cultural psychology, the dynamically developing cultural psychology emphasizes the significance of the *emic* perspective for a more comprehensive understanding of culture. The situation is similar in case of creativity sciences: despite the dominance of psychometrics, the cultural psychology of creativity begs a more dynamic, processual take that focuses more on the act of performance than on its observed effect (Glăveanu 2010, *in press*; Vygotsky 1930/2004).

The fundamental risk I ponder in this chapter concerns the fact that creativity studies might be dominated by perspectives coming from the West, or countries described as WEIRD (western, educated, industrialized, rich,

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and democratic; Henrich et al. 2010). This affects the creation of a particular image of creativity and, consequently, a way of measuring it that is low on validity and, in its extreme forms, completely invalid when it comes to the description of this phenomenon with regard to cultures other than those of the West (Kaufman and Sternberg 2006). This observation is even more important if we realize that the contemporary science of creativity does not exist without psychometrics; at least not in the shape we know it. Despite the enormous significance of strictly theoretical works (see Kozbelt et al. 2010, for a review), despite the role biographical (Gruber and Barrett 1974; Wallace and Gruber 1989) and historiometric (Simonton 1990, 2009) research plays, a clear majority of findings that we consider “classic” in the creativity literature apply tests and self-descriptive measures of creativity. The fourth-grade slump (Krampen 2012; Torrance 1968), the threshold hypothesis (Jauk et al. 2013; Karwowski and Gralewski 2013), flat associative gradient (Benedek and Neubauer 2013; Mednick 1962), relations between personality and achievements (Jauk et al. 2014), personality determinants of creative achievements (Feist 1998), and many other findings would likely not be postulated were it not for the use of psychometric methods. Although the psychometric approach to creativity has been rightfully criticized for years (Hocevar 1981; Houtz and Krug 1995), it still dominates creativity research even now when neuroimaging studies are developing rapidly (Benedek et al. 2014). It is therefore justifiable to say that appearance of the tests of divergent thinking by the duo of the founding fathers of the contemporary psychology of creativity—that is, Guilford (1950, 1967) and Torrance (1988)—has forever changed the nature of research into creativity, especially mini-c and little-c creativity (Kaufman and Beghetto 2009).

The psychometric approach to creativity implies its intra-psychological character that resembles what the *g* researchers (Jensen 1998) seek with the use of intelligence tests. Psychometrically oriented creativity researchers seem (frequently implicitly) to assume that creativity is a solely (or in its milder version—mainly) a psychological phenomenon. Although they appear more and more frequently in the literature, statements about creative organizations (Gundry et al. 1994), schools (Jeffrey and Woods 2003), or societies (Resnick 2008) are hard to be accepted by psychometrists. In their perception, the environment may foster or inhibit creativity, but even if it is contextualized (Amabile 1996; Csikszentmihalyi 1999), creativity itself is still intra-psychological (Runco 1999a). This perspective has been challenged more or less since the 1980s (Glăveanu 2010). Most cross-cultural studies as well as those currently conducted within cultural psychology do not consider culture as a catalyst or inhibitor of creativity, but instead treat it as a constitutive

and definitive factor in creativity (Glăveanu 2011a). Culture is not just a cocoon individuals are submerged in—their external reality, so to say (Runco 2015). On the contrary, it becomes an immanent part of the creative process: a sort of *participant* in the process of creative activity (Csikszentmihalyi 1999; Glăveanu, in this volume).

Do We Understand Creativity in the Same Way?

Most studies devoted to creativity begin with a slightly conservative statement that it is an extremely complex phenomenon and as such it is extraordinarily difficult to study. There is much posturing in this statement, because independently from differences, scientists as well as laymen are able to quite similarly and, what's important, coherently state what creativity is (Rudowicz 2003; Sternberg 1985). Naïve or implicit theories of creativity (Sternberg 1985) or the social representation of creativity (Glăveanu 2011b) are important in and out of themselves, and are significant for the cultural perspective; yet I will address them later. Here, let's begin with the definition (Sternberg and Lubart 1999) typically brought about in similar situations, which posits that creativity is everything that combines originality and value or usefulness and that it is multiplication rather than an additive effect of these two components. Consequently, an idea or a product must concurrently be new and valuable—the lack of its value cannot be replaced with a higher level of originality and low level of originality cannot be replaced with an even greater value. Although we occasionally hear arguments that these two criteria should be complemented by the ability of a creative product to surprise and to being non-obvious (Simonton 2012 *in press*) or being authentic and esthetic (Kharkhurin 2014), a clear majority of contemporarily evoked definitions (see Kaufman and Sternberg 2010) refer particularly to originality and value as criteria of creativity. Though, obviously, value as well as originality are relative, that is, they differ temporally, culturally, geographically, or inter-individually, the definition renders well what professionals think about the essence of creativity.

Yet, is the weight of originality (newness) and value (usefulness) the same for understanding creativity? It should be; after all, it is assumed that these properties are of equal importance. While operationalizing creativity, an imbalance between them may lead to many consequences and limited validity of the measurement may be the most important of these. For instance, it was recently suggested that the fact that creativity tests measure originality rather than value and school achievement tests, on the contrary, focus on correctness

(usefulness) rather than originality of solutions, may be one of the reasons for a moderate (though significant) strength of the relation between creative ability and academic achievement (see Gajda et al. 2016, for a discussion). Similarly, the complex relations between creativity and intelligence (Jauk et al. 2013; Karwowski and Gralewski 2013; Karwowski et al. 2016; Silvia 2015) may to at least some extent be attributed to the fact that whereas the measurement of creative thinking is based on originality, when studying intelligence scholars search for useful answers—proper, correct ones and hence rather useful than original (Kaufman 2015).

The first argument of this chapter assumes, therefore, that *even though scholars define creativity as the multiplication of originality and value, ascribing similar weights to these criteria, a clear originality bias* (Beghetto 2010; Diedrich et al. 2015; Runco 2003) *exists when it comes to measuring creativity, especially when this measurement is based on tests elaborated in the West.* Though multidimensional (ordinarily accounting for fluency, flexibility, and originality), the classic assessment of tasks that measure divergent thinking does not stray significantly away from originality itself and does not address usefulness almost at all. Elaboration—a less frequently applied criterion—does indeed focus on perfecting and makes it possible to assess managing task constraints, yet it is clearly less popular among psychometrists (see, for instance, Barbot et al. 2011). Therefore, if we accept this line of reasoning, consequences that stem from it become a serious allegation against the validity of divergent thinking tests. After all, even though they are indeed predictively valid, meaning they make it possible to predict actual creative achievements (Plucker 1999), they still encompass only a small part of creativity constructs.

The second argument goes even farther by claiming that the *originality bias, perceptible in tests, is not a coincidence but a natural consequence of defining creativity that has been characteristic for Western researchers since Guilford.* More precisely, the dominance of originality over value is a characteristic of the Western view of creativity when we deal with explicit (scientific; e.g., Amabile 1996) and implicit (naïve; Sternberg 1985) theories, while the opposite emphasis is evident in the “Eastern” viewpoint (Nowacki 2012; Rudowicz 2003).

Therefore, the third argument stems from the above: *creativity tests whose validity is limited right from the onset (because they examine mainly originality without being able to properly account for value) could be even less valid outside of the Western cultures, where creativity is predominantly equated with value.* As Rudowicz (2003) correctly noticed, the significance of culture is not limited to the fact that it exerts influence on what is being created, by whom, and how it is communicated, but it also determines functions and effects creativity has for the individual and for society. This is why it is also important to analyze

intercultural differences in explicit and implicit theories of creativity, because they make it possible to comprehend the shared commonsense views about its nature and the meaning ascribed to it by various people in a given culture. Explicit as well as implicit theories form a sort of “standard” when assessing one’s own self as well as others (Gralewski and Karwowski 2016; Hass and Burke 2016; Hass et al. *in press*; Sternberg 1985).

Do the Same Personality Traits Predict Creativity Independently of Culture?

A quick review of self-report instruments used to measure creativity shows that non-conformism and sometimes even aggressiveness (Simonton 1991) play an important role as characteristics of creative individuals. This set of traits, sometimes actually characteristic for creators (Feist 1998), does not have to be a culturally universal predictor of creativity. Already classic studies (Markus and Kitayama 1991, 1994) point to the fact that representatives of different cultures define their identity through socialization. Individualist societies are characterized by stronger non-conformist attitudes, their members see themselves as separate individuals, and in collectivist societies more as group members. Both of these types of culture make it possible to realize and satisfy completely different—though equally important—psychological needs. Collectivist societies emphasize the need for belonging and individualist ones for standing out and being differing (Maslach 1974). Creativity is most frequently analyzed as an individualistic act. And though indeed eminent creativity frequently means challenging the *status quo*, many creative activities—especially those that are characteristic for the East—excellently fit in with the culture and actually develop it. Decorating Easter eggs in Eastern Europe may form just one example (Glăveanu 2012).

According to Eysenck (1993, 1995) differences in psychoticism, a complex dimension of personality loaded by such traits such as aggression, assertiveness, anti-sociality, egocentrism, lack of empathy, or impulsiveness (Eysenck 1993, p. 155), are responsible for differences in creativity understood as a trait. Psychoticism may lead to psychoses, yet it may also stimulate creative thinking. What is common to creators and individuals in the grip of psychosis is a specific way of processing information and a particular functioning of attention, especially a relaxation of associations that enables creating remote and frequently original associations, as well as a weakened inhibition that make an individual receptive to much more environmental stimuli not associated directly with his or her current activity. Yet it is psychoticism, considered

along with openness to experience as one of the key personality-related drivers of creativity, culturally universal? Whereas a study on Indian writers (Mohan and Tiwana 1987) did suggest that their psychoticism was greater than norm, comparisons of Chinese mathematicians and writers with a control group (Hu and Gong 1990) showed that mathematicians were characterized by a clearly lower psychoticism level than the control group, and the writers' results were not significantly different from those of the control group, although they too revealed a tendency toward lower psychoticism ($p = .09$).

Consequently, creativity in Eastern cultures does not have to be considered as an opposite to conformism (Khaleefa et al. 1996). In Africa, creators-adaptors are appreciated more than innovators (to use Kirton's 1976, concepts). Renovation, understood as intellectual revision, reformulation of what was, is more important than complete newness. In Islamic cultures, creativity is appreciated when it fits in with social and religious norms. Also in China, creativity is inseparably linked with values.

Rudowicz (2003), in her review, emphasized that the East is more "intuitive" and the West is more "logical", which translates into various understandings of creativity: the West focuses more on solving problems, a generative phase, one may say, using the categories of the Geneplore model (Finke et al. 1992), while the East focuses on exploring and developing themes. Despite the stereotype of a distracted creator and demonstrated importance of mind-wandering for creativity (Zedelius and Schooler 2015), the last meta-analysis shows that creativity is positively related with mindfulness (Lebuda et al. 2015), and the strength of this relation is clearly higher in case of tests that are based on insight more than on divergent thinking. This could not just indicate that attention-focus typical for mindfulness helps in solving tasks that require insight, but also that mindfulness, so strongly based on meditative practices typical for the philosophies of the East, may differently associate with creativity, depending on culture.

Are Implicit Theories Really So Different?

The conviction that creativity is differently understood in the East and in the West is well grounded among creativity researchers (Niu and Sternberg 2002; Rudowicz 2003). Indeed, an analysis of cross-cultural works may render it possible to accept this conclusion. Is it true, though, that usefulness dominates over originality in the East and that originality dominates over usefulness in the West also in the case of implicit theories and social representations? It is not a trivial question if we realize that cultures mingle

more and more, and classic distinctions of cross-cultural psychology, such as individualism-collectivism, seem to be insufficient when describing cultural diversities. For instance, Oyserman and colleagues (Oyserman et al. 2002) meta-analytically demonstrated that Central European countries are more individualistic and less collectivist than Western European countries. This unexpected difference can be explained by the modernization theory according to which individualism levels increase when a society experiences a period of steady economic growth (Inglehart 1997; Kashima et al. 2004). The link between modernization and individualism is applicable across different cultures (Hamamura 2012): for instance, over the years, the personality profile of Chinese people has gravitated toward individualism (Yang 1986) and so it did in Japan (Yamagishi and Yamagishi 1994).

Continuing on this path, one may assume that representatives of various cultures will become more and more alike also with respect to the perception of such phenomena as creativity. Sundararajan and Raina (2015) have recently been postulating this by stating that the widely shared view of the differences in the perception of creativity between East and West is an artifact that resulted from studies on non-random samples that blur similarities. The “implicit theories similarity hypothesis” finds its confirmation in a recent meta-analysis (Nowacki 2016), which shows that cross-cultural differences in implicit theories of creativity are negligible. Nowacki (2016) meta-analyzed 30 studies of implicit theories of creativity conducted in 15 countries on four continents (USA, Canada, Germany, the UK, Ireland, Romania, Poland, Hong Kong, China, Japan, Korea, Cyprus, India, Turkey, and Argentina). Overall, almost 9000 individuals participated in these studies; they were asked to describe creative people with the use of various methods, mostly adjective scales. For the purpose of the meta-analysis, all adjectives (the total of a few hundred) used in various studies were brought down to five personality factors, in accordance with the Big Five model (McCrae and Costa 1997), in order to create a theoretical matrix that would render it possible to compare implicit theories across studies. Independent judges assessed the extent to which each adjective describes each of the Big Five factors. Openness to experience was a clearly dominating factor in the profile of a creative person ($ES = 0.60$), followed by agreeableness ($ES = -0.46$), extraversion ($ES = 0.35$), conscientiousness ($ES = 0.22$), and neuroticism ($ES = -0.21$). Overall, then, creative individuals were perceived as open and extravert while concurrently being non-conformist, conscientious, and emotionally stable. At the same time, this profile was very stable cross-culturally—in each of the analyzed regions the hierarchy of psychological traits perceived as characteristic of creative individuals was identical, with openness as the most strongly characteristic trait of creative

individuals, and agreeableness being the weakest. Importantly, in case of the Far East (mainly in studies conducted in China, Hong Kong, Japan, Taiwan, and Singapore), the profile was exactly the same as in the studies conducted in the West.

This finding, therefore, confirms Rudowicz's (2004) argument that even though explicit theories differently emphasize the various characteristics of creativity in the West and in the East, implicit theories are surprisingly similar (but see Lan and Kaufman 2012 for an opposite conclusion). Obviously, it is important to remember that the fact that creative individuals may be similarly defined in different cultures does not mean these cultures appreciate the typical creative personality pattern to the same extent (Leung et al. 2004; Ng 1999). Creative individuals may be defined through the prism of the same characteristics, but concurrently, in certain cultural circles these characteristics may be perceived as desirable and functional (e.g., standing out in case of the individualistic cultures of the West, Maslach 1974), while in other circles they can be considered as dysfunctional (Rudowicz et al. 2009).

The aforementioned meta-analysis (Nowacki 2016) suggests that implicit theories of creativity are becoming alike in different cultures, which may bear significant consequences for the measurement of creativity, especially in Asian cultures, where explicit and implicit theories seem to differ from each other (Rudowicz 2004). Most tests used in Asia are adapted from Western instruments—a set of Torrance's tests (TTCT, Torrance 1968), Wallach and Kogan's Creativity Tests (WKCT, Wallach and Kogan 1965), or Urban and Jellen's Test of Creative Thinking-Drawing Production (TCT-DP, Urban and Jellen 1996). These tests—at least the TTCT and WKCT—place significantly greater emphasis on originality than on usefulness. And although it fits well into the implicit understanding of what creativity is, the sole focus on originality makes it incomplete when confronted with explicit theories held in the East. Future research should explore the consequences these differences may bear on the testing procedure. For instance, some researchers suggested that the pragmatic attitudes of Asians as well as their perception of creativity as leading to valuable developments may translate into low involvement in the activity of solving a creativity test itself as the test is not considered to be a true measure of creativity and, as such, the process of solving it is not a valuable activity (Rudowicz 2004). Other studies showed the particular sensitivity of Chinese students to the effect of the "be creative" instruction (Niu and Sternberg 2002). This result was interpreted as an explicit consent for creativity given by the instruction, hence allowing for non-conformist activity, and as such it was discussed in the context of inhibiting the influence of Confucianism (Kim 2007). However, it may also have serious measurement

consequences. Psychologists of creativity have for years known that instructions of the like of “be creative” not only direct activities and motivate but also plays a metacognitive function (Nusbaum et al. 2014). When the situation of being tested with a “creativity test” in a culturally alien context is unclear and indeterminate, such instructions play a directional function and explain intent, thus rendering the measurement itself more valid. Hence, studies of the intercultural role of instructions and the process of interpreting the procedures and contextual aspects of testing are an indispensable element of studies of creativity that use psychometric methods (see Chen et al. 2005).

Is Creativity Perceived as Fixed or Malleable?

The issue that directly stems from the analyses of implicit theories of creativity lies in seeking sources of creativity in one’s own activity and effort or in perceiving it as an innate and lasting characteristic. This dimension, known as creative mindset (Karwowski 2014) refers to one of the perpetuated myths about creativity, which state that one has to be born creative (Plucker et al. 2004). Similarly to the studies of mindsets / implicit theories of intelligence or personality (Dweck 1999, 2006), also in case of creativity it was shown that individuals who believe that creativity may be developed and depends on one’s own involvement and efforts are characterized by a greater extent of creative self-efficacy or creative ability (Karwowski 2014). However, it was also demonstrated that in case of such a complex phenomenon as creativity, people have a tendency to perceive fixed and growth mindset as two distinct dimensions rather than ends of a single continuum. To put it more vividly, one can at the same time perceive creativity as possible to develop as well as fixed, susceptible, and not susceptible to changes (Karwowski 2014). Though this possibility was postulated previously with respect to implicit theories of intelligence (Dweck et al. 1995a), it is already well confirmed in the case of creativity. Much indicates that the complex characteristic of creativity, the fact that it may be analyzed on many levels (e.g., from mini-c to Big-C) in various domains, makes it easier for people to accept the assumption that creative potential may be developed (O’Connor et al. 2013), although it does not mean that eminent achievement is possible for anyone (Lin-Siegler et al. *in press*; Csikszentmihalyi 1996).

Yet is this psychometrically derived two-factor structure of mindsets, reconstructed cross-culturally and, if so, are we dealing with differences in the intensity of different mindsets among representatives of different countries and cultures? Furthermore, were such differences do indeed exist, what aspects of individual cultures may be responsible for them? A study on a Polish sample (Karwowski

2014) recently confirmed the two-factor structure of the creativity mindset and, what's important, this structure was successfully replicated in Germany, Spain, UK, Latvia, and China (Karwowski et al. 2016). A later study (Karwowski et al. 2016) also demonstrated the measurement invariance (Cheung and Rensvold 2002) of the Creative Mindset Scale (CMS; Karwowski 2014). The requirement of measurement invariance is one of the fundamental criteria in intercultural studies and is discussed later on in this chapter. The fact that the CMS (Karwowski 2014) is cross-culturally invariant indicates that the two-factor structure of the creativity mindset is culturally replicable, and countries may be reasonably compared with respect to the intensity of perceiving creativity as fixed or malleable. This is of particular importance because little is known about potential cultural differences in creative mindsets and factors that may shape them. Because creative mindsets are part of a wider category of "creative beliefs" (Karwowski and Barbot 2016), good reasons exist to believe that just like other beliefs, they develop under the influence of society and culture. To be more specific, one of the discussions of possible cultural differences with regard to mindset in general rather than the creative mindset specifically (Dweck et al. 1995a), postulated that the fixed mindset is much more characteristic for individualistic societies, while the growth mindset is much more strongly present in collectivist societies (see also Dweck et al. 1995b; Heine et al. 1999, 2001; Lillard 1998). Previous studies (Stevenson and Lee 1990; Stevenson and Stigler 1992) demonstrated that Asians consider cognitive traits as more malleable than people of the West. In a recent study, Tang and colleagues (Tang et al. 2016), examined cross-national differences in creative mindsets between Polish and German students and tested the hypothesized mediating role of individualism and collectivism in this relationship. Results demonstrated that Polish students perceived creativity as more fixed and less malleable than their German peers and that individualism and collectivism fully mediated the differences between countries in the growth versus fixed mindset preferences.

Do Cultures Differ with Respect to the Intensity of Creativity?

In an introduction to a book that argued that Asians are less creative than the people of the West (Ng 1999), Runco (1999b, p. X) stated:

[Ng] captures what may be the key idea in cross cultural studies, namely that cultures differ but cannot and should not be directly compared. Any such comparison is unfair, much like the common expression (in the West) about

comparing apples and oranges. Just to name one example, the West might seem to have an advantage for fulfilling creative potentials in that it allows the individual more liberty. Individuality is encouraged, rewarded, expected. There is probably more autonomy in the West, less pressure for conformity and harmony. On the other hand, human emotions are treated in different ways in the East and the West, with the East typically more open to and in control of emotions. This is especially significant when it comes to creativity because emotions have such weight in creative work

Independently from this (correct) argument, cultures have been compared also with respect to creativity. Sometimes observable and quantifiable Big-C creativity indicators (Kaufman and Beghetto 2009) are compared. Sometimes, scholars refer to studies on more or less representative samples of participants from different cultures.

Studies that compare entire cultures rarely refer to psychometric methods; they are rather based on observable indicators of creative achievements such as the number of patents or Nobel Prizes, or aggregated indexes of economic innovativeness. At least a few alternative theories anticipate intercultural differences in the intensity of creative achievements. For instance, the climato-economic theory (Van de Vliert 2008) assumes that development of cultures is conditioned by climatic conditions and economic resources. Excessively harsh climatic conditions (e.g., too high or too low temperature) pose a threat to human functioning, whereas low or high level of resources make it impossible (low) or make it simple (high) to deal with difficulties generated by the environment. Consequently, whereas harsh climatic conditions and low level of resources pose a threat, difficult climatic conditions with high level of resources pose a challenge that is possible to overcome. One of the most recent re-analyses of the climato-economic theory with regard to creativity (Karwowski and Lebuda 2013) shows that in poorer countries, a linear relationship exists between climatic demands and creativity: the more harsh the climate, the higher the country's level of creativity. The observed relationship is curvilinear in richer countries, where the level of a country's creativity increases along with the challenge generated by climatic demands. At the same time, it decreases upon achieving its optimum. Nations characterized by moderate climatic demands score the highest on creative achievement. Therefore, in poorer countries folk wisdom works: under harsh conditions, creativity pays off and necessity is the mother of invention.

Pathogen prevalence theory (Murray 2013a; Murray and Schaller 2012; Murray et al. 2011; Schaller and Murray 2008) is another alternative theory that explains the diversification of creativity and innovation on the level of

cultures. In short, this theory assumes that in various cultures the development of personality, conformist behaviors and in consequence also creativity, may stem from the feeling of threat from illnesses. It proves that even when nations' wealth, level of education, and population structure are controlled, nations characterized by a higher risk of diseases—especially parasitic diseases—are significantly less creative due to their conformism (Murray 2013a). The pathogen prevalence theory and the climato-economic theory do not have to be mutually exclusive (Murray 2013b); work on integrating them for explaining creativity is in progress.

What Do Comparisons of Creativity Test Results Tell Us?

Comparing representatives of different cultures, especially on the dimensions measured by tests and questionnaires, should always be approached with a high degree of caution. This is particularly so when we deal with measures that were developed and elaborated in one culture and applied in another. The risk of such a measurement's invalidity is obvious and stems not only from differences in defining creativity. Most frequently, what differs are the attributions of the respondents with regard to the testing situation—familiar in the West, but completely alien in Africa, for instance. To provide an example, one of the first applications of the TCT-DP (Jellen and Urban 1989) in cross-cultural studies showed that differences did appear in the results of TCT-DP among respondents from 11 countries, with participants from Philippines ($M = 28.2$, $SD = 11.5$), England ($M = 24.7$, $SD = 8.7$), and Germany ($M = 24$, $SD = 8.5$) having the highest scores. Students from Zulu from South Africa ($M = 16.7$, $SD = 6$), Indonesia ($M = 14.9$, $SD = 5.2$), and Cameroon ($M = 14.9$, $SD = 6.4$) obtained much lower results. What is important, however, is the observation that application of the TCT-DP among the Zulu leads to serious doubts about this instrument's validity (see Jellen and Urban 1989 for a discussion). Unlike typical divergent thinking tasks, the TCT-DP does not require writing and is largely void of cultural content—and therefore is considered “culture-fair” (see Jellen and Urban 1989). However, despite the drawing character of the test, in case of the Zulu respondents the necessity to draw as well as the testing situation itself and the lack of full comprehension of researchers' expectation made the procedure highly unnatural. Hence, the scores obtained by Zulu students should be interpreted with caution.

Similarly, one of the latest studies with the use of TCT-DP in the Meru tribe (Karwowski et al. 2016) showed that, although the respondents eagerly

engaged in solving the test, and assessments of their products were reliable, frequently the qualitative analysis of obtained results indicated incomplete comprehension of the test's instructions. Participants in the TCT-DP are asked to complete an unfinished drawing that consists of a number of shapes. The overall TCT-DP score is based on 14 criteria: (1) continuations, (2) completions, (3) new elements, (4) connections made with a line, (5) connections made to produce a theme, (6) boundary breaking (fragment-dependent), (7) boundary breaking (fragment-independent), (8) perspective, (9) humor and affectivity, (10) manipulation of the material, (11) surreal or abstract drawings, (12) atypical combinations of figures and symbols, (13) non-stereotypical use of a certain element, and (14) speed. It is important to note that the majority of these criteria are formal, so no subjective evaluation as to whether something is creative or not is required. Instead, what is assessed are these detailed criteria whose sum—the total result on the TCT-DP—is supposed to indicate the level of creative abilities. Previous studies with the use of the TCT-DP confirmed that it is a valid and reliable instrument that measures creative potential well (e.g., Gralewski and Karwowski 2012; Urban and Jellen 1996). The fact that subjective criteria play a relatively minor role in the assessment makes it seem particularly useful in cross-cultural studies. After all, previous investigations showed clearly that who makes the assessment, not just what is being assessed, is also important for creativity (Kasof 1995; Lebuda and Karwowski 2013).

Yet, is it really so? Examples from Fig. 8.1 (panels A-B) show original and esthetic products that would be rated quite low were we to follow the TCT-DP criteria, and panels C-D show examples of products that would be rated similarly even though they are clearly less original.

Although both drawings from panels A-B show high aptitude of respondents in drawing, and, additionally, panel B shows manipulation of the testing sheet, the fact that testing instructions were ignored is clearly evident. TCT-DP respondents are told that someone started the drawing and their task is to complete it. Examples provided above show that these starting elements were ignored, and respondents used the testing sheet to create their own works, somewhat outside of the testing criteria. It is hard to indicate to what extent the observed phenomenon results from incomprehension of instructions and to what extent it is a result of the respondents' own invention. Other products that were clearly set in the context determined by the initial symbols (while being clearly less creative) (panels C-D) speak against the hypothesis regarding incomprehension of the instructions. It is possible, then, that examples shown above illustrate conscious ignorance of the instructions and the creation of a drawing on the basis of one's own preferences and ideas.

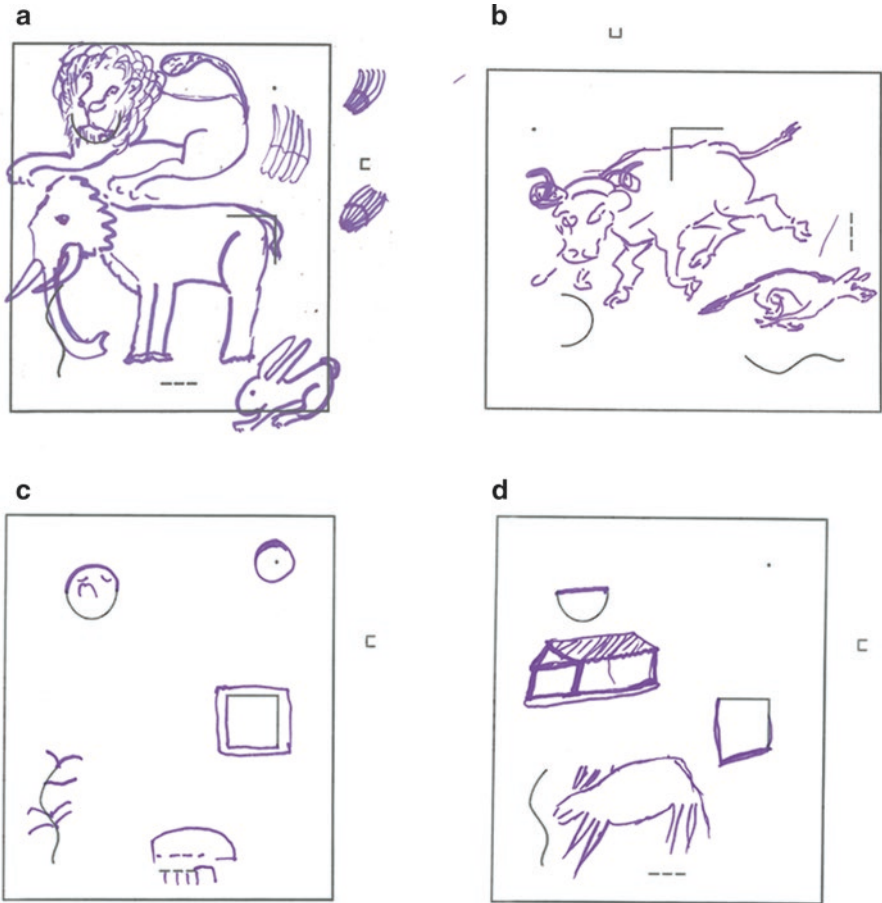


Fig. 8.1 Examples of completing the TCT-DP test by Meru. *Panels A-B* show tests characterized by high esthetic values, but completed without instructions, and *panels C-D* show tests completed in accordance with instructions, but low on originality

This expression of creative non-conformism would not be rated high, though, were we to stick to the criteria of rating this test.

Does sticking to the test instructions, paradoxically, result in worse results and, consequently, did creative individuals obtain lower results *because* of their non-conformism? Are test criteria themselves inaccurate and “hurt” the respondents? In order to examine this we assessed each product independently from test assessment criteria, and focused on their originality, esthetics, and elaboration. A structural model with which we assessed the relations between the way of counting the results of the TCT-DP based on the formal attributes of the drawing with the results of an independent assessment of originality,

esthetics, and complexity of the products showed that, in case of the Meru, the standard procedure of counting the results of the TCT-DP rendered statistically significant yet weak relations with the drawings' originality and esthetics (both $r = .31$, $p = .002$) and related more strongly to the diversity of the products ($r = .63$; $p < .001$). Consequently, our fear that intellectual non-conformism of the more creative Meru made their test results worse was not confirmed. On the other hand, however, formal assessment of the TCT-DP was only moderately related to the classic criteria of creativity, namely product originality or its esthetics. This necessitates a closer consideration of more complex and multidimensional ways of assessing this and other tests (see for instance Kalis et al. 2016).

Do We Really Measure the Same Thing in the Same Way?

More fundamental issues are occasionally also problematic in cross-cultural studies. For instance, studies very infrequently use representative samples, because such samples are expensive and fieldwork takes a lot of time. On the other hand, making conclusions on the basis of results obtained on convenient samples (frequently made up of students) is risky when one attempts to draw conclusions about entire cultures basing on them. A student's social status is very different in countries characterized by high and low gross enrollment ratio.

Another serious limitation is the risk that individual test items—for example, test tasks or questionnaire items—function differently in different cultures. It is important to remember that, from the psychometric point of view, divergent thinking tests are characterized by a non-standard structure, because they are open-ended tasks and the same answers given by respondents are assessed on the basis of different dimensions, such as fluency, flexibility, originality, or elaboration. This does not at all relate to the assumption that testing items are independent, which forms the basis of most psychometric analyses (e.g., testing reliability with the use of the internal consistency method; Cronbach and Shavelson 2004). The previously mentioned lack of measurement invariance is an even more serious problem.

Cross-cultural studies, but also psychometrics in general, assume that a number of fundamental conditions need to be fulfilled in order for any intergroup comparisons (e.g., inter-gender, but also cross-cultural) to be possible. The first, most basic of these conditions is to demonstrate that overall structure of examined constructs is the same in different groups. Researchers

show, therefore, that in the case of men and women or citizens of China and the USA the given instrument measures the assumed constructs. This stage, called configural invariance, points to the fact that the theoretical validity of constructs is convincing across groups and consequently such an instrument makes statistical as well as theoretical sense. When the configural invariance assumption is not met, we become aware that the theory which informs the method is not universal and so the measurement itself cannot be fully valid. In such a case, no intergroup comparisons make sense. Previously I mentioned, bringing about the example of the Creative Mindsets Scale, that despite coming from different cultures, people perceive the source of creativity in the category of two distinct factors: fixed and growth mindsets. Similarly, a recent study (Puente-Diaz et al. 2015) showed that students from Germany and Mexico are able to differentiate between behaviors that indicate mini-c, little-c, Pro-c, and Big-C creativity with similar accuracy (Kaufman and Beghetto 2009).

However, similar examples are rare in cross-cultural studies that use creativity tests. While it is possible to identify a few studies in creativity literature that indicate invariance in age groups or among men and women (e.g., Kim et al. 2006; Krumm et al. 2014; Kuhn and Holling 2009), it is still difficult to find cross-cultural analyses of this type. Still, configural invariance is only the first step to ascertain the full measurement's equivalence. Metric invariance is the next and more demanding level of equivalence. It is about showing that not only is the instrument's factorial structure identical, but that factor loadings of individual indicators of latent variables (such as the hypothesized overall factor of creativity) are also identical in the analyzed groups. Consequently, metric invariance shows that each indicator is similarly saturated by the latent variable. Scalar invariance is the most restrictive level of invariance. It is about proving that not just the factorial structure is identical (configural invariance) and that factorial loads of the indicators are the same (metric invariance), but also that items' intercepts are identical, which is a condition meeting which makes it possible to compare means across groups (Vandenberg and Lance 2000). If an instrument does not meet the assumption of at least partial scalar invariance, meaning when at least some of the items do not have identical intercepts, comparison of means across groups may render artifactual conclusions that do not accurately address actual intergroup differences as a consequence of the measurement's non-equivalence. Consequently, even though results obtained on creativity tests by representatives of different cultures have been compared for years (e.g., Kharkhurin and Samadpour Motallebi 2008; Torrance and Sato 1979), it is difficult to unequivocally interpret these results

without first proving full equivalence of the measurement. It is possible that they do indicate substantive differences that result from cultural specificity, yet it is also conceivable that they are an artifact. Of course, the fact that many studies published over the last decades show significant cross-cultural differences with regard to test results (Torrance and Sato 1979), quality of creative products (Tang et al. 2015), or self-descriptions (Kobal and Musek 2001), does increase the credibility of these ascertainties, yet it is still necessary to meet statistical requirements of posed equivalencies in order to conduct factual comparisons.

Should We Do It Differently and, If Yes, How?

One of the rarely used possibilities of conducting cross-cultural analyses of creativity tests is by focusing not so much on standard criteria, such as fluency, flexibility, or originality of thinking, but on analyzing the specificity of products generated by representatives of various cultures. Such a perspective speaks less to cross-cultural differences, but it makes it possible to better comprehend the cultural influences on processes such as imagination (see Glăveanu et al. [in press](#)). For instance, one of the new tests (i.e., Test of Creative Imagery Abilities, TCIA, Jankowska and Karwowski 2015) that renders it possible to analyze the functioning of creative imagination, especially its vividness, transformativeness, and originality (Dziedziewicz and Karwowski 2015; Jankowska and Karwowski 2015), used in cross-cultural studies, revealed a series of interesting cultural idiosyncrasies. It showed that the respondents who completed the TCIA testing items referred to universal, widely used symbols (Fig. 8.2, panel A), as well as to specific references comprehensible only in the context of their country/culture (Fig. 8.2 – panel B).

The dominance of culturally specific categories demonstrates that even inadvertent cultural immersion causes saturation with its codes and symbols. It also makes it more difficult to make reasonable cross-cultural comparisons. Many of the codes are comprehensible not just in the culture they originated in, but also in a particular moment in time. Consequently, they are completely incomprehensible for someone who is not *hic et nunc*. Hence comes a postulate to study creativity in such a way that it would be strongly immersed in a particular place, moment, and time (*emic*) without departing from the comparative perspective (*etic*). Time will show whether such a synthesizing perspective (we can facetiously call it *etmic*) settles in creativity research or not.

a (universal symbols)

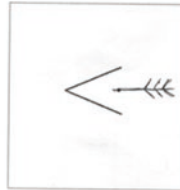
France: AIDS symbol



France: Symbolism



Italy: Macintosh

b (specific symbols)France: Logo
of the Paris City HallItaly: Symbol of the Italian Student
Union (Unione degli Studenti)France: "The Great Beauty"
(title of a feature film co-produced
by France and Italy)England: Cricket ball
and wicketBelarus: Cheburashka – a character
from a Russian animation

Italy: Luciano Pavarotti

Fig. 8.2 Examples of the products of TCIA created by children from different countries. *Panel A*—universal symbols; *panel B*—culturally specific symbols and examples

Discussion

Creativity is a cause but also an effect of culture (Csikszentmihalyi 1999; Sawyer 2006). Analyzing it as a solely psychological phenomenon that is possible to be easily measured with such psychometric methods such as tests or questionnaires must inevitably bring about simplifications. Yet, since the time when Guilford and Torrance published their pioneering research, psychologists do believe that in experimental and testing conditions it is possible to induce samples of creative behaviors and to measure intellectual operations that are crucial for creative functioning. Despite justifiable criticism (Glăveanu 2014; Hocevar 1981), this approach has for the last seven decades

been bringing many theoretically sound results and has enriched our understanding of (especially) the mini-c and little-c creativity. However, it should be kept in mind that, at present, most popular theories of creativity and, consequently, methods of measuring them do not have to be (and much indicates that they in fact are not) culturally universal. Specificity in perceiving and defining creativity is reflected in the validity of its measurement and in the quality of conclusions drawn on the basis of studies with the use of methods devised in different cultural conditions.

Dichotomizing and slightly simplifying the matter it is possible to state that although quite a general consensus exists with regard to the definition of creativity—with originality and value as its definitive criteria being equally important (Rudowicz 2003, 2004, see also Diedrich et al. 2015 for an opposing view)—the practice of measuring divergent thinking is affected by a clear originality bias (Runco 2003). Consequently, divergent thinking tests attach much greater importance to the newness of ideas than to their usefulness, hence risking that eccentric and lowly meaningful answers may also be considered creative. Were we to also account for the fact that much greater importance is being attached to value and esthetics in the East (Rudowicz 2004), then right at the start we are dealing with a significant element that blurs any possibility to compare the results. Understanding creativity, its social and cultural representations, are a kind of standard that not only renders it possible to interpret and assess it, but also determines individual interpretation of the testing situation (Glăveanu 2014).

Starting from an analysis of cultural differences in implicit and explicit theories of creativity, this chapter mainly focused on the limitations of the psychometric approach when it comes to examining creativity in different countries and cultures. Creativity tests are predominantly the products of the West and their creators are strongly influenced by the tradition of measuring intelligence. Even though testing abilities originates as early as in ancient China (Kaufman 2009), nowadays this practice is much less natural and frequently even alien to cultures located outside of the wide WEIRD category. Research into creative potential outside of developed countries with the use of methods developed in rich countries is equally accurate as examining intelligence in the jungles of the Amazon by means of a test that requires the creation of a multimedia presentation on the latest version of a Mac computer. Even if this comparison seems ludicrous, the artificiality of putting a tribesperson in direct contact with a computer is not much different from the artificiality of a situation of using standard testing with time limitations and a strictly followed procedure. Hence, in all situations when psychometric procedures are applied cross-culturally, it is of special importance to, on the

one hand, prove that the testing situation itself is commonplace in the given culture and, on the other hand, to empirically prove that the measurement is invariant, meaning that the measured constructs really reconstruct themselves in different parts of the world, a measurement accuracy high enough to render it possible to make cross-cultural comparisons. When these conditions are not met, any comparisons must be approached with caution.

At the end of this chapter, it is important to strongly assert that the practice of psychometric testing of creativity is one of the least creative areas of the entire science of creativity (Karwowski 2015). Even though new theories and ever more sophisticated methods of analysis do exist, the way divergent thinking is measured has changed only slightly over the course of the last 70 years. New and more complex instruments, including TCT-DP (Jellen and Urban 1989) or TCIA (Jankowska and Karwowski 2015) creativity tests mentioned in this chapter have a chance to push things in the right direction, but the field still needs tools that would initiate revolutionary rather than evolutionary change.

Even if psychometrics might “search” for creativity within an individual and ignore his or her environment, it does not mean that it is not useful. However, in order for it to be useful for a culture-sensitive psychology, it must be much more deeply rooted in the culture it operates in, it must analyze the process leading to the generation of test products rather than the products in isolation and, in the analysis, it must account for individual attributes and interpretations ascribed to the testing situation by the respondents themselves. Such a measurement may not necessarily render it possible to make comparisons between countries or cultures, but it will surely be more culture-fair.

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Part 2

Creativity in Socio-Cultural Psychology

9

A Semiotic Approach to Creativity: Resources for Re-contextualization

Jaan Valsiner

Strictly speaking, my goal in this chapter is to avoid any effort to advance a “theory of creativity”, but instead—to account for the real phenomena of creativity in terms of a general theory of semiotic mediation of human living. The term *creativity* is heavily loaded by its common sense values and is hence not a productive basis for building a *theory of* “creativity”. It would have a similar fate in the realm of theories in psychology that other common sense notions—like *intelligence*, *character*, *attachment*, *culture*, and *self*—have had. Efforts to build theories for each of these common language notions—that function very well in our common sense worlds—have ended in unproductive tautologies when common sense becomes elevated into theoretical discourse. Starting from common sense delineation of real phenomena (X) constructions of “theory of X” have resulted in circular explanations (e.g., intelligence “factor g” causes everyday phenomena called “intelligent”). Repeating this time-honored invention of yet another entified common sense term such as *creativity*—turned into a “theory”—is unappealing.

What could be an alternative to this traditional way of theory making? Given the open-systemic nature of the human *psyche*, it is useful to dissect the processes of arrival at new trajectories in ongoing lives through theoretical

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constructions that avoid turning an observable phenomenon that occurs *in-between* person and environment into an implied essence that is *projected into* the person. Such projection has led psychology as science astray since its very beginning. It contradicts the primary axiomatic basis of any psychological phenomena—as those are made possible only in-between the person and the environment (defining nature of open systems), the attribution of causality to any part of the system (person, or environment) is unwarranted. Yet such attribution happens all the time in our common sense. Similarly the European history of thought has introduced separation between the spheres of art and ordinary life. Creativity has been presumed to be there in anything that becomes classified as art, and not observed in the mundane everyday events of making food, cleaning and mending of clothes, and ordinary chatting.

Innovation in Affective Meanings: Dynamics of the *Beautiful* and the *Sublime*

History of European philosophy is marked by the work of two eighteenth-century scholars—Alexander Gottlieb Baumgarten (1714–1762) and Immanuel Kant (1724–1804)—in the development of the notion of *the beautiful* as the defining meaning for the field of aesthetics. Baumgarten was the innovator in the field—his first book on poetic feelings in 1735 starts the field of Aesthetics. It was followed by his *Aesthetica* in 1750 (Poppe 1907). Kant entered the field through his typical orientation to critiques of various topics. He began to think about issues of aesthetics in his *Beobachtungen über das Gefühl des Schönen und Erhabenen* in 1764 (Kant 1873). Written at the times of intense lecturing,¹ they bear the mark of active search for making sense of the *contrast* of the beautiful and the sublime (*Erhabene*). Kant's tendency for making of distinctions (e.g., the day is beautiful, while the night is sublime) has obscured the focus on how the sublime becomes beautiful, or vice versa. It is not the contrast between two opposite categories, but their *dynamic unity*—the borders for transition into each other—morning as the transition from the sublime into the beautiful, or evening as the transition from the beautiful to the sublime; that is the issue Kant failed to cover. Yet, that is precisely

¹ Between 1755 and 1770 Kant earned his living from lecturing 20 hours a week, being paid directly by his students. The considerations about the beautiful and the sublime (*Erhabene*) bear the marks of lecture-based discussions relating with the work of David Hume and Jean-Jacques Rousseau (Rohlf 2014).

the question of innovation that was thus left out of focus in early European philosophy of aesthetics. Considering something “beautiful” (or “ugly”) amounts to an act of social presentation itself.

Social Presenting: A Perspective In-Between Person and Environment

The science of psychology needs to solve the perennial developmental question—how do novelties emerge in nature, society, and human lives. That this process takes place through social mutuality of feeling-in (*Einfühlung*) into one another and through meaningful human-constructed environment (*Umwelt*) is the basis for such inquiry. Furthermore, the processes of *social representing* and their tools—social representations (Sammut et al. 2015)—play a key role in such catalyzing (Cabell and Valsiner 2014) of emerging novelty. The presence—rather than direct action—by some conditions is necessary for different innovations to emerge. Issues of human *psyche* are catalyzed, not caused, by complex catalytic systems. As an example—social scientists’ much appreciated complex social phenomena such as “gender”, “social class”, “educational level”, and the like are not causes for human conduct but complex catalytic conditions under which a person invents something new. Literacy—capacity to read and write that is socially promoted over life course—does not cause a young person, overtaken by feelings, to write down his or her first poem. It makes such poetic move possible—without literacy, poems could not be created, but not every use of the writing capacity leads to a poem or to the writing of a novel.

How Catalysis Works

While we move over from causality to catalysis theoretical discourse, numerous issues remain unclear—how does such catalytic process happen, and how can social representations survive over long time periods, which may go beyond the life courses of the representers themselves? The character of Hamlet and that of his father’s ghost keep us fascinated in the twenty-first century despite William Shakespeare’s literary goals five centuries before us. Such historical continuity happens through *sign mediation*—a term that may fit the goals of cultural psychology (Valsiner 2014) but attaching such label to the processes that capture our interests is not sufficient. Calling something “culturally mediated” does not explain, but itself needs explanation.

Cultural mediation happens through signs. Signs are representations—something is turned into a sign that represents something else for some function. Types of signs are variable—a wet trail is a sign of a rain that has passed (indexical sign), a passport photograph (however worn down by tear) is a sign of the person whose passport it is (iconic sign), and the passport itself is a sign of the person's citizenship of a given country (symbolic sign). All language notions are signs. Human beings use signs toward some objectives that extend from past through present to the future.

Signs are central for human semiotic mediation—and to model such sign mediation might be a productive idea. Signs operate at different levels of abstractive generalization—the same word (e.g. “love”) can operate in mundane (“Romeo loves sushi”), affective (“Romeo loves Juliet”), and hyper-generalized (“Romeo loves humanity”) contexts. Signs form complexes where symbolic, iconic, and indexical signs represent something else. The complexity of human living is paralleled by the complexity of human sign complex construction.

Social representations are sign complexes that organize the lives of human beings in their societies. They saturate human life environments in both explicit (general suggestions for “right” ways of living) and implicit ways. Social representations become used in the presentation of the “outsiders” in community discourses that re-organize the current interdependence patterns (Howarth et al. 2015) to regulate the “we<>they” borders. Social representations are ambiguous as to the emergence of creative moments in human lives—they both set the stage for non-appearance of novelty and—on the basis of that—precisely enable the creation of novelty.

Organizing the Present: Catalysis for the Future

We make signs, use them, and change the meaning of our immediate experiencing. Since we operate—inevitably, as living beings—within irreversible time, we can only anticipate our future states. Yet we do it by creating a meaningful anticipatory system of signs for the future (Fig. 9.1). Such anticipatory system is inevitable since our lives proceed in irreversible time where the immediate future is always uncertain, and the longer-term future open to present-moment desires without any guarantee that these could be reached.

The critical point in Fig. 9.1 is the *double* function of the sign (S) generated in the here-and-now setting to regulate the flow of ongoing experience. Aside from doing that, it also feeds forward—into the unknown, and infinite, future—a field of meaning (Hyper-Generalized Anticipatory Sign—HGAS)

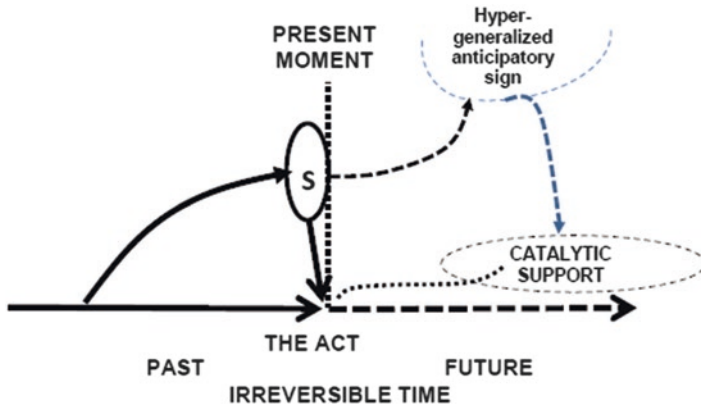


Fig. 9.1 Minimal depiction of semiotic mediation: a sign operating in the present and setting up an anticipatory meaning field for the future

that can, at some future time, become used by the meaning-maker as a catalytic support for some other (here-but-then) sign regulation of the anticipated experience. Furthermore, the HGAS is assumed (theoretically) to be not only generalized, but hyper-generalized in its nature.

The distinction between generalization and hyper-generalization is crucial here. All generalization involves abstraction. In the case of generalization from a single case,

to generalize is to recognize likeness which had been previously masked by differences; *to recognize the likeness is also therefore to recognize these differences as irrelevant*, and to *disregard them* from the point of view of the general conception (Baldwin 1901, p. 408, added emphasis)

It becomes clear that our cognitive facility to discount immediately observable differences and replace them with an opposite focus—that of similarity—is based on our making of Gestalts in our meaning system. Such Gestalts come at different hierarchical levels—the higher levels entail generalization of the whole fields of experience. Thus, the perceptual detection of a “cloudless sky” and its color (“blue sky”) can lead to aesthetic generalization (“beautiful sky”) with hyper-generalization (“how beautiful!”).

In contrast with generalization—that takes the form of an abstract, precise, and universal point-like sign (“the devil has been around”), hyper-generalization entails the “explosion” of the precise meaning to cover the whole subjective and inter-subjective field by feeling (e.g., the approximate, all-encompassing feeling of the fate of being vulnerable to devilish happenings in the world at large).

Generalization takes place by two routes—the analytic-to-synthetic (recognition of differences and turning that recognition into recognition of likeness) and holistic move to higher-order Gestalts (within which there are no differences—the cloudless sky, or an overwhelming feeling of happiness, have no distinct parts to compare). In both cases the concrete details are substituted by signs. Generalization is possible through human preponderance for semiosis, and through mutual relations between two kinds of categories—choice and sense (Mammen 2016). Choice categories—given in point-like signs—can be expanded by the sense categories (given in terms of field-like signs)—to arrive at new level of generalization, finally arriving at hyper-generalization.

Double Function of Signs: Immediate and Deferred

What would the double function of the sign mean for the organization of everyday lives of real human beings? First of all, it specifies the object of meaning-making within the inevitable setting that unfolds in irreversible time. Actions that happen here-and-now (e.g., a parent telling a child “*don’t touch THAT!*”) are meant not only to regulate the ongoing action (block, enhance, or re-value it), but lead to possible future meanings encompassed new events. By being hyper-generalized, the future-projected signs acquire the “nebulous” (cloud-like) nature that gives flavor to a new life event. A general field-like sign such as “life-is-unfair”—based on an unhappy incident here-and-now—can cover future expectations for new experiences.

The forward projection of a sign—a meaning field—allows for continuity of human ways of being across the PAST-|PRESENT|-FUTURE constantly moving boundary. Through projecting the field-like sign into the environment and using it to guide the internalization processes at some time in the future (when it enters the past through present) maintains its continuity in the “inner infinity” (Stern 1935) of the person’s subjectivity and stops being “visible” in the person’s self-narration and conduct (Fig. 9.2).

The process depicted in Fig. 9.2 entails three relevant theoretical ideas. First, it recognizes the infinite nature of person’s relations with both the intrapsychological and external horizons. Infinity is a hyper-generalized notion that has been a crucial organizing feature in art and science (Osterkamp, 2004). The assumption of the ideal fixed World—created and immutable—does not emphasize infinity, but rather is an example of complete finality of ideal forms that cannot change. Infinity—if it exists—is re-organized into

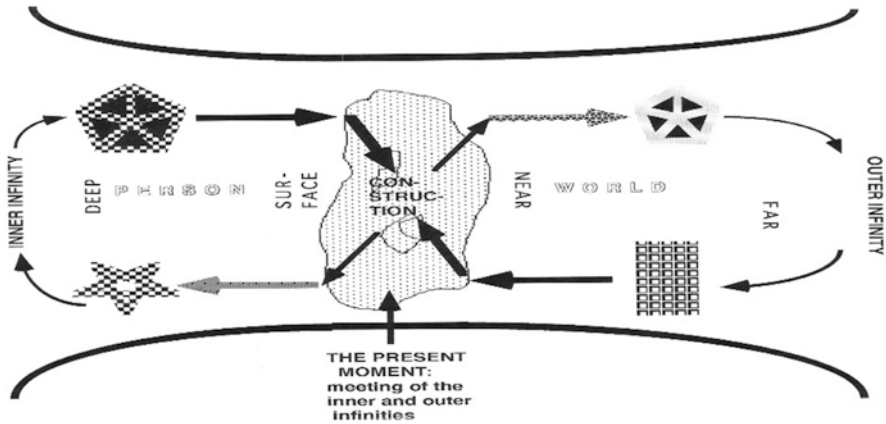


Fig. 9.2 The process of relating inner and outer infinities (after William Stern)

“variability” and seen as “error²”. Accepting infinity as a theoretical term makes the explanatory system open to detecting development—starting from the moments of creative innovation. It is obvious from this perspective that the phenomena of creativity do not represent an illusory hypothetical entity we might be tempted to call “creativity”.

Second, the external and internal exploration processes are feeding into each other at the present moment. In order to explore one’s interior infinity—the “depth of the self” where the notion of “the unconscious” becomes a conscious (i.e., reflected upon) border that is the current horizon for understanding oneself. In order to explore oneself in the inner infinity sphere the person needs to explore the outer infinity—making new moves in one’s life course. Experimenting with drugs, getting drunk to explore one’s feelings while in that state, visiting an art museum to see the exhibits—are all examples of acting outwards *in order to act inward*. New actions in the explorations of the outside world feed into innovation in the inner infinity.

Third, the model presumes developmental transformations to happen as the result of making changes—both in external exploration and in its internal counterpart. An adolescent girl begins her internal exodus from the externally controlled home environment by starting to dress up in ways that slightly challenge religiously prescribed ways (Benedikt et al. 1992). The impetus comes from the present—an encyclopedia—that creates free knowledge base in the home. Small challenges to the social order led to big changes in the

²This thought model has been canonized by the statistical methodology use, based on the Gaussian curve where variability indicates deviation from the “true” (average or prototypical) condition. That this model is inadequate for living systems is long known but rarely implemented (Valsiner 1984).

internal infinity of the girl's subjective domain, ending up loving both home and the religious orthodoxy.

Figure 9.2 has its limits. Most of human socialization efforts in here-and-now settings are oriented toward future guidance by feelings through values. Values in the semiotic mediation theory exposed here are hyper-generalized signs that exist as projected to the future. That projection process remains beyond Fig. 9.2 (and William Stern's personological philosophy) which—while being dynamic and context bound—were not developmental.

However, development is central for human living. Rational philosophy can at times be non-rationally challenged. An example of how hyper-generalized affective fields can have life-long relevance can be found in the retrospective account of the son of William Stern—Günther Anders³—who later in his adulthood (in 1971) recollected a moment in his relations with his father. Having been brought up in family atmosphere that emphasized reverence toward nature and avoidance of its violation, the young boy—at the age of about 10—was confronted with his aunt who committed the crime of rape toward nature:

The aunt clipped a flower [in garden, at the presence of Günther and his father], held it before young Günther's face, and told him to take it to his mother as an expression of love. Horrified that this flower, a living entity in which God was present, had been decapitated, Günther struck his aunt. Witnessing the event, William Stern swung at Günther, but missed, and had to restrain himself from swinging again. Deriding the father as a “softy” (*Schlappenschwanz*) Günther's aunt took it upon herself to slap the boy by pulling his ears. William Stern then told his son to apologize to the aunt. Günther refused to do this, protesting that by his father's own pantheistic beliefs, it was the aunt who should apologize for decapitating the flower. (Lamiell 2003, pp. 25–26)

Two hyper-generalized affective fields promoted in usual human life course happened to get into mortal combat in this example. The family value of HONORING NATURE as a God-imbued surroundings of human beings came into conflict with OBEDIENCE AND NON-VIOLENCE toward adults. The child's protest against the demand to apologize to the aunt is perfectly reasonable from the value standpoint of the family, as is his demand that the aunt apologize to him for violating the nature—not to speak of physically hurting the child. On the sides of all three persons involved—Günther, the aunt, and the father—the initiation to action was supported by the values-filled interpretability of the setting. Yet it was not caused by the values. An act

³Born 1902, died 1992.

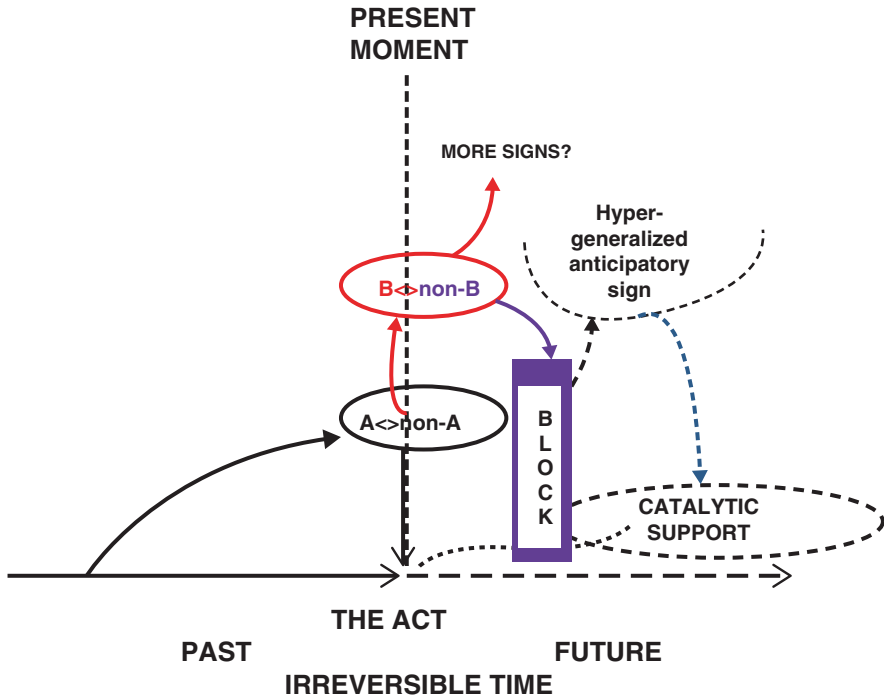


Fig. 9.3 Emerging sign hierarchy that can demolish itself (by creating a BLOCK on further meaning making)

by an aunt to suggest to the child to take a bouquet of flowers to his mother as a sign of love would have initiated a completely opposite—conforming—reaction, had it been organized by the shared value system of love, translated into the presentation of flowers.⁴

Self-Organizing Properties of Signs

In the process of sign mediation, the dynamic sign hierarchies grow until they reach a breakthrough point of either leading to a new form, or becoming demolished (Fig. 9.3). The trigger of elimination of the hierarchy is embedded in the dual nature (A<relating with>NON-A) of the sign the subordinate part of which (non-A) can lead to the growth of the hierarchy (A subordinated to B) together with BLOCK for further meaning construction emerg-

⁴One can easily see the powerful effect of the values-framing of this act if one were to present a bouquet of flowers to a loved one, with a cheerful comment “These are the very best beautiful flowers I could pick up for you on my way here, passing through the cemetery”.

ing from the subordinate part of the new sign (non-B) (see Josephs et al. 1999). As an example, consider the phenomena of something—clothes, one's house, street—being presented in terms of the opposition {CLEAN <> non-clean}. With time (and use) the object's meaning changes {clean<>NON-CLEAN} and at certain moment the new opposition {DIRTY<>non-dirty} emerges, leading to specific cleansing rituals that turn the “non-dirty” part into “CLEAN”.

It is posited that novelty emerges from the sub-dominant (=contextual) complement of the sign (B) which is designated as non-B. In other terms—the context is the “birthplace” of new signs (and elimination of previous ones, including itself). Yet the tension (A<>non-A, B<>non-B) or (sign<>context) relation—is where innovation occurs. Making sense of phenomena of creativity is not possible without assuming a dialectical model in which dynamic tensions between the figure and the ground reach a breaking point, leading to emergence of new forms.

The possibility of stopping the growing meaning construction and demolishing of the emerging sign hierarchy is important for human sanity. Without such in-built self-regulation systems, our subjectivity would become quickly removed from the immediate encounter with the realities of experience.

Signs can also be “suicidal” for themselves. The tension within each sign—a system of opposites (A<>non-A; B<>non-B, etc.)—can lead to both the dialectical leap to more signs in the hierarchy, or to the blocking of further meaning construction (e.g., “all that I am thinking here is pure nonsense”—see also Fig. 9.4). Assuming the presence of self-destructive features within each sign system (A<>non-A) makes sign mediation of the psyche adaptive in its depth. In situations where no “deep” signification is necessary—such as in mundane everyday settings of habitual operations of the psyche—construction of sign hierarchies is not necessary. In contrast, in situations which present the actor a puzzle or a demand for further understanding, the possibility of “growing” such hierarchies is important. The “depth of signification” is a result of pre-adaptation to the demand conditions of the move toward the future in the irreversible time.

The qualitative leap depicted in Fig. 9.4 entails the re-framing of the previous experience in new and non-alterable ways (sign hierarchy level $X + 4$). All religious and ideological conversions and personal feelings in assuming some new identity (and maintaining it) involve such re-organization of the constraint systems—a rupture in meaningful experience (e.g., see Valsiner 2016). As an example, in year 1173 AD, Waldes—a prosperous merchant in Lyon—made a radical change in his life, dedicating himself (and, after him, his Waldenesian followers) to evangelical preachers:

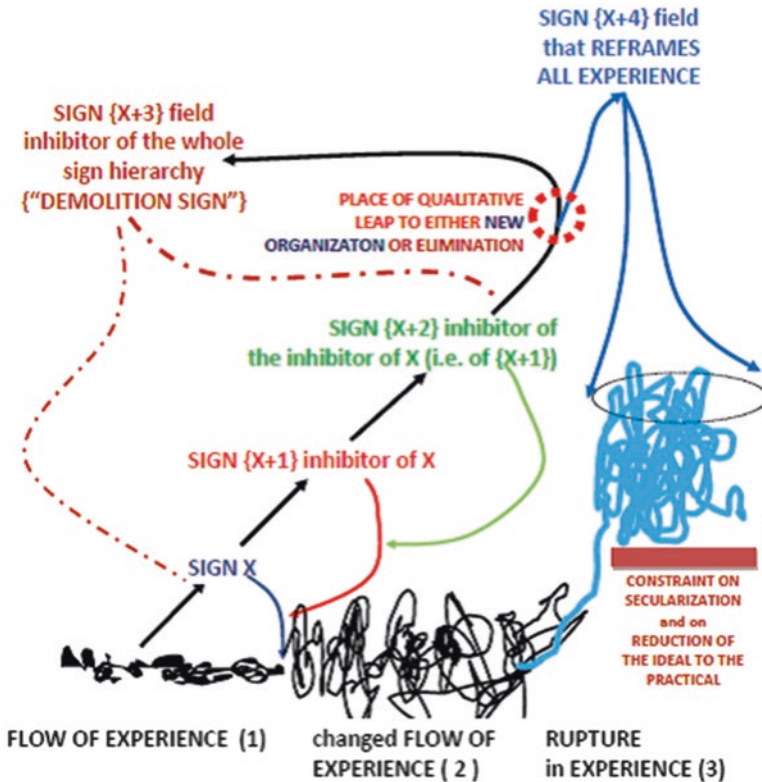


Fig. 9.4 Qualitative leap of the meaning-making process

After having sold all his possessions, in contempt of the world, he broadcast his money as dirt to the poor and presumptuously arrogated to himself the office of the apostles. Preaching the Gospels and those things he had learned by heart in the streets and the broad ways, he drew to himself many men and women that they might do the same, and he strengthened them in the Gospels. He also sent out persons of the basest occupations to preach in the nearby villages. And these, men and women alike, unlettered and uneducated, wandering through the villages, going into homes, and preaching in the squares and even in the churches, induced others to do likewise (Dominican preacher Stephen of Bourbon, quoted via Kaelber 1998 p. 135)

The notable feature of the first Waldensians—heretics by the local standards if the twelfth century—was the focus on *their own acts of preaching*—rather than gaining followers. By getting rid of earthly belongings and starting preaching—a move toward the outer infinity (Fig. 9.2), they elaborated their own inner infinities. The fact that many others started to convert to a similar

lifestyle was not success of the preaching, but co-presence of similar needs to radically undergo life-course changes at key turning point (for less dramatic life story—that of “Urie”—see Zittoun 2007).

The processes of sign hierarchy construction entail regulation by signs of other signs. Such regulatory system can also malfunction—by fixation of some of the regulatory relations. Such malfunctioning has been beautifully demonstrated by Pierre Janet (1921, 1928) in his accounts of the ideation of psychiatric patients. A person may turn any simple everyday act into one that is affectively deplorable by some meaning construction, and would thus inhibit the action, not letting it happen. If one creates for oneself a meaning that wanting to eat meat is “cruel to animals” and if the idea “I am cruel” is deplorable, conversion to vegetarianism may follow. Describing his patients with fear of action, Pierre Janet pointed to the “education of melancholia”:

When the patients have general spells of melancholia in succession they seem to learn their job as melancholics; they have much finer fears of action at the second and third spells than at the first one. *They finally arrive at the fear of life, which is a completion of their fear of action.* It brings about a general and continuous state of sadness, suppresses all action, makes one indolent, and may even lead to highly absurd feelings and action. (Janet 1928, p. 309, added emphasis)

Such *fear of living* constitutes a qualitative shift in the personal life orientation of the whole person, which is an innovation in their life course and fortified by the “jump” in the meaning system. All religious, political, and personal conversions to new identity states happen through the escalation and re-adjustment of sign hierarchies along the lines of Fig. 9.4.

The critical point for innovation is depicted in Fig. 9.5. The process of sign-mediated reflection continues within the dialectical unity of opposites (THESIS<>ANTITHESIS—“flow” between {A<>non-A} and {B<>non-B}), but only at some moments would lead to innovation (SYNTHESIS). This happens at the bifurcation point where the tradition is “broken through”—albeit in ways that maintain continuity with the previous form.

Maintaining dynamic continuity in human meaningful flow of experiencing is central for both continuity and (episodic) non-continuity in the psyche. Innovation—creative moments—occur only episodically, and unpredictably, in the flow of human negotiation of the inner and outer infinities (above, Fig. 9.2). In Fig. 9.5, the continuity line is depicted by the trajectory of ONGOING TENSION between thesis and antithesis (A and non-A), while breaking it into the PATHWAY TO NOVELTY (new tension: B and non-B) depends on the presence of specific catalytic conditions at the given time. It

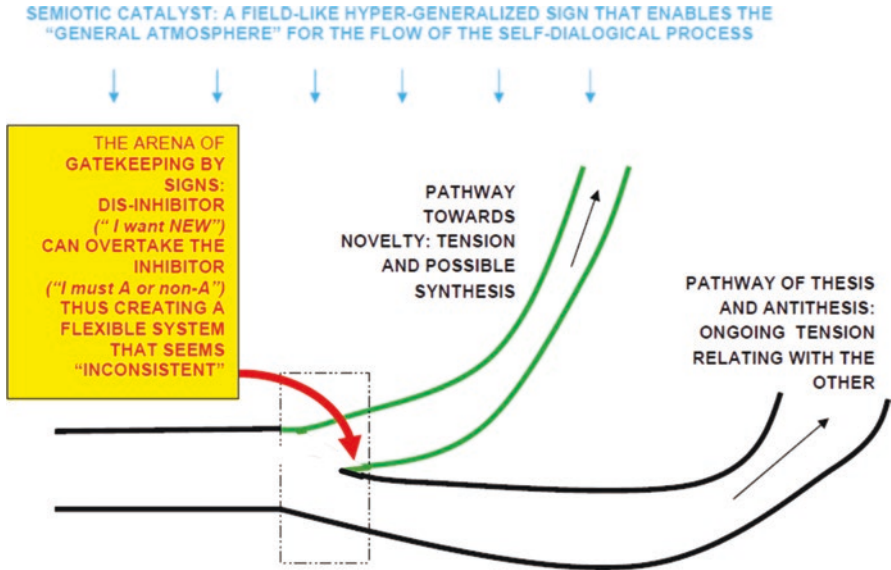


Fig. 9.5 Where innovation is being born: the semiotic regulation process at the diversity point

becomes clear that an event of creativity is a result of creating a bifurcation point under catalytic conditions. Breakthrough from the present dynamic flow, rather than the tension within the flow, is the crucial feature in any of the cases where a "creative moment" is detected.

Novelty involves breaking off from the previously established routines by creating a new one. Yet anything new is ambivalent: it may be desired as such (something new), but it is simultaneously threatening (as something not yet experienced). This is best illustrated by knowledge in science (*Wissenschaft*):

Scientific discovery reveals new knowledge, but the new vision that accompanies it is not knowledge. It is *less* than knowledge, for it is a guess; but it is *more* than knowledge, for it is a foreknowledge of things unknown and at present perhaps inconceivable. Our vision of the general nature of things is our guide for the interpretation of all future experience. Such guidance is indispensable. Theories of the scientific method which try to explain the establishment of scientific truth by any purely objective formal procedure are doomed to failure. Any process of enquiry unguided by intellectual passions would inevitably spread out into a desert of trivialities. (Polanyi 1962, p. 135)

The issue of interest here is: what kind of semiotic catalysts—complex signs—could be found at such bifurcation points in human everyday lives where no

great innovation emerges in the middle of routine life events, and yet, at some moments in the life course, a rupture of some kind, catalyzed by a sign (or sign-field), gives rise to innovation. Affective upheavals are often reported at around such moments of creativity.

General Conclusion: Heterogeneity of Signs Affording Innovative Re-contextualization

Creative acts are ordinary life events in the course of development. From the present semiotic perspective on creativity such acts involve innovation in action and reflection upon the newly experienced life event. Culture in creativity is in the making, using, and abandoning signs.

There were three main points in the present chapter:

1. Innovation in the human *psyche* happens as a process of sign-mediated (catalyzed) breaking of an existing process of relating with the world. As a consequence, it is a conservative process—innovations remain near the previous state of affairs, breaking through the “tradition” while still maintaining specifiable link with it.
2. The signs that set up conditions for the emergence of innovation are themselves heterogeneous complexes in their texture—hence affording multiple, sometimes opposite and even mutually contradictory, innovative forms to emerge. Iconic, indexical, and symbolic aspects of the sign complexes are united in the wholes of such semiotic mediators. The role of retelling of folk myth-stories in the visual forms of painting, sculpture, and architecture allows for opening of the meaning systems of the myths for reconstructive applications.
3. Innovations are possible through hyper-generalization of meanings,⁵ their maintenance over time in the form of affective sign fields, and their re-contextualization in concrete here-and-now settings where the innovation emerges. In other terms—any theory of “creativity” is that of abstractive hyper-generalization of affective meanings—with subsequent pathways to potential concrete practices

⁵Ranging from very brief time moments (e.g., improvisation in ongoing music performance; see Klemp et al. 2008) to life-time credo of an artist, for whom art is: “an exercise in re-creating a non-reality which turns into a credible reality in my pictures. It is not a picture for tourists nor a costumbrista scene. It is something far more profound. It is a world which I have re-invented, unreal, because it does not exist; this is what realism in true art always is. ... Our need for poetry makes us see reality through the eyes of art” (Botero 1980).

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10

The Psychology of Creating: A Cultural-Developmental Approach to Key Dichotomies Within Creativity Studies

Vlad Petre Glăveanu

Creativity is a troublesome noun. First of all, it suggests that there is *something*, an object it designates in the world that can be rightfully called this way. With this assumption comes the quest for locating the something of creativity—in the brain, in genes, in the personality or cognition of creative people, in the social structure or in culture. Second, if there is creativity, then we can also presumably measure it. From brain scans to the proliferation of creativity questionnaires and tests, a considerable research industry developed on this basis in psychology in the last decades. Most of all, talking about creativity gives us the feeling we are talking about something real, objective, even if we acknowledge historical changes in defining it. Previous generations didn't know as much as we do today about creativity and we, in turn, will learn more about it in the future. Linguistic reification goes often hand in hand with a view of linear progress in science.

What is the alternative? Celebrated author Jorge Luis Borges (1962) offers us a fictional answer in his short story *Tlön, Uqbar, Orbis Tertius* where the people of Tlön don't understand and speak of their world in terms of objects placed in space but rather in terms of acts. Tlön is lacking nouns; it only allows its imagined inhabitants to use verbs. The Tlönian equivalent of the

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word ‘moon’, for example, is ‘to moon’ or ‘to moonate’. It is safe to assume that nobody would even think about mentioning creativity in this universe. The language of creating would completely replace it. And, with creativity, would go all the other (numerous) nouns of psychology: intelligence, personality, motivation, cognition, memory, perception, sensation, imagination... Human life would be defined by what people *do* rather than what they *have* or *are*. Michael Billig’s (2013) sharp criticism of noun-based terminology in the social sciences resonates with this literary position. For him, social scientists use terminology in order to exaggerate, to conceal and, generally, to promote their field. What would the psychology of creativity and its researchers do without creativity, their object of study? This chapter argues they could turn towards a psychology of creating (see also Wagoner 2015).

At this point it is important to mention that I am not advocating here—and neither was Billig—for a Tlön-like rewriting of psychology, nor am I arguing against the use of nouns or the word creativity itself. What I hope to develop, drawing on sociocultural and developmental theory, is a conceptual alternative—a psychology of creating—and what I am calling for is increased reflexivity in using the term creativity in view of the dangers of reification. Creativity, will be argued here, is not a thing but a *quality of human action*. It is not static, but *unfolds in irreversible time*. Finally, it is not singular but *plural and relational*, cultivated within interaction and communication. This account of creating is, at once, cultural and developmental. It is cultural since it emphasises the fact that acts of creativity both use and produce cultural forms, including beliefs, objects, values, norms, processes, institutions, etc. It is developmental since it conceives of creativity in a temporal manner. This goes well beyond a narrow understanding of development as reserved for the years of childhood; on the contrary, it considers development at a historical level (sociogenesis), at a personal level (ontogenesis), and in the moment-to-moment interactions between person and world (microgenesis) (see Cole 1996).

A cultural-developmental psychology of creating is, ultimately, a psychology of action (Glăveanu et al. 2013; Glăveanu 2014). In this chapter, I will develop this notion with the help of four key concepts coming out of sociocultural psychology: perspectives (action orientations), affordances (action potentials), trajectories (action paths), and representations (action meanings). The significance of each of these elements of action stems from the way in which they address and help us overcome traditional dichotomies within the psychology of creativity: that between individual and social, between creative potential and creative achievement, between idea generation and idea implementation, and between creativity beliefs and creative practices, respectively. Such dichotomies are based on an individual, static, a-developmental view of

creativity specific for *analytical–positivist* approaches to this phenomenon. In contrast, sociocultural theory advocates for a *holistic–constructionist* paradigm whose premises and consequences will be presented in the course of this chapter. To grasp its significance, let us have a closer look first at dichotomies and the way they shape our view of what creativity is/means today.

Mapping Key Dichotomies in the Psychology of Creativity

Like many other scientific fields, the psychology of creativity is built around conceptual distinctions organised in the form of dichotomies. And, just like in most other cases, these dichotomies become polarised to the point where researchers focus on one ‘end’ forgetting (or dismissing) the other. This, of course, overlooks the fact that the two sides of a dichotomy cannot be understood independent of each other. More than this, that they are often used to describe two facets of the same phenomenon. Similar to the proverbial blind men touching different parts of an elephant and mistaking them for something else, we are at risk in the psychology of creativity of breaking the phenomenon into pieces that, finally, make it unrecognisable and meaningless.

I have previously considered the consequences of dichotomic thinking in the field of creativity and advocated for a *relational logic* (see Glăveanu 2013a, 2015a). The latter doesn't imply not using categories or dichotomies but doing so in a critical manner, always with the whole in sight. Such an approach is specific for a cultural psychology that draws its roots, among others, from the second school of Leipzig in Germany (for details see Diriwächter and Valsiner 2008). It also builds on pragmatist scholarship (James 1907) that points towards the consequences of our scientific constructions and invites us to evaluate them in terms of what they help us achieve in the world. What are the benefits of using dichotomies? One might think here about gaining conceptual clarity, being able to analytically distinguish between different instances and, ultimately, laying the foundations for measurement. What about the pitfalls? Not noticing or downplaying relationships and context, valuing one aspect over others and, finally, building systems of evaluation that discriminate against those who don't conform.

What are the key dichotomies structuring creativity research today? Without trying to offer a comprehensive list, I will focus here on the following:

1. The dichotomy between individual and social in creativity;
2. The dichotomy between creative potential and creative achievement;
3. The dichotomy between idea generation and idea implementation;

4. The dichotomy between creativity beliefs and creative practice.

Let's briefly consider them in turn. The separation between person and social context is one of the oldest and more pervasive dichotomies, being arguably at the root of what we call today the psychology of creativity. This field distinguishes itself from other approaches (e.g., sociological, anthropological) precisely because it focuses on the individual and, in particular, what is 'inside' the individual. Claiming the person as the centre of creativity and the mind as its primary locus, psychologists achieve two pragmatic goals. One is to define their area of interest and actively distinguish it from others; for example, from systemic approaches often considered quasi-sociological (see Csikszentmihalyi 1988). Second, and more problematic, is the implicit claim that individuals and individual minds are the true 'origin' of creativity; as such, psychologists have priority over other specialists when it comes to defining, measuring, and enhancing creativity (all enterprises with both scientific and economic value). And, indeed, creativity studies is today a field of research dominated by psychologists. If other disciplines are to challenge this monopoly they have to use and promote their own terms, such as innovation in management, invention in engineering, etc. The downside is of course the fact that the creative process is often truncated in psychology by a bias towards individual variables at the expense of social factors. Even within the 'social psychology of creativity' (Amabile 1996), the focus is still firmly placed on intra-psychological processes and traits such as intrinsic motivation (see Glăveanu 2015a).

Starting from individual creativity, further distinctions are possible. One of the most basic ones in psychology is that between creative potential and achievement. This second dichotomy originates in the realisation that real acts of creativity (i.e., creative achievements) are complex and always involve some sort of material and social contribution; the individual alone never suffices. What is then, purely individual that can be legitimately studied by psychologists alone? Creative potential. To study potential, presumably, one can bracket out all other elements of the situation and zoom into what the person 'brings' to the situation. Pushing this view to the extreme, creative potential appears like an aura that hovers around the individual at any given moment and, even if it depends on other factors in order to effectively turn into achievement, it does have a separate existence in the psychological sphere. What is overlooked by this dichotomy is the fact that potential can only be defined *in* the situation, just as achievement is. How can potential be studied outside of any concrete situation? With the help of simplified divergent thinking tasks, for example, a trademark in the psychology of creativity after the 1950s (Runco

1991; Mayer 1999), based on asking people to generate many answers to a simple task. Even if, in time, these tasks became much more domain specific and it is largely recognised today that divergent thinking is not creativity, the dichotomy between creative potential and achievement remains largely unchallenged.

While potential and achievement have a different ontological status—that is, latent versus actual—idea generation and implementation refer to different phases within the creative process. The problem begins precisely here: what keeps the generation and implementation of ideas separate? Let's imagine a modern organisation, defined by division of labour. One team might be assigned the role of brainstorming solutions for a problem. Once a decision is reached, other people from other departments are asked to work towards successfully implementing it. This activity of implementation is considered the essence of innovation (Anderson et al. 2014) while creativity is often reduced to ideation alone. A closer, critical look shows how problematic this separation is. Are teams in organisations implementing ideas blindly? Aren't they generating new ideas in the process? Are brainstorming teams completely cut off from the rest of the organisation? Ignoring the coordination between these two 'stages' is the equivalent of separating stimulus and response in behaviourist schemas (for an inspiring critique of this tendency see Dewey 1896).

Finally, the fourth dichotomy considered here is that between creativity beliefs and creative practice. Unlike the other three, this came to the fore mostly in the past decade, when creativity researchers started considering more closely beliefs, mindsets, and identity (Beghetto 2006; Karwowski 2014). This concern takes us back to a classic field of study, that of implicit theories of creativity (Sternberg 1985)—lay beliefs about creative people. Rarely is this research connected to theories of creative practice. In other words, another dichotomy is at work here: that between what people think and what people do. And yet, it is undeniable that people think while they act, including when they create. After all, why else would creative thinking receive so much attention in psychology? However, there surely is a difference between thinking about the task and thinking about creativity. When I am trying to imagine a new and exciting dish for dinner, I am most probably not starting from my definition of creativity. This would be indeed highly uneconomical. Nonetheless, what supporters of the dichotomy between beliefs and practice ignore is the fact that definitions of creativity do influence action; in this case, how and what I cook and if I consider engaging in 'creative' cooking in the first place.

In this chapter, I challenge these four dichotomies with the conceptual means of sociocultural theory. From this standpoint, there is one element

that, when added to our understanding of creativity, can change the way we envision individuals and society, potential and achievement, idea generation and implementation, creativity beliefs and practices; that element is *time*. As Vygotsky (1978) noted, to study something means to understand it in the process of change (p. 64). Adding time and, as such, development, to the psychology of creativity makes us aware of the fact that individuals and society co-evolve, that ideas are generated and implemented in dynamic cycles, that potential and achievement feed into each other, that beliefs and practices constitute one another. A cultural and developmental approach to creativity turns it into a study of creating; it does not eliminate the dichotomies described above but understands them holistically.

The Psychology of Creative Action

Creativity is not a personality trait, a cognitive process, a feature of objects or ideas, a neural or social structure for as much as it relates to the activity of brains, individuals, groups, and society; creativity is, first and foremost, a quality of human action. To create means *to act in a flexible, novel, and meaningful way in a given context*. If we take this short definition seriously, then talking about the creativity of persons or objects doesn't make sense. It is the *doing* of persons and *making* of objects that should be called creative; creators and their resulting creations are merely demonstrating or bearing the mark of creativity, respectively. This is because, in line with my argument from the beginning of this chapter, creativity is not a 'thing', despite what language might trick us into believing. It is *embedded* in relationships, in the encounter between self, other, and world (May 1959). And these relations and encounters are defined in terms of action—the possibility of acting within and being acted upon by the environment (Dewey 1934).

All human action is, at least potentially, creative because it continuously adjusts us to an ever-changing environment. But it is the case that some ways of acting are more novel and meaningful than others, within particular situations, and these are usually the ones identified as 'creative'. It is to be noted here that the way we label action as creative or not is highly contingent on historical time and community of belonging. What is considered creative today might not be so tomorrow or might not be creative for another reference group (Stein 1953). Moreover, the criteria on which we base creativity judgments vary as well: novelty, originality, surprise, usefulness, appropriateness, breaking with tradition, keeping tradition, demonstrating skill, solving a problem, fostering insight, etc. So there is a difference to be made between

what the society of our time calls 'creative activity' and the *pervasive creativity* intrinsic to human action (see Joas 1996). In other words, our action is often not meant to be (or be judged as) creative, but this shouldn't stop us from considering it, *as well*, in terms of creativity. Social validation is a condition of creativity only for those forms of activity that 'aspire' to be creative. More than this, some types of creative action are not always immediately visible (although, arguably, all action has a materialised form, even if this is represented by neural activation or micro muscular contractions); for instance, thinking and imagining are types of action that have a pronounced intrapsychological dynamic. And yet, in line with the temporal/developmental perspective advocated here, these instances of action never exist in isolation. They are part of broader chains of acting on and reacting to the 'outside' world. So, in this sense, creative ideation is also a form of action even if, at particular times, it is not verbalised or otherwise physically expressed.

What the above suggests is that the psychology of creating forces us to rewrite existing theories of creativity in ways that prioritise process and development over time. It does not deny the contribution of intra-psychological variables (by far the most studied in psychology) but considers them in a dynamic rather than static manner. Even personality traits and factors, such as openness to experience, lose their universality and generality and become descriptors of action in concrete situations. This view doesn't propose, however, that our entire psychology is constructed each and every moment anew. Being a fundamentally developmental approach, cultural psychology starts from the premise that our biological endowment and the personal histories of interaction with the environment do leave their mark on the person and can 'sediment' over time in more or less stable ways of acting within similar situations. But to take these personal predispositions and study them separately from the situation is one of the big fallacies of psychology as a science (consider here, as well, the fundamental attribution error; Kasof 1999). Personality traits contribute to acts of creativity, but they are neither the origin nor the key variable in this process. A study of creating needs to focus precisely on the *meeting point* between person and situation, the interface between creator and world where efforts are constantly made to adapt to and grow within a changing environment. In this process, both person and culture are interdependent and co-evolving (Shweder 1990; Cole 1996) and it is here where we find the 'source' of all creativity.

For some this view might be overstressing the notion. Where are the limits of creativity then? Is there anything non-creative? These concerns derive from a long-lasting fascination with the genius and great creative achievements, particularly in the Western world (Montuori and Purser 1995). How

can we ever equate the work of da Vinci with someone cooking dinner, in the way suggested above? Is it even the same phenomenon we are talking about? Here it is worth noting that, just as with any other concept, more extensive and more restricting definitions are possible. In a narrow sense, creativity is associated only with those actions and outcomes that have a significant impact on the life of the creator and that of other people. In the broader sense I use here, creativity potentially describes *all* human action but, of course, there are different degrees to which this quality is expressed in a given context (see also the 4 C typology proposed by Kaufman and Beghetto 2009). But a new kind of sensitivity to this quality is needed in order to recognise it even in those actions that seem to be routine or habitual (Glăveanu 2012). To discover and appreciate creativity in action means to be knowledgeable about person and context and, most of all, their relationship, and appreciate all three developmentally. This is not an easy task but, fortunately, there are some branches of psychology well equipped to assist us. The sociocultural orientation (Cole 1996; Valsiner and Rosa 2007) is particularly useful in this regard. Although it is a very diverse and still emerging field, drawing inspiration from foundational scholarship in psychology and related disciplines (e.g., Vygotsky, Leontiev, Luria, Mead, James, Dewey, Bakhtin, Gibson, Moscovici, and others), it is united by a basic understanding of the human mind and its processes as *extended* into the world, using and incorporating its various artefacts (signs and tools) and transforming them in this process.

What are the means through which mind extends in the world? Human action or activity. How does sociocultural psychology understand them? In answering this question, we should note first that the notions of action and activity are central within this branch of psychology. According to Wertsch (1998), mediated action 'is a natural candidate for a unit of analysis in socio-cultural research' (p. 24). What sets action aside from behaviour is precisely the fact that the former can never be understood outside the social and cultural dimensions that both orient it and give it meaning (Harré 1982). Human action is *meaningful action* first and foremost and this means that it is rendered intelligible by cultural norms, values, and scripts. Action is thus, at once, spontaneous and normative, personal and social, even when enacted by a seemingly isolated individual. Unlike behaviour, often understood in terms of simple stimulus—response chains, human action is *culturally mediated*. This means that it is both informed and facilitated by cultural means, both 'immaterial' (e.g., language and other symbolic systems) and material (e.g., physical tools and institutions). Last but not least, human action is *intentional*, by which I don't mean that it is always guided by precise goals. Intentionality is understood here as a broad orientation of the person towards the world, a directionality of action that is

specific not only for humans but also, to some extent, for non-human animals. However, the existence of human beings in a world of culture enriches this intentionality with meaning and the capacity to imagine.

A psychology of creating grounded in the above understanding of action is able, as I will argue next, to help us overcome or rethink the key dichotomies that dominate today's creativity studies. In other words, creative action is inherently individual and social, articulates potential and achievement, idea generation and idea implementation, and expresses both beliefs and practices. As explained before, this is so because action is temporal and can only be studied developmentally. The three levels of development—historical, ontogenetic, and microgenetic—are intertwined in action and a cultural psychological analysis of creativity should be mindful of all of these (for a great example see Boesch's 1997, discussion of playing the violin). However, in order to capture the complexity of development in creative action, we also need a conceptual framework made up of notions that transcend rather than preserve dichotomies. There are several such frameworks for understanding action already available within cultural psychology, from activity theory (Leontiev 1978; Engeström 1987) to symbolic action (Boesch 2001). In the psychology of creativity, the study of action is less prominent yet not altogether absent (see Glăveanu et al. 2013). In this chapter, I would like to contribute to the nascent psychology of creating by proposing four guiding concepts for future theoretical elaboration and empirical study. Each of them is considered in turn.

Perspectives in Creative Action and the Individual - Social Dichotomy

Fundamental for establishing the dichotomy between individual and social in the psychology of creativity is an understanding of both as distinct. The border of the skin separates, in this case, the inner world of the person (made up of mental and neuronal activity) from the outer world (of others, groups, institutions, society and culture). What this simplistic understanding overlooks is the fact that 'inner' and 'outer' world are defined by each other and mutually dependent. This means that individuals and environment don't just 'interact', as two distinct entities, but *constitute each other*, a fundamental sociocultural premise. A new ontology is thus proposed in which the human mind is social while the environment is intentional, transformed by human activity (Marková 2003; Shweder 1990). This implies that, even when creating in complete solitude, we still act with others in mind, in dialogue with their 'voices' or viewpoints (see Bahktin 1981). In other words, our social mind is capable of taking the

perspective of others and reflecting on it. For example, as I am writing this text, my writing is constantly informed by the views of other people. This is not only because I refer to ideas from several authors but because my writing is, at each moment, responding to an internalised audience. For instance, I might be thinking a particular idea is not easy to grasp or a certain critique will be raised and I should anticipate it. Being able to conceive of my own work in terms of how others might look at it involves an act of *distantiation*. I am capable of looking at something (here, the text) as another person would, to understand it from another perspective—the perspective of an other.

Perspectives are *relational concepts*; they link a position (from which the perspective is constructed) to an object (what the perspective is about). Virtually any object of perception and knowledge can be considered and described from a variety of perspectives, from the abstract notion of democracy to the concrete laptop I have in front of me. The possibility of seeing the world from the position of others is at the root of our sense of self, our capacity for empathy and our creativity. Perspective-taking doesn't only relate self and others (Mead 1934), but it also makes our action in the world more flexible and, ultimately, creative (Glăveanu 2015a, b). This is so because perspectives are not primarily mental constructions but *action orientations* (Gillespie 2006), they depict the world for us in ways that facilitate certain action paths and block others. Coming back to the example of the laptop, seeing it as a writing tool or a music device, two different perspectives on the same object, foster certain actions (writing, listening to music) and not others. What is important for creativity is that we can hold different perspectives on the same object or reality *at the same time*. Even if the laptop is, at this very moment, primarily a writing tool, I can be easily reminded that it can play music, help me communicate with friends, etc. At the same time, other perspectives (e.g., the laptop as a weapon or cooking tool) are not taken. The different positions from which these perspectives originate are marked by our social experience: we know and learn to use laptops in interaction with others and this experience defines our own position as users of technology. Being able to adopt positions and perspectives that are *unique and yet functional within given situations* is at the heart of creative action.

Affordances in Creative Action and the Potential - Achievement Dichotomy

If perspectives are action orientations defined by a social context of interaction, these orientations still need to take into account the material support. In other words, we need another concept to be able to theorise the way in which

the materiality of the world makes salient, blocks or conceals perspectives. According to Shweder (1990), we live in an *intentional world* full of ‘intentional (made, bred, fashioned, fabricated, invented, designed, constituted) things’ (p. 2). This intentionality is inscribed into their form—which invites certain uses and makes others impossible—as well as within culture—which promotes or inhibits certain actions in relation to these objects. To take an example, a bottle has the perfect shape for carrying liquid but it doesn’t really make a good hat on a rainy day as it doesn’t sit well on the head or afford much protection. Gibson (1986) defined the affordances of the environment as ‘what it offers the animal, what it provides or furnishes, either for good or ill’ (p. 127). Using his terminology, water bottles afford, first and foremost, keeping and transporting liquid; this can be understood as their canonical affordance (Costall 1995). However, as any other object, water bottles can be used for many other purposes. When empty, they can help store small items like paper clips or cereals; when full, they can be used as paperweight or rolling pins. Even if we rarely get to use bottles this way, we certainly could; they are all afforded action potentials. Seen from a material perspective, creative action identifies unique affordances and adequately exploits them within the situation (Glăveanu 2016).

Just like perspectives, affordances are a relational notion, cutting across the potential—achievement dichotomy. They are ‘located’ neither in the person nor in the object but defined *contextually*. To continue with our example, regular bottles afford drinking for most of us but not for infants, they need new objects with different affordances to drink from a bottle. Equally, if we were gigantic, a water bottle would still carry water but it wouldn’t quench our thirst. However, giants might use water bottles to create a necklace, an affordance that is not immediately obvious to most of us. The potential for creative action rests, in all these cases, on the *relation* between a specific actor and specific object within a specific context. Thus, affordances for creative action are not defined at the level of the person alone, as it is commonly done by creativity tests. Divergent thinking as a measure of creative potential is typically evaluated with the help of items such as ‘how many things can you do with a brick’ (the Unusual Uses Test; Guilford et al. 1958). What this test invites respondents to do, in fact, is generate a list of affordances. But, since participants don’t apply any of their ideas (nor are they placed in a situation where it would make sense to do so), their responses are taken as an indication of potential rather than achievement. In contrast, achievement is frequently approximated by real-life performance (i.e., number of citations in the case of scientific works, number of patents in the case of inventors, and so on). Both these measures are unsatisfactory from the perspective of a psychology

of creating, principally because they don't focus on the act of creation itself. If we were to rethink both potential and achievement from the standpoint of action and affordances, they would need to be thoroughly inscribed within the person–object–context relationship.

Trajectories of Creative Action and the Idea Generation - Implementation Dichotomy

To study creative action means to study its unfolding in time. Time, experienced through change and transformation, can be observed at the different levels mentioned before: historical (societal), ontogenetic (personal), and microgenetic (immediate). In its unfolding, creative action describes trajectories that connect all these levels. Even those actions that don't necessarily make a societal contribution still bare the mark of history and build 'history in the small' by continuing and renewing cultural practices. What does an action trajectory consist of? This notion is meant to capture the *directionality* of creative action, the *movement* in space and time of creative actors and the continuous *transformation* of creative outcomes (see also Tanggaard 2016). We can think here about the historical trajectory of different ideas (e.g., evolutionism) as well as the dynamic of these ideas within the life course (for a careful analysis of the development of Darwin's thought see Gruber and Barrett 1974). Moreover, Zittoun and de Saint-Laurent (2015) documented trajectories of creativity in the way people construct their life, constantly reinterpreting their past while imagining potential futures. In its moment-to-moment unfolding, creative action describes trajectories as well, embodied in the movement of people, ideas, and objects. This movement should not be reduced to the different stages of creativity described from early on in psychology (for details see Wallas 1926); it refers as well to material aspects represented by spaces (family home, school, office, etc.), resources (tools, technology, etc.), and interactions (meetings, division of labour, etc.). Recent proposals for the analysis of ideational pathways within social interactions can be found, for example, in Tanggaard and Beghetto (2015).

A focus on trajectories or action paths in creativity studies can arguably help us overcome the strict separation between idea generation and idea implementation by grounding them both in a socio-material and developmental context. To begin with, this approach turns idea generation from a specific 'moment' within creative work (usually much shorter than time-consuming implementation) into an expanded period during which ideas emerge, mix, divide, merge, transform or are abandoned. As part of their trajectories,

ideas are both generated and ‘tested’, even if only imaginatively (see also the Genevieve model; Ward et al. 1999), thus blurring further the line between ideation and implementation. Consider, for example, the work of craftsmen. Easter egg decorators start from a general idea of what they could depict on each egg but this idea changes, sometimes completely, in the process of working (Glăveanu 2013b). There is no strict separation, in art, craft, and design, between having ideas and making, they are intertwined in one and the same trajectory of creating. The same applies to other domains where, at least in principle, the separation between the two is more pronounced. In mathematics, Poincaré (1908/1985) offered us an account of his discovery of Fuchsian functions almost entirely based on sudden illumination or insight. However, as psychological research into insight comes to show, big Eureka moments are never singular but built by years of practice (thus, implementation) and prepared by numerous other mini-insights (for a comprehensive discussion, see the volume edited on this topic by Sternberg and Davidson 1995). In other words, trajectories of creating can experience major shifts and qualitative jumps but these don’t come out of nowhere as in romantic conceptions of the genius. An integrated view of ideation and implementation as two *facets* of our creative action pathways can shed new light on both the subjective experience of creativity and its material expression. Most of all, it would overcome the implicit and harmful premise that some people, occupations, and/or disciplines are better equipped to generate ideas while others should just apply or carry them out.

Representations in Creative Action and the Beliefs - Practice Dichotomy

As previously mentioned, a distinctive characteristic of human action is that it is meaningful, that is, made intelligible to both actors and observers through the use of signs and symbols. In other words, when creating, we don’t just act in the material world but also in the cultural universe of representations. Representations carry the meaning of action and they are formulated, shared, and contested within social contexts of interaction. Let’s take the basic example of the representation of creativity. Each of us, presumably, operates with more or less structured or unitary definition of creativity. We use this understanding in our everyday life to discover and evaluate creativity, to appreciate it in others as well as in ourselves. Studying these definitions as individual and mental constructions, something specific for research on implicit theories (see Runco 1999), overlooks the fact that creativity beliefs or representations

are grounded in acts of communication and social interaction. The theory of social representations (Moscovici 1961; Jovchelovitch 2007) argues precisely for the social construction of knowledge within different communities of practice. We might methodologically study creativity beliefs by asking individuals to name what characterises creative people, products, etc., but this shouldn't make us forget the social origin and expression of these representations. And such ideas are not only debated within society but also materialised within popular culture (think, for instance, about Roald Dahl's *Matilda* and movies such as *A beautiful mind*), and institutions (e.g., in textbooks, job descriptions, and at award ceremonies). How do we account for this sociocultural and material facet in the study of implicit theories of creativity? More than this, how do we theorise the latter's connection to creative practice, to what people actually do when they create?

A growing body of research articulates today creative identity with other key constructs such as self-efficacy, curiosity, and mindsets (Karwowski 2012, 2014), all ultimately related to practice. However, using sociocultural theory and, in particular, the theory of social representations, I would like to argue here for another, deeper, connection between beliefs and practice in creative action. This goes back to the notion of representations as action-meanings, rendering intelligible the course of creative action and its outcomes. Dewey (1934) captured the dynamic between thought and action in creative work as a cycle between doing (acting in the physical world) and undergoing (experiencing and giving meaning to the consequences of our doing). Creativity, in this account, doesn't reside either in action or representation, practice or belief, but precisely in their interplay, in *meaningful action*. Let's consider the case of accidents (see also Austin et al. 2011). There are many accounts of accidental discoveries, including that of penicillin, and what they point us to is the fact that doing, by itself, is never sufficient; in order to create we need to hold representations that allow us to understand and value what has been done, including what emerges later from our doing. A focus on representations in creativity research should go beyond creativity beliefs and consider more widely *meaning-making processes* at play within both creative production and the reception of creative outcomes. These representations structure identities and practices for creative actors and their audiences and offer us common reference points for decoding and communicating about creativity. Instead of a separate study of beliefs and practices, a much more meaningful approach (pun intended) is to study the system of representations creators mobilise when creating and persuading others about the value of their creations. This system, however, cannot be understood purely in individual terms, but related to the

social contexts of discourse and interaction that regulate its production and use; this takes us right back to the first dichotomy, preparing the ground for a few concluding thoughts.

Towards a Holistic-Constructionist Theory of Creating

Despite the title of the chapter, making reference to a *psychology* of creating, it is important to mention that the study of creativity as action is interdisciplinary. Just like sociocultural psychology itself, it borrows from neighbouring domains such as sociology, anthropology, linguistics, philosophy, politics, as well as the natural sciences and the arts. Equally, the dichotomies mentioned in this chapter are not only specific for the psychology of creativity. The separation between individual and social, for example, has deep philosophical roots that can be traced back to Descartes's separation between mind and body (Jovchelovitch 2007). The gap between ideation and implementation and between beliefs and practice fuels many other distinctions made in everyday life, including education where students often have to choose between a theoretical and a vocational path. This is why, finding new ways to rethink these dichotomies in a holistic and constructionist manner could have much deeper consequences, beyond psychology. In this chapter, I proposed one such possibility grounded in the idea of action. It is undeniable that creativity involves action despite the fact that, in psychology at least, other aspects gain priority: traits, mental structures, products, implicit theories, etc. Even the long tradition of exploring creativity as a process (for a review see Lubart 2001) doesn't focus on action but rather cognitive processes that are part of action and yet cannot fully account for it. We need a new vocabulary and conceptual frame for the study of action that goes beyond a dichotomic logic and embraces relational thinking.

Understanding creative action in terms of perspectives, affordances, trajectories, and representations is meant to provide a holistic, cultural-developmental alternative to existing models of creativity. The four terms briefly discussed here reveal different yet inter-related *facets of action*. Perspectives (action orientations) are shaped by and shape, in turn, the discovery of affordances (action potentials). This dynamic defines trajectories of creating (action paths) at a historical, ontogenetic, and microgenetic level. Finally, these trajectories cannot be understood outside the system of representations (action meanings) that guide their temporal unfolding. Future theoretical elaborations as well as empirical research are required in order to define further these concepts and

their articulation. Interesting questions can be raised in this regard about the role of expertise in creative action, the importance of domains, and the way different cultural systems of appreciation facilitate or constrain possibilities of creating.

Last but not least, at a methodological level, we are reminded by this approach of the importance of analytical units in creativity studies (see also Glăveanu 2015c). Many of the dichotomies discussed here are instituted by certain traditions of segmenting the activity of creating within different phases or stages that seem, taken separately, individual or social, characterised by ideation or implementation, etc. At the same time, the extensive use of psychometrics nowadays, instead of prioritising a close observation of creative action, contributes to the separation between potential and achievement. Finally, different programmes conceived to enhance creativity tend to focus either on creativity beliefs or practices, rarely adopting a unitary approach. While acclaimed for bringing some conceptual clarity to creativity studies as scientific domain, all these dichotomies are, in the end, more harmful than beneficial. They reinforce a view of creativity as a personal quality and, most of all, as the responsibility of the individual. A holistic theory of creating is meant to go beyond scientific debates. It carries with it a message of social responsibility and cultural sensitivity by conceiving creativity as *an action made possible and meaningful only in relation to other people*. It is on this basis that a more solid ethics and science of creating can be established.

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11

Imagination: Creating Alternatives in Everyday Life

Tania Zittoun and Alex Gillespie

Imagination and creativity are closely related. Creativity has recently received increased research attention (Glăveanu 2014; Glăveanu et al. 2015; Kaufman and Baer 2006; Kaufman and Beghetto 2009; Kozbelt and Durmysheva 2007; Moran and John-Steiner 2003; Sawyer et al. 2003; Sternberg 1999), while imagination has received less attention. Arguably this difference is because creativity focuses more on visible, and potentially profitable, outcomes, whereas imagination is often associated with being private, immature, and gratuitous (Piaget 1992). However, we take here the opposite stance. Following Vygotsky, we will be starting with the proposition that imagination is the psychological process at the heart of creativity, and that it is, as such, at the heart of culture:

It is precisely human creative activity that makes the human being a creature oriented toward the future, creating the future and thus altering his own present. This creative activity, based on the ability of our brain to combine elements, is

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called imagination or fantasy in psychology. [...] But in actuality, imagination, as the basis of all creative activity, is an important component of absolutely all aspects of cultural life, enabling artistic, scientific, and technical creation alike. (Vygotsky 1967/2004, pp. 9–10)

In this chapter, we will argue that a sociocultural account of imagination can enrich the literature on creativity. Specifically, we introduce a sociocultural model for conceptualizing imagination proposed by Zittoun and Gillespie (2016). This model distinguishes the triggers, sequence, and outcomes of imagination. We will then use this model to show how imagination is central to the creativity of everyday life, and, moreover, how it can inform interventions in creativity.

The Psychological and Cultural Antecedents of Creativity

Although creativity has recently been conceptualized as a process (Glăveanu 2015; Sawyer et al. 2003), it is still predominantly defined in terms of outputs, such as ideas, artifacts, or products which are deemed to be original, surprising, and potentially valuable (Boden 1996). While there is some debate about how original something needs to be (i.e., something original within the daily life of an individual or something original within the life of the community; Glăveanu and Gillespie 2014) and whether being valuable is necessary, there is a widespread assumption that creativity needs an output that can be evaluated. This process of evaluation is not necessarily an individual process, because creativity always pertains to an output, and this output can be judged by an audience. Indeed, it has been argued that the judgment of the audience is central to the determination of creativity (Dewey 1934; Csikszentmihalyi 1999). The role of the audience in creativity makes it an inherently cultural and normative phenomenon.

Creativity has been widely researched, as it is a key topic in the fields of education, management, technology, and arts (Beghetto and Kaufman 2010; Craft 2000; Davies et al. 2013; Sternberg 1999). Increasingly, in the knowledge economy, there is an emphasis on increasing innovation, and in this political agenda, creativity is a key component. But, again, this brings us back to the outputs of creativity; the focus is on objects, products, patents, and so on; measurable outcomes begin to determine what creativity is. This focus on the outputs, we suggest, has led to some oversight regarding the psychological antecedents or conditions, specifically, the role of imagination. Imagination is often opposed to outputs; it is seen to be unproductive, fanciful, and poten-

tially distracting. We will argue that it is precisely imagination's lack of constraints in terms of both outputs and reality itself then makes it an important ingredient in the process of creativity.

Unlike creativity, the value of imagination resides in its very existence, independent of any output, community judgment, or validation. Although imagination often has consequences, both emotional and practical, it is not defined by its consequences. Imagination is an experience that can remain completely private (Singer and Singer 1992), but it can also be shared. Accordingly, we would argue that imagination is usually part of the process of producing something that is judged creative. Indeed, imagination is likely a necessary condition for creativity, but it is not the case that all imagination leads to creative outcomes.

Not only are imagination and creativity two different moments in a chain of events; the concepts also have different statuses. The concept of imagination designates a specific psychological process, different from other processes because of inherent properties. In contrast, the concept of creativity is a social qualification to evaluate positively certain range of conducts or their outputs. The same event can be judged creative or not depending on the values and criteria of a given community (Glăveanu and Gillespie 2014), whereas an occurrence of imagination is independent of any such judgment.

Finally, in addition to arguing for imagination as psychological phenomena and as a necessary precondition for creativity, we also want to argue for a thoroughly cultural conception of imagination, and thus, creativity. In this sense, we align with existing work that emphasizes the cultural dimension of creativity (Glăveanu 2010; Sawyer 2011). To focus on imagination is to focus on the contents of thought, on the stream of experience. When we look into this stream, we find elements that are cultural in many ways. First, much of the content of imagination pertains to imagery and ideas widely circulating in a culture. Second, the very motivations and wishes being vicariously satisfied by imagination are also often refracted through culture. Finally, even imagination that is based on the individuals' own practical experience of the world tends to be cultural because the world that was experienced is a world that has been shaped by other people, in different times and places.

A Sociocultural Approach

We adopt a perspective in which culture is not so much a question of research, as a starting and end point of our enquiry. Sociocultural psychology is developing as a new general psychology (Valsiner 2014), drawing on authors of

the past that considered humans' complex inclusive separation to their social and cultural worlds (e.g., Lewin 2000; Mead 1934; Vygotsky 1986). Such psychology starts with the assumption of the uniqueness of each human person, together with its necessary location in a web of interactions with others beings, in socially and materially bounded situations. Its two specificities, compared to other interactive approaches, are its emphasis on temporal dynamics, that is, development, and on sense making, for which it pays a special attention to semiotic processes. Such emphasis enables us to analyze how socially constructed meanings or discourses eventually become psychological, and thus guiding human action, and how, conversely, a person's unique understanding or thought about the world can lead to specific activities in the world—through signs, things that designate something for a mind under some specific regard (Peirce 1974).

Drawing on Schuetz (1945, p. 552), we call “paramount reality” the taken-for-granted world in which people live. It includes the others with whom we interact, material things, physical time, and social and symbolic realities which we assume to be out there. Thus, paramount reality includes the mountains at the horizon, the educational system, the chair on which one is sitting, and widespread ideas about too much sitting being a health hazard. People in their interaction with paramount reality constitute “spheres of experience”. A sphere of experience designates “a configuration of experiences, activities, representations and feelings, recurrently occurring in a given type of social (material and symbolic) setting—it is one of the various regular, stabilized patterns of experience in which a person is likely to engage on a regular basis” (Zittoun and Gillespie 2016, p. 8). A sphere of experience combines the perspective of a specific person, engaged in a specific situation with its “cultural pattern of group life” (Schuetz 1944, p. 499).

If we want to account for experienced lives, we have to distinguish two types of spheres of experience: proximal and distal (Zittoun and Gillespie 2015). “Proximal experiences” are directly located in the paramount reality. People are engaged in irreducible time, actions have causal consequences. Cooking an egg, or meeting people at a café belong to proximal experiences. In contrast, “distal experiences” are lived as if partly, if not fully, disconnected from the present constraints; people can imagine situations independently of their bodily location, beyond the laws of time and space, and also, independently of logic and causality. Dreaming, daydreaming, or being engrossed in a novel are distal experiences. Finally, on a daily basis, people constantly alternate between spheres of experiences; places where they sleep and wake up, the sphere of work, specific friendships, and so on, each demanding the mastery of certain activities, relational modes, emotional experiences, and

specific values and projects. Schuetz (1945, p. 553) has called mild “shock experience” that of moving between spheres, such as falling asleep and entering in a dream, or finding one’s way back to reality after seeing a movie. We believe that imagination is a powerful means for traveling, at a psychological level, in and through spheres of experiences.

Imagination as Uncoupling

Imagination has been studied as a process of seeing things in their absence in one’s mind eyes, in a more or less accurate fashion (Descartes 1641); it also has been seen as the process by which human can give meaning to the impressive world in which they live and the emotions they feel (Vico 1993). Arguably, it is a form of “stimulus independent thought” (Killingsworth and Gilbert 2010, p. 932), in the sense that the flow of experience is not directly guided by the proximal situation (although it might be facilitated by a symbolic resource, such as a book or film). It is often seen as an emotional, slightly irrational capacity, which soon gets tamed by reason (Piaget 1992), or possibly, that plays a role in regret (Byrne 2005) and ruminations. Only more recently authors have started to see its functions in its capacity of “bracketing” reality (Bogdan 2013), which eventually also allows exploring alternative realities (Singer and Singer 1992, 2005), finding some freedom from social constraints (Cohen and Taylor 1992) or is pleasurable in itself (Oppenheim 2012). Hence, seen as creative or reproductive (James 1890; Ribot 2007), representational or embodied, negative or positive, imagination has had all possible status in the literature. Drawing on Freud, and then Vygotsky and Winnicott, we consider imagination as a dynamic which is creative, multi-modal, and able to substantially expand experience (Pelaprat and Cole 2011; Zittoun and Cerchia 2013).

We conceptualize imagination as a looping experience. Imagination is “disengaging from the here-and-now of a proximal experience, which is submitted to causality and temporal linearity, to explore, or engage with alternative, distal experiences, which are not submitted to linear or causal temporality. An imagination event thus begins with a decoupling of experience and usually concludes with a re-coupling” (Zittoun and Gillespie 2016, p. 40). Defined in these terms, imagination includes dreaming, day-dreaming or mind wandering, remembering, anticipating, exploring alternatives, or enjoying fiction or any other cultural experiences. Imagination is thus an embodied experience, often emotionally engaging, and potentially transformative for self and others.

The Sequence of Imagination

Given our sociocultural approach, our aim is to study imagination as a concrete stream of experience, as something that unfolds in time, within a specific context, but also drawing upon the past and giving shape to the possible future. We have thus proposed to conceptualize imagination as a “loop”, that is, as a temporal sequence with triggers, resources, and outcomes. Before describing these three moments, and the psychological processes by which the resources are utilized to create alternatives, let us first give an example of imagination.

In the most standard case, imagination demands our consciousness to leave the proximal sphere of experience, to expand into a distal experience. For example, a person engaged in a task at work, gets bored, looks up out of the window, and starts to imagine how to refurbish his summerhouse. Here, the proximal sphere of experience is the task-at-the workplace, the trigger for disengagement is boredom, and the distal experience is the sphere of the distant house. Imagining refurbishing a summerhouse requires the person to mobilize images of his summerhouse, his experience of painting and building, his experience of houses seen, decoration catalogues browsed, memories of childhood informed by the family photo album, and so on; such a reverie might also entail constraints, such as the reality of the budget available, or the possibility of the neighbors’ disapproval. The loop ends, or experience recouples, when the daydream ends, and the present task comes back to the fore. Maybe the reverie runs its course or maybe the person’s boss appears. The outcome of the imagination might be simple relief (of having temporally escaped a boring situation) or pleasure (of enjoying the vicarious experience of refurbishment in the warm summer sun); in this case, it might also be a starting point for a series of activities, such as convincing his partner about a paint color, buying paint, or planning the work, which in turn might lead the summerhouse to become more valuable, to be sold for a higher price, or starting a new decoration trend, and so on and so forth. In other words, the outcomes feedforward into the life trajectory, potentially causing changes for self, others, and the material and sociocultural world.

Triggers

Triggers are defined as that which provokes the disengagement from the proximal sphere of experience. Besides boredom, ruptures—the end of the taken for granted—can also trigger imagination: being in a new environment, or

in the dark; having a new neighbor; or becoming a parent. Third, a too high intensity or invasive quality of a sphere of experience can trigger imagination: a too strong pain, a too difficult task, or imprisonment, may all demand mind to wander off. Fourth, culturally designed techniques for uncoupling experience can be used: going to the cinema theater, taking recreational drugs, or engaging in ritual or meditation, aim precisely at uncoupling from the proximal experience and engaging into a distal one.

Resources

The loop of imagining itself builds upon various resources. What “nourishes” the loop are all the past experiences, images, embodied memories, present perceptions, that will enter in the bricolage of imagining. The most typical resources for imagining are traces or past experiences, or personal memories—to continue the summerhouse example, one’s memories of houses and places. Second, uses of symbolic resources play an important role: using images seen in books, magazines, films, or any other cultural artifact (Zittoun 2006). Third, social representations can be used as resources for imagining (Marková 2003; Moscovici 2000): the shared ideas, norms, and values for instances associated to houses and tastes, likely guide people’s actions. Fourth, interpersonal relations also offer resources to give shape to imagining.

These four types of elements used as resources both nourish and constrain. These elements make imagination possible, they help imagination to deploy, but also, they circumscribe the limit of imagination within a given cultural milieu. For instance, they forbid some types of colors or designs that would be considered bad taste, or they more radically prevent all range of possibilities. A given state of the paramount reality hence entails an “imaginative horizon” (Crapanzano 2004)—a zone beyond which people do not imagine, mostly by lack of means. For example, before photovoltaic cells were invented, one would not imagine installing solar panels on one’s summerhouse.

Semiotic Work

Imagination is a semiotic process by which various materials collected through present, past, and vicarious experiences is mobilized and used as resources, to give shape to an emotional, embodied experience. In addition, imagination can be elaborated with diverse material, including complex semiotic systems mastered by a person (musical codes, rules of construction, etc.). This is why the imagination of a trained architect is different of that of a child building

shelters; both draw on what knowledge and experience they have, and the semiotic systems they master, in imagining a possible house.

This semiotic process demands the creations of new forms, which can be described along two lines. First, semiotic construction functions laterally: ideas, images, meanings get assembled and transformed. Here, we can assume that the main processes involved correspond to these identified by Freud in his analysis of the dream work (Freud 2001a, b). These include the processes of condensation, by which diverse meanings and experiences become designated by a semiotic construct which thus becomes heterogeneous; displacement, by which some meaning is displaced from one construct to another one; figuration, by which some ideas or concepts of feelings can find a concrete form; and synthesis, which gives a new unity or consistency to diverse experiences within an imaginary experience.

Second, semiotic constructs in imagination can be seen as deployed along a vertical axis of generalization. Processes of generalization are involved in imagination, both process of categorization corresponding to socially accepted classes (as when Irish shepherds, fox terrier and basset hounds become subsumed in the category of “dog”) and processes based on more experiential or emotional generalization (such as, all situations in which one feels uncomfortable) (see also the two processes of schematization and pleromatization in Valsiner 2014).

Imagination thus is a process of semiotic construction, bringing in diverse experiences to create new ones, which are emotionally laden and multimodal, and, because of this emotional and experiential involvement, may transform the experience of the person.

Three Dimensions

Imagination as temporary disengagement from proximal experiences can be described as a loop, which varies in a three-dimensional field, and along three dimensions (Fig. 11.1). A first dimension is time, or the temporal orientation of imagining. The act of imagining occurs as the person lives in an irreversible, physical time, defining the paramount reality and mostly the proximal experience. However, imagination precisely disconnects from the proximal experiences located in the ongoing present. It allows to explore distal experiences in the past (former proximal experiences), or to explore experiences in the future, or in a time that could have existed or could exist in a twin planet. It allows traveling forth and back, imagining how Neanderthal would live in a space rocket allowing traveling in other galaxies, or how one's life could

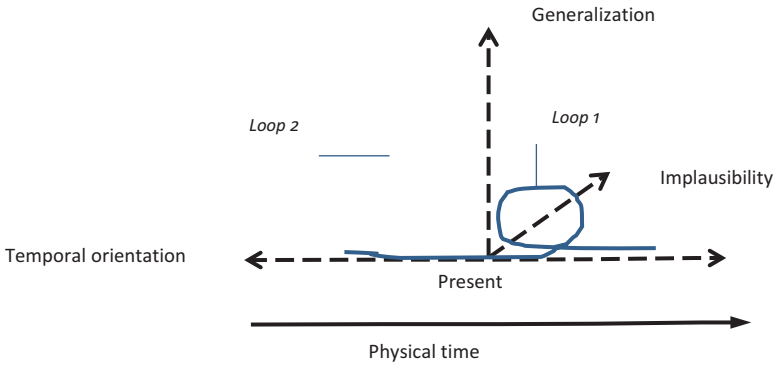


Fig. 11.1 Loops of imagination in a three-dimensional space

develop if one had studied, or not moved country. Hence, imagination is a loop that allows a disjunction from the physical time, and as such, it escapes the rules of temporality. Only, it imposes that, when a loop is ending, it comes back to the present of the person, that is, the present at time $t + n$, the time of imagining. Hence, one can be absent to one's mathematics class, or to one's driving, for the time of imagining. In that sense, imagination includes remembering, anticipating, and counterfactual reasoning.

The second dimension of imagining is its distance from the concrete here and now into more general experiences, along the processes of generalization mentioned above. Because imagination operates on semiotic material, that semiotic stuff can be more or less indicial or indexical, or more or less symbolic and distanced from actual occurrences. Hence, imagining whether it would be nicer to cut one's apple horizontally or vertically demands a clear reference to an actual apple. However, imagining making the world a better place, or imagining a chiliagon, to use Descartes' example, are very general statements, that do not translate immediately into actual actions or experiences, but that can only mediate further meaning and actions. Imagination can demand more or less distanced semiotic experience, that is, use semiotic means that refer to further semiotic means. In that sense, exploring plans for action, or dreaming about a better world, are variations of imagination on the generalization dimension.

The third dimension of loops of imagining defines their distance from the paramount reality, or their plausibility. In a given social environment, with a certain shared knowledge and certain norms, and for a given person with skills and experience, some imagining clearly depart from what is or could ever be possible, while other are quite likely, or could or could have been the case. Hence, imagining that a blue hippo would pick one up after lunch to

bring one to Saturn is quite implausible; imagining how one's garden could flourish might be more plausible. Plausibility thus depends on various material, social, and symbolic constraints and enabling conditions. In that sense, having precursor ideas, being creative, or being considered as mad or heretic, depend on the implausibility of one's imagination in a given time and space.

Outcomes of Imagination

If imagination is a disjunction triggered by various events, its loop ends when a person's experience rejoins the present proximal situation and its course in the physical time. One of the great interests of imagination is that such jointure actually usually has outcomes—it slightly changes the person's experience in the proximal world (unlike the sort or rumination that Winnicott (2001) calls fantasizing, and that does not change the person).

Outcomes of imagination can have various scales and orientation. Imagination can mainly change a person's mood (feel less tensed after imagining that one could be sitting on a beach rather than in the tube) or her understanding of a problem; it is thus oriented toward self. Imagination can also bring to change one's relationship to someone else—to offer a present, to pursue a dialogue—or it can bring to actions in the world—plant a tree, change one's movement during an aikido lecture. It can finally be oriented toward a more general social entity, as when imagines how to limit the warming of the planet.

One could also say that some of the outcomes of imagining are microgenetic: they affect how a situation keeps unfolding leading to everyday creativity with a “mini-c” (Beghetto and Kaufman 2007). Some outcomes are imagination can play a role in the definition of possible selves, and progressively, in the creation of one's life path. Finally, imagination can have sociogenetic outcomes, for instance, when the imagination of some people, such as that of flying to the moon, becomes translated by semiotic artifacts, which are likely to become resources for other people's imagination, until the imagination becomes a social project, then turned by some, with financial and technical resources, into an actual trip to the moon—which marks a turning point in the history of society. In that sense, working through and emotional change, creativity, or social innovation can be seen as a continuation of imagination.

Using Imagination to Understand Creativity

Imagination and creativity intersect at the outcomes of imagination. While not all outcomes of imagination are necessarily creative (i.e., respite from boredom or taking a predictable course of action), all genuine creative acts,

we would argue, necessarily begin with the human imagination. Accordingly, we are going to focus on sequences of imagination that lead to creative outcomes, specifically outcomes that alter the life trajectories of an individual or the history of a community.

As we have seen, imagination occurs at the level of individual experience, and refers to the stream of uncoupled experience within which the world as it is can be reconfigured into what it might become. Accordingly, the antecedents of creativity are to be found in the uncoupling of experience, and the stepwise movement of imagination, carving a line between the dimensions of time, generalization, and plausibility. We are going to illustrate this link between imagination and creativity by considering creative outputs at both the level of the individual and the community.

First, imagination occurs all along the lifecourse, but only some of its occurrences actually lead to specific actions which can change or reorient it, and thus be seen or evaluated by others. We have called these instances of imagination about one's life, which many enrich and transform its course, "life-creativity" (Zittoun and de Saint-Laurent 2015). Life-creativity can thus be defined as a way to create a life-path, that is, "refusing to be stumped by circumstances but being imaginative in order to find a way around a problem" (Craft 2000, pp. 3–4, quoted in Banaji et al. 2010, p. 29).

Second, imagination can lead to new practices and products, collectively acknowledged as such, and then reverberated in the social group and beyond. Creativity thus becomes innovation, feeding forward into cultural change. As an individual act of creativity is acknowledged and valued by the community, it becomes part of the resources that nourish future imaginings. This circular dynamic can, as we will show, guide trans-individual traditions of imagination, with potentially huge creative societal consequences. We will now closely examine imagination leading to creativity as these two levels, namely, at the individual and community levels.

Imagination as Life-Creativity

Imagination occurs in different locations of the lifecourse. It can be the main activity of a given sphere of experience, as when one is engaged in a proximal experience of storytelling with a child, or one is at the theater. Imagination might also be what connects or relates a proximal experience to a distal experience, for example, thinking back about a past experience or imagining the future. Or imagination might occur precisely when one proximal experience threatens to end, and thus the person has to envisage possible futures or alternatives. Because people's imaginings have specific idiosyncratic qualities, and

use as resources memories of past imagination, these can layer up, and slowly give a specific direction to a lifecourse.

An example of the role of imagination in the lifecourse can be found in the Czech documentary *Studies of marriage* (Třeštíkova 2009) that follows six couples along 25 years of their married lives starting in 1980 in Communist Czechoslovakia to end up in early 2000s in liberal Czech Republic (for a full analysis see Zittoun 2016; Zittoun and Gillespie 2016, Chap. 6). In one of the couples, Stanislav appears as a young man who deploys a lot of imagination in his leisure time, next to his work as technician and his life with his young wife and children. With an interest for small transistors and low-voltage installations, he progressively gets interested in more complex electronics and computing. For instance, he builds a small telescope; now able to see the sky from closer, he then becomes curious about what is behind. He progressively builds a large telescope, directed by his computer, and is able to see quite far away, which leads his imagination to the limits of our galaxy, as he imagines what is beyond the visible galaxy and the origins of the universe. In Stanislav's case, imagination is largely limited to a leisure time activity, and the distal imagination becomes more and more mediated by tools and knowledge, until he ends up, according to his own account, with one of the best telescopes in the Czech Republic.

On the other hand, young Stanislav transposes his interest for what is beyond the visible and the reachable in another sphere of experience. He builds, during the communist years, a satellite dish that allows him to view German TV channels. Curious of what these people said and eager to imagine their lives, he teaches himself German. Eventually, some years later, after the end of communism and the opening of a liberal market, Stanislav has to define a new occupation, as people lost their state-given jobs. As with many young adults, he then had to imagine possible life-paths for himself; to imagine himself as another, he first draws on his past leisure time occupation to imagine possibilities. He thus first tries to create a technological company, which however fails—here, imagination leads to one option which is not socially validated. Maybe the idea for a technological company was not particularly creative or original, but, nonetheless his believing in the vision and altering his life course according entailed imagination.

Later, Stanislav becomes a translator from German to Czech for a large company (Zittoun and Gillespie 2016). In that case, imagination leads to actions which are now socially accepted and validated. In other words, an outcome of his imagination—life beyond the borders—is his learning of German; and mastering German opens a new life-path, which can then be followed, when the paramount reality and the social environment acknowl-

edged and validated that skill. In that sense, Stanislav's interests for technical artifacts, and his imagination of what is beyond the given, become key constituents of his life-creativity.

Imagination as Cultural Creativity

The history of our human society is filled with instances of collective imagination which fed forward into more or less creative outcomes. Indeed, the history of utopian projects is based upon a history of the human imagination (for a discussion see Zittoun and Gillespie 2016, Chap. 7). However, the example that we want to analyze briefly is the 1969 moon landing. For most of human history, the moon was not seen to be a place, certainly not a place that humans could reasonably visit. It was only after the widespread use of telescopes in the seventeenth century that it became apparent that the moon was not spherical, but instead was a landscape. The patterns observed on the surface of the moon were generalized, from earthly experience, to become mountains, valleys, and even rivers. The craters, produced by meteor impact, were thought to be, again on the basis of earthly experience, volcanos. Initial imaginations of actually traveling to this alien landscape were highly implausible. Dreams (Kepler 1608) and swans (Godwin 1638) were the initial means of transport. However, as the industrial and scientific revolutions unfolded, more plausible means were proposed (McCurdy 2011). Jules Verne (1865), for example, calculated the details for a cannon that could shoot a projectile carrying humans to the moon. Needless the initial acceleration proved problematic. This method was taken up and used by Miles (1902) in *Le Voyage dans la Lune*. This film, which is arguably the first science fiction film, was hugely popular in both Europe and the USA—filling the minds of viewers with vivid images of traveling to the moon, seeing earth-rise from the moon, and encountering life on the moon. These vivid images, arguably, provided some of the motivation and focus that would culminate in the moon landing.

The imagination of traveling to the moon was further nourished by the rocketry used in World War II. The German V2 rockets, which terrorized London, received a lot of publicity. Self-steering rockets traveling at high speed provided the resources for imagining a new way to travel to the moon, namely using rockets. The world's first satellite to orbit earth, in 1957, again made space travel seem achievable. So vivid did this imagination become that, in 1961, when President Kennedy announced the plan to send people to the moon, it was seen as ambitious, but not implausible.

The actual work of landing people on the moon entailed numerous creative outcomes. Solutions had to be found for how to steer the rocket, how to land it, how to live in minimal gravity, how to maintain communication, and so on. The interesting fact is that each creative solution to a problem was feeding forward into making the overall imagination of landing on the moon more vivid and plausible. Moreover, had the landing failed, then history might have judged these innovations as less valuable, and less creative. But, the success of the moon landing, celebrated across the globe, provided the audience legitimation to say, categorically, that this was a major creative achievement.

At this cultural level, that is the level of a tradition of imagining landing on the moon which spans nearly 400 years, individual acts of imagination form the bedrock. Yet, no individual act of imagination is absolutely necessary. There seems to have been a cultural momentum, a preferred persistent tendency toward this imagination. And thus, individual sequences of imagination, individual loops of imagination, give way to larger looping sequences; namely, the outcomes of one imagination feeding forward and becoming the resources for the next loop of imagination.

Imagination at the Core of Creativity

Following Vygotsky (2004, discussed above), we consider imagination to be the psychological process at the heart of creativity. According to our proposition, imagination designates a basic process (i.e., uncoupling, elaborating new semiotic constructs, and then recoupling to proximal experience) that can take many forms and variations. In some cases, imagination can be externalized, leading to actions or the creation of new cultural elements or even guiding ideas and ideals. Thus, the outcomes of imagination, at the level of the life course or the community, can actually have a guiding function, feeding into the life of the individual or the history of society. These outcomes cross over into the domain of creativity if other people judge these as creative (or if the creator imagines an audience which gives appropriate recognition). We thus suggest that creativity designates the dynamic or the outcomes of imagination, at various scales, when these are acknowledged by social others.

The model we have proposed also allows us to conceptualize how imagination can be limited, specifically by a lack of resources, when generalization cannot be achieved, or when temporal horizons are too constrained. Also, if the outcomes of imagination are not socially acknowledged, then creativity—in the lifecourse, or as social phenomena—cannot take place.

One of the consequences of such analysis is that, in order to foster creativity, a group or a society should foster and support imagination (see also Zittoun and Gillespie 2016, Chap. 8). Supporting creativity does not only depend on developing lateral thinking techniques, brainstorming, or mind-mapping. Rather, as creativity is often the unexpected outcome of local or collective forms of imagination, then creativity can be enhanced by supporting the imagination. Specifically, imagination can be facilitated, our analysis suggests, if people have the time and place to disconnect from ongoing demands, have access to diverse resources to nourish their thoughts, and can freely play with alternatives, without being afraid of their consequences. In that sense, supporting and preserving the diversity of creations of the present and the past (i.e., books, arts, fictions, and sculptures) is a crucial part of supporting resources for imagining. Imagination needs resources, and, simply put, the more diverse and rich those resources, the more diverse and rich the human imagination. Also, creating spaces for thinking and imagining should be facilitated—but the means by which this can be done are diverse (i.e., limiting productivity demands, boredom, or major uncertainty). Tolerating individual idiosyncrasies and originalities in ways of doing and modes of expression, and therefore, people’s work of imagination, might also in the long run allow individuals to contribute in a novel manner to their lives or to society as a whole.

Conceptualizing imagination and creativity together opens up new paths for both intervention and research, and, as such, provides the justification for linking these concepts together. In the present chapter, we have begun to sketch out how this link might work at the level of psychological process, and we have illustrated it with two examples, one from the individual level and the other from a community level. Imagination, in short, is the play of ideas that can occur before any movement of actualization. Although imagination is often opposed to that which is real, in so far as individual life courses and history is made by people, then, we would argue, imagination contains the seeds of what might become real tomorrow.

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12

Position Exchange, Life Positioning, and Creativity

Jack Martin

Many traditional theories of creativity have located the engines of innovation within the cognitive processes of individuals. For example, J.P. Guilford (1950, 1968), often credited with founding the psychological science of creativity research, emphasized divergent thinking as an essential capability of the creative individual. Not surprisingly, Guilford's emphasis on divergent thinking has been linked by many others to the psychological ability to take and consider a wide variety of perspectives on a particular problem, which calls for novel responses. In this chapter, I agree with the importance of perspective taking for creativity, but shift the traditional and still popular emphasis on perspective taking as an individual, psychological power to perspective taking as a socioculturally grounded process. In doing so, I consider the ways in which perspective taking is grounded in the interpersonal and material aspects of our interactivity with others and objects within everyday sociocultural practices and traditions.

Of particular importance to my project are (1) the idea of *position exchange* and (2) the method of *life positioning*. *Position Exchange Theory (PET)* (Gillespie 2005, 2006, 2012; Gillespie and Martin 2014; Martin 2005, 2006; Martin and Gillespie 2010, 2013) is highly relevant to theory and research on creativity. It

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helps to provide a developmental account of the emergence of perspective taking and creative agency within physical, material, interpersonal, and sociocultural contexts. This is a description that emphasizes the importance of how creators are positioned and come to position themselves within different phases of interactivity with objects and others. *Life Positioning Analysis (LPA)* (Martin 2013, 2015) offers a social psychological, biographical method for studying the life projects and creative accomplishments of individuals in interaction with others and objects within socioculturally sanctioned and constituted conventions and traditions. LPA also situates lives and creativity within the human condition in a way that captures the salience of existential concerns that attend the lives and life projects of individuals and communities. In what follows, PET and LPA are elaborated, discussed, and then illustrated with material from the lives of two historically important figures in psychology: Sigmund Freud and B.F. Skinner. But first, it is necessary to establish further the centrality of perspective taking and position exchange for understanding and studying creativity.

Creativity, Perspective Taking, and Position Exchange

As previously mentioned, it was J.P. Guilford who was highly influential in steering creativity theory and research toward perspective taking and diversity. By invoking creativity as an important antidote to the challenges facing American society in his 1950 presidential address to the American Psychological Association, Guilford, who had studied creativity during World War II for the US air force, is widely credited as the founder of creativity measurement and research in the contemporary psychological manner. Central to Guilford's (1968) account of creativity, which like intelligence he considered to be multifaceted and multidimensional, was what he referred to as *divergent thinking*. Guilford associated creativity with divergent thinking by noting the *fluency, flexibility, originality, and elaborative* nature of such thought. Fluency was the ability to produce a number of ideas and possibilities. Flexibility was the ability to consider such ideas simultaneously. Originality was the ability to produce new ideas based on such consideration, and elaboration was the ability to synthesize ideas and execute a plan of action to bring them to fruition. Thus, for Guilford, divergent thinking was a set of cognitive and behavioral abilities that defined the creative process as a whole. Nonetheless, the core concept of divergent thinking, as an interior attribute of creative individuals, is what became lodged centrally in the theorizing of many psychologists and other creativity researchers.

Much psychological research that has made use of Guilford's ideas concerning creativity has focused on the measurement and enhancement of divergent thinking. However, more recent years have seen an increased interest in the idea of creativity and divergent thinking as social psychological processes that are deeply embedded within sociocultural, material practices that populate the life contexts and projects of creators. Many such programs of inquiry and implementation are readily evident in the chapters of this Handbook. Two that have incorporated ideas and methods similar to those I discuss in this chapter are Gruber's (1989) *Evolving Systems Approach*, especially as elaborated and further developed by Michael Hanson (2015) and Vlad Glăveanu's (2010, 2015, also see his chapter in this volume) cultural psychology of creativity. In discussing the particular ways in which PET and LPA contribute to a more materially situated and socioculturally embedded approach to creativity theory and research, I will emphasize the important relationship between position exchange and perspective taking. The central idea is that occupying different positions when interacting with others and objects necessarily entails taking different perspectives concerning those others, objects, and one's self. Some of these perspectives, and others issuing from their joint consideration and interaction, may become linked in important ways to creative life projects.

Perspective taking has a long and complex history in both developmental and social psychology (for relatively recent reviews, see Elfers et al. 2008; Martin et al. 2008). In these areas of inquiry, perspective taking is broadly conceived as a social cognitive process through which individuals are able to consider and value the orientations, understandings, and action tendencies of other people. Consequently, perspective taking frequently is targeted as a goal in social, psychological, industrial, and educational efforts to enhance empathy, cooperation, and creativity (e.g., Grant and Berry 2011; Hoever et al. 2012). It is precisely because perspective taking is thought to open up of a divergence of cognitive and behavioral possibilities for individual and collective consideration that it is associated with creative problem solving and accomplishment.

What *PET* and *LPA* attempt is to explain exactly how perspective taking develops in the lives of persons as a consequence of the positions they occupy, take up, and imagine within the physical, material, sociocultural, and psychological space and time of their life experiences and projects. When these explanations are considered in relation to creativity theory and research, it becomes obvious that a careful and detailed study of the life contexts and positions of creative persons is required to understand creativity and the situated agency it requires. *LPA*, most simply put, is a theoretically guided search for patterns of positioning and position exchange across the life span of a particular individual.

Position Exchange Theory

PET (Gillespie 2005, 2006, 2012; Gillespie and Martin 2014; Martin 2005, 2006; Martin and Gillespie 2010, 2013) makes three basic observations. The first is that society is partially comprised of a multitude of social positions, many of which are both interdependent and complimentary. A second observation is that a person's occupation of and interactivity within social positions help to constitute perspectives, defined as orientations to situations with respect to acting within them. The third observation is that people occupy and move dynamically and repeatedly through an enormous number of complementary, asymmetrical, and other social positions throughout their lives, both actually and imaginatively. Social positions are historically established, interactional, and institutional locations within dynamic social and cultural structures from which people act and speak. Such locations are saturated with situational demands, conventions, routines, expectations, rights, and responsibilities.

Social positions can be transient (e.g., asking for help) or relatively stable (e.g., being a mother), consequential (e.g., being a judge) or relatively inconsequential (e.g., being a polite host), and formal (e.g., an elected official) or informal (e.g., narrating a story). They always have both generic and specific situational aspects. Central to *PET* is the idea that every social [context] entails at least one interdependent social position. Speakers have addressees, mothers have children, judges have defendants, a prosecutor narrating a story has an audience, and so on. ... Social positions, with their roles, responsibilities, rights, and situational constraints shape [and provide the raw materials and templates for] feelings, thought, and action. ... [P]eople moving between social positions "layer up" psychological perspectives and discourses, thus becoming dialogical beings. Position exchange ... is a general developmental principle operating across the lifespan. ... Whatever resolution we consider, position exchange is at work. Children become adults, parents become grandparents, and employees become employers. But equally, at a micro resolution, within the course of a single day, people alternate between talking/listening, asking/helping, giving/getting, buying/selling, leading/following, winning/losing, teaching/learning, reading/writing, and so on. (Gillespie and Martin 2014, p. 2014)

From the perspective of *PET*, psychological development always is social psychological development. It proceeds through the repetitive situating of individuals in multiple, interdependent positions and the experiencing of action orientations and perspectives contained in those positions and situations. Through their lifelong immersion in this dynamic situatedness, children

actively transform themselves into increasingly sophisticated social psychological beings—persons with first-person experience and understanding, self-consciousness, and the kind of open-ended, integrated, and coordinated perspective taking that enables rational and moral agency. In doing so, they form attachments to life goals and projects that give their lives purpose and direction. By repeatedly taking up different social positions, young children come to remember procedurally these positions and their experiences of them (e.g., hiding/seeking, giving/receiving, leading/following, etc.). Through immersion in these routine social situations and their attendant conventions, young children come to recognize, perform, and anticipate prototypic gestures, cues, and patterns of interaction. Of particular importance is the developing ability to recall and anticipate being in a complementary position to one in which the child currently is situated. Thus, in a game of hide and seek, the seeking child looks where she previously has located another child or where she herself has hidden. As children become able to integrate and coordinate complementary and interdependent positions in this way, they functionally are able to occupy simultaneously the two positions involved, including the action orientations and intentional perspectives associated with these positions. As George Herbert Mead (1934) was apparently the first to recognize and describe, such simultaneity of experiencing two or more positions/perspectives is an important social psychological, developmental milestone. In effect, it is a proto form of human agency. For Mead, psychological subjectivity itself issues from a developing individual reacting to her own actions as others do—by becoming an object to herself through using the reactions of others as an initial means to situate herself physically, socially, and psychologically. Such situated, social psychological reactivity is indispensable to the more sophisticated and purposeful forms of human agency exercised by adolescents and adults, in which possibilities for current and future actions and projects might be imagined and planned, with varying degrees of attachment and commitment.

In these ways, PET anchors a developmental trajectory for the emergence of human subjectivity and agency that is firmly grounded in physical, material situations and social interactivity, routines, and practices. Creative possibility issues from a self-determining agency that, once begun, generates its own continuing psychological emergence as individuals simultaneously occupy and exchange positions and perspectives drawn from and constructed within a richly contextualized personal history of social psychological experience and an actively imagined future of possibility and potential action, invention, and accomplishment (see Martin and Gillespie 2010 for a more detailed elaboration of the developmental processes and trajectory involved). This is

what Glăveanu (*in press*) recognizes in describing the relevance of PET's neo-Meadian framework to creativity theory and research by saying:

The creative process is conceptualized as a form of action by which actors, materially and/or symbolically, alone and/or in collaboration with others, move between different positions and, in the process, imaginatively construct new perspectives on their course of action which afford greater reflexivity and the emergence of novelty. (p. 1)

...

What defines creative action is not only realizing the difference between my position and your position ... but the capacity to move between these orientations and integrate or coordinate them in the creation of a new understanding or a new object that is significant for its maker and/or her "audience". (p. 5)

Life Positioning Analysis

LPA considers the life histories of biophysical and socioculturally constituted individuals. Creativity has been theorized and studied psychometrically (e.g., Torrance 1966), descriptively (e.g., Barron 1969; Ghiselin 1952), psychoanalytically (e.g., Freud 1908, 1910), cognitively (e.g., Noppe 1985; Quinn 1980), historiometrically (e.g., Simonton 2002), and biographically (e.g., Csikszentmihalyi 1996; Gardner 1993). Although much, perhaps most, of these studies have focused on creative individuals, and their internal processes and make-up, more recently (as this volume attests) there has been a turn to the contexts and relational dynamics that populate the lives of creative persons. LPA is part of this more recent trend. It studies individuals in socio-cultural contexts, both immediate and historical, using position exchange as a basic mechanism by which sociocultural interactivity helps to constitute the psychological experiences, strategies, and motivations of creators. Before providing my two examples of the life positioning and projects of Freud and Skinner, it is useful to have a more general idea of what is involved in the application of LPA to individual lives.

LPA (Martin 2013, *in press*) studies individual lives by examining a focal person's relationships with *particular others* within what Mead (1934) referred to as *generalized others*. Particular others are individuals who are significant in the life of the person who is the focus of the LPA. Generalized others are the broader social and cultural practices and contexts within which interactions between the focal person and particular others occur. The recognition of particular and generalized others is especially important to a well-executed LPA. Important criteria for identifying significant others include duration and

judged importance of interactions with the focal individual, nature of these relationships, evidence that these interactions were revisited later in the life of the focal person, and testimonials of impact. The recognition of generalized others involves an attempt to recapture and reconstruct the broader social, cultural, and historical contexts of the life in question. Given the relationships between particular and generalized others, their interpretation consists of a hermeneutic tacking between the specifics of interpersonal interactions and those background contexts and institutional practices that render them intelligible and meaningful.

In its actual execution, LPA gradually shifts from a focus on particular others and situations to a focus on more generalized others, wider contexts, and over-arching themes and life projects. This movement is from a primary concern with descriptive interpretation to a secondary concern with explanatory interpretation. The life narrative is first descriptively crafted and plotted in its chronological particulars before it is thematically interpreted in terms of those threads that move through the entire life history, weaving it together, and imbuing it with the meanings and significance evident in the lived experience of the focal person. The importance of meaning and significance in the life of the person who is the subject of the LPA is connected not only to how that person is positioned and comes to position himself or herself within socioculturally embedded interactivity. Questions concerning meaning and significance take on added importance in the wider context of the human condition writ large. This is the context within which creative persons offer up their life project and work as their legacy. It is a context created by our self-consciousness, agency, and mortality—a context in which all of us struggle to accomplish something worthwhile for ourselves, our particular others, and for our societies and cultures. This existential context can be an especially important generalized other in the lives of creative persons. In sum, LPA is a theoretically guided search for patterns of positioning and position exchange within the life span and life contexts of a particular individual.

The following illustrations hopefully will serve to illuminate further various aspects and processes of LPA as applied to the lives of particular creative persons. I have selected material from two lives that illustrate the importance of somewhat different kinds of position exchange and life positioning: interpersonal and conversational interactions and exchanges (Sigmund Freud) and material and technological interactions and exchanges (B.F. Skinner). All of these may be found in any creative life, and certainly in the lives of Freud and Skinner. Nonetheless, emphasizing different aspects of their lives serves to provide what hopefully will be a readily approachable sampling of the range and diversity of ways in which creative individuals are

positioned and position themselves within close interpersonal relationships, material contexts replete with relevant objects and methods, relevant intellectual traditions, and the human condition, with its inescapable challenges of living, striving, and dying.

The Study of Creative Lives

In conducting and promoting biographical case studies to examine the life projects and work of creative individuals, Howard Gruber (1974, 1989; Gruber and Wallace 1999) and Michael Hanson (2014, *in press*) focus on how creators organize their lives to perform creative work that involves purposeful activity over long periods of time. However, they also emphasize that while creative individuals purposefully attempt to develop a unique life project and perspective, the exact nature of their projects and goals continuously emerges over time, much as described by Rollo May (1974). May used the existential concept of the “creative encounter” to convey the juxtapositioning of purpose and serendipity that frequently characterizes creative interactions with the world. In the examples that follow, I describe a few of the ways in which two famous psychologists positioned themselves (purposefully) and found themselves positioned (without much, if any, explicit purpose) in relation to circumstances, others, objects, and their own unfolding life projects. Typically, purposeful positioning emerges from less purposeful positioning as the individual develops and ages. However, even as explicit purpose becomes increasingly salient, ongoing immersion in multiple positions and perspectives can yield innovative and unpredicted results.

Sigmund Freud and Interpersonal Positioning

I draw upon material from the life of Sigmund Freud to illustrate some of the ways in which position exchange within intimate interpersonal relationships and perspectives can function to motivate and clarify life purposes and projects. As is well known, Sigmund Freud was born into an unusually structured nuclear family. His father, Jacob, was significantly older than his mother, Martha, and had two sons from a previous marriage, sons who were much closer in age to Martha than to him. In consequence, one of Sigmund’s most influential childhood playmates was his nephew John, who was born earlier in the same year (1856) as Freud. In *The Interpretation of Dreams* (1913), Freud discusses his early life relationship with John as one of intimacy and

interchange. “We lived together inseparably, loved each other ... scuffled with and accused each other” (p. 384). A specific instance is recounted by Peter Gay (2006) when, in response to his father’s questioning of the two-year-old Freud about why he hit John, Sigmund replied “I beat him ‘because he beat me” (p. 6). Commenting much later in his life, Freud remarked that

my friendships as well as my enmities with persons of my own age go back to my childish relations with my nephew ... An intimate friend and a hated enemy have always been indispensable requirements for my emotional life; I have always been able to create them anew, and not infrequently my childish ideal has been so closely approached that friend and enemy coincided in the same person, not simultaneously, of course, nor in repeated alterations, as had been the case in my first childhood years. (1913, pp. 384–385)

Thus, Freud’s early interactions with John were marked by repetitive instances of exchange across biophysical and sociopsychological positions and perspectives that might be labeled “attacker/attacked” and “lover/hater.” As Gay (2006) remarks, “Love and hate, those elemental forces that were to loom large in Freud’s mature psychological writings, were confronting one another” in these early childhood exchanges of positions and perspectives (p. 11).

At least two relationships in Freud’s later life exemplify more mature versions of the same kinds of exchange, with the caveats noted by Freud. One of these was his relationship with Wilhelm Fliess, the other was his relationship with Carl Jung. Both these relationships and the numerous interactions and exchanges within them reflect the oscillating theme of intimate friend and hated enemy, roles that had become increasingly bound up in Freud’s life project, psychoanalysis. “In developing the theory of psychoanalysis, Freud was to have more enemies, and fewer friends, than he wanted” (Gay 2006, pp. 55–56). During much of the 1890s, a pivotal decade for Freud’s project, Wilhelm Fliess entered into a uniquely intimate professional and personal relationship with Freud, at a time when Freud seemed to be searching for exactly such a relationship of colleague and friend, having moved away from his previously close relationship with Josef Breuer who had introduced Freud to Fliess. At the time of their initial meeting, Fliess was both older and more established than Freud, with theories about the nose as a dominant organ in human health and biorhythmic cycles linked to a kind of numerology. If these preoccupations seem rather odd, it must be remembered that, at the time, Freud’s unfolding ideas about infantile sexuality and repression were no less unusual and no more acceptable.

For almost ten years, Fliess and Freud exchanged letters and once or twice each year held structured discussions person-to-person. This was a period in which both were developing their ideas in relative isolation and each took up the positions and perspectives of “ideational sounding board” and “supportive nurturer” for the other. For Freud, this was a time in which he realized he must devote himself to realizing his life’s potential as his mother’s “goldener Sigi” (Jones 1953, p. 3). Both men, perhaps especially Freud who may have been inclined to greater relative skepticism, were careful to imbue their ideational exchanges with a willed openness and their more personal exchanges with staunch support. Fliess developed a firm grasp of Freud’s theories, supplemented them with his own perceptive and sometimes highly unique insights, and was a diligent reader of and responder to Freud’s manuscripts (Gay 2006, pp. 56–59). In their exchanges, “the two were simultaneously insiders and outsiders: highly trained, professional physicians working at, or beyond, the frontiers of acceptable medical inquiry” (Gay 2006, p. 58). Freud appeared to idealize Fliess and “poured out his innermost secrets to his Other” (Gay, p. 59). During Freud’s adulation of his Other, he became increasingly critical of existing methods and techniques for treating neurotic patients. “Surrounded by neurologists, Freud was beginning to seek out psychological causes for psychological effects” (Gay, p. 62).

Throughout much of the pivotal (for Freud’s life project of psychoanalysis) decade of the 1890s, Fliess continued in the role of indispensable Other. “There was no one else ... who could perform this service for Freud, not even his witty, intelligent sister-in-law Minna Bernays” (Gay 2006, p. 86). However, with Freud’s increasingly innovative theorizing and practice of psychoanalysis, fueled by his own self-analysis and the writing of his masterpiece, *The Interpretation of Dreams*, his idolizing dependence on Fliess began to fade. More specifically, his self-analysis began to uncover the complex nature of his relationship with Fliess. By the time the birthing of his masterpiece was complete and his self-analysis sufficiently advanced, Freud’s enthrallment with his midwife Other was over. With these occurrences, Freud withdrew his always cautious and tentative support for Fliess’ mysticism and numerology. In August of 1900, at their last face-to-face congress, the two quarreled violently, with each attacking what the other held dear—the validity and worth of his work. Thus, came to an end the influence of Fliess as a particularly salient other. Freud stepped more confidently and more alone into his expanding role as inventor and owner of the enterprise of psychoanalysis, a far less directly interpersonal and more generally grand position.

The final “particular other” to be discussed in this all too brief illustration of position exchange and life positioning in the life and work of Sigmund Freud

is Carl Jung. As with Fliess, Freud's relationship with Jung centered on Freud's life project of psychoanalysis, but this time, given the nineteen-year difference in their ages, the intimacy involved more resembled that between a father and son. And yet, once again Freud's life project, what he at times referred to variously as "the project" or even his "empire" of psychoanalysis, proved to be the elephant in the room. Because so much is widely known about Freud's interactions with Jung, I shall be very brief here. Shortly after Jung's appointment to the Burghölzli sanatorium in 1900, his chief of staff, Eugene Bleuler assigned Jung to read and brief the staff on Freud's *Interpretation of Dreams*. The book made such an impression on Jung that he immediately appointed himself Freud's advocate and defender. In addition to defending psychoanalysis, Jung (1906) also conducted inventive research on the technique of word association that supported Freud's theory of free association. In return, Freud embraced Jung as his champion and propagandist, an embrace that deepened to one of favorite son and eventually to crown prince of psychoanalysis itself. Indeed, many of their interactions (in writing and later in person) were positioned asymmetrically between older and younger savants, with Freud and Jung, respectively, cast in the roles of ruler and crown prince, of aging founder and torch bearer, with Freud about to hand off everything to his pupil and missionary (Gay 2006, pp. 199–203).

Yet, despite Jung's assurances to Freud that he could depend upon Jung "never [to] abandon a piece of your theory ... Not only for now but for all the future, nothing Fliess-like will happen," by the time of their famous trip to lecture in the USA at the invitation of Granville Stanley Hall, President of Clark University, the relationship between Freud and Jung had begun to fray. Nonetheless, the unraveling, although increasingly rancorous, was very slow, probably because of the centrality of the relationship for the future of psychoanalysis. Consequently, it was not until 1915 that the relationship was over and the dust had settled. Analyses of the break between Freud and Jung differ considerably with respect to which of the interactants made the running in culpability. Details of their break-up are provided in many sources, including biographies by Jones (1953–1957), Gay (2006) and in an interesting psychobiographical interpretation by Amy Demorest (2005).

Without going explicitly into these historical details, I want to end this example of position exchange and life positioning by mentioning very briefly the different interpretations of Gay (2006) and Demorest (2005). I do this because I believe Gay's tendency to partition the lion's share of blame for the break-up to Jung versus Demorest's countervailing implication of Freud is, in part, explicable by the different roles and positions in which they cast the protagonists. Whereas Gay adopts a father/son positioning framework, Demorest

opts for a brotherly or fraternal framing. For Gay (pp. 197–243), Freud cast as the supportive, besotted father “was slow to recognize the persistence and pervasiveness of Jung’s mental reservations” (p. 226); “When Jung was touchy, Freud was soothing ... Through it all, Jung preserved the stance of the favorite son ... At times, though, Jung’s rebellious unconscious was irrepressible” (p. 227); “Freud finally recognized that the time for pointing out niceties was over ... ‘Jung seems all out of his wits, he is behaving quite crazy’” (p. 235); “As in earlier friendships, Freud rapidly, almost rashly, invested his affections, moved toward almost unreserved cordiality, and ended in irreparable, furious estrangement” (p. 241).

From her fraternal positioning of the Freud–Jung relationship, Demorest sees things somewhat differently. In describing Freud’s fainting spell at the beginning of their voyage to the USA, she offers that “Freud considered this a momentous event for his work ... That Jung was invited as well may have provoked Freud’s competitive feelings” (p. 59); “As Jung continued on the topic [of corpses perfectly preserved in peat bogs near Bremen] Freud suddenly fell unconscious ... [and] told Jung that he was sure Jung’s great interest in the corpses represented a death wish against him.” And later, on the occasion of a second fainting spell in Jung’s presence three years later: “because Freud could no more accept a hostile impulse against Jung than he could a hostile impulse against Julius [Freud’s slightly younger brother who died in infancy], he had further defended against this impulse by projecting it onto Jung and seeing it as being felt by Jung rather than by himself” (p. 60). And still later, following this same line of interpretation, “it is unlikely that Freud’s characterization of Jung as a usurper was justified by Jung himself. More likely Freud was displacing his childhood rivalry with Julius onto this adult situation” (p. 61). To further support her interpretation, Demorest then quotes from *The Interpretation of Dreams* the line I cited earlier that “An intimate friend and a hated enemy have always been indispensable requirements for my emotional life” (Freud 1913, pp. 384–385).

As these rather different interpretations attest, it matters greatly how one frames life stories by positioning protagonists within their life interactions, perspectives, and experiences. From the perspective of explicating Freud’s motivation for his life project, there are important insights that flow from both the father/son positioning of Gay (2006) and from the brother/brother positioning of Demorest. As I understand them, Gay’s reading of relevant evidence suggests that Freud, concerned as ever with his life project and thinking he had cleverly managed its continuance after his own death, was slow to recognize that his trust in and demands of Jung were misplaced. In contrast, Demorest’s reading indicates that Freud was sufficiently possessive of his proj-

ect that his near dogmatic ownership prevented him from giving Jung any room to move in ways that would permit Jung's own motivation and self-regard as a co-innovator. At any rate, in either case, I think the utility of biographical analysis in terms of key position exchanges (friend/enemy, leader/follower, etc.) and patterns of life positioning with respect to goals, projects, and legacies is clear in the material I have selected for this first example. This is not to suggest that such an analysis is sufficient to explain everything that calls out for explanation in the portions of Freud's life on which I have focused. However, when set alongside more conventional biographical interpretations of creative lives, position exchange and life positioning typically enable a greater sensitivity to contextual and relational aspects of the lives of persons in historical and sociocultural time and place. In support of this claim, compare the following summation of Freud's life and work with what has been said here:

[Freud] is a stunning demonstration that one [may attain the heights of creativity through the use of a particular intelligence: through the intrapersonal examination of one's own thoughts and feelings, and in his case, persistence even when no one else displays sympathy for or understanding of what one is doing. Freud then successfully redirected his energies and convinced an often hostile world of the plausibility of his discoveries. (Gardner 1993, p. 86)

In drawing this contrast, I do not wish to say that there is nothing of value in Gardner's (1993) more traditional "personal genius" interpretation of Freud's life. However, I do want to maintain that interpretations such as his focus so forcefully on the psychological make-up of individuals that they run the risk of removing creators from the interpersonal, material, and uniquely human conditions and contexts of their lives and life projects. Further, although I have emphasized patterns and themes arising from Freud's immersion in salient interpersonal contexts and dynamics during different periods in his life, I have said relatively little about those broader generalized others, that is, those historical and sociocultural contexts, within which these interpersonal interactions unfolded. For example, when referring to psychoanalysis as the "elephant in the room," it is important to point out that the "room" in question consisted of a multifaceted "generalized other" that encompassed not only the developing psychoanalytic community and movement but also the broader ideational and institutional contexts of psychology, psychiatry, and the medical and new psychological treatments of the late 1800s in Austria, France, and elsewhere, including the USA. When this is understood, to hold that personal talents, cognitive abilities, and personality traits can be consid-

ered as prime movers of creative accomplishment in the relative absence of interpersonal, social, and cultural considerations is, I think, to paint on a very limited conceptual and biographical canvas.

B.F. Skinner and Material, Technological Positioning

Freud's life and work are illustrative of how interpersonal exchanges and positioning help to constitute the social psychological and intellectual lives and life projects of creative persons. The life and work of B.F. Skinner illuminate another distinctive facet of life positioning and position exchange, which I will discuss much more briefly. Skinner's experiences provide extensive examples of the ways in which positioning within concrete practices of invention, in interaction with material artifacts and technologies, can stimulate the strategies, thinking, and projects of creative persons. As Bjork (1997) makes clear, Skinner's originality and creativity derived in part from a life of thoughtful tinkering with sociocultural artifacts that he molded into practical vehicles for behavioral control and demonstration. In many ways, Skinner's life and work are prototypical of the generalized other of American invention and advance through twentieth-century technologies—an unfolding drama that occasioned a mixed public response of perceived progress and promise on the one hand and significant anxiety and worry on the other. Rutherford (2003) nicely documents how the response of the American public to Skinner's ideas and inventions turned specifically on matters of individual freedom versus scientific and state control that invoked values, attitudes, and principles deeply embedded in American culture and the American psyche.

In this context, I, like Bjork (1997), believe that Skinner's most important subject, the object which he was most anxious to control and develop, was not the laboratory rat, the pigeon, the child, or the pupil, but himself. Indeed, the positional oscillation between "controller" and "controlled" was central not only to Skinner's inventiveness and motivation but also to his moral and political stances concerning the desirability of nonpunitive personal and social control. The personal agency he sought and affirmed was one that derived from harnessing environmental means of control to the furtherance of his own life habits and projects. In this way, Skinner's life and creativity were set within the generalized other of American culture as a whole, especially Americans' insistence on individual freedoms and their concerns about governmental controls that might infringe on those freedoms. What better solution than to become your own self-controller?

An example from Skinner's youth captures some of the social psychological dynamics of position exchange that formed a pattern in his life and work. In the first volume of his autobiography, *Particulars of My Life* (1976), Skinner describes a Rube Goldberg inspired gadget he constructed to mediate an ongoing disputation with his mother concerning his failure to hang up his pajamas and her punitive measure of sending him back to his room to do so if she checked and found them out of place. Finding this interaction increasingly "aversive" as it "continued ... for weeks," Skinner describes how he escaped it:

The clothes closet in my room was near the door, and in it I fastened a hook on the end of a string which passed over a nail and along the wall to a nail above the center of the door. A sign reading "Hang up your pajamas" hung at the other end. When the pajamas were in place, the sign was up out of the way, but when I took them off the hook at night, the sign dropped to the middle of the door where I would bump into it on my way out. (pp. 121–122)

In this and many other examples from his childhood, adolescence, and adult life, Skinner exchanges being controlled by others (and social, institutional contexts) with controlling himself by means of engineering his situation. In another example, three days before his death on August 18, 1990, at the age of 86, Skinner's typical work routine remained uninterrupted, supported by one of his self-managed control systems.

Near the study door there are comfortable armchairs, one equipped with movable metal arms fitted with a reading lens. Toward the far end of the study, facing each other on opposite walls, are a long wooden writing desk and a bright yellow sleeping cubicle, complete with stereo system, storage compartment for musical tapes—especially Wagner—and a timer which, with circadian like rhythm, rang at five o'clock every morning for over twenty years to bring B. F. Skinner to his writing desk, like a monk to his matins. For two hours every morning, until the timer rang again at seven [he] ... worked on ... papers, articles, and books. (Bjork 1997, p. 1)

Thus, an extremely important part of Skinner's creativity was his self-management of his own situational behavior, in both his personal and professional life. The scientific apparatuses and inventions for which he is best known (e.g., the operant chamber or "Skinner box," the "baby tender" or "air crib," his "teaching machine") all resembled, in both function and fundamental structure, the materials and functional interconnectivities he constructed to control his own behavior. Whenever he found himself in a position of being controlled, he learned to exchange such positioning and experience for one

in which he was in control of his situations and behaviors. As a human being and a highly original behavioral scientist, Skinner's creativity was wedded to a form of life positioning that benefitted from his experiences in the positions of "controlee" and "controller" and involved his technological inventiveness in exchanging the former position for the latter.

In a more psychodynamic interpretation of Skinner's life positioning, Amy Demorest (2005) remarks:

Part of him had identified with his parents, in choosing to control as a scientist and parent and in denying the possibility of freedom. But part of him remained identified with his rats and children, who felt the negative consequences of aversive control and wished for freedom. (p. 117)

As partial support for these comments, Demorest refers to the exchanges between the two protagonists in Skinner's (1948) novel, *Walden Two*, and interprets the protagonists as representing two sides of Skinner's own character—Frasier the builder of the utopian community and Burris, a college professor and potential community member, who values his freedom.

I am sympathetic to Demorest's social, psychodynamic interpretation, but, as already indicated, I think it can be enhanced by attending to the specifically material and technological aspects of the inventiveness he continuously displayed across his life experience—an inventiveness driven by his desire to manage his own life and, in typical American fashion, to escape the controlling clutches of others. Interestingly, Skinner's unique form of engineered self-management, one that built on his interactions with others and physical, material objects of his own invention, also was his existential life project. As Bjork documents, Skinner's greatest fear was the premature destruction of the world by human beings. Toward the end of his life, he increasingly invoked his work as possibly leading to a new way of living fueled by behavioral theory and technologies that might facilitate a new form of cultural life, one capable of producing "a new kind of individual whose *behavior* could ensure cultural survival" (Bjork 1997, pp. 232–233), because such individuals would finally be able to appreciate the consequences of their actions and take appropriately preventative action:

Gone [would be] the old standbys of traditional individualism: character traits, conscience, and the inner man. Gone too ... he hoped, would [be] the failing urban industrial environments—the faceless aesthetically ugly, bureaucratically controlled cities, with their contrived reinforces such as wages. These would be replaced by smaller communities with life enhancing and ecologically preserv-

ing technologies that promised an end to punitive environments, whether they be maintained by governments, religions, or conventional technologies—a world, of course, much like *Walden Two*. “I am not trying to change people,” Skinner insisted. “All I want to do is change the world in which they live”. (Bjork 1997, p. 233)

I believe Skinner came to understand both his controlled and controlling sides, and drew on their exchange in his experience and in his imagination to envision a better world, one in which individual freedoms would not automatically trump social, cultural goods and goals. Whether or not his behavioral technologies, or any other technologies, are really up to such a challenge, or if this way of putting things is helpful, are, of course, related but different matters.

Concluding Remarks

The danger in using case examples to illustrate an understanding of creativity as a socioculturally embedded form of life practice and project is that the examples used demonstrate not only the potential utility of the theoretical perspective being advanced but also inevitably point to other possible interpretations and analyses. I am happy to accept this risk because I do not believe that PET and LPA speak adequately to the full nature of creativity. I nonetheless do believe they open up fruitful avenues of investigation for the study of creative lives, some of which have tended to be downplayed or ignored by more traditional modes of psychological theory and research on creativity. I have mentioned the tendency among many researchers of creativity, especially psychologists, to prioritize the individual talents, abilities, and cognitive strategies of creative individuals at the relative expense of examining the immediate life situations and broader sociocultural contexts within which creative persons interact throughout their lives and in their work. In the two case examples I employed, I highlighted interpersonal, material, social, intellectual, and existential aspects of life exchange and positioning. Nonetheless, I do not think these are easily separated, nor do I think they exhaust creative accomplishment. I do, however, hope these examples point somewhat adequately to the rich tapestry that is our sociocultural embeddedness. This is an all-encompassing contextualizing that includes not only interactions with objects and others but also historical artifacts, life practices, and traditions and ways of living that encompass institutional, political, economic, intellectual, artistic, and aesthetic dimensions of human existence. Society and culture are much, much more than sets of shared beliefs, assumptions,

worldviews, or bits and pieces of information. To fail to realize and study the historically established material, institutional, and traditional objects and practices of communities and forms of life within which individuals develop, live, work, and create necessarily yields only the most reductive of analyses and accounts of creativity. In saying this, I am not claiming to have displayed all the sociocultural riches I am attempting to invoke through the meager offerings I have set forth in this particular chapter. Nonetheless, if what I have done points, however weakly, to such riches, I am well satisfied.

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13

Encounters and Extended Collaborative Creativity: Mobilization of Cultural Resources in the Development of a Functional Food Product

Reijo Miettinen and Janne Lehenkari

The turn from individual-centered to systemic and sociocultural approaches in creativity studies calls for multidisciplinary. It includes critical historical accounts of the changing cultural understanding and rhetorical uses of creativity. Robert Wiener (2000), for example, suggests that we are witnessing the emergence of an ideology of creativity. Creativity is extended from art and science to cover all spheres of society, business, and everyday life. Creativity is increasingly connected to two drivers of knowledge-based economy and competitive capitalism, “innovation” and “entrepreneurship” (e.g., Drucker 1985). Creativity is found to be a key foundation of science of innovation management, and creativity studies are expected to provide tools for fostering group and organizational innovation (Woodman et al. 1993). On the other hand, in making sense of creativity, the undeniable connection between creativity and economy calls for utilizing the resources of sociology and the economics of innovation (Freeman 1982; Van de Ven

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et al. 1999; Noteboom 2001), science and technology studies, as well as studies of the history of science and technology (Fleck 1981; Gruber 1981; Hughes 1983; Schaffer 1996).

This chapter focuses on the paradigmatic case of novelty creation: product development. We first review the systems and sociocultural approaches to creativity and evaluate to what extent they are able to make sense of invention and product development processes. Sociocultural interpretations regard the spaces of dialogue and symbolic resources as central in the analysis of collaborative creativity. Following activity theory, we think that they need to be analyzed as a part of material object-oriented activity, exemplified in this paper by product development activity. We suggest that the concepts developed by innovation and organizational studies can complement and enrich the sociocultural approaches to creativity. We introduce the idea of *creative encounters* as an account of the emergence of creative collaboration. In a creative encounter, agents from different organizations meet and recognize the complementarity of their interests, expertise, and resources. It leads to the emergence of collaborative agency and to a joint project. It is oriented to create a new object or artifact that is able to solve a social or technological problem. Today product development projects increasingly include the collaboration of numerous organizations with complementary resources and expertise. We will elaborate on this concept by reviewing results from our studies on collaborative product development (DyNAzyme enzyme and Delfia technology). The framework of a creative encounter is expanded by analyzing the development of a functional food product family called *Benecol* that lowers the level of cholesterol in human blood. Various completely different types of disciplinary and professional resources and expertise were mobilized and combined to create the product. The process of creation cannot simply be described as project partnership, but rather as an extended collaborative and distributed enterprise in which different stakeholders contributed in various ways to the different phases of the development work.

The Limits of the Systems or Sociocultural View of Creativity in Making Sense of Product Development

Two transitions have taken place in the psychological theorizing of creativity in recent decades. The first transition was from the individual-centered view to the social psychology of creativity. The latter focuses on how the features of the environment have an influence on the creativity of individuals

(Amabile 1988, 1996), the dynamics of interaction in groups (Paulus and Nijstad 2003), and an organizational climate or culture that favors creativity (Woodman et al. 1993). This transition seems also to include a shift from the myth of individual genius to the myth of “group genius” of business creativity (Bennis and Biederman 1997; Sawyer 2007). The social psychological approach still retains some key features of the individual-centered psychology, such as a thesis of intrinsic motivation as an essential component of creativity and the flow state as “the most central ingredient of creativity” (Sawyer 2007, p. 42).

The second transition toward a contextualist and historical view of creativity is the emergence of the systems view that has also been called a socio-cultural view (Gruber 1989; Feldman et al. 1994; Csikszentmihalyi 1999; Gruber and Wallace 1999). It suggests that creativity should be studied as reciprocal interactions between a person, a social field, and a domain, where a domain is an organized body of knowledge associated with a given field. Even this approach, however, tends to remain individual-centered. A domain provides resources and raw material for creativity; an individual uses these to create; and a field evaluates and accepts the products: “it is a task of the field to select promising variations and incorporate them into the domain” (Feldman et al. 1994, p. 22). More recent sociocultural theorizing has been inspired by cultural psychology and a dialogist ontology (Glăveanu 2010, 2011). It has analyzed the relationship between individual and context in terms of partnership in collaboration and exchange of symbolic cultural resources in dialogical spaces that are located within a field or a community. Since a distinguished feature of product development work is experimenting and tinkering with material entities in laboratories, a dialogical approach alone is not sufficient. A common experience in engineering experimentation is the failure of these experiments caused by the resistance of the poorly understood material entities and their interactions (Miettinen 1999). Consequently, we find it sensible to complement the evolving sociocultural view by utilizing the resources from activity theory and its concept of object-oriented and mediated activity, as well as concepts from sociological and economic theories of innovation (e.g. Van De Ven et al. 1999; Miettinen et al. 2008; Miettinen 2009; Tuunainen and Miettinen 2012).

One of the main findings of innovation studies in the 1980s was that the locus of innovation is no longer a single organization but rather an inter-organizational collaboration or an innovation network (Freeman 1991; Rothwell 1992). In a review paper on innovation networks Christopher Freeman, one of the European founders of innovation studies (1991, p. 504) concluded: “The empirical studies provide a clear-cut confirmation of an

extremely rapid growth of inter-firm innovative networks in biotechnology, material technology and information technology in the 1980s.” Increased global competition, increased specialization, and division of labor, as well as the increased complexity of products, force business firms to collaborate. By combining dispersed complementary knowledge, inter-organizational collaborative networks make novel combinations of knowledge and expertise needed in innovations possible (Powell et al. 1996). Evolutionary economists have characterized this phenomenon as a generative relationship or an interactive emergence (Lane and Maxfield 1996; Noteboom 2001). Innovation studies also provide concepts for making sense of cultural resources, expertise, and the relevant “context” of product development activity. In the following we characterize the ways in which they may enrich the sociocultural view.

The resource-based theory of firm in business economy analyzes cultural resources as the collective resources and expertise of an organizational community. Typically a firm has developed a certain kind of technological expertise related to its main products. It typically comprises a laboratory with diverse instrumentalities as well as engineers, natural scientists, and technicians capable of using these instrumentalities. In the business literature such a strategic expertise is often called a core competence of a firm (Coombs 1996). A firm’s R&D personnel might be characterized—following Ludwig Fleck (1981)—as a local thought community. When a representative of a firm negotiates a product development collaboration, she speaks about the collective capability of her community to do things and perform experiments. However, even such a community is not anymore the locus of innovations. It is rather a network constellation of organizations and communities organized into alliances and joint projects. Powell and his colleagues (2005) suggest that an ongoing change of a field can best be characterized by analyzing the changes in the structures of its networks.

Secondly, the space of dialogue, dynamics of collaboration, or forms of communication should not be studied detached from the practice of constructing a material artifact or service. Experimentation and testing cannot be reduced to exchange of symbolic resources or communication. Dialogue and communication is a part of object-oriented activity (Leont’ev 1978). Their detachment from objective activity and its outcomes may lead to a romantic view of social interaction (Glăveanu 2011, p. 482). Furthermore, an analysis of the interaction in a space of dialogue does not explain why the partners of collaboration commit themselves to a joint project. As will be suggested later, the motives of partners and the emergence of collaborative agency need to be analyzed both from the point of view of the users of an artifact and from the point of view of its developers (Fig. 13.1). First, the object and motive of joint

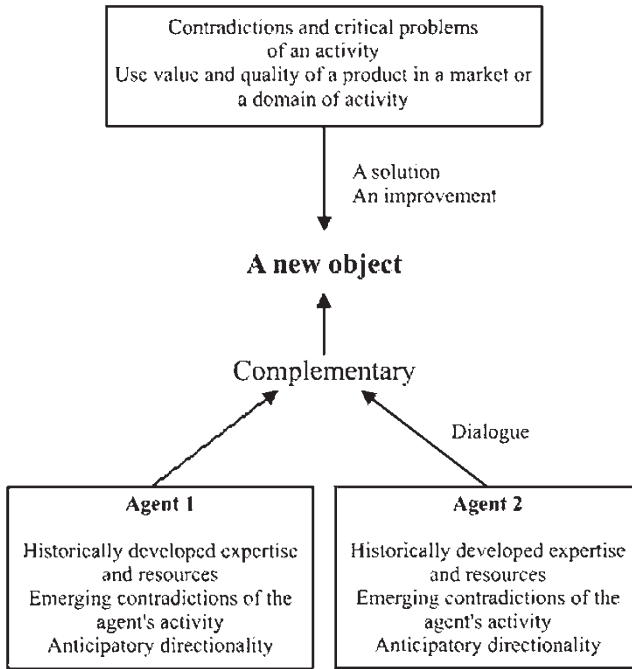


Fig. 13.1 The structure of a creative encounter

activity include the societal value and significance of the product, that is, the use and exchange value of the artifact constructed together by the partners. This is a corollary of A.N. Leont'ev's theoretical insight according to which "the concept of object of activity (*Gegenstand*) is already implicitly contained in the very concept of activity. The expression 'objectless activity' is devoid of any meaning" (Leont'ev 1978, p. 52). Such an object is, in the beginning and by its nature, a hypothesis and an imagined, open "horizon of possibility" that gradually materializes during collaborative product development. On the other hand, an emerging agent of collaboration is rooted in the history and resources of the partners involved. It is path dependent in the sense that it is based on the accumulated knowledge and resources of an agent (Garud and Karnoe 2003). Each of the agents joins the collaboration in order to use and develop further these capabilities and to solve problems faced in their activity (Miettinen 1998).

The possibility of a new object—a product idea for example—is also based on the complementarity of the knowledge and resources of the partners. A dialogue or the dynamics of collaboration need to be related to the complementarity of the cultural and material resources of the partners. At

this point, sociocultural theory, innovation studies, and resource-based theory of firm have much in common. Vera John-Steiner (2000, p. 4), in her account of creative collaboration between artists and scientists, elaborates on different aspects of complementarity, among them different disciplinary backgrounds, mastery of certain technics, and different modalities of thought and work. Her account also includes generative tensions between competing positions (p. 54). She thinks that the concept of complementarity could be applied to the basic tension between individual and social in cultural development (p. 56). The literature on firm strategies in inter-organizational alliances finds that resource complementary is the single most important reason for alliance construction. Many advantages such as increasing efficiency, risk reduction, competitive positioning, learning, and gaining legitimacy can also be achieved (Child and Falkner 1998). Because of the differentiation and specialization of expertise and research instrumentalities, product development alliances and collaborative projects have increasingly replaced firm R&D laboratories. There has been a dramatic shift from closed (internal) to open (collaborative) innovation in recent decades (Chesbrough 2003). Collaboration allows for cross-disciplinary integration which may be essential for creating really new products (Emden et al. 2006, p. 331).

The account based on the interaction between a person (or a firm or a research institute), field, and domain may be a conservative account, since partners collaborate increasingly across the boundaries of established disciplines and technological fields. Howard Gruber (1981) showed that Charles Darwin's work on developing his theory of evolution extended across the disciplinary boundaries of natural philosophy, geology, morphology of barnacles, ornithology, breeding of domestic animals, and human development. The "founding father" of the economics of innovation Joseph Schumpeter in his *Theory of Economic Development* (1934/1963) presented the idea of innovation as "carrying out new combinations." This view is compatible with Arthur Koestler's (1964) idea of dissociation, a process that brings together and combines previously unrelated ideas. These combinations are increasingly created through inter-organizational networks. This has led to a reinterpretation of technology entrepreneurship in terms of distributed agency (e.g., Garud and Karnoe 2003). Various actors contribute to the formation of a technological path in its different phases. Distributed agency has a counterpart of "distributed cognition" in cognitive anthropology (Hutchins 1995) and of "distributed work" in the sociology of work (Moon and Sproull 2002).

The Emergence of Collaborative Agency through Creative Encounters

Manuel Sosa (2011) asks, *where do creative interactions come from?* In keeping with social network literature, he analyzes interaction in terms of information processing where the roles of the actors in an interactive dyad are those of a provider and a recipient of knowledge. This does not help to make sense of the emergence of an instance of collaborative agency, that is, a mutual development of a joined vision of a new product or service and a joint commitment to a project to realize the vision in practice.

We want to contribute to the understanding of the emergence of creative collaborative agency. While studying research-based technical innovations inspired by activity theory (e.g., Hasu 2001; Hyysalo 2004; Lehankari and Miettinen 2002; Miettinen 1996, 1998, 1999, 2009; Tuunainen and Miettinen 2012), we recurrently came across a mechanism of such an emergence: an encounter between two partners from different organizations that gave birth to a collaborative product development project. We suggest that such a creative encounter provides a proper event through which the nature and conditions of interactive emergence and collaborative creativity can be studied.

The biographies of scientists provide examples of how novelties emerge from encounters between knowledgeable subjects. An example is the emergence of one of the most important technologies of the last century, gene transfer technology. It emerged out of an encounter between Stanley Cohen (Stanford University) and Herbert Boyer (University of California, San Francisco) at a conference in Hawaii in 1972. We will cite Cohen's account of the encounter between the partners written in 1982. Although the citation is lengthy and somewhat technical, and without doubt suffers from the weaknesses of a retrospective account, it illuminates well the key features of the emergence of an idea, of a new object, and a collaborative agency in an encounter (Cohen 1982, 213–214):

The invention that is the subject of Stanford patent was conceived during a U.S.-Japan Joint Meeting on Bacterial Plasmids held in November 1972 in Honolulu, Hawaii. At that meeting, I described the development in my lab of an *E. coli* transformation system that enabled the introduction of plasmid DNA into appropriately treated bacterial cells. (...)

At the Hawaii meeting, I heard Herb Boyer describe experiments that he and others had carried out, indicating that cleavage of DNA by the EcoRI endonu-

cleave yielded projected single strand ends, and that all molecules cleaved by the enzyme have identical termini. In listening to Herb's presentation, it occurred to me that the cohesive ends generated by the *EcoRI* enzyme might be used for reconstructing plasmid DNA molecules and for linking other DNA fragments to the plasmid replication system. (...)

That evening at a delicatessen across from Waikiki Beach, I proposed collaboration with Boyer. Herb and I discussed experiments in which we would use plasmid DNA molecules to try to clone other DNA fragments that had been generated by endonuclease digestion. Reconstituted plasmids carrying an additional fragment could then be introduced into bacteria by the transformation procedure. (...)

The experimental part of our collaboration began shortly after the Hawaii meeting, and by March 1973 we had shown the feasibility of DNA cloning, thus reducing the invention to practice.

While listening to Boyer's presentation on restriction enzymes that cut DNA strands in specific sites, the idea of gene technology occurred to Cohen. He was a specialist of plasmids, which are molecules that are able to carry sequences of DNA inside the cell (Cohen 1982). He talked with Boyer, and they established a project that subsequently led to the development of the new technology. They had complementary areas of expertise and, therefore, a strong mutual interest in joining forces. Although Boyer recognized how to create a new DNA molecule, he did not know how such a molecule would behave without introducing it into a living cell. Cohen and his assistants developed a method of introducing plasmids into a bacterial cell, but they did not have the means of slicing new genetic information into the plasmids.

The history of product development of a Finnish biotechnology firm, Finnzymes, provides an example of the significance of an encounter. The firm was specialized in the production of enzymes used in biotechnology (Miettinen et al. 2008). Its business was based on the production restriction enzymes that are able to cut DNA strands in specific sites. In the late 1970s, the firm could not develop its business activity on the basis of them, and it started to look for new complementary products.

The PCR (Polymerase Chain Reaction), a gene multiplication technology, was invented in 1983, and it soon became a basic tool for biotechnology. It is based on heating and cooling cycles, and enzymes that can survive in very high temperatures (70 grades) were needed to catalyze the process. The management of Finnzymes wanted to go to these enzymes, but it did not have access to microbes that are able to produce them. In 1989, the CEO of Finnzymes participated in a meeting of a Nordic biotechnology research program and encountered the leader of an Icelandic research group working

at the Technological Institute of Iceland, Ice Tec. The Icelandic group had expertise in hot-spring bacteria, and the CEO immediately saw it as a potential producer of the thermostable DNA polymerases required in PCR. As a consequence of the discussion, a product development project was launched. During the joint research, several new restriction enzymes were found, and a new DNA polymerase enzyme was derived from the *Thermus Brockianus* bacterium. In 1991, this enzyme became Finnzymes' first leading product with the marketing name DyNAzyme. The main feature of the product was its thermal stability. In comparison with its rivals, DyNAzyme tolerated longer heating phases when used in PCR, which diminished reaction failures in the PCR process. The case is an example of an unplanned encounter that immediately led to a joint project and to the development of a new product. The Icelandic partner has a unique, inimitable resource and expertise (knowledge in hot-spring bacteria) which was combined with the capability of Finnzymes to purify enzymes and package them into reliable tools for biotechnology.

Although the term creative encounter has occasionally been used in the literature (e.g., Lorenzen 2007), there have been only a few attempts to define it. Beech et al. (2010, p. 1342) introduce the term "generative dialogic encounters" in which (p. 1342) "Researchers and practitioners work together in order to develop solutions to problems in the world of practice." They base it on the theories of dialogue that focus on the epistemological and communicative dimensions of interaction such as mutuality, shared understanding, and transmission of knowledge and models of action from one actor to another. They do not extend their explanation to the commitment of the partners to shared transformative projects. Miettinen (2013, 2014) defined creative encounter as an event or a process in which two or more persons representing different organizations meet face-to-face and recognize the complementarity of their expertise and resources for the creation of a new artifact that can solve a contradiction in a human activity. A creative encounter leads to the emergence of a collaborative agency, which assumes the form of a joint project.

In Fig. 13.1, the three constitutive elements of an encounter and the emergence of a collaborative agency are outlined as follows: (a) the gradual development of a contradiction within an activity is expressed as dissatisfaction concerning some elements of that activity and as a gradual formation of anticipatory directionality that is a preliminary orientation to look for a solution to the contradiction; (b) an encounter with a partner which leads to the formation of a shared object idea as a solution to the contradiction and to the emergence of collaborative agency in the form of a joint project; and (c) the complementarity of the expertise, resources, and interests of the partners makes possible the formulation of a joint object and the establishment of

a joint project. The model is simultaneously structural and processual. The developmental contradiction within the activities is a structural source for the processes of object formation and the emergence of agency. In the following, each of the elements is briefly discussed (for an extended discussion see Miettinen 2013, 2014).

The idea of developmental contradictions is widely regarded, using different terms, as a source of change of human activities in philosophy, organizational studies, and the history of technology. In organizational research, the dialectic approach regards contradictions (Benson 1977; Ford 1996) and institutional contradictions (Seo and Creed 2002; Hargrave and Van de Ven 2010) as the source of change. In Engeström's (2015, p. 82) theory of expansive learning, contradictions constitute the driving force of development and learning in human activities. Phenomenology and pragmatism regard *breakdowns* or *disharmonies* of practices (Koschmann et al. 1998) as the starting point for world making and the reflective transformation of practices. The historians of technological systems also find developmental contradictions as the main source of technological change. They have developed their own terms for developmental contradictions in analyzing the development of technology-mediated activities. Thomas Hughes (1988) used the term *reverse salient* to refer to the weakest point in an expanding technological system by saying that "An analysis of a growing system often reveals the inefficient and uneconomical components, or reverse salient (1988, p. 80)." Edward Constant uses the term *functional failure* to refer to a system's inability to function in new and more demanding circumstances, as a major impetus for technical change (Constant 1984, p. 30).

In his theory of inventive activity, Thomas Hughes (1978) regards critical problems as bridges between imbalances of current technology use and inventive activity. The formulation of the problem already implies a hypothesized direction of the possible solution (Hughes 1978, p. 172). In terms of activity theory, the development of the contradiction within a field of human practice constitutes a foundation for the formulation of a productive problem and a project oriented to resolve it. Since both the development of contradictions and their recognition are gradual processes, the definition of the problem is preceded by anticipatory directionality (Fogel 1993), a non-specific dissatisfaction and care for what is happening, and a preliminary orientation from where to look for solutions. In innovation studies, Van de Ven and his colleagues (1999, p. 26) characterized the formation of anticipatory directionality in terms of an extended gestation period during which the need for change is gradually recognized as a result of multiple coincidental events. In evolutionary economics and organizational research, activity in this phase

has been characterized as “search activity” and as Stuart and Podolny (1996, p. 22) put it, “organizations search for novel technologies in areas that enable them to build upon their established technological base.”

From the 1950s, radioimmunoassay (RIA) was the main method used in immunodiagnosics. It uses human antibodies to recognize begetters of diseases in blood samples. In RIA, radioactive labels were used to mark the antibodies to allow the measurement of the quantity of biological agents in the samples. In the 1970s, a small Finnish enterprise, Wallac, a manufacturer of measurement devices of radioactivity, developed an alternative immunodiagnostic method in which radioactive labels were replaced by fluorescence compounds (Miettinen 2009, pp. 113–134). In 1971, Dr. Erkki Soini, a physicist and the research manager of Wallac, visited a client and user of their measurement device, Professor Roger Ekins, who was working at the Middlesex Hospital Medical School located in London. Ekins was one of the key developers of RIA technology. This encounter led to a long-standing collaboration between Wallac and Ekins’ departments. During this collaboration, Wallac also gradually learned that RIA had several limitations, which constrained the use and development of immunodiagnosics. The sustainability of radioactive labels was bad, often only lasting from six to eight weeks. They were awkward to handle and involved health risks that made special safety equipment a requirement, and after use became problem waste. Dr. Soini recollects how he saw the situation (Interview 12.3.1999).

It was already clear that the use of radioactive labels in chemistry and biomedical research was difficult, because the researchers couldn’t use them freely. They always had to go to a laboratory that was inspected and ratified. There were systems of control, and so forth. It was clear, that had it been possible to use these methods without radioactivity, their use would have expanded, and so would the market, of course.

This statement includes a description of a contradiction of the immunodiagnostic testing practice and its transformation into a technical problem to be solved, as well as the perspective of a new product and market for Wallac. Also the third element of a creative encounter is the most evident in the case of the development of Delfia. The two partners had totally different but complementary areas of expertise: physics and the design of measurement instruments (Wallac) and biochemistry related to immunodiagnosics (Prof. Ekins’ group).

The model of a creative encounter outlined above is an abstraction that simplifies the reality of collaborative product design. First, although product

development projects based on the dyadic collaboration of two key partners are not uncommon, they may be characteristic for small technology firms. When a product is complex and more partners join, the process of collaboration becomes more complicated. Second, we have provided examples where one unplanned encounter immediately leads to the emergence of collaborative agency and to a joint project. In most cases, however, a more iterative process is required; a series of encounters are needed for the establishment of a collaborative agency and a joint project. Thirdly, wholly unplanned encounters are without doubt exceptions. In most cases, one of the partners has initiated search activity and contacts partners it expects to have complementary interests and resources. In the following, in order to expand the view from dyadic collaboration to extended networks, we analyze the product development process of a functional food product *Benecol* in which the contribution and expertise of a number of firms and public players were needed.

The Development of Benecol as Extended Collaborative and Distributed Creation

Benecol is a Finnish food innovation that was one of the first functional foods with international markets and recognition. The active ingredient of Benecol, sitostanol-ester, reduces the total cholesterol level of human serum by over 10 % and the potentially harmful low-density lipoprotein (LDL) level by approximately 15 %. It therefore contributes to the prevention of heart and coronary diseases. The innovation process of Benecol lasted four years, 1986–1989, during which experts working in the pulp and paper industry, medical science, and margarine industry; encountered each other during the course of events; and started to collaborate on the basis of shared interests and complementary resources.

The initiator of the innovation process was the Kaukas pulp and paper factory that was searching for buyers or applications for sitosterol in Finland in the mid-1980s. After several industrial research projects, Kaukas built a plant that refined sitosterol from the waste material generated in pulp production. The company, however, lost its supposed client of the product, and the wood chemistry engineers working at the factory were forced to search for possible new uses and markets for sitosterol. The factory engineers learned that sitosterol and its impact on the cholesterol level of human serum had been studied in medical science since the 1950s. In internal medicine, internally taken sitosterol was known to reduce serum cholesterol levels. The engineers also noticed that pharmaceutical products of sitosterol had been available for

decades, even though the effect of those products had been marginal in comparison with some other medical substances (Lehenkari 2000). This was due to the poor solubility of the crystallized form of sitosterol. They contacted Finnish medical research groups about the possibility of medical applications of sitosterol.

One of the medical scientists contacted by Kaukas, with whom there had no prior contact, was a professor and the leader of a medical research group that specialized in internal medicine at the Helsinki University Central Hospital (HUCH). In an informal meeting, Kaukas inquired about the possibility of producing the cholesterol-lowering medical applications of sitosterol and offered the scientist sitosterol for testing purposes. The leader of the research group, who had studied human lipid metabolism for decades, was well familiar with the medical properties of sitosterol. He was not interested in studying the sitosterol provided by Kaukas, since the effect of sitosterol-based pharmaceutical products was known to be marginal. In 1986, however, the scientist noticed a publication with a new research result. It showed that sitostanol, which is a saturated form of sitosterol, had a greater effect on the cholesterol level of human serum than sitosterol and was not absorbed into the blood-vascular system as sitosterol was. This encouraged him to start medical research on sitostanol and asked Kaukas to produce the substance for the studies (Lehenkari 2000). Kaukas responded by implementing a pilot test of production machinery for sitostanol.

The leader of the medical research group at HUCH had collaborated with the Finnish food industry in several research projects. Utilizing his prior ties, he contacted the research personnel of Raisio Margarine Ltd., which was a large producer of vegetable fat products and proposed the use of sitosterol and its modified form sitostanol in vegetable fat products. The idea of using sitosterol in food products instead of drugs had already been presented in the research literature. In the late 1980s, the research laboratory of Raisio Margarine, in cooperation with several research institutes, including the medical research group at HUCH, was studying the health effects of canola oil. The company was searching for new applications for vegetable fats and tried to improve their public image by supporting medical research on them. After the canola oil research projects had successfully ended, the research laboratory of Raisio Margarine accepted the suggestion of testing how sitostanol could be mixed with vegetable fat products. Kaukas provided the sitostanol for testing.

The research laboratory of Raisio Margarine succeeded in producing a pure sitostanol-ester that was fat-soluble and mixed easily with vegetable products during an intensive research period in 1989. The knowledge gained in the canola oil research projects had a decisive influence on the research project.

A tiny amount of canola oil is, in fact, sitosterol in a fat-soluble form. After the discovery of sitostanol-ester, the product development work of industrial-scale production machineries commenced at Kaukas and Raisio Margarine. In addition, the medical research group at HUCH began research on the medical effect of sitostanol-ester. The collaboration changed from informal interaction to formal cooperation in 1990. It was regulated by multiple contracts and a strict division of labor between Kaukas, Raisio Margarine, and the medical research group at HUCH.

The collaboration network expanded when the North Karelia Project, that was a Finnish government agency, joined in testing of the medical effect of sitostanol-ester. The leader of the research laboratory of Raisio Margarine pursued the leader of the North Karelia Project to test the new substance of sitostanol-ester on a population level after the initial medical tests. The North Karelia Project was launched in 1972 to study and prevent heart and coronary diseases in a large population group in the North Karelia area of Finland. The trial of sitostanol-ester margarine was carried out in the region of North Karelia where the North Karelia Project had available a suitable sample of test subjects. The number of test subjects was 153, with the test took place in 1993–1994. The results verified that sitostanol-ester margarine reduced the cholesterol levels of human serum significantly and did not have side effects. The research results were published in the *New England Journal of Medicine* in November 1995. The test carried out by the North Karelia Project proved essential for granting a sale approval and approval of using health claims for sitostanol-ester margarine (Lehenkari 2003, 2006). After several years of medical testing and industrial research, Benecol margarine was finally introduced into Finnish grocery stores in 1995. Benecol has proved to be a commercial success ever since, and Benecol products are now sold in some 30 countries.

In brief, the innovation process of Benecol can be analyzed as a chain of successive encounters. The process started from the need to find uses for the sitosterol produced in the Kaukas plant. During the long-lasting search efforts, Kaukas engineers contacted a medical research group at HUCH with vague ideas about the medical applications of sitosterol and offered sitosterol for testing purposes (encounter 1). The leader of the research group became interested in the suggestion as a result of a new research finding concerning the medical effect of sitostanol, the saturated form of sitosterol. The leader developed the idea of using sitosterol or sitostanol in vegetable fat products, which had been hinted at in the research literature. This idea also offered a suitable expansion of the research agenda of his research group. Thus, through the competence of the medical research group at HUCH, the idea of the

medical application of sitosterol offered by Kaukas progressed and sharpened into the idea of using sitosterol or sitostanol in food products.

Utilizing his prior ties with Raisio Margarine, the leader of the medical research group contacted the research laboratory personnel of the company and suggested that they set up tests that mix sitosterol and sitostanol with vegetable fat products (encounter 2). For the research laboratory, this task was an appropriate continuation of their research agenda with canola oils. Finally, the sitostanol-ester was discovered by utilizing the knowledge gained in the canola oil research project. As a result, by means of the resources and know-how of Raisio Margarine, the tentative ideas offered by Kaukas, and the medical research group materialized into applications.

During the development work of Benecol, between 1986 and 1989, the participants did not utilize financial or contractual means in their collaboration. Instead, they offered each other tentative ideas and knowledge that they assumed would be intriguing and relevant from the recipient's point of view. This collaboration phase was temporary, and it was quickly replaced by formal contract-based cooperation after the economic benefits of the sitostanol-ester became evident.

Conclusions

So, what can our account about the logic of extended collaborative product design contribute to the development of a sociocultural view of creativity? Here, we want to take up five points.

Firstly, it underlines the collective sociomaterial nature of cultural resources. What was combined in the cases we presented were capabilities and expertise of doing something (producing raw material, purifying and packaging enzymes, making clinical research or a population-level comparative study, etc.). These core competencies or capabilities are not individual capabilities but achievements of thought collectives with sociomaterial arrangements, such as a laboratory or an experimental system.

Secondly, the innovation process is not linear, from basic science to technology, as was suggested by post-World War II science policy. Instead, it is messy and interactive as shown by the Benecol case. The initiative came from a pulp producer that was in trouble with its newly constructed plant: the producer persistently searched for new uses for its sitosterol raw material.

Thirdly, the interests of the stakeholders in the product development are based on their prior history: both the resources and expertise are path dependent (tied to investments in the laboratories, instruments, and professionals)

and the collaboration is either resolving the problems and contradictions of its activity or further developing its capabilities and expertise (Miettinen 1998, p. 446). The case of Benecol is again illuminating in this sense. The investment in the sitosterol plant and the disappearance of a client forced Kaukas to search for novel uses of the raw material.

Fourthly, as the case of Benecol suggests, the product development was a distributed process. No one inventor can be denominated. Instead, several key persons representing the different organizations (and their resources and capabilities) contributed in different ways to the many phases of the object (Benecol) construction process (see Fig. 13.2). The pulp and paper engineers of Kaukas learned by reading about the potentiality of sitosterol for lowering the cholesterol levels in blood. They contacted the medical experts and finding

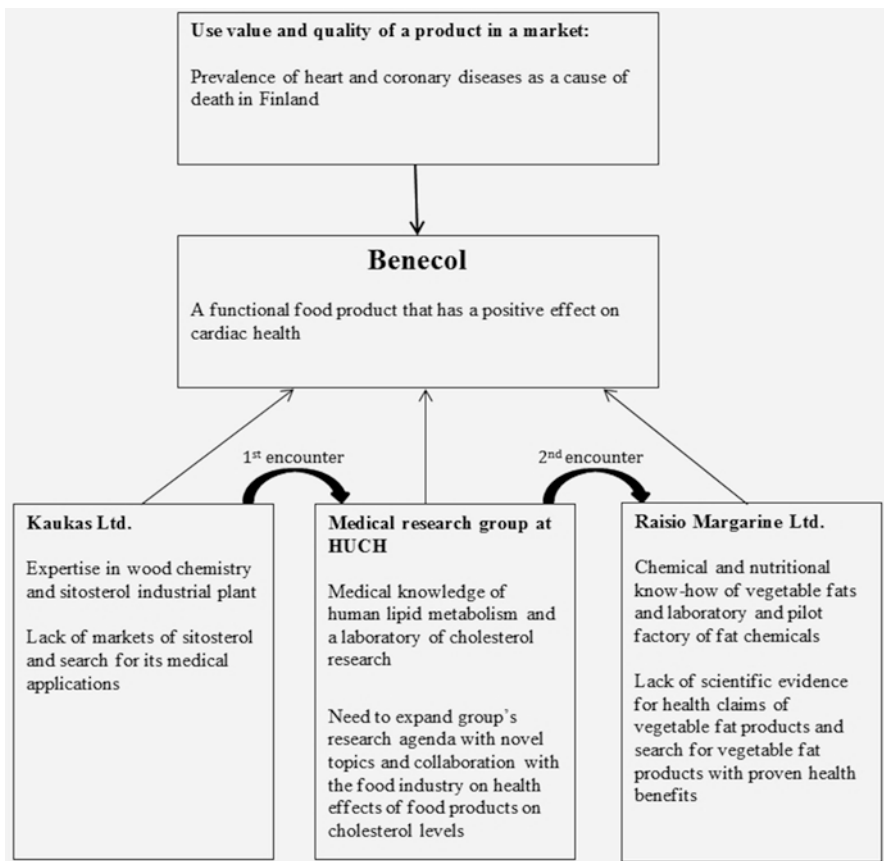


Fig. 13.2 The encounters between the key contributors to the development of Benecol

applications for sitosterol and its derivatives. The professor from the Helsinki University Central Hospital connected this potential to his research of human blood cholesterol and took the initiative to suggest using sitosterol and its derivatives in food products. The research laboratory of Raisio Margarine was able, because of its research expertise in vegetable oils developed in several projects, to solve the problem of crystallinity of sitostanol by converting it into sitostanol-ester. The conversion method was patented. When coming nearer to commercialization, the research leader of Raisio Margarine contacted the leader of the North Karelia Project. The Project provided a ready-made platform for showing the effects of Benecol at a population level.

Fifthly, we want to underline that the collaborative network was fragile, as it was based on trust and reciprocity. A creative encounter may be realized after several unsuccessful contacts. When an invention is ready to go to a market as a commodity, the tensions related to property rights and division of incomes are intensified and may destroy the trust between the partners. In one of the cases presented in this chapter, the controversy over contributions made, and the share of the returns of the new product was resolved in the magistrate's court of Helsinki. The relationship of friendship between the partners broke down and turned into a relationship of mistrust and bitterness.

Finally, we find it important to study and develop emerging new institutional arrangements to enhance creative encounters. They include, for example, regional meetings for dialogue (Nohria and Eccles 1992), user-producer seminars (Miettinen and Hasu 2002), and living laboratories in universities (e.g., Malik et al. 2011). In various laboratories, the problems of firms and service providers and the expertise of researchers and students from different disciplines are brought together to find solutions and to initiate development projects.

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14

Creativity as a Practice of Freedom: Imaginative Play, Moral Imagination, and the Production of Culture

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and Natalia Panina-Beard

Introduction

While it is common to think of creativity in the work of artists and authors, and to see the products of adult labor as contributions to the production of cultures, it is less common to consider creativity in the social practices that constitute everyday life; in this context, the creative quality of children's thinking and action is often overlooked. Yet it is here that we focus our attention with specific consideration of the developmental trajectory of children's imaginative play. Play, imagination, and creativity are positioned as social practices that draw upon psychological functions that are themselves pathways for both the engagement with and the renewal of culture in response to changing conditions. Ultimately, it is the human ability to see and act "as if" and "other than" in play, as a basis for imagining and creating, that enables the

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creation of new practices along with the values that support them. These new practices reflect the dialectic between cultural continuity and change, as well as each individual's increasing capacity for moral imagination: the foundation for moral feeling, thinking, and action that creates possibilities and pathways for cultural transformation (Greene 1988, 1995b).

The purpose of this chapter is threefold. First, we locate creativity within everyday social practices beginning with the imaginative play of children. We highlight the ways in which play enables objects, actions, and participants to become "other than what or who they are" by drawing on Vygotsky's (1967, 1994a, 2004) framework on play, learning, and development. Second, we describe the development of imaginative play over the life course, extending Vygotsky's ideas through current work on play, and linking it to the role of conceptual and emotional development in play, imagination, and creativity. Over the life course, imaginative play, imagination, and creativity are nothing less than the foundation for engaging with and troubling social practices and cultural norms, for "playing at" and "playing with" alternatives, and ultimately for freedom of thought; yet, they must be seen in relation to cultural expectations and norms for childhood (Göncü et al. 2007; Wells 2009), as well as adolescence and adulthood (Moran and John-Steiner 2003). Third, we describe the ways in which opportunities for and manifestations of imaginative play, imagination, and creativity are pathways for moral imagination and the freedom of thought to both engage with and renew culture in response to changing conditions. We conclude this chapter with several implications of this conceptualization for educational practices.

Everyday Imaginative Play: Acting "Other Than" and "As If"

From a Vygotskian (1967, 2004) perspective, creativity is not a special quality of a few people, but a general capability of human beings that changes through the life course from early childhood to late adulthood with the beginnings of creativity found in and expressed through the imaginative play of children. Vygotsky viewed creativity "as a growing, positive capability of all healthily functioning individuals" (Moran and John-Steiner 2003, p. 72).

While acknowledging the culturally celebrated examples of creativity, and creative production more specifically, Vygotsky (2004) was also keen to argue for the recognition of everyday instances of creativity, including those that

develop from the ever widening spirals of playful engagement between infants and caregivers to later expressions of significant symbolic and representational accomplishments in early childhood and beyond. He noted that:

creativity is present, in actuality, not only when great historical works are born but also whenever a person imagines, combines, alters, and creates something new, no matter how small ... this new thing appears compared to the works of geniuses. (Vygotsky 2004, pp. 10–11)

Locating creativity within everyday social practices, the ability to see objects, actions, and participants “as if” they are “other than” what or who they are enables the creation of meaning. Acting or performing “as if” and “other than” are the building blocks for imaginative play, imagination, and creativity, as well as central to cultural continuity and change.

Vygotsky (1967) defined play as an imaginary situation coupled with roles and rules for verbal and physical action. With this definition of play, rather than explaining a child’s participation in play as pleasurable or pleasure seeking, play emerges in relation to a need or motive to act. The need to act may be stymied by a range of factors: from the inability to act in a certain way, to the inability to take action in a particular environment, to a lack of recognition from significant others about the need, motive, or timing of a particular action. A child plays in order to experience and realize a need or motive to act that is, at present, not possible. In this sense, play is “wish fulfillment,” the fulfillment of something that the child wishes to have, wishes to do, wishes to be, or wishes to understand. It is imagination, and specifically an imaginary situation, that enables a child to unite the objects, actions, and/or roles of her community that may be outside of her reach with action in play. She is motivated by her own interests to model her actions after her mommy’s: to have a phone, talk on the phone, and be like her mommy who talks on the phone when she works at home. The child is beginning to realize objects, actions, and roles as emerging concepts, as well as imagining a situation that enables these concepts to sit within a valued social practice. Over time, the imaginary situation becomes less constrained by the surrounding environment given the child’s growing ability to separate the visual field and the field of meaning (Vygotsky 1967). Acting like mommy becomes less urgent than acting through an uncertain event and, perhaps, attempting to understand or even change the outcome. A dried worm on the sidewalk provokes imaginary play that includes a dying and dead worm brought back to life by the rain (from a garden hose) and crawling into the grass.

As imaginative play develops, separating the visual field from the field of meaning becomes possible in at least three ways. First, imaginative play enables the separation of meaning from object: a child imposes a new meaning on a chestnut. Now it is something “other than” a chestnut; it is medicine for a sick Teddy. Second, it enables the separation of meaning from action, as when the same child presses the arm of her Teddy with her pointer finger acting “as if” she is giving it an injection. Third, in play, the child is enabled to take up the role of a doctor and to care for a sick Teddy. She plays “as if” she is a doctor. Performing this role allows the child to think and feel her way into engaging with the tools a doctor uses, perhaps, her fingers or repurposed household objects. She can take on the actions of a doctor, and practice what being a doctor may mean in relation. For example, the child may perform how a doctor acts in relation to Teddy, who is a patient and is fearful of being at the doctor’s office, and how this may differ from the doctor’s relation with Teddy’s mommy, who is concerned about Teddy, but knows the doctor will help Teddy. Imaginative play binds the child in an imaginary situation, in a role with rules in the present that are enacted through past memories: the child’s previous medical appointments, stories told by family members and/or read to the child, and other play experiences. The past and present are unified in play and shape an imagined future that is only just beginning to form: a time when the child is big enough, old enough, and experienced enough to be a doctor. Each imaginary situation is saturated with the values of community and culture—from how to hold a particular object, to how to complete a gesture, to who can and how to be a doctor—thus shaping the development of moral imagination.

As children become able to separate the fields of vision and meaning, to act “other than” what an object is and to act “as if” a play partner really is a horse, along with wish fulfillment, the child is working toward other significant developmental accomplishments. Scholars have noted that the development of symbolic action supports the development of narrative understanding and expression, as well as prepares the child for the recognition of symbols and signs necessary for reading and writing (e.g., Gajdamaschko 2006; Nicolopoulou et al. 2006). The beginnings of the development of concepts and conscious awareness can be traced back to imaginative play, as when Vygotsky (1967) described how awareness of what being a sister means increases when sisters play at being “sisters” and when the first author’s daughter said recently, “Let’s play family.” In both cases, the concept of “sister” and the concept of “family” move from being “unnoticed by the child in real life” to being “a rule of behavior in play” (p. 9) and, thus, something of which a child becomes consciously aware. The imposition of meaning in an imaginary situation and the

rules that emerge from this situation are a creation of the child in collaboration with play partners and act to support a child's self-regulation (Berk et al. 2006). For example, the necessity of acting in a certain way to play a doctor imposes limits on the range of actions a child in that role can perform.

At every moment in play, the play partners must enact a common understanding of a role or, if there is a difference, they must work through whether to continue with what has defined play to that point or to expand the imaginary situation to include something new. As in the improvisation of adults, the child bringing Teddy to the doctor must take up what the play partner offers when the partner suggests that he is a pilot and wants to fly Teddy to the doctor (see Sawyer 1997). To extend the tripartite organization of play—an imaginary situation with roles and rules—to include caregivers, siblings, and peers requires making and imposing meaning together through intersubjectivity, for our purposes, joint attention and meaning making through a particular object, action, or role (Göncü et al. 2010). Meaning making occurs when play partners establish together that objects, actions, and/or people are now represented in new ways. The development of a shared imaginary situation in play, thus, requires the continuous recreation of intersubjectivity between play partners (Göncü 1993). Creating and recreating intersubjectivity includes defining and working through the practice of play using metacommunication between play partners: communication about roles and rules as when a child suggests to her play partner, “*Pretend* puppy is crying,” and her partner agrees to this pretense. In addition, it includes communication within the imaginative play situation itself, defined as communication entailed by a role and through the rules that adhere, as when the play partner confirms, “On no, puppy *is* crying, she is tired and needs to sleep!” The ongoing creation of intersubjectivity, and the metacommunication and communication that mutually constitute intersubjectivity, forms an ongoing narrative that enables children to impose meaning on objects, actions, as well as their own participation in play practices (e.g., Nicolopoulou and Ilgaz 2013; Paley 1990).

Imaginative play is a significant social practice for young children—a zone of proximal development that enables the child to act “a head taller than himself” (Vygotsky 1967, p. 16)—and, as such, play makes visible new developmental accomplishments far earlier than they are visible in other social practices (Bodrova et al. 2013). Drawing on Bateson (1971/2000), who argued that statements and actions in play are at once what they are claimed to be and what they are not, we argue that this dual world of “being” and “not being” enables the child to weave together past experiences, and possible futures, within the practice of play in the present. What enables this process of creation is, in particular, the rules that emerge from the imaginary situation and the role that a child takes up. Vygotsky (1967) wrote that

the role the child fulfills, and her relationship to the object if the object has changed its meaning, will always stem from the rules, i.e., the imaginary situation will always contain rules. In play the child is free. But this is an illusory freedom. (p. 10)

This is the dialectic of play, then: that, in willingly submitting to the rules of the imaginary situation, a child is enabled to think beyond his concrete environment to act “other than” what the environment presents him with and, therefore, to act “as if” it is what it is not.

Though Vygotsky (1967) noted that the existence of rules in play makes freedom illusory, he also noted that it is through play, and later imagination and creativity, that we are able to think, feel, and act beyond the concrete environment, beyond our own experiences to the experiences of others, and to engage in the world in ways beyond what is given to create the new (Vygotsky 2004). It is this capacity to create anew that links directly with cultural transformation, the emerging moral judgments that act to sustain transformation, and the moral imagination to envision it.

Play, Imagination, Creativity: Playing with Culture, Creating Culture

All children are immersed in a social situation of development, defined as the child’s environment as experienced through relationships with caregivers, practices, and institutions and, significant for this chapter, the cultural expectations and norms for participation that coincide (Vygotsky 1994b, 1998). Imagination is a psychological function that develops through the child’s imaginative play; a child’s “play is not simply a reproduction of what he has experienced, but a creative reworking of the impressions he has acquired. ... It is this ability to combine elements to produce a structure, to combine the old in new ways that is the basis of creativity” (Vygotsky 1967, pp. 10–11). In adolescence, imagination merges with the developing ability to think in concepts and, into adulthood, opportunities for further development occur in relation to the social situation of development. Over the life course, access to and appropriation of cultural psychological tools through lived experiences shapes the expression of creativity.

The development of imagination as a higher psychological function is defined in Vygotsky’s (2004) four laws of imagination. According to the first law, the development of imagination is influenced by the quality and quantity of lived experience. The more diverse and enriching the environment is, the

more advanced the development of imagination. The second law states that the development of imagination is influenced by the experiences and narratives of others and by social and historical events. These experiences and events are heard, read, and imagined through the accounts of interlocutors, authors, and artists. The third law explicates that the relationship between imagination and reality is a dialectical intellectual and affective experience. Our experiences influence our imagination and our emotions, and our emotional state influences our perception and interpretation of experiences and events. The fourth law proposes that the act of imagination can potentially become crystallized in reality as a concrete product that is deemed useful by others or as a performance that has an affective impact on others. Imagination—essential to human activity and to effective functioning in society—plays a significant role in creative expression that contributes to cultural production and transformation.

Creativity, a capacity of every individual, is fostered by imagination. In creativity, an individual weaves together concepts and experiences with new ideas and imagined possibilities that may transform them into a new form. Concept development is central to creativity as a historical process grounded in life experiences. If experiences are limited, conceptual development can be negatively affected; rich experiences lay the foundation for further development of conceptual thinking. “Creation is a historical, cumulative process” understood as the human capacity to create oneself, one’s abilities and actions, and culture itself (Vygotsky 2004, p. 30). Creativity is the process of meaning making interrelated with imagination and concept development; this resonates with the understanding of creativity in contemporary research as critical for the development of “original ideas that have value” (Robinson 2011, p. 3). Potentially, these ideas may be put into practice to make a change in any number of cultural domains, from the arts to technological innovations. Creativity speaks to the movement of knowledge and abilities from what is already known toward new ideas and novelties, in relation to social and cultural needs and interests at a given moment in time; it is a “culture-generating” process (Ageyev 2012).

The concepts appropriated by a child undergo a transformative process leading to the creation of new knowledge for the child, abilities that contribute to a child’s development, and potentially further become manifest in cultural production. To think beyond the concrete environment, to think beyond cultural norms and expectations, and transform ourselves and our cultural tools given changing conditions, this is freedom of thought (Vygotsky 1994a). Freedom to think creatively and imagine situations differently from the actual situation is only possible when one can think in concepts (Vygotsky 1994a).

The repurposing and creation of meaning with concrete objects, actions, and bodies can be done abstractly as inner speech develops through concepts:

...imagination and creativity are linked to a *free* reworking of various elements of experience, *freely* combined, and which, as precondition, without fail, require the level of inner *freedom of thought, action and cognizing* which only he who has mastered thinking in concepts can achieve. (Vygotsky 1994a, p. 269, emphasis added)

When a person's behavior depends on the concrete situation, it is the object, or action, or role that directs behavior. A person who thinks conceptually, who imagines and creates possibilities, actions, or responses different from what the concrete situation demands, frees herself from situational dependency, or "unfreedom" (p. 268), and becomes self-directed.

Children and adolescents, along with adults, are capable of transforming existing knowledge and creating new knowledge and experiences that will further contribute to cultural development; children and youth not only consume culture, they also produce it. Yet, cultures differ in expectations for a child's engagement in imaginative play, in school and academic tasks, and ultimately, in a child's engagement as a young adult in forms of labor. What a particular social situation of development offers a child, and the meaning she has made of these experiences, is mediated by her own conceptual development in the present, as well as the ongoing reinterpretation of past experiences over time. In addition, however, while the social environment may be similar for two children, the way each child has made subjective meaning from it is likely to be different, and this meaning may change and evolve over time as the child's thinking, reflection, concepts, and sense-making capacities develop within relations.

Further, the social situation of development Vygotsky (1998) identified was based on life in an industrializing and industrial society, with developmental periods related to the relationships, practices, and institutions within which children were expected to be engaged given cultural norms, including moving through infancy, early childhood, preschool, school age, to adolescence. Developmental trajectories are shaped by the cultural context, with norms and expectations as individuals move from home to school, and to work. For Vygotsky (1967), imaginative play evolves into imagination in adolescence and into creativity: the "old adage that child's play is imagination in action can be reversed: we can say that imagination in adolescents and schoolchildren is play without action" (p. 8). This shift occurs, in part, because, given the social situation of development, adolescents are in schools and/or preparing for

work. In industrial societies, the kinds of contexts they are in and the cultural norms and expectations reflected in these contexts value imaginative play less. Adolescents can use their developing ability to think abstractly to imagine objects, actions, and roles, rather than requiring concrete objects, physical action, and embodied roles for this sort of thinking and feeling.

Consistent with Vygotsky's recognition of historical change and the dialectical relation between individuals and sociocultural contexts, opportunities for imaginative play and the way imaginative play is manifested must be seen in relation to cultural expectations and norms for childhood, as well as adolescence and adulthood. Scholars have argued that childhood does not have a singular or universal form of expression (Corsaro 2011; Lancy 2008; Wells 2009), nor does adolescence or adulthood. In addition, imaginative play, including opportunities for imaginative play and the ways in which imaginative play is manifested, must be considered in relation to the everyday social practices in which children participate, including children's domestic chores, schooling, labor, and play (Gaskins 1999; Göncü et al. 2007, 2009; Göncü and Vadeboncoeur 2015). In research developing from lines of Vygotsky's theory informed by culture and context, play is theorized as a cultural activity, interpretation, and expression (Göncü et al. 1999, 2007; Haight and Miller 1993), with universal aspects and cultural and developmental variations (Haight et al. 1999).

In some cultures, socialization provides a case in point. For example, in cultures and contexts where children have less access to and/or time for imaginative play, pretense and imagination are often used for socialization (Haight et al. 1999). Examples include encouraging a child to imagine what a role model would do to redirect attention away from a potential tantrum and toward more socially desirable behavior, the use of an imaginative situation, such as a race, to enlist cooperation and encourage a child to put away toys, and teaching children social rules and adult customs by enacting roles. Linking the concept of the zone of proximal development with emerging developmental accomplishments, the notion of "performance before competence" highlights the importance of mediated participation in all sorts of social practices as opportunities to practice playing and performing a particular role with support and as a method for becoming competent in the future (Cazden 1981/1997). Certainly caregivers know this as children and caregivers engage in pretense and imaginary situations in culturally specific ways in order to prepare children to participate in culture (Haight et al. 1999; Roopnarine and Davidson 2015).

Some scholars have argued that imaginative play—repurposing objects and actions in role play—evolves over the life course and retains its usefulness as

a social practice over the life course as well. The significance of play across the life course has been the topic of research to date (Göncü and Perone 2005), linking pretense with imagination and improvisation in educational contexts with adult learners (Perone 2011), and play and performance with adults in the workplace and in social therapy (Holzman 2009). Vygotsky's position emphasized the contexts that people move through, going from home to school and work contexts in particular, in his shift from childhood play to adolescent imagination. These examples assert that Vygotsky's emphasis on the transformation of the child in imaginative play—from the child at present to the child as becoming what she is not yet—can be useful for different developmental accomplishments throughout life. Imagination plays a central role across the life course, both in terms of self and cultural transformation. Indeed, following Greene (1995a), that “is the task of imagination: to enable us to look at things as if they could be otherwise; to provoke us to transform” (p. 76) both ourselves and our cultures.

Social Futures: The Moral Imagination and the Renewal of Culture

From an infant's earliest days, she is observing culture and her participation in culture is being supported by caregivers. With every object, every action, every role, the growing child sees cultural norms, expectations and values enacted: how the objects in the home are used, how caregivers and family members act toward each other, how the roles of parents and grandparents are or are not differentiated, and how specific practices shape the structure of daily life. As the young child draws upon what she has seen and experienced for imaginative play, objects become something a child aspires to use, and actions become ways in which a child aspires to act in the world. The ability to impose meaning increases as children grow. Along with the power of play to enable a child to overcome the disparity between what she can and cannot yet do is the ongoing identification with what is seen and heard and the rules required to participate in the culture of the family and community. The social situation of development retains the dialectical relationship between child and social environment; a child's ontological ideal is modeled by the people who constitute her environment (Vygotsky 1994b).

If the desire in imaginative play is to use objects, to act, to understand, and to become those to whom we look for guidance, “the enclave mentality of our early lives” (Greene 1995b, p. 21), when play has matured and children

can impose meaning on objects, actions, and roles (Bodrova et al. 2013), the possibility of being different from extant role models begins to emerge as well. The child is faced with this difference in play—at present, she cannot *really* be a doctor, and later, if later is possible to imagine, she can never *really* become a horse. Her actions and performances will always fall short of the images that motivate them. Years later, what becomes fascinating for the school child and the adolescent is the sheer number of ways actions can be completed and roles can be played; “the enormous variety of human lives, the multiplicity of faiths and ways of believing, and the amazing diversity of customs in the world” (Greene 1995b, p. 21). What guides ideas about various differences, and decision making regarding actions, is an emerging relational sensibility that enables the exploration and examination of different or alternative actions and roles—lives, faiths, customs—in relation to participants, goals, and the current situation, imaginative, as in play, or otherwise. This relational sensibility is moral imagination: the creative capacity to generate useful ideas, to form ideas about what is good and right in the moment, and to act on the best ideas to grow with others (Fensmire 2003).

It should not be surprising, then, that Vygotsky (1997) argued that morality and moral action is “like the air we breathe” (p. 226) and that moral concepts vary depending upon the social and historical context: what is considered good or bad at one point in time and in one place may change. To questions of moral education, he was wary; not because moral action is unimportant, but rather because it is “dissolved entirely imperceptively” (p. 226) into the social environment. As such, he challenged the notion of moral education. With this position, he wrote against two more common forms of teaching moral behavior: fear-based approaches, or approaches based on fear and religious obligation, and Rousseau’s ideal of education as free from the dictates of adult society. The argument against fear-based approaches was that moral actions neither emerge from fear or punishment nor do they emerge from a sense of obligation. Moral precepts that demand to be followed unthinkingly do not themselves make moral action: “Every unfree attitude towards things, all fear and dependence, already denotes the absence of any moral sensibility” (p. 227). The argument against simply learning from the consequences of actions, without guidance from adults, was based on a concern that children might not survive the time it takes to learn this way citing both physical and moral harm. As such, the application of the idea that moral behavior emerged from “the individual’s true nature” and, thus, should not be imposed upon, was neither of general value to education, nor of particular value to moral education (p. 234).

Instead, Vygotsky (1997) argued that if we are concerned about the moral actions of children we should begin by looking at the social environment, “the air we breathe,” and more specifically at the opportunities for the development of moral imagination in imaginative play and games in childhood that lead to concept development later in adolescence and freedom of thought through creative imagination. The child’s actions are regulated by rules in play and in games, not because

he is threatened with punishment or, on the other hand, because he is scared of failing in something or of losing something, but only because observing the rules—which is a promise that he renews from one minute to the next—vouchsafes him the inner satisfaction that comes from playing a game, because here he acts as part of the general enterprise that is formed out of a group at play. Breaking a rule does not represent any threat whatsoever other than the fact that, at that moment, the game has not worked out, and the child has lost interest in it, and this is a powerful enough incentive for regulating the child’s behavior. (Vygotsky 1997, p. 233)

In imaginative play, what is significant is the co-created parameters provided by the rules that derive from the imaginary situation. In playing games, the necessity of the moment to moment recommitment to the rules of the game, and the lack of compulsion to play the game is paramount. What draws the child to the game is becoming “part of the general enterprise that is formed out of a group at play” (p. 233). Being part of, contributing to, the general enterprise, the imagined community for that moment, is what the child desires. Through imaginative play, through playing games, the imaginary situation becomes not simply a world, but *our world*. It is a world created by the working through of intersubjectivity and affective attunement (Göncü et al. 2010). It is *our community, us*. Greene’s (1995b) way of thinking about imagination is helpful here: “an idea of imagination that brings an ethical concern to the fore, a concern that, again, has to do with the community that ought to be in the making and the values that give it color and significance” (p. 35).

Moral imagination changes through adolescence and adulthood, again shaped by the social situation of development, in particular the relationships, practices, and institutions within which we engage. As creative imagination develops alongside the development of concepts, opportunities to think and feel through moral inquiry and conflict offer opportunities to participate, learn, and transform. Aware of the dangers of how, in the absence of freedom given directives for action, a false picture of moral values is created, Vygotsky (1997) argued that this false picture included: “assigning to moral virtue a

kind of wealth, arousing self-esteem and a contemptuous attitude towards everything which is wrong” (p. 228). Instead, and similar with other scholars, Vygotsky (1997, 2004) argued for the importance of engaging with narratives and literature, as well as creative expression, as opportunities particularly significant for adolescents and young adults that draw upon a developing moral imagination. As an example, reflecting on his own experience, Coles (1989) wrote of his early days as a young doctor learning how to be with patients and the importance of his mentors both in human form and in text. He noted authors like Anton Chekhov, William Carlos Williams, and Toni Morrison as influencing his search “to find a good way to live his life,” highlighting the possibilities created for “a person’s moral conduct responding to the moral imagination of writers and the moral imperative to fellow human beings in need” (p. 205). In addition to the connection between individual readers and lives in literature, Coles noted the refraction of moral contradictions and inconsistencies in our social contexts, the politics of our nations, and our cultures.

Along with scholars who highlighted engagement with artistic works as opportunities for meaning making and moral deliberation, Vygotsky (1997, 2004) attended closely to creative drawing, verbal or literary creation—as in narrating or writing a story—and the use of literature and dramatization. He cited Alexander Pushkin’s story of *The Captain’s Daughter* as having “the power, not of external, but internal truth,” and further, as elucidating “a complex relationship in life; its images, as it were, illuminate a vital problem, and, what cold prosaic reasoning could not have achieved, this tale accomplishes through its imagistic and emotional language” (2004, p. 23). Attending to Leo Tolstoy’s work with street children in a creative writing group and Fyodor Dostoyevsky’s discussion of the suffering of creation when thoughts cannot be captured in words, Vygotsky recounted the research of Anna Grinberg who collected stories written by 14- and 15-year-old street children. They were keen to write about their lives, and did so with “authentic seriousness,” that attested to “a real need to express themselves in words, the clarity and individuality of these children’s language is quite unlike the trite literary language of adults” (p. 52). The literary creation of children had not been severed from its connection to each child’s interests and personal experience and this connection permitted them “to master human language, this extremely subtle and complex tool for forming and expressing human thoughts, human feelings, and the human inner world” (Vygotsky 2004, p. 69).

Although the child can imagine less than the adult, he has both greater faith in and less control over the products of his creation. The importance of creative writing parallels the importance of imaginative play: “Children’s

creative writing has the same relationship to the writing of adults, as children's play has to life. Play is necessary to the child himself, just as children's creative writing is necessary, first and foremost, for the proper development of the powers of the young author himself" (Vygotsky 2004, p. 65). This perspective on imaginative play, imagination, and creativity highlights the important role of access to and participation in the creative arts throughout life both as an end in itself and as a means for engaging the moral imagination. More than any other capacity, moral imagination disrupts the "inertia of habit" as the "gateway" through which meanings from past experiences are called up and held again in the present (Dewey 1934, p. 272). For Greene (1995b), what is required for this disruption is "wide-awakeness," an "awareness of what it is to be in the world" (p. 35). Imagination "is required to disclose a different state of things, to open the windows of consciousness to what might be, what ought to be. Imagination allows for empathy, for a tuning in to another's feelings, for new beginning in transactions with the world" (Greene 2008, p. 18). Drawing on Albert Camus's novel, *The Plague*, Greene (1995b) recalled the main character's unwillingness to back down to the plague and, instead, to work unceasingly to try to heal his patients. She argued that we have to be able to name what we see around us—"the hunger, the passivity, the homelessness, the 'silences'" (p. 111). These differences are social deficiencies: "It requires imagination to be conscious of them, to find our own lived worlds lacking because of them" (p. 111). Even so, she noted, the technical and behaviorist emphasis we continue to see in American schools contradicts a "concern for the critical and the imaginative" (1988, p. 126).

Central to both the development of creativity and education, as opposed to schooling, is freedom. For any attempt to foster the development of creativity "we need to observe the principle of freedom, which is generally an essential condition for all kinds of creativity. This means that the creative activities of children cannot be compulsory or forced and must arise only out of their own interests" (Vygotsky 2004, p. 84). Developing artistic abilities and skills, even those that require intense study and practice, should be done authentically in relation to some kind of meaningful labor or action. In terms of education, his argument was similar, rather than "artificially inculcating children with ideals, feelings, and moods that are totally alien to them," a good education "involves awakening in the child what already exists within him, helping him to develop it and directing this development in a particular direction" (p. 51). Vygotsky (2004) stressed that "the entire future of humanity will be attained through the creative imagination; orientation to the future, behavior based on the future and derived from this future, is the most important function of the imagination" (pp. 87–88). The main goal of educators should be the guidance

of children and youth to both prepare them for unknowable futures and, in the process, enable the development and exercise of their imaginations to create the future. Greene (1995b) described education this way:

Our classrooms ought to be nurturing and thoughtful and just all at once; they ought to pulsate with multiple conceptions of what it is to be human and alive. They ought to resound with the voices of articulate young people in dialogues always incomplete because there is always more to be discovered and more to be said. We must want our students to achieve friendship as each one stirs to wide-awakeness, to imaginative action, and to renewed consciousness of possibility. (p. 43)

It is engagement in nurturing, thoughtful, and just classrooms that becomes the air we breathe. Engagement in dialogues across difference draw upon intersubjectivity, stir wide-awakeness, and open opportunities for moral imagining: thinking and feeling our ways toward the creation of ideas that are useful, that contribute to equitable conditions, that shape actions for and with others.

Thinking and feeling drive human creativity, a future-oriented practice: “The development of a creative individual, one who strives for the future, is enabled by the creative imagination embodied in the present” (Vygotsky 2004, p. 88). And there is nothing more future oriented than education writ large, and, unfortunately, nothing that becomes so narrow so quickly than schooling when it is at its most overdetermined and reductionistic (Vadeboncoeur and Collie 2013). Schooling must become more than “learning what was,” and more “learning who we can become.” In addition, however, what sits alongside of these ideas is the significance of freedom of thought, for each individual, and a relational ontology that recenters equity. The notion of learning as organizing for possible social futures (O’Connor and Allen 2010) and the importance of equity-oriented social futures that include the broadest range of possible futures for all students is consistent with the discussion here (Vadeboncoeur and Murray 2014). For Vygotsky (2004), as for Dewey (1934), as for Greene (1988), education neither is a product nor is it static. The purpose of engaging with the accumulation of cultural knowledge(s) is not to memorize and repeat this knowledge, but to build upon it, and through building upon it, to transform it and create a more humane and equitable world.

Moral imagination is central for more than the work of envisioning this future: it is central because what we envision must be based upon our ability to see diversity and difference, to be moved when it results from inequity, and to act to address injustice. As hooks (1994) noted,

The classroom, with all its limitations, remains a location of possibility. In that field of possibility we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom. (p. 207)

Classrooms are one context through which our playful learning and learningful play ought to ground an exploration of what interests us, what we would like to create and discover, who we are and who we might wish to become, as well as providing a context for sitting at the center of the tension between what is and what ought to be.

Concluding Thoughts

Imaginative play is much more than pleasure seeking, and more still than symbolic action. Play is a unified emergent experience of cognition and emotion that is linked to a child's everyday life and contributes to the developmental trajectory of imagining and creating. Imaginative play, imagination, and creativity evolve over the life course as practices and psychological functions that provide space for "playing at" and "playing with" alternatives and transforming cultural norms. They are pathways for the freedom of thought to both engage with and renew culture in response to changing conditions. Ultimately, it is creativity, and the human ability to see and act "other than" or "as if," to challenge and to question, that assists the creation of new practices along with the values that support them enabling the dialectic between continuity and change to become cultural transformation. "Culture is alive as long as it can question itself," Zinchenko (2012) argued, "otherwise it becomes stagnant and dies" (p. 64).

Vygotsky (1998) noted that "[d]evelopment never ends its creative work" (p. 194). For us, the developmental line through imaginative play to playful imagination and creativity is perhaps where the creativity inherent in development is at its most obvious, though even the most basic psychological functions, like attention and perception, rely upon imagination as well (see Peleprat and Cole 2011). That human beings become capable of playing through imaginative abstraction does not mean that imaginative play is less important; however, less likely youth, young adults, and adults are expected to engage in it given cultural norms and necessities. What changes over the course of our culturally different lives is the social environment, along with our evolving interpretations that contribute to social situations of develop-

ment. Role-playing games and simulations, drama and improvisation, are just some of the many opportunities for repurposing, ways of thinking differently yet again, continuing to fine tune our imagination and recreate ourselves with others in revolutionary ways across contexts and throughout the life course (Perone and Göncü 2014).

For education, the concern is to facilitate the conditions that engage learners in the development of imagination as a fundamental psychological function that contributes to the development of conceptual and creative systems. From this perspective, the significance of access to and experience with a broad range of cultural narratives and artifacts cannot be overstated. Also important is an awareness of how and why different learning contexts select for different experiences, narratives, and artifacts privileging some over others. When deemed significant by curriculum developers and publishers, a selection of cultural narratives and artifacts enter into the institution of school described from dominant perspectives for future generations, but this is highly selective. Of importance, as well, are inquiries into (a) how different cultures and contexts contribute to the differential valuing of experiences, narratives, and artifacts; (b) how social institutions like schools undertake a selection process for foregrounding some experiences, narratives, and artifacts and erasing others; and (c) how of knowing, embracing, and integrating diverse cultural perspectives can improve one's understanding of one's own culture and enable the debate and dialogue that is necessary for classrooms to become places where "we collectively imagine ways to move beyond boundaries" (hooks 1994, p. 207).

These experiences, narratives, and artifacts could be collected as content or curriculum, the "what" of culture. Yet, moral imagination speaks to us more in terms of the "how" of human relationships and of education. The mediated participation that is offered in educational relationships, "obuchenie," is often translated as teaching and learning, or instruction, in formal educational settings (Cole 2009). However, the depth of meaning of these particular words includes a complex creative "culture-generating" (Ageyev 2012) educational process that is situated in and inclusive of the interrelated dynamics between a teacher's approach in educational practice, her development and teaching of the curriculum, her learners and the experiences and interests they offer to the learning environment, the awareness and assessment of different ways of knowing and diverse abilities to express these knowings, and the relationship between learners and teachers. Education ought to be prospective, based on the potential capacity for a child's learning and development, rather than retrospective, or based on the knowledge and abilities already possessed by a child (Kozulin 1998). The learner-teacher relationship reflects both participants as

whole people, who have the potential to grow in relation, with learning and development in dialectical relation. Gaining a better understanding of this relationship is central for the work of educators and a significant research goal (Vadeboncoeur, 2013; Vadeboncoeur & Rahal, 2013).

Relationships between learners and teachers call forth what was learned in previous relationships and should add to this a broadened proleptic vision of the range of possible social futures for each child and youth. Tracing the trajectory of imaginative play, through imagination and creativity, provides a thread that pulls together individuals and their cultures. By attending to moral imagination, however, we gain a sense of the possibilities for cultural change and cultural transformation, as well as a realization that, for each of us, through moral imagination, we are “free to become the people we have been waiting for” (Ayers 2004, p. 159). Imaginative play, and the variety of culturally grounded ways in which pretense and imagination are used, are the practices that ultimately enable participants to imagine and create for both personal and social liberation.

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15

Dialogic Authorial Approach to Creativity in Education: Transforming a Deadly Homework into a Creative Activity

Eugene Matusov and Ana Marjanovic-Shane

Introduction

Recently, we started to explore a possibility to cast “creativity” in a dialogic light. Currently, most existing approaches to creativity known to us have been monologic, authoritative, objectivist, and positivist—that is, looking at creativity as a phenomenon that exists in itself, independently from the understanding, evaluation, and dialogic positions of people who participate in creative practices and those who study them. In these monologic approaches to creativity, the goal is to find the universal and the final truth about what this phenomenon—creativity—in itself. Because of that, creativity is often seen as a particular human ability (e.g., divergent thinking) or a personality trait that can be more or less developed or present in some individuals. Or it is seen as a quality of human experience, that is, a particular psychological state that can be achieved by some individuals when participating in some practices individually or together (Csikszentmihalyi 1979, 1996; Gardner 1982; Moran 2009; Moran and John-Steiner 2003; Sawyer et al. 2003; Sternberg

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2010; Vygotsky 2004). Thus, we argue that these conventional conceptual frameworks to creativity do not fit the phenomenon of creativity itself because they focus mostly on producing something very new, out-of-box that has not existed before.

In contrast, based on Bakhtin's (1999) dialogic framework, we try to develop an approach to creativity from the perspective of creativity's dialogic significance—that is, what creativity means to the participants in meaningful social practices. We look at the significance of creativity in the context of the relationship among the participants in dialogue, for dialogically testing participants' ideas, positions, and desires in light of personal, social, and cultural values and in terms of transcendence and transformation of the relationships in the meaning-making process (cf., the notion of “internally persuasive discourse,” Bakhtin 1991; Matusov and von Duyke 2010).

In particular, we study creativity as one of the central qualities of learning and teaching in the authorial approach to education “that actively recognizes, values, and actively promotes the authorial nature of teaching and learning” (Matusov 2011b, p. 31). The authorial nature of a human activity reveals itself in the recognition of personal unique contribution and responsibility reflecting the true, authentic personality of the contributor. In the authorial approach to education, learning and teaching are “about human, unique, irreproducible, irreplaceable and ‘here-and-now’ agency that is based on improvisation, creativity, originality, diversity, and uniqueness” (Matusov 2011b, p. 26).

We abstract four dialogic aspects of creativity:

- a) The *addressivity* aspect of creativity—We claim that anything that people do have an aspect of a dialogic addressivity and responsivity transcending the given. Every utterance addressing the other is aimed to change something in the dialogic relationships among the participants—that is, it is aimed at transforming and transcending the existing state of affairs, knowledge, perspectives, opinions, desires, relationships, and so on. The very act of addressing someone has a creative motivation—to bring up something new and relevant into the relationships.
- b) The *existential* aspect of creativity—is about recognition and acknowledgement or withdrawal of recognition and acknowledgement by others (and/or self) of someone's act as creative, that is, giving or denying an act a “creative existence.” It is a direct dialogic recognition of the creativity of someone's dialogic act—that is, it is a recognition and acknowledgement that this bid for creativity can and has transformed the existing relationships, meanings, knowledge, desires, or ways of doing something in some

- meaningful and innovative enough way (i.e., recognition of meaningful innovation). It is a recognition of the power of someone's act to transcend the existing desires and experiences, and it is author and the others' selves.
- c) The *axiological* aspect of creativity—is about evaluating a creative act as pragmatically good or bad, ethical or unethical, constructive or destructive, and so on. In conventional approaches, this evaluative process is usually preset through “an internal dialogue” of the designers of activity or test, “Very early on in the process, evaluation standards are constructed that serve as benchmarks throughout the process. They are not binary (acceptable vs. unacceptable), but rather form a latitude of acceptance and are regularly questioned by the mechanism of ‘the internal dialogues’” (Fourquet-Courbet et al. 2008, p. 10). A creative act does not necessarily have to be evaluated as good, ethical, constructive, beautiful, and so on. It can be seen in an opposite light. For example, one can say that Hitler was very creative with his violent, aggressive policies, ways that he devised for the Nazi party to gain power, or in his speeches that definitely fired huge numbers of people, bringing them a new vision of who they are and/or how to become who they dream to be, and in creatively and authorially redefining the politics at that time, and so on. At the same time, many people had condemned Hitler's creative acts as bad, evil, utterly destructive, and so on. While it is hard to deny the creativity of many different aspects of Hitler and the Nazi party's activities and acts, a passionate, critical, and dramatic dialogue about the values of Hitler and Nazi party's acts, policies, ideology, treating others, and so on still continues on the worldwide scale.¹
- d) The *cultural (meta-axiological)* aspect of creativity—is about culturally valuing creativity itself over preservation of tradition or vice versa. Are particular creative aspects of acts (offered and recognized) culturally valuable because they are seen as strengthening and promoting a particular culture, or are they culturally insignificant, or even running against some vital and culturally defining traditions, customs, and norms? Meta-axiology, that is, the cultural aspect of creativity, is the big dialogue on whether or not creativity itself is good or bad.

These four dialogic authorial aspects of creativity are creative acts and creative dialogues in their own right, promoting examination, and new insights about creativity from each of their points of view. Recognizing someone else's

¹ It may feel surprising and unbelievable now that the Nazi values were problematic for so many people then (both in Europe and in the USA) (Olson 2013).

creativity is a creative act in itself. Debating axiological and meta-axiological values of a creative act is an act of authorial judgment, which creates new meanings and transforms existing relationships. In our chapter, we will criticize existing approaches to creativity; provide an ethnographic case, through which we will define ontologic dialogic creativity; and discuss its implications for education.

Critique of the Existing Non-Dialogic and Non-Ontological Approaches to Creativity

Both of us were subjects (or victims) of psychological testing on creativity in our childhood. I (the first author) experienced creativity testing in my high school when my physics teacher, then graduate student of famous Soviet psychologist Vasily Davydov, developed his test based on “theoretical thinking” that involves use of dialectical contradictions (Davydov and Kilpatrick 1990). The test involved manipulation with several ring magnets, prediction, and explanation of their interaction. I miserably failed the test demonstrating a non-creative formal logic thinking.

When I (the second author) was about ten-year-old, my mother, Sanda Marjanović, was doing her doctoral dissertation in child development psychology about creativity (Marjanović, 1965). She applied many tests on divergent thinking. For example, how many words I can associate with a prompt word, for example, “brick”—“house,” “brick”—“obstacle.” This test probably followed Guilford’s test on creativity measuring creativity by fluency, flexibility, originality, and elaboration (Guilford 1962).

The common aspect of all these tests on creativity is that the experimenter defines (in some arbitrary way) in advance what creativity is and expects a research participant to conform to this definition. This contradicts the intuitive idea that creativity involves unpredictability, surprise, and acting/thinking/feeling out-of-box. Using Aristotelian terminology, it is possible to claim that traditional psychological measurement-based approaches to creativity define creativity as *poiesis* and not as *praxis*. Aristotle coined the notion of *praxis* as activity, in which its goal and definition of its quality of the activity emerge in the activity itself and are not preset or do they pre-exist it as it is the case in *poiesis* (Aristotle 2000). Creativity-as-*praxis* cannot be predefined before it occurs, “Excellent creative thinking is much easier to recognize when you see it than it is to define or explain” (Wegerif 2010, p. 3). Moreover, the recognition of creativity is creative in itself and, thus, always a subjective and contested process, embedded in a dialogue about this (non-)recognition as

well. We criticized the traditional approaches to creativity as essentializing it—treating creativity as a given. In contrast, we argue that creativity involves transcendence of the given (and the participants) recognized by others and/or the self, and thus its definition cannot pre-exist the creative act (Buchanan 1979; Matusov 2011a; Matusov and Brobst 2013).

Creativity has emergent, subjective, contested, and dialogic properties. It is emergent because creativity is *praxis* and not *poiesis*. It is subjective because it is in the eyes of the beholder. Creativity is always a co-construction between an actor transcending the given and an observer who recognizes this transcendence as such. It is always contested because of the creative act of recognition of creativity. Different people may not recognize it or may recognize differently: what is exactly creative and what is not; they may have different evaluation of creativity; and so on. We contend that creativity is not consensus-based and not consensus-oriented as many psychologists assume (e.g., Gruber 1998). Thus, conventional psychological research methods of objectivity (e.g., inter-coder reliability) cannot be applied to assess creativity. Finally, creativity is dialogic because the meaning-making process is essentially dialogic (Bakhtin 1986, 1999)—the point that we will develop in this paper.

Another important characteristic of the traditional approaches to creativity is the assumption of creativity as being involved in self-contained problem-solving rather than being open to diverse contexts and problem-, goal-, and value-defining processes. The traditional approaches often involved the demonstration of creativity on-demand in the controlled lab conditions. These rather rigid constrains may not necessarily preclude creativity themselves, if these constrains were viewed by the researchers as a material for the research participants' creativity. For example, research participants may creatively reject the presented problem or creatively redefine it. For instance, in Vygotsky's description of mediation involved in problem solving, little children use imagination to try to solve a presented problem in the realm of fantasy (e.g., getting an object outside of their possible reach). Vygotsky did not reject this imaginary approach as failure to solve the problem but rather he *creatively* recognized the children's creativity, where other psychologists might see the children's problem-solving failure (Vygotsky 1987).

Many sociocultural scholars influenced by the work of Hegel, German gestalt psychologists (e.g., Köhler 1973), Vygotsky, and Leont'ev view creativity as a mere production of new mediation: symbolic or physical (e.g., tools, signs, and psychological functions). In our view, this approach to creativity (and beyond) is reductionist and instrumental. It is reductionist because it reduces dialogic meaning—the relationship between addressivity of one person's consciousness and responsivity of another person's consciousness—to

monologic mediation that exists in the universal consciousness, approximated by a consensus, or even objectively outside of any consciousness (e.g., Cole 1996; Vygotsky 2004). It is instrumental because creativity is seen narrowly, only within the scope of accomplishing goals, however emergent these goals may be, rather than also on an axiological activity of evaluation of values and self-actualization. What for a dialogic scholar is a personal point of view addressing and responding to other personal points of view in a dialogue; for a cultural-historical activity, scholar is merely an impersonal mediation—objectified and finalized subjectivity.

Finally, emerging dialogic approaches to creativity often still focus on consensus as the basis of creativity, “Dialogue is the meeting ground on which new questions are raised, the mating ground on which new combinations are found, and the testing ground in which novelties are critically evaluated and *assimilated into the body of shared knowledge and thought*” (Gruber 1998, p. 139, the emphasis is ours). Dialogue, nicely described in the first part of the quote, is viewed instrumentally here as a vehicle for arriving at a shared meaning (knowledge) rather than as a medium where any meaning lives. Sidorkin (1999) and Matusov (2009) called this dialogic approach “epistemological” in contrast to “ontological” Bakhtinian dialogism (http://diaped.soe.udel.edu/dp-map/?page_id=18). In an ontological approach to dialogism, dialogue is viewed as the essence of human *being*,

Notion of dialogue is treated (in an ontological understanding of dialogue—the authors) as central for defining human existence, not merely a form of communication. To experience what it means to be human, one needs to engage in dialogical relations. We are human in the fullest sense when we engage in dialogue. This ontological understanding of dialogue has its implications for education. I argue that schools should focus on helping children experience and learn what it means to be human. Therefore, the entire social arrangement called “school” should be designed around this purpose of introducing children to the life of dialogue (Sidorkin 1999, p. 4).

The word ontological does not refer to just any kind of being, neither does it deal with the existence of dialogue; it refers specifically to human existence. This may not be the most conventional use of the term, but from my point of view, it is the most accurate one. The ontological concept of dialogue explores the place of dialogue in the human way of being. One of the reasons for using the adjective ontological is a need to distinguish between what I propose and a number of non-ontological concepts of dialogue. In the context of this book, the very existence of a human being in his or her human quality is a result of dialogue. In the non-ontological conception of dialogue, this relation between dialogue and human existence is reversed: dialogue is treated as secondary to human existence, mainly as a form of communication (Sidorkin 1999, p. 7).

Below we will consider our dialogic approach to creativity based on the Bakhtinian framework of ontological dialogism. We will start with an ethnographic case involving creativity and abstract a dialogic definition of creativity and its implications for education.

From Boring Homework to Creative Exploration of the Morphemic Structure of Language and Complexity of Human Relations

We describe and ethnographically analyze the four dialogic aspects of creativity in an educational event that took place in an urban afterschool program—a Latin American Community Center (see the full description of the case here: Matusov 2011a). In this episode, a third-grade boy, Zion, was having trouble working on his homework—copying new words as part of his English language assignment. We will describe how this tedious, decontextualized school assignment was transformed for Zion by the first author, who at that time was taking his undergraduate students—education majors to this urban afterschool center, as part of their learning how to create relationships with minority children. We will analyze creative addressivity in the creative offers of the professor, Zion and one more child Maria, a Latina girl of similar age as Zion. We discuss their mutual recognition of their mutual creative bids and then their evaluative transformations.

On that day, I (here and further, the first author) was called by one of my students to help them with a boy, Zion, who was reluctantly doing his homework. Zion had to copy new words but he was very reluctant to do that and did not pay much attention to his (mis)spellings, which defeated the whole purpose of this rather meaningless homework drill. He clearly wanted to finish his homework as soon as possible, so he can go to play computer games. One of my undergraduate students asked me if I could do something to turn the situation around for the better. I said that I would try but I could not guarantee that I could do anything good.

Four Dialogic Aspects of Creativity

Addressivity Aspect of Creativity (by the Professor and Zion)

My challenge in addressing Zion was to design an activity that would combine the following characteristics: (1) to make the activity interesting, meaningful, and challenging for Zion, (2) to preserve the structure of homework,

and (3) to deepen his learning spelling of new words. I approached the problem by trying to turn the meaningless activity for Zion of copying words into a Scramble-like game of finding as many shorter words as possible within the targeted word that Zion had to copy three times. Zion enthusiastically accepted my creative bid. My addressive success with this new activity was in the following: the activity was entertaining and Zion liked it; he started making fewer spelling mistakes; it focused him on exploring morphological patterns within the word and eventually led him to discover morphemes of words. Let me illustrate it with an example within this activity.

One word Zion had to copy in his homework was “exit.” Zion looked at the word and said, “I see ‘IT’” (exIT). And then he exclaimed, “And ‘EX’” (EXit). I asked him what “ex” meant. Zion replied, “‘Ex’, like in ‘ex-boyfriend.’ My mom has an ex-boyfriend.” And he added, “I hate him.” By this comment, Zion made a bid for me—for transforming the activity one more time—and I followed it. In our judgment, this was another instance of the addressivity aspect of creativity, but this time it was done by Zion and responded by the professor.

I asked him, “Why?” Zion replied, “Because he constantly fought my mom.” I asked, “Fought?!” “They constantly yelled at each other,” explained Zion. “But how did he treat *you*?” I asked him. “OK. He took me to sports games and bowling. He read me books and gave me presents.” I asked, “Do you think he liked you?” Zion replied with hesitation, “I guess... But why did he fight my mom?” I thought for a moment and said, “Sometimes two good people can’t live well with each other and it can be better for them to live separately.” Zion agreed, “Yeah, it’s like me and my cousin—we like to play but we also fight a lot.”

Existential Aspect of Creativity (by Maria, Zion, the Professor, Katherine, and Beyond)

There was yet another creative transformation of the activity made by Zion. Suddenly, he interrupted himself, “I know how this word is called!” “How? What word?” I asked. Zion exclaimed with excitement, “This one, ‘exit’. It is a *compound*. We studied it in school!” “How come?” I asked. “Because it made out of two words ‘ex’ and ‘it’! It’s a compound!”

“No, it’s not!” said Maria, a girl working next to us on her homework on another computer. She was probably the same age as Zion. Maria publicly challenged Zion’s creative move as legitimate, and thus she challenged his creativity of labeling the word “exit” as a compound word. Thus, she did not

recognize that his move of bringing the compound category to the word “exit” was creative, but rather thought of it as a mistake. Maria denied Zion’s bid for creativity here.

“Yes, IT IS!” yelled Zion. He tried to reaffirm his bid for creativity as he, himself, recognized it.

“Why do you say that it is not?” I asked Maria.

“Just because. I feel it,” she replied, without even looking in my direction being glued to the computer screen.

“What makes you feel that way?” asked I.

The professor now transformed the activity one more time introducing the theme of justification in the existential evaluation of creativity.

“I don’t know, but it does not feel it’s right,” Maria replied, still without turning her head.

“‘Exit’ consists of two words, like ‘ex-boyfriend,’—it’s a compound!” exclaimed Zion. Maria could not justify her position but Zion could.

I felt that the girl was up to something important—thus, validating her creativity (i.e., another existential evaluation)—but she did not have terminology to explain it clearly, so I helped her. “Are you trying to say that ‘ex’ and ‘it’ don’t have anything to do with ‘exit’?” She turned her head to me, smiled, and nodded, as if acknowledging my presence, as a living person, for the first time (i.e., another existential evaluation). “So, are you trying to say that a compound should consist of not just any words but words that contribute to its meaning, right?” She smiled at me and nodded again. I continued, “Such parts of the word that constitute meaning are called ‘morphemes.’ For example, a compound ‘ex-boyfriend’ consists of three-word morphemes: ‘boy’, ‘friend’, and ‘ex’—all of which contribute to the meaning of being a former boyfriend. But, morphemes might be not whole words but meaningful parts of the word.”

However, as my colleague, Katherine von Duyke, pointed out in her feedback to an earlier version of my 2011 manuscript (Matusov 2011a), both Maria and I were wrong, insisting that the words “ex” and “it” have nothing to do with the word “exit.” I checked the Oxford English Dictionary and confirmed Katherine’s objection as the English word “exit” has Latin origin “exitus” where morpheme “ex” means “out.” I wonder if this Latin word has actually the Greek origin from “exodus”—a true compound meaning “a way out”: “ex”—out, “odus” way, road (cf. “odyssey”). It is still probably true that “exit” is not a compound in English because of “it” is not a recognizable morpheme in English but rather phonetic transformation of the Greek word “odus.” I wish I knew this complexity before and introduced it to the children (who may find it later on, hopefully). But, on the other hand, this is an inherent nature of inexhaustible and bottomless learning in any curricular topic.

Axiological Aspect of Creativity (The Professor and His Undergraduate Students)

When my undergraduate student and I shared this case in our class, all students seemed to recognize that my approach was creative and interesting. They liked that I managed to make the homework useful for Zion, that he took his homework seriously and finished it, and my lessons on morphemes, compounds, and complex human family relations. However, a few students raised issue about questioning if my creativity was good. For example, they raised issue that I created dependency in Zion on me because he could not do his homework without me. Another objection was that education should be a serious business and not entertainment or a game. And finally, some objected many times Zion was not on-task as he was distracted by talking about his mom's ex-boyfriend too much, beyond putting the word into a sentence. That led us to discuss and test our educational values—what we meant by “good education.” The class split around issues of what it means to learn spelling and language. Should it include a web of meaning: both on the micro level of studying morphemes and on the global levels of understanding troublesome aspects of the students' lives? Another big issue was about individualistic or dialogic values of learning.

Cultural Aspect of Creativity (The Professor, His Undergraduate Students, and Institutions)

Some students raised an issue about a poor-quality homework that was assigned to Zion. This was another explosive issue because some other students started to argue that homework is not negotiable in the era of the high-stake assessment and accountability. This brought a cultural meta-axiology evaluation of whether deviation from the norms set by the national educational policies is a good or a bad thing. Some students—future teachers—felt that teachers are servants of the state and must follow whatever values the educational authorities and politicians prescribe. In their view, teacher professionalism is about conforming to the authority's preset demands and deviation from that should be viewed as insubordination, unprofessionalism, and undermining educational well-being of the students. In contrast, some other students view teachers as students' advocates who, as professional educators, have to define educational values and practices. The goal of school administrations and politicians should be to help and to serve the teachers (and not the other way around). These students viewed teachers' experimentation and creativity as a necessary part of their professional activity that should be evaluated by other educators.

Discussion

We have found in this event that creativity, as a phenomenon, is constituted, for the participants of the event and us as observers, by the four dialogic authorial aspects we described above. Based on our ethnographic analysis, we argue that creativity remains always immeasurable, problematic, subjective, authorial, contested, cultural, axiological, involving risk taking, calling for responsibility, and ethical in its nature revealing itself on small and big scales. Our coding and analysis are subjective for several reasons.

First, we projected the data into the ongoing academic dialogue on creativity rather than dialogue on agency, which was the first author's theme when he analyzed the same pedagogical event in 2011 (Matusov 2011a). Second, we have developed a dialogic view of creativity. With some other concept of creativity, this same case could have been coded differently, or may have not even be coded at all as a case of creativity. Third, scholars who may subscribe to a dialogic approach to creativity may subscribe to some other dialogic approach (e.g., not Bakhtinian) and, thus, see the case differently. Fourth, we have our own authorial sensitivities, rooted in our cultural histories and our own creativity, that prompt us to creatively notice or not notice the participants' creativity. In other words, we want to stress that creativity is not a thing out there, existing independently on its own, but it is itself a dialogic phenomenon. This does not necessarily mean that our coding and analysis are arbitrary, owing to the fact that it enters a dialogue of testing ideas—in our case an academic discourse—in which our analysis may or may not survive this testing. Still, our dialogic analysis of creativity will remain contested and forever contestable as new challenges may emerge. At the same time, as soon as creativity emerges through its recognition, it immediately undergoes a process of objectification, reification, and finalization by becoming a new given and, thus, a potential for new creativity through its transcendence. Creativity is objectified in new material or symbolic objects (e.g., a new smartphone), new practices, new discourses, new knowledge, new coding, and new truth. Nevertheless, the objectification of creativity does not resolve its contested nature because a dialogue about it continues forever.

Although the concept of creativity is akin to the concept of agency, it is also somewhat different from it. We have defined the notion of (authorial) agency as authorial transcendence of the given, recognized, and evaluated by others and/or by the author him/her/themselves (Matusov 2011a; Matusov and Brobst 2013). Creativity is an aspect of this authorial agency that is specifically about sudden and surprising novelty in the authorial agency. In other words, creativity is a special discourse on the authorial agency focusing on

the surprising novelty. This discourse involves transformation of the audience perception of the world, their ontological relationship with the world, and the awareness of this transformation, as by-products. Thus, as a result of this creativity discourse, the world becomes new and unfamiliar for the audience (including the author as self-audience). That is why creativity (and authorial agency) is always co-constructive. For example, after the professor introduced the Scramble-like game to Zion, Zion's vision of the homework activity and his ontological relationship with the immediate world have changed (cf. Bakhtin's notion of chronotope, Bakhtin 1991). Instead of being in the midst of the painfully boring, meaningless, and tedious homework, he suddenly found himself in the middle of the exciting playful competitive adventure. Similarly, when he introduced the theme of hating his mom's ex-boyfriend, the professor's world changed as well: instead of being in the midst of the playful investigation of the morphemic structure of language and facilitating guidance, the professor found himself in the midst of the human drama involving Zion with the ethic call for help. In both cases, the transition was abrupt and surprising.

Recognition of creativity is different from recognition of agency. Recognition of agency involves responsive actions—for example, support of an actor bid in improvisational play. In our case, Zion recognized the professor's authorial agency by engaging in the Scramble-like game offered by the professor. Maria recognized the authorial agency of Zion, who claimed that the word "exit" is a compound by challenging his claim. In both instances, the authorial agency is recognized through engagement in a new course of the activity. Non-recognition of the authorial agency involves ignoring the authorial bid for the transcendence of the given. In contrast, creativity requires a special reflective discourse. Creativity is the discursive appreciation of agency. The discourse of creativity requires refocusing from the world and activity to the author and the audience themselves. The discourse of creativity transforms the actors into audience—"estrangement" (the term "отстранение" was coined by Russian literary formalist Viktor Shklovsky, Shklovskii and Sher 1990; it means a person becoming an audience of his/her own or somebody else's action or events looking from outside, where *I* becomes *me*). In our case described above, it stays unclear how much Zion or Maria would use the discourse of creativity for the described events involving the participants' authorial agency, if they told it. The professors and his undergraduate students clearly did. However, we argue that all the participants of the event recognized each other's authorial agency.

Thus, discourse on creativity is always subjective and cultural. In some cultures, the discourse on creativity is valued (as in the modern "Western" cul-

ture), but in some cultures, it is not. For example, in the Medieval Christian Europe, creativity was not valued. The only legitimate creator, and thus, the source of the creativity discourse, was God. The role of a human was to literally record, accurately transmit, and correctly interpret the Word of God. In the Medieval Europe, novelty was under suspicion of Devil's contamination and temptation,

...authoring has not always been related to writing and responsibility: inspired by God, the writer could be just the *scriptor* of a sacred word that did not belong to him; and being original was not a value *per se*, since the written text, inscribed in tradition, was supposed to repeat or reiterate what had been already said. Indeed, on a further etymologic search, we find that *auctor* comes from the Latin *augere* (to increase, to improve), meaning instigator, promoter. Thus the author does not create anything new; he has just to improve what already exists (Smolka 2005, p. 360).

Dialogism of the creativity discourse is schematically reflected in the following imaginary dialogue:

- [bid for creativity]
- Wow, this is so creative!
- Why do you think so?
- Because so and so...
- I agree/disagree [the dialogue continues].
- Has somebody done it before?
- [Reply]
- But is it good?
- [Reply]
- Why do you think so?
- [Reply]
- So what? Why do we need to have new things? What is wrong with old things and traditions?
- [Reply]

This dialogue is embedded in diverse contexts and spheres: political, economic, educational, industrial, governmental, religious, and so on. It generates new inquiries and contests. It creates new alliances and breaks old ones. For example, Zion's introduction of the compound notion creates an alliance between Maria and the professor, who believed that the word "exit" was not a compound, against Zion who believed it was. Also, the professor's creative introduction of the Scramble-like game in Zion's homework created new alliances and polarizations among his undergraduate students (and other edu-

cators) who agree or disagree with his move as educationally legitimate or illegitimate. Thus, creativity spurs dialogues and alliances, while being born from dialogues as well.

The creativity discourse has its organization by sociocultural genres. For example, one current genre of creativity is discourse on intellectual property mediated by patents, legal contracts, trademarks, copyrights, credits, and court decisions, the “commodity-creativity”² genre. Another current historical genre is a discourse about extraordinary, unique, and innate geniuses who from time to time change the history of humanity, the “he-creativity” genre (Glăveanu 2010). Yet, another common genre of creativity is a discourse of innovations, focusing on the qualitative discontinuity between the past and the present, “revolution-creativity” genre. For example, Bakhtin described Dostoevsky’s literary contribution as revolutionary, “Dostoevsky is the creator of the polyphonic novel. He created a fundamentally new novelistic genre. Therefore his work does not fit any of the preconceived frameworks or historico-literary schemes that we usually apply to various species of the European novel” (Bakhtin 1999, p. 7). However, this breakdown with the past may not be always so dramatic. A less prominent but also old genre of creativity is discourse on stable elements that can be combined in some creative ways, the “combinatory-creativity” genre (Vygotsky 2004):

All human activity of this type, activity that results not in the reproduction of previously experienced impressions or actions but in the creation of new images or actions is an example of this second type of creative or combinatorial behavior (p. 9).

The first type of association between imagination and reality stems from the fact that everything the imagination creates is always based on elements taken from reality, from a person’s previous experience. It would be a miracle indeed if imagination could create something out of nothing or if it had other sources than past experience for its creations (p. 13).

A hut on chicken legs exists, of course, only in fairy tales, but the elements from which this fairy tale image is constructed are taken from real human experience, and only their combination bears traces of the fantastic, that is, does not correspond to reality (p.13).

This combinatory-creativity genre probably goes back to the Ancient Greeks.

Another genre is religious discourse on creativity, focusing on God as the source of everything in the world, “creator-creativity” genre. Another genre of

²We want to credit Vlad Glăveanu (2010) for introduction of metaphoric description of creativity paradigms. We extended his metaphoric description to the creativity genres.

creativity is a discourse on playfulness, freedom, spontaneity, improvisation, and openness, regardless of whether the result is productive or not,

...a view of creativity as a kind of freedom to play around and on the other a focus on ideas that are not only original but also valuable and influential. If asked for examples of creativity most people suggest things like Van Gogh's "sunflower", Einstein's "theory of relativity" or Apple's "i-pod", ignoring all the countless pictures ideas and products that never made it to iconic status. Meanwhile we still say that children mucking around with paint and paper are "being creative" even if the outcome is of no value and goes into the dustbin (only when the children's attention has moved on of course, as we don't want to discourage them with adult value judgements!). (Wegerif 2010, p. 37)

Finally, we want to attract attention to an ethic creativity genre focusing on anti-conformism, the "breaking rules-creativity" genre, "Majority decisions tend to be made without engaging the systematic thought and critical thinking skills of the individuals in the group. Given the force of the group's normative power to shape the opinions of the followers who conform without thinking things through, they are often taken at face value. The persistent minority forces the others to process the relevant information more mindfully. Research shows that the decisions of a group as a whole are more thoughtful and creative when there is minority dissent than when it is absent" (Zimbardo 2007, p. 266).

There are also anti-creativity genres. For example, discourse about religious prophets or clairvoyance focuses on the medium of other higher forces, and any "creativity" can only make it worse. And, there is another anti-genre of creativity well expressed by Ecclesiastes (1:9), "What has been will be again, what has been done will be done again; there is nothing new under the sun." A more recent and widespread anti-creativity genre is a discourse on "common sense," "My success was not based so much on any great intelligence but on great common sense" (Helen Gurley Brown, <http://thinkexist.com/quotation/my-success-was-not-based-so-much-on-any-great/362901.html>).

Implications for Education: The Dialogic Pedagogy Creativity Genre

From our point of view, conventional education discourse is anti-creativity. It defines education as a measurable reproduction of culture. Creativity is expected to be postponed until students are out of education. Creativity is

not encouraged even in teachers as curriculum is prescribed by the state (e.g., educational standards, “common core”) and instruction is defined by the research-based “best practices” or “evidence-based teaching.” Even in teaching “creativity,” it is viewed as objective and predictable way of problem-solving.

In contrast, dialogic authorial education is pro-creativity. It defines education as culture-making, production of culture, and transcendence of the given (Berlyand 2009; Bibler 2009). Creativity is viewed as the basis of education; it is encouraged in students and teachers rather than postponed. From this point of view, creativity is immeasurable because it is always dialogically contested and in the eye of the beholder.

The dialogic authorial pedagogy creativity genre involves four pedagogical dialogic moves—elements. The first one is *ontological dialogic provocation*—provocation for creativity. In the case described above, we see many of ontological dialogic provocations: the introduction of the Scramble-like game by the professor, Zion’s introduction of his troublesome and puzzling relations with his mom’s ex-boyfriend, his introduction of the notion of compound, the professor’s introduction of the notion of morpheme, the professor’s sharing the case with his undergraduate students, the students’ raising diverse issues and problems with the professor’s approach, and so on.

The second move is *responsive authorship*. In the case, it involved the professor’s finding the Scramble-like game satisfying the three demands, listed above, in response to his student’s request for help and Zion’s boredom with his homework, Zion’s finding many “little words” in the targeted word, Maria’s disagreement with Zion’s claim that “exit” was a compound word, and so on. The responsive authorship—creativity in response—can be an ontological dialogic provocation for other participations.

The third move is *axiological, critical evaluation of the value of the creativity*—critical creativity. In the case, it involved Maria’s evaluation of Zion’s claim and undergraduate students’ evaluation of the professor’s pedagogy with Zion and Maria.

Finally, we call the fourth move “*praxis of praxis*” (Matusov and Marjanovic-Shane 2012). It is critical examination of the practice and its values as the whole: its limitations, desirability, and testing against alternative values. In the case above, the professor and his undergraduate students were engaged in *praxis of praxis* when they discussed whether students are for the school or the school for the students.

In developing our dialogic approach to creativity, we examine an actual educational event testing our theoretical categories, and simultaneously trying to compare them to other contemporary existing conceptual and theoretical interpretations of creativity. Furthermore, we address different educational

implications that contemporary approaches to creativity have in comparison to the authorial dialogic approach we are developing. We show that a dialogic approach to creativity promotes and gives rise to different educational conditions for both the teachers and the students, and that in itself it promotes creative authorial agency, thereby changing the educational process and outcomes.

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Part 3

Creativity in Cultural Context

16

Political Pathologies and Big-C Creativity: Eminent Polish Creators' Experience of Restrictions Under the Communist Regime

Izabela Lebuda

One of the most frequently underscored conditions necessary for creative potential to come to fruition is the freedom to choose and make autonomous decisions: unimpeded freedom of opinion and behavior (Gruber 1997; Inglehart 2000; Putnam 1993; Seitz 2003; Sternberg 2003; Wei-Ming 2000). Nikolay Danilevsky called this principle the *second law of the dynamics of great cultures*, arguing that, “in order for the civilization of a potentially creative group to be conceived and developed, the group and its subgroups must be politically independent” (Sorokin 1937–1967, p. 543). Contrary to common interpretations, this does not imply that only democracy promotes creativity (Hellmanzik 2014). Creativity can also develop under aristocracies or oligarchies, a prime example being Renaissance Florence (Ansell 2013; Csikszentmihalyi 2014). What is key for creativity is not the political system but rather freedom in various aspects of life: absence of the threat of ostracism or legal responsibility for original judgment (O’Hagan and Hellmanzik 2008; Simonton 2002; Törnqvist 2004).

The creative man has no choice but to trust his inner command and place everything at stake in order to express what seems to him to be true. (Milosz 1953/1990, p. 217)

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However, it is not only the comfort of activity and support that are listed as conditions conducive to creativity, but also the presence of challenges (Gute et al. 2008; Toynebee 1946; Törnqvist 2004). Creations that alter a given discipline emerge also in difficult, demanding conditions (Karwowski and Lebuda 2013), in times of social upheaval (Roberson 2010), and in the face of various types of oppression, deprivation, or frustration (Emery 1993; George and Zhou 2007; Heinzen 1994; Perkins 1988). Occasionally, these are times of peak productivity for certain groups and within certain domains (Csikszentmihalyi 1996; see Simonton 1976a, b).

The aim of this chapter is to broaden the knowledge about sociocultural conditions and creativity by presenting their relation to political pressure exerted by totalitarian authorities on each element of the creative system (Csikszentmihalyi 1996; Glăveanu 2013, 2015) and by presenting relevant experiences of professional and prominent creators (Kaufman and Beghetto 2009) under such circumstances. An example of the relationship between the political situation and creativity is offered by the history of creative ideas, a contextual perspective on creativity that takes time and the sociocultural setting into account. Lev Vygotsky developed his cultural–historical psychology in the Soviet Union under Stalin. Due to the Cold War, his psychology remained virtually unknown outside the author’s homeland until the second half of the twentieth century (Moran and John-Steiner 2003). Similar difficulties were experienced by many scholars and artists from the Eastern Bloc. When Czeslaw Milosz became a Nobel literature laureate in 1980, few people were familiar with his writings in Poland. Upon the publication of *The Captive Mind*, a collection of essays in which he metaphorically described the functioning of creators in a totalitarian regime, the communist government and Polish Writers’ Union deemed Milosz a traitor, and between 1951 and 1980, censorship completely prevented the publication of his works. An uncensored edition of *The Captive Mind* did not appear in Poland until 1989. After more than a quarter of a century, history seems to have come full circle. When the Nobel Prize for Literature was awarded to Svetlana Alexievich in 2015, many residents of Belarus found out about her works only because of the publicity surrounding them. Because the picture of the post-Soviet man in her writings goes against what the authorities promote, her books are printed in limited editions by obscure publishers in Belarus, and state media remain silent about her international success.

The above cases illustrate the limitations placed on Big-C or even Boldface-C Creativity (Kaufman and Beghetto 2009; Simonton 2010) in totalitarian contexts and highlight problems concerning the presentation of creative work. However, this relation goes far deeper and is not unambiguous.

Both Milosz and Alexievich were persecuted for the contents of their writings; yet their works, as well as Vygotsky's ideas, survive and their influence remains undisputed. In the case of the writers, the experience of functioning in an oppressive system actually inspired their greatest work. Was the difficult political situation a factor facilitating their artistic success, or would their artistic work be much more powerful had the sociocultural conditions been different? How many works of art were never created or publicized due to political pressure or because of censorship, and how many gained acclaim (though later or elsewhere in the world) for the very same reasons?

The political context impacts culture-generating conditions (Runco 2014; Seitz 2003) and living conditions both directly (e.g., by promoting certain values) and indirectly (e.g., by determining funding caps for each domain); at the same time, the social "mood" imprinted by the political system is a key element of the zeitgeist, the "spirit of the times" (Simonton 1984, 1997). Research on historical creativity provides knowledge about the link between creativity and politics, especially about the relationship between the number of outstanding works in particular domains and forms of social and political pathology (Simonton 1990). Little is known, however, about the supportive and obstructive role of closed-circuit political systems where rules strictly regulate various spheres of life, including scientific and artistic endeavors. This chapter presents selected results from the analysis of biographies of eminent creators who experienced varying degrees of political pressure from totalitarian governments in communist states. These are analyses of interviews with as well as biographical and autobiographical data of 34 prominent Polish creators representing three generations: those who grew up in a totalitarian system ($N = 7$), those growing up on the eve of a political shift ($N = 15$), and those born after a political shift ($N = 12$) (Lebuda 2014; Lebuda and Csikszentmihalyi submitted). Each interview took the form of a thematic life history (Ward 2003), focusing on the experience of creativity. The analyses followed the principles of grounded theory methodology (Glaser and Strauss 1967), especially constructivist theory (Charmaz 2014).

Vygotsky hypothesized that the most eminent creators are those who best adapt to their era and seize its social and cultural opportunities (Moran and John-Steiner 2003). I shall focus on two main issues: the impact of experiencing and functioning in a closed oppressive political system and the interaction of multifaceted creative resources with the conditions offered by a one-party dictatorship.

This chapter will present the potential links between creative activity and demanding or difficult political situations as well as offer a review of research and reflection on the politics–creativity relationship, with special

attention to the consequences of living in a closed state with a nondiversified source of authority. Next, I will briefly describe the Polish political system of 1944–1989—a Soviet-enforced one-party rule—and present my own research on experiences related to the political system that eminent Polish artists and scholars lived under.

Political Pathologies and Creativity

Since the dawn of humanistic psychology, creativity has been treated as a form of self-expression, a manifestation of personal dignity (Maslow 1963; Rogers 1961). In difficult times, it may constitute a protest and a way to express emotions, reorganize cognition, or put up inner resistance to tyranny (Emery 1993; Jamison 1989). In oppressive circumstances, creativity helps maintain spiritual freedom, psychological equilibrium, and self-respect (Benchoam 1993); it boosts resilience (Metzl 2009; Stokes 2006), and may also be perceived as a moral obligation inscribed in one's professional role (Csikszentmihalyi et al. *in press*; Benchoam 1993; Gruber 1985). During political events related to protecting independence, creative work arises also from patriotic impulses and aims at inducing similar feelings in compatriots (Borowiecki 2014).

Various kinds of “structural instability” may aid in disrupting established patterns, rejecting existing rules, and making behavior standards more malleable, which may dampen resistance against unconventional behavior (Porter and Suefeld 1981; Törnqvist 2004). Moreover, situations of limitation and coercion induce reactance, and personality traits and attitudes characteristic for creators predispose them to oppose and disregard rules. Creators stand out as nonconformist, independent in views, and bold in actions (Crutchfield 1962; Davis et al. 2011; Eysenck 1993, 1995; Lebuda and Karwowski *in press* Lebuda, I. & Karwowski, M. (2016)). Moreover, personality traits linked to creativity are also associated with greater sensitivity to political circumstances (Barron and Bradley 1990).

A destabilization of the state, disrupting the possibility to satisfy one's most basic needs, coincides with long-term emotional tension and strong negative emotions. Negative affect is conducive to creativity (Akinola and Mendes 2008; Andreasen 2005; Borowiecki 2014). Moreover, personal experience often becomes the subject of art (Jones et al. 1997; Roussel 2007). Riots may also prove inspiring, becoming the subject of works, reflected in the authors' feelings or intellectual contemplation (the push effect; Borowiecki 2012). It has also been shown that plays by playwrights whose countries lost a war

frequently feature the theme of “prudence” (Simonton 1983). At the same time, a work presenting a shared experience attracts a wider audience (the pull effect; Borowiecki 2012). Certain subjects in art and certain fields of scientific inquiry are more sought after, while exploring others may result in professional marginalization, and even incur a threat from the authorities in the case of dictatorships (Simonton 1990; see Bailin 1990). This decline of topical variety decreases the originality of creations.

Factors related to political pressure whose nature may prove inhibitory to creative endeavors also include disorders of communication and social processes (Cerulo 1984). Cooperation—crucial for effective work in certain domains—is hindered, information exchange opportunities are limited, and so is the possibility to be active in the field and to exhibit or share the works created (Cerulo 1984). Moreover, the separation involved in social unrest and potential migration may destabilize social support networks and thus disturb the sense of security, disrupt balance, and lead to organizational problems (see Borowiecki 2012, 2013, 2014). Although uncertainty encourages people to explore and generate creative ideas (Audia and Goncalo 2007; Tiedens and Linton 2001), high uncertainty is negatively associated with creativity and the appraisal of creative work, thus making accurate judgments about the value of art works more difficult (Mueller et al. 2012).

One of the most oft-cited causes of negative relationships between creativity and sociopolitical upheaval is the supply-side aspect of such events. What usually follows is the allocation of all goods; investments of time, capital, and power are transferred to operations directly related to defense of aggression (Simonton 1975). In the case of physical creations, the issue of resource availability arises, as does the risk of the work being destroyed (Borowiecki 2012, 2013, 2014). It can also be assumed that when the basic needs are at risk of not being satisfied, interest in and demand for goods connected with art and culture diminishes, which may form a negative feedback loop, discouraging creators from producing more works.

Of the factors related to social pathology, some inhibit and others stimulate creative activity. The causes of variety in the frequency and quality of creative acts are sought in the interaction between pressure and creators’ personality traits, their ways of coping with emotional strain, in the way the social network functions at times of political unrest, in changes in the perception of the legitimacy and restriction of previously laid out rules, and in the supply-side aspects of upheaval.

The relationship between creativity and the political situation has also been studied (Kroeber 1944; Sorokin 1937–1967). One of the most frequently investigated issues is the impact of wars on the number of outstanding works

in a given time and in the decades that followed. The results are ambiguous. Some indicate a negative impact of sociopolitical unrest and armed conflict on creative productivity and cultural development (e.g., Simonton 1976b, 1984; Toynbee 1946), while others suggest no impact of war on creativity (e.g., Naroll et al. 1971; Simonton 1975, 1977; Sorokin 1937–1967) or even a positive link between conflict and human accomplishments (Murray 2003). Such differences have been attributed to the division of creativity among domains (Hellmanzik 2010; Simonton 1976b; de Solla Price 1965), to the type of conflict and its outcome (victory, defeat, or neither) for a particular group (Borowiecki 2012, 2014; Simonton 1980), or even to the distance between the place where fighting took place and home (Hellmanzik 2013; Simonton 1980). These relations also varied depending on the creator's age during the conflict: no such relation was found in creators who were in their late 20s and early 30s at the time of the war; among people aged over 50, an increase in productivity was observed (Borowiecki 2014; see Borowiecki and O'Hagan 2013).

Not only the number of works created during upheavals but also their quality is different. For example, melodies written during the war vary in length and smoothness depending on whether they were created in combat or noncombat zones (Cerulo 1984). Political instability is also linked to how well a work created in a given period would later be known. For instance, data concerning philosophers shows that the more political instability there was in the previous generation, the smaller were the odds of being well known in next generation and even 20 years later (Simonton 1976c).

Besides war, another type of “political pathology” (Simonton 1990) is political instability. Its relation to creativity depends on the nature of particular events. Anarchy and political coups, conspiracy, and revolution, negatively correlate with creativity in the generation growing up at the time of such events (Simonton 1975); no links were observed between creativity and internal political disturbance (Simonton 1977) or cultural persecution (Simonton 1975). By contrast, imperial instability as well as nationalistic revolts against imperial pressure and homogeneous culture have positive consequences for the creativity of subsequent generations (Kroeber 1944; Simonton 1975, 1997; Sorokin 1937–1967). After a period of repressed national culture and language, creativity tends to come into bloom in the next generation, strengthening the previously muted beliefs, attitudes, and habits. According to the *law of polarization* (Sorokin 1937–1967), a revolt with nationalistic roots leads to a diversification of beliefs, cultural diversity, and a departure from homogeneity (Simonton 2002). This kind of diversity seems key for creativity (Arieti 1976, p. 320; Simonton 1997). Among other circumstances, it is political

fragmentation in the previous generation that is linked positively with artistic and scholarly creativity (Simonton 1975) and with heterogeneity of ideology in the next generation (Simonton 1976c). Odds for creative progress are the highest within a multicultural environment promoting social tolerance, openness to others and to external influences, as well as the presence of minorities (Eysenck 1995; Florida 2002; Nemeth and Kwan 1985, 1987; Nemeth and Wachtler 1983; Simonton 1984, 1999). A significant tendency for first- and second-generation migrants to become distinguished creators and leaders has also been observed (Goertzel et al. 1978). Analyses of the number of eminent creators in many domains working in Japan between 580 and 1939, taking into consideration measures of extracultural influx (outside influence, travel abroad, and eminent immigrants), have shown that the number of eminent creators in a generation correlates with the amount of foreign influence two generations earlier (Simonton 1997). Functioning in an intercultural environment and being exposed to various perspectives make it easier to realize the arbitrariness of cultural norms and values, verify the rules and regulations in force, reconcile contradictions, and improve the malleability of one's own convictions and judgments (Simonton 1976c).

Universal State and Creativity: The Example of Poland

The opposite of a tolerant and open culture is what Arnold Toynbee called the “universal state” (1946), which also correlates negatively with creative activity. All kinds of ideologies promoting a hierarchical view of the world, political unanimity, or strict social control are not conducive to creativity (Simonton 1999; see Niu 2013). People in such societies are submissive and close-minded, conformist, poised to maintain and affirm the established values and rules; independence is frowned upon, and so is criticism of the prevailing state of affairs. It is known, for instance, that states with higher support for conservatism have significantly fewer patents registered (McCann 2011).

One feature of the “universal state” is autocracy or dictatorship, a system lacking a diversification of power (Therivel 1995). The type (divided or undivided) of political power impacts the formation of attitudes and beliefs. Two opposite types of mentality are distinguished: *insular* and *visitor* (Therivel 1995). The former arises in result of long-term impact of a unified source of power; the latter results from long-term impact of diversified sources of power. Visitors have access to alternatives, can make a conscious change, and openly voice contempt, because it is in the interest of the competing sources

of power to attract supporters. This kind of situation fosters creative activity, and we may even speak of the *creativigency* of defied power (Therivel 1999, p. 72).

Insular mentality results from living in a country where authority is undivided and society has no choice but to subdue and accept. In the case of monolithic authority, people follow the rules and attempts to question them often mean danger to one's entire family or group. Consequently, obedience, adjustment, patience, dissimulation, and adaptation are valued. People are characterized by deterministic and fatalistic beliefs, a propensity to group-think, intolerance for nonstandard behavior, attachment to tradition, and—what follows—low creativity. This is reflected in the expectations of mothers living in such a culture: what they primarily expect from their children is obedience, respect, and silence as opposed to the independence, curiosity, and self-perfection expected by parents in countries with diverse sources of power (Hatwood and Miller 1991). In cultures with a single source of power, all elements of the creative system are impeded (Csikszentmihalyi 1996). The individual has less inspiration and fewer experiences; the field only accepts work that is in line with the ruling ideology and maintains the status quo, rejecting innovative and original products. The domain is in stagnation, and—in extreme cases—cultural heritage is irretrievably destroyed (Seitz 2003; Therivel 1995). Particularly difficult conditions for creativity arise when the influence of a single source of power lasts more than one generation, forming a culture and mentality that sometimes spans several generations (Simonton 1990; Therivel 1995). This echoes in the words of Svetlana Alexievich, who argued: “The ‘Red Empire’ is gone, but the ‘Red Man,’ homo sovieticus, remains. He endures” (Alexievich 2015).

One example of a state with a nondiverse source of power is Poland between 1944 and 1989. After World War II, like in many other Central and Eastern European countries, a nondemocratic one-party political dictatorship was imposed by the USSR. The communist party drew on the tenets of socialist utopia and historical materialism. Its rule limited freedom in most aspects of life, including creativity. Soviet communism, based on Marxism, strongly promoted realism and materialism in art and science. Art became propaganda, and science was meant to legitimize the party's ideology. Social realism focused on showcasing the laborer's everyday life and the reconstruction of the country. Institutional censorship was the main source of pressure on art and science. Resistance or violating the canon meant exclusion from the professional community and the right to share work, being repressed within one's family, and even having to leave the country. The working man gained cult-like attention, whereas scholars and artists were treated as a degenerate class living

on society's dime. Artistic communities were kept under surveillance. Private information was considered leverage to prevent publications going against the ruling ideology. Due to the system's utopian economy, access to resources was greatly limited not only in art and science: basic everyday goods were lacking.

In times of heightened social upheaval and in martial law, the opportunity for interpersonal contact was greatly limited: gatherings were outlawed, leaving home after curfew was forbidden, and so was voluntarily changing one's place of residence and traveling abroad. This impeded socializing, cooperation, and led to losing touch with developments in many domains.

Importantly, during World War II, numerous members of Polish intelligentsia emigrated, fell in battle, or were murdered in concentration camps. What is more, mass ethnic cleansing—especially the holocaust of Jewish and Roma populations—led to a pronounced decline of multiculturalism in the country.

The Gradient of Influence of a One-Party Dictatorship on Creators' Careers

Out of many theoretical codes (Urquhart 2013) present in biographical interviews with eminent Polish creators about their creativity experiences, I selected here those associated with creativity in totalitarian states, especially with functioning in a closed oppressive political system and with the interaction between multifaceted creative resources (personal and social) and the conditions offered by one-party dictatorship: reactance, developing habits conducive to creativity, the shaping of group identity, and creators' perceived role.

The experiences of eminent Polish creators with the communist system vary across generations: those growing up in the totalitarian system, those living on the eve of the political breakthrough, and those born after it. The role that the respective political system played in the careers of artists and scholars increases in proportion to their age (see Borowiecki 2014). This is explained not only by the amount and diversity of such experience in older people, but also by the evolving forms of oppression, severe in the early years of the system and gradually less and less restrictive later. This is how a musician active in the opposition described these changes:

And suddenly, out of nowhere, it turns out that the system is losing this capacity for great atrocity, that the tiger is basically toothless; it may snap from time to time, landing on Popiełuszko, Przemysław, Pyjas, you dig? Get this, They'd still bludgeon and

kill, it's still a tiger after all, but you could finally try and bob and weave between its teeth and stand up to it. (musician, male, oldest generation)

Different types of limitations were central to different generations. The oldest generation mainly indicated issues of within-domain socializing and a lack of access to information. Growing up in a single-party dictatorship formed creators' educational experience, too (see Whitmarsh and Ritter 2007). Especially scholars experienced a number of obstacles—from not being allowed to finish school and freely choose a major to having a limited choice of research topics. The reigning ideology banned some areas of knowledge as domain-determined career choices:

But because of this lack of any Western literature and resources in that period, I took up Pavlovianism seriously and remained faithful to Pavlovianism, and even today in some way I can say that part of my theory of temperament still draws on Pavlov's ideas. (psychologist, male, oldest generation)

Limitations to socializing with the domain also resulted from travel restrictions:

I got a kind of scholarship in '63 after having done my doctorate, by means of selection, [a scholarship] to attend an international Congress of Psychology in Washington for free; all the costs were covered – since the moment I'd leave home until I'd come back, but not only. I also got a three-month stay with an acclaimed primate researcher (...) I didn't make use of it, because the ministry's input was limited to writing a document and covering its postage to inform me that the ministry refused me permission to leave. (psychologist, male, oldest generation)

Political pressure on scholars and artists was also about making it difficult to showcase one's work:

I had the manuscript ready around the time the martial law began. And in this period (...) many people basically couldn't travel abroad, nor could they send mail abroad, it was impossible at that time, not to mention manuscripts and what not. (psychologist, male, oldest generation)

The obstructions mentioned and the pressure experienced made learning about one's capabilities and focusing on work possible. Restrictive isolation allowed for increased concentration on one's strong points and interests. As the same already quoted scholar argues:

That's when I finished school and that's when I, in a way, discovered, that I could do better than in the scouts, when I treated studying as an extra activity. (psychologist, male, oldest generation)

Political oppression, lack of access to the domain's resources, and difficulties with meeting the requirements of censorship, which replaced community appraisal mechanisms, could be overcome only thanks to nonstandard support from colleagues, people across the "Iron Curtain":

And in fact all these people did send me their publications, articles, and books, because they knew there was nothing like that here. And then, when I matured in some way and learned to express my thoughts in English in writing, I tried to write a monograph in English, I sent a sample of one chapter to this one couple of American psychiatrists, Thomas and Chess, who reacted in an incredibly positive way. (psychologist, male, oldest generation)

Characteristics of the System and Habits Conducive to Creativity

Growing up in times of severe political oppression formed habits that would be an advantage throughout the years to follow. This is what a famous actor and director, who also worked as a lecturer, said about message control and responsibility for one's words:

For my generation stating a view out loud was something you could go to prison for; you could lose your job over it; you could get a one-way ticket for that, right? So I'm much more careful. Today, when I hear what they're rambling on about guilt-free, well, how am I supposed to have anything in common with this? I could have gone to prison for one hundredth of those words. Responsibility for one's words was developed differently. And school is this kind of place where you have to take responsibility for your words. (actor, director, male, oldest generation)

Under political pressure, creators experienced numerous conflicts between crucial elements of the meso-system, usually between the vision expressed by the family and ideas promoted publicly. Such experiences taught tolerance for ambiguous situations, fostering sensitivity to contradictions and vagueness. Facing contradictory opinions, especially voiced by respected authorities, established a distance to the feedback received and cushioned the blows of criticism:

I knew what I couldn't say in class. I learned to treat what the teacher said as a kind of spectacle. That's when I believed that she has to say that, and I have to agree. I make use of this in my contacts with journalists and critics. (musician, male, oldest generation)

Such experiences strengthened reliance on personal judgment and led one to consider discrepancies between personal judgment and that of others as the norm (see Dickerson and Kemeny 2004; Stryker and Burke 2000). The totalitarian system explicitly defined the criteria of worthy and unworthy entry in the domain. The harsher criteria led to the rejection of many pieces of work, which caused frustration, and one can guess that some people probably quit creative activities altogether (Dickerson and Kemeny 2004). However, in the case of eminent creators, expectations correlated positively with creative efficacy (LePine et al. 2005). These people perceived obstructions as part of the creative task. They redefined the initial problems they would like to work on or sought out forms and means of expression—typically resorting to metaphor—that would not lead to the work being rejected but would remain suggestive enough for the audience to understand the message (Simonton 1984; Therivel 1995).

I knew what I wanted to talk about. The question was how. You had to steer clear of the censor's keen eye, yet reach people's hearts, move them, and give them something to think about. (actor, director, male, oldest generation)

Seeking out opportunities to present one's actual convictions stimulated creators to look for unusual solutions (Roberson 2010). Even when the political system changed, the habit of “cloaked” communication remained. Games played with other actors within the field as well as the search for “forbidden works”—products expelled from the domain—undertaken on one's own gave creators a sense of inner independence and was their “escape to freedom” (Maslow 1963). Playing against the rules, breaking them, made creative endeavors a riskier challenge (Hunter et al. 2007) and a more exciting one (Byron et al. 2010). It was also a means of providing excitement in circumstances of limited stimulation; it was gratifying enough for the creator to forget about the looming dire consequences (Csikszentmihalyi 1996).

The overwhelming power that was rushing us forward was, as I see it today, a need to break away from our usual life. An enormous, overwhelming desire for an adventure at all costs. Entering university already meant breaking that barrier. (actor, director, male, oldest generation)

Group Identity and the Perception of Creators' Role Amid Political Oppression

Despite systemic obstacles, creative activity was also linked with classical conditioning. Usually, dissent and resistance were appreciated (Perkins 1988) by someone among significant others. Moreover, dedication to principles and struggle against political pressure became dimensions of group identity (Csikszentmihalyi et al. [in press](#); Karwowski and Lebuda [in press](#)).

And I have to tell you that when I look at my family house and my ancestor's attitudes from today's perspective, I have to admit that this loyalty to themselves, their beliefs and views, no matter what discomfort the manifestation of these attitudes carries, is a family trait that I value the most nowadays and I try to develop it in myself with all my strength. (actor, director, male, oldest generation)

As a result, a professional identity was also developed: a feeling of belonging to a particular artistic group that shares a particular value system and rules, and—most of all—a similar outlook on the role of creativity.

I entered a group of people who thought similarly, with whom – in a blink of an eye – I found a common language. Kiesłowski, Idziak, Agnieszka Holland – who was unemployed at that time or even blacklisted for her Prague Spring, among others. (actor, director, male, oldest generation)

Resistance expressed in artistic endeavors was seen as an element of the professional role. Creators declared a heightened sense of social responsibility. They saw promoting values as their goal, seeking to introduce culture and familiarize a wide audience with it or to apply scientific discoveries in practice. Creative work was a form of resistance. Creators saw their activities as uniting the opposition, forming the people's consciousness, and encouraging society to resist.

Gierek cut student clubs some free rein, "Do what you want there," he said in 1970 or '71 and it turned out to be a hotbed of future staff who went on to join Solidarity, which numbered ten million. This entire awareness movement, the students, the culture that spawned then gave rise to freedom. (musician, male, oldest generation)

Creators believed it was their task to keep others' spirits high, to work for the sake of maintaining tradition, culture, and national identity, and to build a

positive image of the nation on the international arena. This sense of responsibility clearly resounds in the words of a musician upon releasing his work into the public:

It was the very beginning of the martial law when I released this, and I thought to myself, that I no longer had any debt, I just did this. I let it out, the world now owns it. You want it? Play the tape. (musician, male, oldest generation)

Pressure and Reactance

Creators characterized by nonconformity reveal a tendency to object rules, to question existent laws. This is how the musician characterized himself as a child:

I was a contrarian, the forbidden fruit was the most appealing. This was because of all that drill in upbringing and education. Everything was forbidden. Generally speaking, this was still an oppressive kind of education, so I was insufferable, I was a nuisance even to pretty cool teachers. (musician, male, oldest generation)

Because of these predispositions, limitations on independence in adult creative work evoked strong reactance: opposition against the rules in order to regain an inner sense of freedom. This is how the actor put it when describing how censorship stopped a film he starred in:

*And so this is how my real film debut was delayed in time thanks to some civil servants. I felt sad, but some extra passion was born inside me: "if you treat me like that, you will see how in my next movie I'm going to f**k you up!" Shelving that movie was at that time a great stimulus and an incentive to act.* (actor, director, male, oldest generation)

Resistance against the established rules was one of the motives behind creativity and strengthened determination (Oldham and Cummings 1996). Resistance and rebellion against the enforced rules constituted a stimulus for approaching topics in an artistic manner:

I also notice that this primary impulse always comes from feeling, sometimes there's defiance in my movies. I just come from a generation like that. And my creative inspiration always comes from what I disagree with, from what annoys me, and from what rallies me against it – this is my first thought. It also comes from my will to confide. (actor, director, male, oldest generation)

Defiance expressed in creative work was also a way to deal with accumulating emotions and frustration (see Madden and Bloom 2004). One of participants recalled:

All this creativity was self-healing. Let me say this again – scream it all out not to go crazy. (musician, male, oldest generation)

One way to deal with this situation was to present these experiences in a piece of work. For those who grew up and gained their first professional experience in the Soviet communist system, this theme was an inherent part of their career, one of the main subjects raised in their creative work. Creators who grew up in communist times but began work after the political system had changed also shared many memories of oppression, especially stories of the gifted whose talents were wasted under oppressive conditions. They revisit such feelings and make them a subject of their work:

The time of my adolescence falls exactly in the last years of Stalinism. I remember this time very well, plenty of stories from that period stayed “deep inside me.” That enslavement, fear, breaking human will and character, destruction of human life – all this is still very scary for me, that is why I depicted it in my movie. (director, male, middle generation)

Creators of the generation that grew up during political change also focused on obstruction in their reports; however, instead of highlighting direct restrictions and prohibition, they tended to focus on supply issues, lack of access to goods, development opportunities, and varied entertainment. An acclaimed photographer recalls:

We kind of grew up in a time when we played with what we had, and if there was nothing else besides the drill I used to drill holes with, I also had a camera. (photographer, male, middle generation)

Limited choice and unmet needs in the realm of aesthetics stimulated the will to create and act. The lack of stimulus got people engaged in seeking out stimulation and in finding solutions to such problems of deprivation.

For example, my grandma spoke German, so what I’d do was take my color-printed comic books in German and grandma would translate the entire dialog for me. I would then write everything up in speech bubbles, cut them out and paste them into the comic book to get a Polish version. So these are the things I’m talking about. I craved this. (cartoonist, animator, male, middle generation)

Prominent figures played a significant role as well. People who had some experience of what countries outside the communist regime were like provided some benchmark as well as knowledge about how the domain operated abroad:

One of my inspirations was an uncle from Amsterdam. Especially in the days of communist Poland, when he would bring these notebooks and magic markers and spin tales about different things. He'd really break those things open. I mean, he would say you had to open up and go crazy in all this creativity. And he was an example, a role model – someone who'd show you that you could be a crazy artist, and all this kind of works out, and that such people exist, and all of this is meaningful, that in all those normal countries you can create professionally and it is appreciated (painter, performer male, middle generation)

For the generations that grew up in times of rapid political transition, it was important to cut the ties with the experience of the previous generation and to seek new forms of expression. Creators wanted to differentiate their work from that of the older generations, who mostly created so-called “engaged works”:

I'm increasingly trying to protect it from some unnecessary influences, which show up among older people – that is sentiment, some form of thinking in political terms, I'm trying to go on with it in its purest of forms, break away from national martyrdom. (performer, male, middle generation)

Interestingly, the generation born in democratic Poland also suffered repercussions of the former system through the relationships, habits, and convictions of their parents and teachers.

I don't remember communist times, but my parents... I think that it had an impact on them and they unknowingly passed some of those things onto me. My dad always wanted me not to stick out, be obedient, not to tell anyone what was going on at home. A kind of post-socialist remnant, fear of surveillance, of being noticed, being different. On the other hand, my mom always said that communism was great, so as soon as freedom bloomed she wanted us to be extravagant, to enjoy the freedom that let us be unique. So those were two contradictory views. I still carry them inside me. (designer, female, youngest generation)

The restriction experienced by mature creators (problems concerning the availability of the domain, opportunities to showcase their work, convincing the field of their worth) as well as difficulties reported by younger generations (con-

cerning the availability of certain types of activities and resources) led to an explicitly stated feeling of inferiority. In other words—the “post-oppressive creator’s complex.” Creators were most distinctly formed in the early days of one’s career—in contact with other professionals. A feeling of lacking knowledge and skills needed in the profession and the inability to immediately make up for it due to the restrictions imposed by the political system resulted in particular attention being paid to self-development and continual improvement, a tendency for perfectionism, and complete commitment to work. Creators kept looking for points of reference to judge their achievements, and a hubristic need increased—the need to continually transcend their limits and professional restrictions, the need to develop and prove their worth.

And so, two years later, another confrontation – a plain old Polish simpleton in great Buenos Aires, i.e., a small German town. Now again, in Poland this sounds like the American dream, but my whole family had to chip in for my bus ticket (...). And that’s how I arrived at that school. In a single white shirt, a white dress shirt of course, because it’s smart and nice. My English was barely communicative. German – nothing. But a great leap again. A great leap into the deep end. And oh, the great big world. The same story all over again – so here I am, this is my chance to break out... to prove something at a higher level, so that even if I fall lower than before... even if I fall, I won’t fall that low, not to square one. (cartoonist, animator, male, middle generation)

The awareness of their own weaknesses also poised creators to undertake new and risky activities—at the price of comfort, health, or even life. In many cases, these aspirations resulted in entire lives being built around the profession:

If you look back on all these years (at least the last thirty, that is since I’ve become a father) from the point of view of the family – this has all been one great parade of irresponsibility and neglect. From the point of view of a doctor – an utter ruin, the result of which you’ll find in the beginning of this writing. And so, whatever you touch upon, the goal remains unclear, entangled; only from the perspective of the nowadays fashionable so-called self-realisation do you see some little light flickering at the end of the tunnel. Self-realisation through work, of course. (actor, director, male, oldest generation)

Discussion

A closed political system enforces restrictions on the realization of creative potential at the level of creator–field, creator–domain, field–domain interactions (Csikszentmihalyi 1996). People who achieved creative success

under these circumstances are characterized by access to social support (see Csikszentmihalyi et al. [in press](#)) and a particular makeup of personal resources: a tendency to be contrarian, answering to pressure through resistance and, in the case of discontent with one's competence, an increased eagerness to compensate and a devotion to broaden one's knowledge and skills.

The experiences of creating in a closed political system reported by eminent creators in Poland mainly revolve around limitations. As one-party dictatorship continued, repression weakened but the professional activity of artists and scholars remained difficult in other ways. In the harshest period of Soviet communism, it was access to the domain itself that was limited first and foremost; this includes limited opportunities to learn about certain specialties and trends. Another problematic area was disturbances in the interaction with the community, difficulties with showcasing one's work, submitting it for external judgment, and passing it on to the domain. Problems of limited interaction between the creator and the field and domain led to the formation of habits and tendencies that proved conducive to creative work. The threat of consequences after presenting one's ideas that went against the grain of the ruling ideology proved helpful to creators in developing responsibility for their words and taught them to share their views indirectly. Inconsistent information from various sources formed a habit of distancing themselves from judgments expressed in public; it taught them to accept criticism while focusing on their own judgment. Belonging to a group of creators who would express their contempt for the current circumstances and perceived creators' professional role as that of spreading values as well as encouraging and inspiring others to take action inspired creative activity of an oppositional nature.

Another stimulus for action was inner objection, reactance against attempts to enforce restrictions. In interaction with the systemic restrictions experienced by the oldest generation of creators, what was key—besides personal resources such as traits and attitudes linked to nonconformism—were social resources: the social milieu, prominent others, and one's professional group sharing one's image of the role of the profession; in case of science, it was also support from people living outside the oppressive system. As regards the younger generations, who either started their professional careers in free Poland or were born after the transition, restrictions still play a significant role. However, they mostly relate to supply issues: the smaller diversity and availability of goods, activities, and materials. Among artists, such direct experiences—or, in the case of the youngest creators, indirect experiences passed on by parents and teachers—are usually reflected in their products: both in the subject matter and in the technique of creation. Among seasoned artists, a certain inclination to present one's message in metaphor prevailed; among younger generations, topics concerning the functioning of the system reemerge,

though new forms of expression attract more attention, and ties to creativity directly engaged in politics are cut. Experiencing various kinds of restrictions—regardless of intensity—formed a mentality among artists and scholars that may be called the “post-oppressive creator’s complex.” It entails beliefs in having less experience and an inferior professional position at the international scale, which results in an increased hubristic motivation, continual transcendence of limits through constant self-development as well as through comparison and competition with other representatives of the domain (Koziol 1987).

These preliminary findings support Vygotsky’s claim that eminence in a domain is achieved by those who manage to optimally use their circumstances. On the one hand, experiencing external demands forms habits conducive to effective creative work; on the other, personality predispositions and support from one’s kin and community allow for the realization of goals despite obstacles and risk. The interaction between social pressure in the pathological circumstances of a closed political system with a nondiverse source of power and broadly defined personal resources (traits, attitudes, flexible habits, social support) leads to creative activity that may be referred to as oppositional creativity or counter-creativity. In the oldest generation, it is a form of rebellion against the political status quo; among younger creators, it is about defiance against the style, methods, and themes established by the previous generation. In both cases, this resistance leads to exploring new means of expression and breaking the established—and perhaps previously mastered—canons. Along with never-ending improvement, which manifests itself in increased activity, an absolute focus on work, and a significant withdrawal from other areas of life—this results in numerous and original products.

The conclusion that a closed political system is related to limited interaction between the elements of a creative system but strengthens creative activity among people with certain personal and social resources requires further investigation. It can be supposed that this should result in a decreased number of eminent creators in generations that experience the impact of a one-party dictatorship (Therivel 1995), but may also lead to an increased activity of those creators who have achieved prominence compared to peers living in countries with diverse sources of power. However, in the Eastern Bloc, the political system was the main result of the lost war, and it is difficult to conduct historiometric analyses that would allow to quantify and verify the hypothesis and separate the impact of the closed political system from the impact of war efforts (see de Solla Price 1965, 1976; Simonton 1976c). Interesting information could also be obtained through comparative analyses with the participation of creators who—under Soviet communist rule—established a working relationship and were involved in supporting the

system. Unfortunately, reaching such people proved impossible. Such analyses could be based on declassified documents from the surveillance of artistic communities, although they are of a different nature than the reconstruction of personal experience presented in this chapter.

In conclusion, I would like to stress the relevance of the topic of political pathology for a broader understanding of creativity and culture. As I finish writing this chapter, an international debate concerning Syrian refugees in Europe is under way; issues of open borders, tolerance, and the impact of coexistence of diverse cultures are discussed. In Poland, despite our democratic system, there is a fierce debate about the connections between politics and the media as well as the culture-generating activity of the media. There is still an entrenched division in the minds of nationals of the previous Eastern Bloc between better “West” and worse “East.” Many countries that experienced a one-party dictatorship still lack political balance. As Svetlana Alexievich said,

we missed the chance we had in the 1990s. The question was posed: what kind of country should we have? A strong country, or a worthy one where people can live decently? We chose the former – a strong country. Once again we are living in an era of power. Russians are fighting Ukrainians. (Alexievich 2015)

In light of such events, closer analyses of the role of the political context within culture seem to be important as well for today’s psychology of creativity.

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17

Rethinking Creativity from the “South”: Alternative Horizons Toward Strengthening Community-Based Well-Being

Zayda Sierra and Gerald Fallon

Introduction

The global South is not a geographical concept, even though the great majority of these populations live in countries of the Southern hemisphere. The South is here rather a metaphor of the human suffering caused by capitalism and colonialism at the global level, and a metaphor as well of the resistance to overcome or minimize such suffering... It is a South that also exists in the global North. (Santos 2012: 51)

How we conceive creativity in a society is based on what we believe about the sociocultural and political nature of this society. For the purpose of this chapter, we understand a paradigm as a worldview, a way of ordering and simplifying the perceptual world's complexity by proposing certain fundamental assumptions about the nature of the universe, of the individual, and of society. Bertrand and Valois (1980, 1992) define a sociocultural paradigm as the action exercised by a society as a result of its activity, on its social and cultural practices. It requires the combination of five elements: a concept of

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knowledge; a concept of relations among persons, society, and nature; a set of values; a way of doing things; and an overarching sense of significance. Weaver and Olson's (2006: 460) definition of paradigm reveals how conceptual and practical understandings of various notions, like creativity, can be affected and guided by a certain paradigm by stating, "paradigms are patterns of beliefs and practices that regulate inquiry within a discipline by providing lenses, frames and processes through which investigation is accomplished". Additionally, for De Souza Silva (2013, 2014), a paradigm is a basic way of perceiving, thinking, valuing, and doing associated with a particular vision of reality in a given society or community. Paradigms are normative; they determine what individual's or community's views are considered important and unimportant, reasonable and unreasonable, legitimate and illegitimate, possible and impossible, what to attend to and what to ignore. Thus all theories, including theories and purposes of creativity, are, ultimately, paradigm based (Granger 1994).

First, we start our chapter by telling the story of a small rural Colombian community that struggles to resist the development of a large mining project called *La Colosa*. This case is illustrative of the many examples of South American rural communities confronting the enormous pressure of economic powers interested in exploiting their territories and resources. In those cases, rural community members need to spend an enormous amount of energy in defending themselves from different life-threatening situations caused by extractive activities rather than dedicating that same energy in pursuing creatively their dreams for a better life. We use the story of *La Colosa* as a practical example that highlights the various ways of understanding the notion of creativity (i.e., oppressive creativity, creativity of resistance, and transformative creativity) according to different actors' understanding of development, economic interests, and power. By *oppressive creativity*, we refer to the tools and interventions used by local, national, and international elites to strengthen their geopolitical and economic dominance through wealth accumulation by means of access to the inexpensive labor and natural resources of the South (Escobar 1998a, b). By *creativity of resistance*, we refer to the beliefs, strategies, and practices that different persons or groups of people have learned to use to face oppressive situations (Campbell 1988; Emery 1993). By *transformative creativity*, we refer to the efforts made by various populations in the world to reimagine their own realities by breaking unequal conditions and build community well-being (Hidalgo et al. 2014; Tapia 2008; Walsh 2015).

We present the case of *La Colosa* as an entry point to discuss the paradigmatic foundations of the various conceptual and practical ways of defining the notion of creativity. For us, sociocultural paradigmatic foundations are

essential in developing an understanding of differing conceptions and practices of creativity and their potentialities to set the stage for venturing beyond ideologies of individualism, consumerism, and commodification of human activities that are increasingly influencing creativity theories nowadays.

In the second part of the chapter, we further develop this discussion about creativity from what Santos (2012) proposes as “*the epistemology of the South*”. This means unveiling the oppression and discrimination caused by capitalism and colonialism upon different social groups. It also means the retrieval of alternatives of life, conviviality, and interaction with nature, systematically ignored by Western mass-produced models of development, with the impact of global emissions on climate change (Saussay 2015).

Third, we end the chapter by addressing the notion of creativity from the perspective of a decolonial and symbio-synergetic paradigm. As an entry point to this discussion, we give an account of an ongoing Colombian community–university engagement initiative (started in 2013) as a practical example of one of the ways of actualizing the notion of creativity as a collaborative and transformative practice within a decolonial and symbio-synergetic paradigm viewpoint.

“La Colosa”, an Example of the Creativity of Oppression and Resistance

A recent report (Pulido and CSC 2013) examining the corporate practices of the London-listed AngloGold Ashanti (AGA), active in gold mining in Colombia, describes the key features of one of their mining projects as follows:

In 2009, AngloGold’s Colombia Project Manager envisaged an open-pit mine at La Colosa with an ore production rate of 20 to 35 million tons per year. Such a production rate would deliver between 591,600 and 1,035,300 ounces (oz) of gold per year. The larger figure would rank La Colosa as the fifth highest gold producing mine (per annum) in the world and would eclipse the 2011 annual production of both of AngloGold’s current largest operations: Vaal River (South Africa, 831,000 oz/year) and West Wits (South Africa, 792,000 oz/year). (Data from AGA in Pulido and CSC 2013: 9)

La Colosa is an enormous project whose impacts on the environment have not been fully grasped by the majority of the Colombian society. Fifty hectares of the *La Colosa* project are located within a protected *páramo* zone (a unique Andean ecosystem with natural water springs). Mining activity in ecosystems

such as *páramos* poses huge risks for local populations. The 100 million tons of waste rock that would potentially be deposited in valleys near the mine have a high probability of causing acid mine drainage. According to the company's own figures, *La Colosa* will have one of the largest *tailings storage facilities* in the world for storing toxic waste. Also, the planned industrial processing plant will use a projected 140 megawatts (MW) of electricity, which is more than twice the installed capacity of the regional hydroelectric plant (Pulido and CSC 2013: 6). Furthermore, AGA needs approximately 1.0 cubic meter of water per second to process each ton of mineral, which then requires 31.5 million cubic meters of water annually (Cabrera and Fierro 2013).

There has been resistance by the local rural community to *La Colosa* mining project as soon as the leaders of the rural community learned about its social and environmental impacts. According to Velandia (2015), this local resistance originated from *Campesino* small-scale farmer organizations and gradually grew to involve regional and national organizations. Local leaders supported by environmental organizations and universities began an information campaign and judicial actions to counteract the AGA project in the region. Regional and local authorities had to respond to the manifest protests of their citizens. In 2012, villagers obtained a decision from the regional environmental authority, Cortolima, ordering AGA to halt the mining project. In January 2013, the villagers blocked the route to the AngloGold site, and homes and businesses in the area displayed banners opposing the mining activity. The company responded by asking a local judge to suspend the Mayor of Piedras, a small municipality of 5370,¹ for refusing to remove the blockades and failing to protect the freedom of movement of AGA's employees. Local people conducted a vigil at the entrance to the village while being threatened by individuals driving by in unidentified cars. Then, a successful referendum was held in Piedras. This referendum was the first of its type in Colombia and became exemplary in the country and around the world. An enormous effort was invested by community leaders in educating locals about how the gold mining project would affect their territory and landscape forever (Cante and Corredor 2013). A vote was held on July 2013 and 98 % of voters said "No" to the mining project. This event prompted several other municipal bans on mining elsewhere in Colombia. In response, however, the central government passed a Decree 934 in 2013 declaring that local referenda and municipal bans have no legal validity as mining is under the jurisdiction of the national government. The judicial dispute continues to this day (Llewellyn 2013).

¹ Perfil municipal de Piedras. Bogotá: DANE, Boletín Censo General de 2005. Available in: http://www.dane.gov.co/files/censo2005/PERFIL_PDF_CG2005/73547T7T000.PDF

The case of *La Colosa* illustrates the longstanding history of resistance of Indigenous, Afro-descendent and Mestizo *Campesino* communities, the main inhabitants of rural Colombia. They have suffered the most from the impacts of land expropriation for extensive mining, cattle, and monocultivation activities (Mondragón 2006; Machado 2011; Garay 2013). As it stands, the extractive economy driving Colombia development jeopardizes the nation's biodiversity and food security. The 2015 census on rural Colombia showed that 70 % of its food supply still comes from family agriculture (Machado 2015). On the importance of small farmers, see GRAIN 2014). However, neoliberal reforms that stimulate agro-industry for exportation, instead of supporting small-scale farming, has transformed Colombia into a net import nation of food products that were previously grown locally. Despite this, Colombian people, through very different civilian organizations, educational projects, and nonviolent social movements, are creatively developing different initiatives toward a future as a sustainable and environmental-friendly country (i.e., Colectivo Agroambiental 2013), and are avoiding the risks of losing its rich bio-cultural diversity, one of the highest in the world (Maffi 1998, 2005). For example, since 2012, the authors of this chapter have witnessed a similar process in the defense of the Dormilon River and its ecosystem by the local members of the municipality of San Luis, Antioquia, against a private energy company. In this situation, the legal process favored the local community claims (Gómez 2015).

Creativity Within Industrial and Neoliberal Paradigms

Acknowledging the social nature of creativity, Glăveanu (2013, 2014) proposes a *five A's model* that defines creativity in relation to (at least) five elements: actors, audiences, artifacts, actions, and affordances. These elements are relational in nature: actors are defined by their interaction with audiences, action engages existing affordances and generates new ones, artifacts can become agents within creative work, and so on. We recognize the *relational* character of this creativity model; however, what we see missing in this conceptualization is how to interpret the conflicts that emerge between elites in power and the social groups resisting their oppressive practices, the ones that keep the oppressed in poverty.

The case of *La Colosa's* mining project is an example of the kind of conflicts resulting in the use of creativity by one of the actors to oppress and control rural communities. Practices of oppressive creativity are also manifestations of

ways the industrial and neoliberal sociocultural paradigms come into play in the life of community members in rural Colombia. These paradigms driven by positivist assumptions about knowledge and about the relationships among persons, society, and nature come to underline the way creativity is understood and practiced. Within these paradigms, the following constructs frame the understandings of creative actions: (1) first, the primacy of humans over non-humans and ecosystems; (2) second, the treatment of non-mainstream groups as different and inferior as a result of and through the imposition of knowledge–power relations; (3) third, separation of nature and culture; (4) fourth, the priority of the autonomous individual over community well-being and goals; (5) fifth, the belief in objective knowledge, reason, and science as the only valid modes of knowing and creating; and (6) finally, the cultural construction of the economic system as an independent and self-regulating entity outside of social relations. The individual is subordinate to society as a whole as s/he is mainly seen as a “cog” in the larger economy and competitive system (Bertrand and Valois 1980, 1992). With globalization, the industrial paradigm has been reframed within the values of neoliberalism (Paquette and Fallon 2010; Restrepo Botero 2003).

Neoliberal societies redefine all social domains (among them creativity) in terms of the economic, a domain best governed by the rational choices of entrepreneurial individuals. In this discourse, society becomes synonymous with the market, and individual advantage prevails over concern about the common good and well-being. Lying underneath all these various meanings, neoliberalism suggests an indirect form of control through economic and cultural dependence—it describes the continued control of former colonies through ruling local elites compliant with neocolonial powers—over populations that are exploited for their labor and resources (Ashcroft et al. 1998).

Basically, neoliberal societies expand economic rationality to all spheres of human actions/interactions (Escobar 2010). In the former European and Anglo-Saxon colonies, neoliberalism builds upon what Latin American scholars have called the paradigm of modernity/coloniality (Escobar 2005, 2007; Santos 2006). After revolutions leading to independence and the abolition of slavery in Latin America, the European and Anglo-Saxon elites found very creative ways of keeping their business flourishing in their former colonies by making alliances with local governments and passing laws that benefit their economic interests over the common good of local populations. Through the discourse of neoliberalism and the free trade agreements, these elites have been succeeding at promoting unsustainable export-led growth and extraction of natural resources, while maintaining exploitative labor relations and severely risking highly diverse ecosystems (Ismi 2015; Restrepo Botero 2003; Ahumada 1996).

In Colombia, like the rest of South America, it has largely been transnational agro-industrial capitalists who have been able to take advantage of, and benefit from, the new opportunities opened up by the liberalization of markets and globalization. The financial, organizational, and technological requirements for agricultural intensification and export production have been imposed largely against the will of Indigenous, Afro-descendant, and *Campesino* communities and remained beyond their reach (Kay 2004; Rubio 2001), while their diverse ways of small-farming and interacting with nature are labeled as “primitive” and “undeveloped”. These communities are against extractive economies and monocultivation because of the destruction of the soil, forests, and sources of water (Aguayo 2015). In addition, the territories that feed them and allow them to re-create their culture are taken in the name of “development”.

There is a correlation between extractive economies like Colombia’s and other countries in South America and low overall standards of living, income inequality, a high poverty rate for the majority of the population, and increased risks for biodiversity (Escobar 2005; Kohl 2004; Kohl & Farthing (2006); Kohl et al. 2011). Much of the current extractive industry is capital-intensive with limited linkages to other sectors, which contributes to its inability to support self-sustained economies within rural communities. Sassen (2014) questions the use of the notion “development” to designate predatory actions against the earth and the displacement of entire rural populations. When resistance movements emerge, corporations and their allied governments co-opt discourses and organize commercial campaigns to show to the public that they are providing jobs and there are no reasons for the denounced lack of social responsibility (Toca et al. 2012). In her work, Lindner (2012) refers to this process as the “art of domination”—the use of innovative, subtle, and covert approaches by the elites to gain control over entire populations. Furthermore, strategies that have economic growth as a principal objective have come to define the purpose of education and creativity in societies and development policies of the South, seeking to bring more people into the consumer capitalist economy and mechanizing production, many times at odds with environmental sustainability, local practices, and well-being needs (Gentili 2004, 2015).

Creativity from the Perspective of Decolonial and Symbio-Synergetic Paradigms

For us, the territories are for life, that is, the territories should be for the people. For the neoliberal model, instead, the territories are not for the people, they are worth if they represent an economic interest, if there are minerals in the territory. For those

*who are in this logic of accumulation the territory does not matter; they are gone after ten years of taking all the economic value out. For us, instead, the territory is life for our children and their offspring. (...) That is why we so strongly defend our territory, because for us the land is life, not only material life but also the spiritual, that kind of feelings, thoughts and relationships that go beyond the physical. (Roberto Daza, Colombian agrarian leader)*²

The case of *La Colosa* is an illustration of how the resistance against the negative social and environmental impacts of colonialism and neoliberalism can take different expressions. Some might fall prey to rage and destructive actions, while others might fight for reforms and forms of inclusion that do not always imply transforming the status quo. In this section, we take our inspiration from the learnings of many Latin American Indigenous, Afro-descendant and *Campesino* (small farmers) communities, who, while still defying oppression and expropriation of territories, keep re-creating, re-constructing, and re-inventing personal, community, and societal life, based on (re)establishing balanced relationships among humans and nature (see, e.g., Hidalgo et al. 2014; Tapia 2008; Via Campesina 2015; Walsh 2013). The case of *La Colosa* provides an example of the possibility for communities of shifting from a process of creative resistance to one of creative transformation as different academic and environmental groups are engaged in the creation and implementation of new strategies to address the necessity for small municipalities of defending and protecting the integrity and quality of their local ecosystems from uncontrolled economic development (i.e., The Water Festivals for the defense of the territory).³ These experiences reflect what we see as an expression of a different understanding of well-being and development grounded in what is called ‘*Epistemologies of the South*’.

Santos (2012) described the conceptual and practical dimensions of ‘*Epistemologies of the South*’ in these words:

By epistemology of the South I mean the retrieval of new processes of production and valorisation of valid knowledges, whether scientific or non-scientific, and of new relations among different types of knowledge on the basis of the practices of the classes

²Our translation from the original in Spanish; cited by Laura Quintana in “La desolación de La tierra y la sombra”, *Palabras al Margen*, Bogotá, 14 agosto 2015, p. 1. Available in: <http://palabrasalmargen.com/index.php/articulos/nacional/item/la-desolacion-de-la-tierra-y-la-sombra>

³VI Festival del Agua en defensa del territorio, San Carlos – Antioquia. [Kavilando.org](http://www.kavilando.org). October 31, 2014. Available in: <http://www.kavilando.org/index.php/2013-10-13-19-52-10/formacion-popular/3091-el-sexto-festival-del-agua-en-defensa-del-territorio-san-carlos-antioquia>. VI Marcha Carnaval en defensa de la Vida, el Agua y el Territorio, Tolima, Tejido de Comunicación ACIN. 9 de junio de 2014. Available in: <http://www.colectivodeabogados.org/?Las-comunidades-del-Tolima>

and social groups that have suffered, in a systematic way, the oppression and discrimination caused by capitalism and colonialism. (Santos 2012: 51)

How do some societies understand ‘progress’ when it means the destruction of others and the environment? Here, we need a decolonial perspective. According to Alban (2013:452, 455), decoloniality is the process through which we recognize other stories, paths, and ways of being in the world other than the rational logic and cultural expression of contemporary capitalism. It also means restoring the human dignity of those who were considered inferior or non-humans and violently oppressed by the narratives of the modern/colonial hegemonic project. It is worth remembering that, in a country like Colombia, the Indigenous and Afro-descendant people had their rights to their own language, culture, and territories legally recognized in the constitutional reform of 1991. However, these rights are still not fully enforced by the government. For Alban, creativity from a decolonial perspective should open scenarios for discussion of social exclusion, racialization, genocidal violence, reaffirmation of stereotypes, and authoritarianism. It should also reveal, problematize, and challenge the established order. Decolonial creativity should contribute to the resistance and re-existence of communities who were silenced and made invisible.

Walsh (2015) invites us to see creativity from these epistemologies of the South or decolonial pedagogies, which are not only pedagogies of resistance, but also re-existence; they are thus much more than a reactive response to and against oppression: “The struggle of Indigenous peoples is about decolonization; that is, to confront the structural problem of the ‘colonial tare’, which means to resist, but also to fight for and contribute to the building of decolonial conditions and possibilities” (3). The notion of Mother Earth is central for Indigenous, but also for Afro-descendant cosmovisions; there is no division between humans and nature; they are connected in all aspects of life: cosmic, physical, affective, spiritual, cultural, and existential (Walsh 2011). The notion of ‘*buen vivir*’ (collective well-being) does not assume a stage of under-development to be overcome. It refers to a different philosophy of life: a fruitful interdependence of humans and communities with the natural environment. This is a central point: the economy is seen as embedded in larger social and natural systems (Escobar 2010).

Bertrand and Valois (1980), in response to the negative impacts of the industrial model of development on the sustainability of ecosystems, also introduced the notion of symbio-synergy as a paradigm promoting a sustainable interdependence between human beings and nature, in which the opposition among persons, society, and nature becomes minimized in a com-

prehensive ecosystem. Culturally and educationally, this paradigm requires a corresponding inventive educational model in which learners develop their capacity to collaboratively create new alternatives. Such a paradigm promotes the value of diversity of perspectives in the co-construction and/or co-creation of knowledge. This view also brings into focus the role of collaborative learning in the creation of many options for collective decision-making and problem-solving for a given issue (Paquette and Fallon 2010). The shift from an individualistic to a collaborative paradigm implies rethinking creativity against atomistic and positivistic standpoints and acknowledges the social nature of creativity as resulting from human interaction and collaboration (Glăveanu 2009). Contrary to a dominant I/He-paradigm, a We-paradigm recognizes that “creativity takes place within, is constituted and influenced by, and has consequences for, a social context” (Westwood and Low 2003: 236, as cited by Glăveanu 2009: 5). This means adopting more holistic and systemic ways of looking at creativity, a process that emerges out of transactions between self and others, self and environment. However, we need to be aware of the illusions of a ‘*We-paradigm creativity*’ when the dominant conditions are asymmetric and oppressive, such as the ones described in this chapter as conditions of living specific for the South. Who defines the ‘*We*’? Current discourses on development, social responsibility, and sustainability manufactured by transnational corporations use a ‘*We*’ slogan to persuade local governments to allow the establishment of their industries in rural areas labeled by business interests as poor and under-developed. Their goal is to profit from cheap labor and territory expropriation (see Escobar 2007).

In creating alternative proposals from the perspective of epistemologies of the South, Santos (2012: 51–58) suggests the following steps: (1) making visible what has been invisible (the sociology of absences), (2) creating alternatives to present realities (the sociology of emergencies), (3) recognizing the existence alternative ways of knowing and working (the ecology of knowledge), and (4) promoting a dialogue between various transformative experiences of the world (intercultural translation). Similarly, Fals (1987); Fals & Mora-Osejo (2004) called for a North–South convergence for meaningful research for social justice to support the poor peoples (which are the majorities of the world) to exercise their human and social rights. As formulated elsewhere Glăveanu and Sierra (2015), the epistemologies of the South decolonize our knowledge of creativity by uncovering its sociocultural and ideological foundations and, simultaneously, conceive alternative spaces for thinking and acting outside mainstream systems of thought that validate oppression and exploitation.

Today, we are seeing the emergence of many initiatives around the world that provide a counter-narrative to the industrial and neoliberal model of development and well-being. Just to give a few examples, *agroecology* and *family agriculture* are emerging as a new culture in food production that promotes creative ways of enhancing the sustainability of agricultural systems by mimicking natural processes and strengthening the cultural value of *Campesino* life. It is receiving increased attention considering the massive soil deterioration caused by monoculture practices (Peterson 2011; Via Campesina 2015). Concerning the relation between nature and humans beings, *eco-feminism* calls our attention to the ideological connection between the exploitation of nature and the exploitation of women; how the negative impacts of environmental degradation and the logic of accumulation and growth affect mainly the women and impoverished communities of Third World countries (Herrero 2015). Initiatives toward strengthening local communities from an *endogenous development* perspective based on a dialogue between knowledge systems and the co-creation of educational, health, and economic initiatives are also offering promising answers in this regard (Haverkort and Reijntjes 2007; Haverkort and Rist 2007; Haverkort et al. 2012).

We are located in the midst of all of those transformative alternative ways of looking at reality while belonging to and working within institutions, as universities, that are not always spaces conducive to such transformations. We are trying to actualize a research process that is collaborative and transformative, leading to the co-creation of knowledge with rural communities. Such a research process is addressed in the following section.

Co-Creating a Community-Based Research Project with Diverse Colombian Rural Communities

In this last section of the chapter, we give an account of an ongoing Colombian community–university engagement initiative (started in 2013) as a practical example of one of the ways of actualizing the notion of creativity as a collaborative and transformative practice (Sierra et al. 2015).

This community–university engagement initiative focuses on the collaboration between institutions and communities, considering all participants as equal experts in the co-creation of knowledge and innovation. Innovation processes develop from the sharing and creation of knowledge across socially and culturally diverse participants in terms of age, gender, leadership position, schooling, and practical experience. In these situations, knowledge has to be

continuously negotiated through interactive and collaborative processes. Our project involves different partners from national and international universities, international NGOs, a Colombian government office, and leaders from rural community-based organizations (Indigenous, Afro-descendant, and *Campesino*) from the Andean, Pacific, and Amazonia regions.⁴ This partnership is oriented at building up capacity in the case of rural communities by developing sustainability policies and practices from an endogenous perspective. The latter is understood as a community process of defining and working toward plans about sustainability of bio-cultural diversity, taking into account local values, priorities, knowledge systems, and forms of organization and practices. Territorial governance, human rights, sustainability, economic challenges, health and well-being issues, ancestral cosmovisions, and creative pedagogies, among others, are some of the primary issues being addressed in this research and educational partnership. Members needed to come to an agreement on the primary research topics, methodology, and diverse activities to be implemented throughout the course of the project.

This ongoing research partnership aims at: (1) analyzing existing sustainability policies and practices in culturally diverse rural groups in Colombia; (2) strengthening the capacity of Indigenous, Afro-descendants, and *Campesino* communities in the provinces of Antioquia, Chocó, and Putumayo to resolve sustainability challenges linked to their cultures and the biodiversity of their natural environment; (3) identifying and understanding different conceptions and practices of sustainability in academic and non-academic communities in Colombia; (4) developing a model for community–university engagement practices that allows for the integration of the needs and perspectives of rural people in the development process of sustainability policy; and (5) raising awareness by government decision-makers about the importance of integrating rural community perspectives and priorities when developing policies related to sustainability.

We see this community–university engagement as a creative collective transformation aimed at interweaving a complex synergy greater than the sum of its parts. For us, the purpose of experiencing creativity as a transformative and collective social practice has been to increase and strengthen rural communities' capacity to reflect on and respond creatively to changing circumstances that affect their overall well-being and development in their own territories. Also, to transform university practices which have not acknowledged the existence of the realities of rural communities. Such collective creativity has been practiced within a rich sociocultural context with diverse vantage points,

⁴ See the names of participant organizations and institutions in the acknowledgments at the end.

interests, perspectives, values, power positions, inequities, beliefs, and needs among diverse rural Colombian communities.

We came to recognize that sites of co-inquiry, co-learning, and co-creation of knowledge involving partners from institutions and communities are contested terrains that require a more nuanced and open-ended conceptualization, grounded in the everyday world and lives of rural communities. Community engagement processes cannot simply be explained in traditional rational terms (i.e., that the dialogue among partners smoothly generates the most rational solutions to conservation challenges faced by biodiverse contexts). We came to see any community–university engagement process and the collective practice of creativity in a society like Colombia as complex, messy, and contested, involving negotiations, power plays among partners over control of limited resources, divergent understandings of development, biodiversity and conservation challenges, and conflicts over potential power inequities.

Our experience of co-creating a research project focusing on rural Colombia led us to view the transformative practice of creativity (as opposed to the creativity of oppression) as a learning and knowledge process that integrates diverse interests, perspectives, constructions of reality, values, and actors while changing inequalities and inequities affecting marginalized communities. Through this partnership experience, we are learning the multi-staged, developmental, and iterative nature of community–university engagement processes. Such a collective practice of transformative creativity takes place within highly interactive environments which might shift in unpredictable ways and require from participants or partners a commitment to remain open to ongoing dialogue, flexibility, and creative problem-solving. For example, members of our collective engaged in *co-creating ideas* in addressing the need for new post-secondary community-based programs aiming at enhancing the capacity of local rural communities to address issues of conservation of biodiversity from an endogenous development perspective. We all agreed to begin with the development of outreach community-based programs by: (1) training a team of collaborators from partners in a seminar about diverse paradigms of development and sustainability, and (2) involving a group of leaders from each participating rural community in discussions leading to the creation of alternative educational programs. We agreed on specific topics as frameworks to guide the development of these initial programs. These topics were: (1) land management and economy, (2) governance and rights, (3) pedagogy and culture, and (4) health and well-being. Following this phase of co-creating ideas for curriculum development, we translated the latter into collaborative actions, and testing them in an attempt to meet the policy challenges of bio-

diversity conservation and people's well-being in participating rural communities. One of the results of this experimentation phase was the creation and implementation of a diploma focused on the capacity development of participating rural communities to diagnose, design, and implement alternative and innovative solutions to their own sustainability challenges.

Concluding Comments: Trends and Challenges Ahead

Through this chapter, we wanted to further develop what Glăveanu (2014) calls the *five A's model* that defines creativity in relation to actors, audiences, artifacts, actions, and affordances. Based on examples of community struggles against inequities and inequalities in rural Colombia (as illustrated in the case of *La Colosa*), we expanded the relational model of creativity by addressing the paradigmatic foundations of the various forms that creativity might manifest within itself in situations of conflict. That led us to look at processes of creativity from a perspective of oppression, resistance, and transformation. We have defined the notion of creativity of oppression as practices used by local, regional, national, and international political and business elites to access to cheap labor and natural resources of the South (Escobar 1998a). By creativity of resistance, we referred to strategies and practices used by individuals or groups to oppose imposed models of development and well-being upon their communities by the political and business elites. Finally, we addressed the notion of transformative creativity as a process of challenging and transforming top-down political, economic, social, and cultural approaches by individuals acting collectively and to reimagine local realities away from oppressive and impoverishing living conditions. We also discussed transformative creativity as a learning process driven by values of complementarity and unity in diversity, self-determination, solidarity, and of interdependence between society and nature (Walsh 2015).

As echoed in the work of Santos (2006) and Escobar (2005), we also argue that the purpose of collective transformative creative actions within rural communities of the South is to construct spaces for actions that go beyond the industrial/neoliberal paradigm of modernity, and this in two ways: epistemologically and sociopolitically. Epistemologically, learning critically from a plural landscape of knowledge forms and experiences around the world to break unequal conditions and build community well-being. Socially and politically, transcending the hyper-marketization of all aspects of life and

strengthening alternative forms of livelihoods, more sustainable and respectful of the environment.

The Colombian response to new and deepening sustainability challenges, as illustrated in the case of *La Colosa*, will continue to require innovation and adaptation throughout every social sector, and especially in education. This means considering the views and participation of Indigenous, Afro, and *Campesino* communities who are central in this equation and have been historically ignored in decision-making. To remedy this situation, we will still need to continue to transform the community and university relationship in a way that is conducive to an ongoing cross-cultural and trans-disciplinary dialogue we deemed essential in developing an in-depth understanding of complex socio-ecological, cultural, political, and economic environments. We think that the ongoing research project on community–university engagement that we presented at the end of this chapter is making a contribution in opening up spaces within academic and non-academic communities for a more equitable discussion, dialogue, and action on sustainability and community development by making visible and possible the prospects for action of those located outside current neoliberal dominant views.

However, we believe that there are still questions to be addressed in furthering our discussion about forms and purposes of creativity: What kind of pedagogical and research challenges are being posed to the educational system by those voices traditionally silenced within academia and educational institutions? How could we enhance creativity in diverse learning settings (schools, families, and their communities) in light of the current global environmental crisis and the worldwide economic imbalances between the haves and the have-nots? We believe that the protection of culture and biodiversity in Colombia still requires the creation of alliances against all forms of oppressive actions through transformative creative practices. Therefore, all of us, whether we belong to a minority group or not, are called to support the efforts of vulnerable groups against colonialism. In return, we will be able to take part in more equal intercultural and creative exchanges, full of meaning and mutual enrichment.

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18

Creativity with a Danish Edge

Lene Tanggaard

Introduction

When I was invited by the editor of the present Handbook to write about creativity in Denmark, that is, the practices and the conceptions of creativity in Denmark, I thought at first it was an odd task. Why this connection between what some would see as a relatively common, universal human phenomenon—the ability to act in and on the world in new ways (Mason 2003)—and a particular nation? However, thinking about the question and the more specific suggestion from the editor that I should write about creativity in general but taking my starting point in the case of Denmark, I realized that creativity is in fact very much part of the Danes' history and the way they think about themselves. Due to the fact that we are a small country without plenty of natural resources, we have always had to be on the frontier of new thinking, and we are known for our rich craftwork and design tradition (Kingsley 2014). It is indeed very hard to tell the story of Denmark without mentioning creativity. In fact, this link between creativity as a concept and phenomenon *and* a nation's self-understanding is undeniably quite interesting because it

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links creativity to the construction of collective identity. It would perhaps be an overstatement to say that Denmark is a more creative nation than many others, but Denmark has consistently been placed in the top five in various rankings over the years concerning approaches to fuelling creativity and innovation¹. If you take into account the fact that Denmark is only home to about six million people, the accolades are even more puzzling. What makes for these creative achievements?

In this chapter, I will explore and describe a possible Danish model for creativity and argue that such models can teach us more about the social and cultural dimensions of creativity underlined by various recent researchers on creativity (Tanggaard 2013, 2014; Glăveanu 2014; Valsiner et al. 2015).

Linking National Branding and Creativity

In Denmark, the concept of creativity is often linked to stories about collaboration, low distance of power, quick interchange of knowledge, learning across sectors and the conceptualization of new products and designs on ‘the edge of the box’ (Tanggaard and Stadil 2014).² The studies presented in this chapter furthermore indicate how a sense of freedom, equality and low power distance, together with a certain emphasis on craft and design, nurture the Danish self-conception of creativity. Such conclusions are supported by a recent interview study involving 25 Danish cases of creativity (op. cit.), combined with an exploration of selected media representations of creativity in Denmark found by searching the database *Infomedia* covering Danish media, newspapers and magazines, for the period from April 2013 to April 2014. Combining the two data sources, an argument for the particular linkage between creativity, freedom, low hierarchy, craft and design in Denmark will be put forth as follows. Furthermore, the chapter will discuss how these representations of creativity are in fact a constitutive part of the cultural and historical dimensions of creativity in practice. Theoretically, the chapter draws on a recent paper by Glăveanu and Tanggaard (2014) addressing social representations of creativity and how they inform and translate into practices involving creativity.

¹ <http://www.bloomberg.com/graphics/2015-innovative-countries/>; <http://studyindenmark.dk/news/denmarks-takes-4th-place-in-global-creativity-index-3>

² <http://www.copcap.com/BusinessOpportunities/creative-industries/Background>

Creativity is Here to Stay

Creativity is here to stay. In today's creative economies, creativity and improvisation are no longer luxuries of the few but have become necessities for all (Csikszentmihalyi 1996). As such, the creative man, woman, nation, society or company have become the ideal as the knowledge society supplements or simply changes the industrial society. This presents a challenge to many countries in Europe characterized by relatively high income yet scant natural resources. We cannot compete internationally on the basis of low wages, mass production, or the hope of finding undiscovered natural resources. We need other capabilities. This chapter presents the case of Denmark, and how creativity is represented in Denmark, both historically, by public media, and by creative actors themselves situated in a Danish context. The chapter draws largely on the theory of social representations (Moscovici 1981, 1984, 1988, 2000) and articulates a socio-cultural model of creativity (Glăveanu and Tanggaard 2014; Glăveanu 2014; Tanggaard 2014).

From this perspective, being a 'creator' involves identity work (both individually and, in this case, as a nation) and recognizing creativity itself as, fundamentally, a social category. The creative person and, by extension, community and even nation, far from existing as an isolated unit, is a *social actor* able to (and, in today's world, compelled to) co-construct his/her/its own sense of creative value in communication with others and in relation to societal discourses about what creativity is. Ultimately, there is creativity as well in the construction of discourses on creativity and, taking a closer look at these construction processes of national creative identity, is my aim in this chapter. Before presenting this approach in more detail, a short introduction to the case of Denmark is in order.

The Case of Denmark

Denmark is a very small county (43,098 square kilometres) situated in the southern part of Scandinavia in Europe. Denmark has 5.5 million inhabitants. On the official webpage of Denmark, one can read the following:

Denmark is one of the world's oldest monarchies with a history that stretches back to the Viking Age around the year 1000. Danish society rests on the foundation of the Danish Constitution of 1849, and the political system has since been characterized by broad solutions across the political divide. Denmark is often cited as one of the world's best countries to live in. The strong welfare state

ensures economic equality in society and the virtual non-existence of corruption, while polls repeatedly show that the Danes are among the happiest people in the world. Many think of furniture design and architecture when they think of Danish lifestyle and culture. Yet today, Denmark is perhaps equally famous for food, films and sports. The world's best restaurant "Noma" has introduced a whole new way of cooking with New Nordic Cuisine. Filmmakers such as Lars von Trier and Susanne Bier have won a multitude of international awards, and one of the world's best female tennis players, Caroline Wozniacki, is Danish.³

Keywords in this very brief story of Denmark seem to be furniture, architecture, film, Nordic food, equality, welfare and happiness, all of which are often connected with creativity. The fact is that Denmark has never had vast amounts of natural resources and so has always had to rely on its creative capabilities (Tvede 2014). To add to this story, we have a long tradition of collaboration across national borders, which is a necessity for a small country such as ours. This has offered us a unique capacity for collaboration. In Denmark, the gap between ruler and citizen has always been small. Most municipal authorities today are active on social platforms, on which they provide space for citizens to offer input and criticism. We place a great deal of trust in the sitting government and in the public sector as a whole (Tinggaard 2014). Because of high levels of taxation, the differences between social classes are small, which has strengthened our tradition of working together and supporting one another. Expressions of this are found in the flourishing of community organizations and in the country's exceptionally strong tradition of cooperative movements. Denmark was among the first countries to give women the right to vote, partially in 1909 and fully in 1915. Written pornography was legalized in 1967 and visual pornography in 1969, and in 1989, Denmark became the first country in the world to permit homosexuals to enter into registered partnerships. Besides, Christiania—perhaps the world's only free-state—is located in Denmark's capital city, Copenhagen. As will become clear over the course of this chapter, this open, cooperative, autonomous and small power differential society is reflected in—and indeed, permeates—the stories we tell about creativity, both implicitly and explicitly. Historically speaking, Denmark has been very active and has even taken a leading role in some areas, such as the food industry, the maritime sector, the pharmaceutical industry, renewable energy and global niche businesses. Denmark has been at the vanguard of particularly creative industries such as gastronomy, film, music, media, architecture, design and furniture. Danish film and architecture win international

³<http://denmark.dk/>

acclaim and contribute to value creation, growth, exports and the retaining of jobs in the country. Already in 2008, the Danish Business Authority concluded that companies with a high degree of input from the creative industries are 12 % more innovative in terms of products than are other businesses and that the companies that do best are those that have more employees with creative educations and more people employed in creative work functions.⁴

What the above indicates is that creativity is not only linked to individuals but also dependent upon indeed embedded within *social structures*. What kind of theoretical model this combination addresses is the theme of the next section.

Social Representations of Creativity

In this chapter, I'm proposing a conception of socio-cultural creativity that draws largely on the theory of social representations (Moscovici 1981, 1984). From this perspective, being a 'creator' involves identity work and identity itself is fundamentally a social category. The creative person or nation therefore, far from existing as an isolated unit, is a *social actor* able to co-construct a sense of creative value, over time, in communication with others and in relation to local and global discourses about what creativity is. In the end, there is creativity in identity construction just as identity construction is achieved through creative expression, even in its most mundane forms. Most importantly, identities conducive for creative performance are not just 'given' but built in continuous interactions with others, interactions that are often marked by struggles and resistance. What might seem odd in this approach is that it diverges from the usual conception of creativity within psychology in which there is "a more or less implicit belief that *it is the individual mind doing the creating*" (Glăveanu 2014, p. 7). Related to this belief is the notion that society and social structures often undermine or hinder individual creativity seen as a separate system localized at the individual level (Nielsen 2009). In contrast, it is proposed here that these social structures are themselves creative or generative, and their very construction is itself a creative process.

In the case of Denmark, building a national identity as the happy home of creative individuals and industries can be conceptualized as a creative process leading to an evolving 'product' (an identity) that is in certain ways conducive for its inhabitants as it enables them to participate in

⁴<https://erhvervsstyrelsen.dk/sites/default/files/vaekst-via-oplevelser.pdf>

further creative processes. All of this implies a shift from a person-centred to a social perspective on creativity as a phenomenon (John-Steiner 1992). This also means that the material, historical aspects of creativity come to the foreground of the analysis (Tanggaard 2014), allowing us to develop a distributed approach to studies of creativity, emphasizing creativity as a phenomenon that exists in the relation between people (Glăveanu 2014), in this case between person and nation. As such, a nation's creative identity (or, rather, identities) is considered representational projects engaging the self in dialogue with multiple others (both from the in- and out-group) about the meaning of creativity as constructed in societal discourses. This simultaneously personal and social project depends on others not only for its development, but also for its success (see Tanggaard and Glăveanu 2014).

In the case of Denmark, Hans Hauge (2013), in a book entitled *Denmark*, has argued that it was artists, the church and the folk high-school that created our sense of national identity particularly in the romantic movements of the 1800s and onward. In this sense, our present day idea of Denmark is a romantic one. This identity was expressed in national songs, lyrics and fairy tales creating storylines about what it means to be Danish. Thøger Larsen's song "Du danske sommer, jeg elsker dig"⁵ was written in 1923 and is today very much part of our struggle to love summer regardless of the weather (Hauge 2013, p. 8). Kai Hoffmann wrote how singing could be compared with a young, blond, Danish girl: "Den danske sang er en ung, blond pige"⁶. Beautiful, young girls are in this way connected to the national representation of Denmark by authors and composers (who were, in most cases, men). In this sense, during the 1800s, elites of priests, artists, composers and intellectuals began to think, speak, paint and compose using more and more the Danish language and in this way created a more common understanding of what it means to be Danish. The case in point is not that this national identity is a unitary, coherent and stable project, but that it is continually created, historically contingent, heterogeneous and contested, but nonetheless canonized and expressed in concrete cultural artefacts and therefore visible and open for (re)interpretation. What it means to be Danish is not written in stone, but seems much more to be connected to and created by cultural artefacts representing particular ideas of 'Danishness'.

⁵Danish summer – how I love you!

⁶The Danish song is a young, blond girl.

The Danish Edge of Creativity

In an attempt to understand the current link between Denmark and creativity, illustrated, for example, by the brief presentation on the nation's webpage cited above, two different empirical cases will be presented in this section.

The first case involves a study of popular media representations of Danish creativity found within a one-year period, from April 2013 to April 2014, tracing also the linkages between Danish creativity and other key terms. The second case is represented by an interview study with famous Danish creators recognized for their creative outputs in various areas.

Popular Representations of Danish Creativity

The database Infomedia covers all media, newspapers and magazines in Denmark. For this reason, this database is a relevant choice when studying popular representations of creativity in Denmark. In an attempt to explore the possible links between Denmark and creativity, I decided to consult the database using these as keywords on 7 May 2014 for the period from 7 May 2013 to 7 May 2014. Initially, I wrote the keywords *Denmark and creativity* in the search field in the database and 54 hits showed up. I went through each of these and explored the exact representation of creativity related to Denmark in each paper. More than 50 % of these covered newspaper articles on advertisement, the media and design domain, others addressed Danish architecture and fashion and five papers referred to school issues and in particular a discussion asking whether the strong emphasis on PISA in the political discourse prevents a focus on creativity. In relation to arts and design, which are topics covered to a large extent in the media, a very popular debate is whether creativity is connected to crafts or not. Searching for the words *creativity and craft*, the result was 164 hits for the same period.

For example, one article had the title: 'Creativity is still a craft'.⁷ In this particular paper, the overall argument is that creativity springs from good craftwork and original ideas, and that new technologies invite us to think mainly in terms of quick fixes and decrease authenticity. This article also reports from Adobes Creative Days in Stockholm, where many key people from the Nordic countries gave talks on how they work with creativity. For example, the Danish multi-artist Henrik Vibskov, fashion maker, teacher and drum player for Anders Trentemøller, emphasized the importance of craftwork. He

⁷<http://markedsforing.dk/artikler/international/kreativitet-er-fortsat-et-h-ndv-rk>

recognized the importance of new technology in materializing ideas; however, in the concrete process of creative work, he often draws quick sketches by hand which he then hands over to co-designers working further on the first, initial drawings by using computers. He actually compared this practice to teaching, where his creative co-workers are guided into creating the 'right' kind of creative expression carrying the Vibskov signature. However, in Vibskov's opinion, the computer can be too effective because it seldom makes mistakes. According to him, craftwork implies small mistakes, creating the authenticity characteristic of craftwork and therefore, sometimes, his team makes deliberately mistakes on the computer to create the illusion of craftwork.

The connection between Danish creativity and craftwork is further illustrated by another article reporting interviews with three famous Danish companies recognized for their creative output. One of them is about Le Klint, the Danish lamp and light producer and designer.⁸ The story of Le Klint is the story of a family filled with creativity and with the desire to innovate. It is, furthermore, a family which has left its mark on Danish design and architecture, while still managing to combine this with entrepreneurship meaning that his company is today one of Denmark's oldest companies selling lighting and lamps. In the newspaper article, it is emphasized that Le Klint is a company characterized by traditions while still being at the forefront of innovation in its area due to having hired the best architects and designers; at the same time, it is underlined how producing the lamps in Denmark ensures high quality and the combination of design and craftwork. The high quality in creative work is often related to an educational perspective underlining the high emphasis on creativity in the Danish educational system (Glăveanu et al. 2015).

In general, searching the database, a clear linkage between creativity and Denmark seems to be present, often in combination with arts and design and not least handicraft. What I noticed was also a critical, perhaps romantic (going back to the artistic notion of what it means to be Danish) discussion of schooling, in which tests and a big emphasis on performance in relation to functional subjects as language and mathematics are seen as a barrier for the development of creativity and, in broader terms, freedom (from testing and international benchmarking).

An Interview-Study Exploring Danish Creativity

Exploring further the link between creativity and Denmark, in 2012, my co-author Christian Stadil and I published a book about creativity based on Danish examples; a revised edition covering additional stories has been made

⁸<http://boligmagasinet.dk/boliger/arkitektens-hjem-for-originaler>

available in English in 2014 (see Tanggaard and Stadil 2012, 2014). In this book, a basic premise is that creativity is much more a matter of moving along the edges of the box rather than thinking completely outside the box. This argument is supported both empirically and theoretically, the latter by reference to American pragmatism and in particular John Dewey's emphasis on theory as a practical tool helping us act in the world.

But why did we focus on a series of creative Danish products and personalities? In the first instance, we did so because there is much we can learn from listening to their experiences with working creatively in real life, outside the confines of creativity research labs. In addition, as we ourselves are based in Denmark, it gave us the opportunity to discover the key components of a possible Danish model of creativity. We did not try to draw up a generic, cookie-cutter Danish formula for being creative, but the stories carry a certain Danish flavour, connecting in particular to the collaborative and collective nature of creativity mentioned before and discovered through the interviews. In Denmark, there is a rich tradition of involving employees in strategy development, from the highest to the lowest levels of the organizational hierarchy. Our claim in the book is that these 'short distances' between levels promote creativity because they allow genuine knowledge to flow from the bottom to the top and *vice versa*, which is essential for actually creating something of value relative to particular topics, particular settings and particular fields of interest.

Creating at the Outer Edge

One of the best current examples of creativity in Denmark is the crime series for which Danish Radio Drama has become famous around the world (e.g. 'The Killing'). During our interview with the director of many such series, Ingolf Gabold admits that he hates the genre:

"Detective and crime dramas are some of the most boring programmes I can imagine watching. The police ones are the most boring of all. 'Bang bang. You're under arrest.' Detective and police dramas are never off the screen these days," Ingolf says. "When I began as head of drama at DR, we broadcast the 'Rejseholder' ('Unit One') series, which, on the surface, was about the Police Commissioner's Serious Crime Squad in Denmark. So that's officially what the series is about. But what really fascinates people is psychopathy. In other words, the warped mind of the criminal and minor sociopathic/psychopathic tendencies. Outwardly, what we're watching is the story of the crime investigators Fischer and La Cour, but it's the things going on under the surface that are driving everything." (Tanggaard and Stadil 2014, p. 170)

Being active and creating at the edge is all about using a conventional concept—TV Crime or Crime Squad-type stuff—while actually telling a whole set of other stories underneath it all. Here, we have a concrete example of traversing the edge, namely, the edge of the crime genre. Otherwise, is there any reason why we would all be cheering the arrival of yet another TV crime series? Or, as Ingolf puts it, “We have access to hundreds of English-language crime series on the goggle box every evening. My point is that we hang in there as viewers precisely because DR dramas are not simply crime thrillers”. According to Ingolf, the insane element must be present; otherwise, the crime genre is uninteresting.

During our studies, we found a good spread of creativity along the edge of the box in other areas of our empirical research not related to the crime genre. At present, the Danish toy-company LEGO is being successful in its move to re-embrace its traditional brick and not stray too far away from this concept. The Danish restaurant Noma (again and again nominated as the world’s best restaurant) moves along the creative edge by using Nordic cuisine as its ethos and gradually modifying it. Royal Copenhagen, meanwhile, has designed a new porcelain series by enlarging the original blue-fluted design.

In the book, we argue that it is worth dwelling a little on the LEGO example. How has LEGO succeeded in maintaining sales of the play bricks and renewing its brand on the basis of little bits of plastic? The answer is certainly not simple but what is clear is precisely the fact that LEGO is not just about selling play bricks—just as DR does not just show detective series. LEGO sells stories based around positive and creative play, and the company’s current success is down to its ability to be creative in that area around the edges of the LEGO box.

At the end of the 1990s and beginning of the 2000s, the LEGO company experienced two periods of serious upheaval. In the interview, the designers explain the crisis by arguing that the company had moved too far away from the core LEGO values. Suddenly, there was way too much focus on technology, and to many elements and colours used. This was highly detrimental to the company as a whole. In truth, LEGO had become too creative and had overheated. As one of the measures taken to tackle the crisis, it was decided to purge the number of platforms, elements and colours. The key concept, Torsten (the creative director of Lego) explains, was a return to core values:

There are lots of different parameters at play as far as our success curve is concerned. The most important, however, is that we went back to our traditional strengths and values. We’d become afraid of simply accepting our own strengths and developing them. We shrank back and were fearful of believing that children

around the world were still happy playing with common or garden bricks and had become convinced that what they really wanted was technology. Some of the products at the end of the 1990s were just too far from LEGO's real *raison d'être*. There are a huge number of children out there who really like our bricks. We've got better at concentrating and focusing. We're much sharper at marketing and interaction with businesses all over the world. Both as a business and a customer service, we listen a lot better as well. To be honest, we'd got a bit arrogant. And there were symptoms of this disease that weren't dealt with. (Tanggaard and Stadil 2014, p. 174)

Essentially, LEGO had gone too far over the edge—or if you like, had moved too far away from the box. Now the company is systematically exploring the periphery of the brick concept and concentrating on one simple but central fact: that children still like playing with bricks. And also the fact that parents are happy to pay for quality products for their children. It is noteworthy that LEGO did particularly well during the years of the financial crash in 2009 and 2010. The designers explain this by pointing out that many parents appear to believe that neither financial crashes nor unemployment should be allowed to unduly affect their children and that the play brick was a familiar product to them. So, once more, we hear the lesson that it might not be good to move too far from that at which you excel.

In the book, we continue with an interview with CEO Peter Kreiner from the Noma restaurant. We ask Peter to tell us the secret behind Noma's success. Besides the necessity of control, perfection, limitations, walking along the edge, and close collaboration between managers, what are the important parameters in the creative process?

Peter Kreiner is sure of the answer. He says that, in contrast to his own experience as an apprentice in French and Spanish kitchens, head chef René Redzepi strives to include his employees to an unusually high degree relative to the international restaurant scene. Noma has shrunken the distance between managers and apprentices and is moving along the edge of the traditions that characterize the cooking profession. René demands that his cooks and waiters think for themselves, and he seeks to avoid the kind of negative competitive atmosphere that he particularly recalls from kitchens in France, where all of the cooks battle one another to obtain one of the sought-after chef roles.

Team thinking is important, and René says of his best cooks that they “understand things quickly. They have a sense, a feeling for truth. They're not fixed in their thought processes. They quickly understand the way we do things.” (Tanggaard and Stadil 2014, p. 220).

A skilled cook can quickly find his or her place in the context and understand how things fit together. At the same time, René stresses the importance of skilled cooks thinking for themselves because the last thing he wants is human robots who just follow a recipe to the dot. His cooks need to be intuitive, solid and have the self-confidence to taste and see differences and nuances. These are necessary for cooks and waiters at Noma, and it is clear that the requirement of being able to fit in yet also think for oneself is a decisive one. Creativity—understood as the ability to think differently, innovatively and appropriately—is a requirement in the kitchen, which seeks to live up to the ultimate standards.

Peter explains further:

“Our Saturday Sessions are vital,” he says. “Over the course of the week, selected sections or parties at the restaurant – for instance, the cold party – experiment with a dish that they later serve to René and the sous-chefs on Saturday night. They can do whatever they like with the ingredients and the dishes. Sometimes, it’s just for fun. Other times, we get the feeling we’re onto something. The sous-chefs get to discuss the dish. If it makes it through the eye of the needle, maybe we’ve got inspiration for a new dish for the menu. This way, we also make sure the cooks see there’s space for experimentation and development. We want cooks who can think for themselves. Sometimes, of course, it can be pretty tightly controlled. Obviously, when the guests come through the doors at Noma, they need to get what they expect. Quality and security for the money invested. So we leave some space for more wildness with our Saturday Sessions.” (Tanggaard and Stadil 2014, p. 221)

In general, comparing Noma and LEGO, an interesting aspect of these companies is that they illustrate the importance of both top-down control of and employee involvement in creative processes. The flat leadership structure (with a short distance between top and bottom) is asserted as characteristic for Danish and Nordic businesses more generally. It is precisely this element that the research literature often identifies as decisive for the promotion of creativity (see Mumford 2003).

Another one of our interviewees, Michael Christiansen, is head of the board of Aarhus University and DR and former director of The Royal Theatre in Copenhagen. In this sense, he has huge experience with creating conditions for others to work creatively. In the interview, Michael focused on what he called the Danish model of creativity, and in his opinion, this model is grounded in our flexibility, that is, our ability to adapt and work within a framework that offers freedom of movement.

Michael explains that, at the theatre, he provided his employees and directors with a general frame, specifying the available hours and the budget. The director, for instance, was authorized to work freely within this frame in the sense that Michael did not concern himself with how the work hours were used, as long as the results were delivered: “I was basically indifferent to what they did inside the framework as long as they remained inside it. If they wanted to put on 100 shows and concerts over the course of six weeks or 14 days that was their decision.” (Tanggaard and Stadil 2014, p. 197).

Of relevance in the context of this chapter, we end the book by concluding that some aspects or themes seem to present in all the 25 cases we studied. We collect these terms in what we call the Danish creativity model, for even though these points may be valid in a more general sense, they are derived from stories involving Danes who have succeeded in competing at a global level. The most important of the themes is related to the fact that the creativity of the companies and persons interviewed seem to thrive *on the edge*. In other words, it flourishes on the edge of existing knowledge and concepts and at the boundaries of or in tension with different branches and different employees and areas of life. Many of our interviewees tell us that they are broadly inspired across genres and disciplines—by music, literature, art, film, competitors and colleagues. They sample that which already exists and try to achieve a unique voice. They *redesign, recreate and reform* what is already there. Yet, they do not venture too far from their original voice and special knowledge. Furthermore, *maximized development alongside limitations* represents a powerful combination in the creative process. Sometimes, quantity begets quality: The more ideas you have, the more you can make use of. Other times, limits and obstructions are keys to generating the desire to transcend that which already exists. In companies and organizations, it is vital to frame creativity with clear goals so that people are not improvising ‘out of the blue’ and creativity itself requires managerial drive. If there is no creative drive in an organization, it can nevertheless be encouraged through leadership, whether this takes the form of a greedy force, such as the one Ingolf Gabold describes, or of a framework for creative processes, such as the one described by Michael Christiansen. Managers can promote organizational creativity and innovation by taking the lead (Dahl and Tanggaard 2014). The last point is that there is no creativity without *employee involvement*. We could also word this as, “Danish businesses excel at involving employees and offering them opportunities to contribute ideas and criticism.”

Creativity with a Danish Twist

This chapter explores if and how creativity can be connected to national identity and branding. In this sense, the chapter moves on the edge of the creative individual—exploring how a concept like creativity can be linked with national self-identity or, more specifically, with social representations of creativity that have an identity function at a national level or a company one, in the case of LEGO or Noma. In this sense, the chapter seeks an understanding of how the concept of creativity ‘moves’ in time and is re-constructed in relation to societal representations of creativity taken up by creative actors situated socially, culturally and geographically. However, the aim has not been to look for a ‘national essence,’ and this is important to emphasize. From a traditional and naturalized perspective, creativity is regarded as a natural ability of the individual, something that can be obstructed by culture. This understanding of creativity causes us to focus on individual creation and to overlook the social arrangements that make creative actions possible. In contrast to this individualized conceptualisation, I argue for a collective and situated understanding of creativity in which: (1) People most often work together to create something new; this is the case even if they sometimes work alone and (2) It is evident that the concept of creativity itself is embedded in socially created representations of what it means to produce something new and of value.

A last question might be if connecting national identity and creativity is a positive thing or has only positive connotation as brought to the fore in this chapter, from the example of the country’s profile online to the interview study reported here. According to Ingold and Hallam (2007), a focus on creativity belongs to *modernity’s narrative of the self*. In modernity and in the idea of the modern, we find an underlying assumption of the continual, progressive development of new ideas and a better society. There is great faith that the steady advance of science and technology will ensure a better and more effective society. Enlightenment and education have taught us to also believe that we will create better citizens and a more useful labour force. Modernity is thus constructed upon a fundamentally progressive and creative understanding (Usher and Edwards 2001). My own discipline, psychology, is a child of modernity as well in the sense that—unlike, say, a religious understanding of Creation as having been created once and for all—psychology is built on the idea that the human psyche can be developed, optimized and improved (Taylor 2007). As such, we need to recognize that the connection between creativity and national identity is also a project of modernity, not necessarily one that has positive connotations for everyone or in all situations. Living

with the idea of constant progression may bring people closer to burnout and make us overlook the dark sides of creativity. In this sense, this chapter is not intended to be just another branding of Denmark as a creative nation, but more so to be seen as an exploration of what results from such combinations of creativity discourses and national identity and how this should make us more sensitive to the cultural, historical and social dimensions of the concept of creativity as such. Indeed, creativity is not only dependent on social contexts and relations, but deeply embedded within these, shaping and being shaped by social representations that inform us, individually and collectively, about what it means to be creative.

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19

Creativity and Indian Culture

Nandita Chaudhary and Punya Pillai

The enterprise of academic psychology treats its subjects as predominantly intra-mental creatures, living their lives largely within their own minds. The notion of what Moghaddam calls the ‘embryonic fallacy’ further isolates the way in which a person’s development is understood, separated from connections with others. Embryonic fallacy is the assumption that an individual becomes the source of psychological experiences as soon as life begins (Moghaddam 2010). Traditional psychology has been somewhat limited in perspectives beyond the single person, thereby excluding social and cultural processes. Culture is argued as being something outside of the individual, rather than a system of meanings which humans live by. Part of this enterprise has been to create constructs about individual abilities like intelligence, emotion, and creativity among several others. Much has been written about individual creativity, its training and enhancement during the developing years. The premise of such an enterprise remains intra-mental: that based on certain conditions, combined with pre-existing proclivity, an individual can be

“The singer alone does not make a song, there has to be someone who hears.”
Broken Song (<http://www.goodreads.com/quotes/317418-the-singer-alone-does-not-make-a-song-there-has>)
Rabindranath Tagore

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trained to ‘become’ increasingly creative and imaginative, and that somehow that becomes an individual attribute.

In this chapter, we make an attempt to acknowledge the otherness of creativity without denying its individual character. The one (social nature of creative processes) is not intended to deny the other (creativity as an individual attribute). This either/or approach has further prevented a reasonable understanding of human psychological processes that are essentially developmental and cultural in nature. Valsiner (2007) reflects on the “always ambiguous quadratic boundary of the unity of inside/outside and past/future functionally related opposites” (p. 207). According to him “the production of novelty and openness to innovation” (p. 207) is through dialogical processes that facilitate the co-creation of the self, the self within culture, and culture itself.

This chapter examines the construct of creativity and its journey, from the Western psychological traditions to the world of culture, where it truly belongs, as viewed through the lens of academic research. The Indian understanding of creativity involves not only its unique definitions, emotive contents and existence in the world of art, but also the practice of the creative art form in everyday lives of people. Such processes are never devoid of the collective, and are almost always co-creative. While endorsing the unique aspects of creativity, the Indian viewpoint subsumes its commonplace character—one found in the everyday lives of artists and others. It is life that lends itself to creativity, its construction and its practice.

Western Psychology and Creativity

Traditional Western psychology has typically placed a priority on evidence-based research of intra-mental activity (Valsiner 2014). Brock (2014) argues that the naïve view that Western psychology is universal, needs to be abandoned in favour of local reflexive discourse on the subject. However, the enterprise of scientific psychology is protected by strong institutional practices and exclusion criteria, thereby preserving the dominance of the WEIRD (Western, educated, industrialized, rich and democratic) samples in the formulation and application of psychological phenomena (Henrich et al. 2010). Not only is this pattern culturally limited, it also presents a skewed perspective on history of society.

The sinister and subversive forces of nationalism have long plagued humanity. “European scholars, accustomed to the conceit that everything in the modern world originated in Europe,” have remained quite undisturbed (Anderson 1983/2006). Surely if we can imagine our ‘selves’, we can also

imagine 'communities' and 'constructs'. This separation of spaces from others can be demonstrated very clearly in the way psychology categorizes itself, a reality that dawned on Danziger (1997) when he was confronted with a markedly different worldview. The term creativity was born out of such an exercise of separating one domain of activity, but refers to the fundamental quality of the human mind. With his work on 'lateral thinking', or the shifting of a premise, or a priori mental patterns, De Bono managed to become one of the world's wealthiest psychologists in present times. Whereas vertical thinking retains existing categories, lateral thinking involves the re-orienting of these categories, thus becoming successful in finding new solutions, known to be specialized in right-brain activity, what Arthur Koestler likens to "pulling back to take a better running jump" (Hampden-Turner 1981, p. 110). According to De Bono, lateral thinking is the key to flexible and creative thinking.

Creativity is notoriously hard to assess and can often be associated with problems like stress, depression or deviance. They (people identified as creative) can score higher or lower on clinical tests (Barron 1968), arguing that they deliberately shake-up, take-apart or breakdown existing ways of doing things. The very feature that makes them creative often results in keeping them on the fringes of social groups, but also makes them capable of creating new order (Oglivy 1977). Social recognition, Guilford argues (1959) is clearly linked with the co-occurrence of the two, separate qualities, creativity and intelligence to adequately appraise and apply creative processes to communicate their ideas. According to William Blake, imagination is the force that assists in reconciling the conflicts related to reason, passion and instinct, through fights with and within ourselves (Hampden-Turner 1981). According to Koestler (1976), it was first the structure of wit (implying both humour and inventiveness) that resulted in the collision between frames of reference, thereby resulting in wit. The emotional tension created by a situation can be relieved by unexpected release of what is called the 'punch line' in jokes. Ultimately, it is about making new connections, the act of bisociation of two or more thought-matrices that were previously not connected. Finding gaps and missing elements and speculating about these as key processes of creativity according to Torrance (1962). The art of creating something new, something that did not exist before, is thus a defining property of creativity, thereby being a persistent challenge to existing ways of doing things, of tradition (Misra et al. 2006). Whether through sudden insight or perseverance, novelty remains an essential component of creativity.

Is novelty the true hallmark of creativity? If life were a task in which one had to consciously and continually think out-of-the-box, novelty would supposedly be the biggest or even the only indicator of creative effort. However,

considering the mundane nature of everyday reality, creativity could well be a more subtle, even subdued or persevering process in the lives of individuals. Though there is creative genius, its existence may not always get a platform. Are not the blade of grass and the glorious sun equally important in the sustenance of life? Is one performing a lesser function than the other? So too we may find the most extraordinary acts of creativity in the most ordinary of existences. Research rooted in culture assists in identifying and learning from some such stories. Although the primary focus in Western psychology has been on the processes and products of the creative processes, the Indian philosophical tradition has placed a greater emphasis on the process on emotional and spiritual dimensions that have always been linked with creativity and its expression in all forms of life. In fact, when an artist expresses himself or herself, in whatever form of creative expression, a state is recognized where the expression is believed to transcend the person to a higher spiritual plane.

Creativity and Culture

Imagination is one of the fundamental capacities of the human species, creating a huge gap between our cousins in the evolutionary cycle. The belief that creative forces have the potential to greatly expand the human experience is a universal belief, ranging from aestheticians in ancient India (Bhatta 2008) to modern psychology theory. Construals of creativity are located within the world view of any person or persons, not outside of it (Niu and Sternberg 2002). Further, Misra et al. (2006) argued that the conceptualization of creativity must be situated in culture since specific dimensions of creative endeavours are different across cultures, providing favourable contexts which in turn influence the directions in which cultural practices tend to develop (Bhawuk 2003). Western traditions in psychology have focussed more on measurable, objective elements of creativity and its enhancement in educational settings, as well as processes of creative activity. This preference has tended to focus more on product-oriented notions of creativity (Lubart 1999). This preference can be understood on account of the value for human endeavours and material progress, but it fails to adequately represent cultural variations in the notion of creativity (Misra et al. 2006; Nisbett 2003; Raina 1996).

For instance, it has been suggested that Asians tend to focus more on holistic perspectives and the complete design of any phenomenon. For Hindu theory, the cycle of reincarnation and karma creates the notion of continuity of action that forms a unique paradigm for attributions beyond the single lifetime. This applies also to the quality of being creative. The context-sensitive

understanding of human activity pervades Hindu thought (Ramanujan 1989), that became the distinct quality in the genius of Gandhi, for instance (Gardner 1993). However, it must not be assumed that there is an Indian way of thinking. Although common threads may be identifiable, there are several divergent trends even within the subcontinent, ideologies that mark themselves as apart from others, confounded further by religious, ethnic, regional and ecological differences. To take a single example of folk stories, Ramanujan (1991) remarks that oral stories proliferate in the 1632 languages that are found in India, and to do justice to all of them will not be possible in one volume. The same could be said about performing arts, craft, clothing and food as well. The diversity and plurality of interpretive culture are unfathomable.

The systemic multi-level perspective of Csikszentmihalyi (1999) recognizes three critical dimensions: the person, the setting and the experts. It would take all three systems before something could be recognized as creative. In fact, Gardner (2001) argues that creativity is always located in dialogue between a place, a person and a domain of activity.

Although universally recognized, creativity must be located in a specific cultural context and different groups of people emphasize different dimensions of creativity. In music, for instance, Indian and Western classical traditions display different strategies for presenting and interpreting music performances. Whereas Indian classical music is largely devotional, no such connections are found in classical Western music. Performances are left to the improvisations of the main singer, what raga he or she will use, what combinations, what leaps may be made during the performance. After announcing the piece (or not), the singer begins, plays with the notes and improvises, followed closely by accompanying musicians. Audiences respond through the performance with encouragement, applause and appreciation. Western classical music, as is well known, provides a stark contrast to this pattern (Anandalakshmy 2014). Similar shifts and flexibility with patterning seem to permeate many other domains of life, food for instance. The pervasive cultural patterning of performative culture demonstrates the variation in creative expression. In the conceptualization and organization of creativity, therefore, cultural differences are evident.

The Indian family is a cohesion of other-centric devotion and enterprise. There are numerous creative acts the mother, the spouse, the child and extended family members undertake in order to ensure the smooth functioning of everyday lives and to preserve the 'close-knit family'. The care of children, for instance, is never really an individual's prerogative. It may best be described as a hugely collective, creative endeavour. Parental ethnotheories being context-bound show innumerable variations and highlight the uniqueness of beliefs

and practices of childcare. An illness in a baby has medical and home-grown remedies competing for attention. In the absence of hospital access in very remote places, it is the traditional creative genius that is at play, with some but not fool-proof success. As people combine creative indigenous systems of knowledge with the latest technical know-how, much could be achieved.

Culturally Defined Creativity and Creative Genius

Although creativity has been identified everywhere, as a property for seeing and creating novelty, it is the process and constituents of creativity over which there may be some differences. For instance, the vocabulary we use to discuss creativity and its constituents can display the cultural nuances of the local understanding. For instance, the Hindi word for imagination, *kalpana*, is seen as the primary distinguishing feature of the human mind in Indian traditional thought. Animals are believed to be lacking in imagination, making the distinction between 'nature' (*prakriti*) and 'culture' (*sanskriti*). The rules of culture and human existence live beyond those of the natural world, even though they may be bound by it, it is believed. This capacity to transcend the here and now, to imagine, is a key feature of the human mind.

Using Sanskrit vocabulary, the linkages between creativity and its constituents can be studied. In order to be creative, a person is believed to require creative talent (*pratibha*), erudition (*vyutpatti*), practice (*abhyasa*) and varied knowledge (*bahujñata*), to create any product, like a poem (Bhatta 2008). Although flashes of ideas emerge from creative talent, the final expression of creativity is not believed to be realized without practice and wisdom. Sanskrit scholars recognized that talent can be both inborn and acquired, and with limitless potential. Within the traditional form of schooling, indigenous to India, the guru remained the key person who would have a group of children (mostly boys) to live with him and learn. These children would be separated from their families and live lives of discipline and commitment to learning for years together and would return home, usually only upon completion of their course. The *gurukul*,¹ as it is known, was a place where rigorous practice and routine was sacred. These long hours of practice or '*abhyasa*' in whichever skill one was pursuing, was believed to result in the consolidation of the skill, after which creativity would flourish, it was believed. Recognizing the genius of a poet, for instance, it is recorded in an ancient Indian text that there is nothing that the genius of a good poet cannot transform into a thing of beauty

¹Traditional schools in Hindu India.

(Bhatta 2008, p. 385). Two types of talent are recognized, one that is borne out of inborn genius, and the other through a thorough study of any given subject. However, to highlight the importance of the audience of creativity, a complementary attribute of a receiver, reader or viewer of a creative product must also be endowed with some element of creativity in order to be able to apprehend the blissful transformation of the mundane into the extraordinary (Shivakumaraswamy 1989).

As we have known, some people are effortlessly creative whereas others work doggedly to create. An analysis of creative genius has indicated certain patterns of creative people, identifying periods of low and high activity, whereas others have clearly marked the 'flow' of ideas as the ultimate process of a creative mind. Our evaluation of creative products is often a matter of familiarity and training. Cultural patterns can be identified as can be different schools of design, pleasing to some and distasteful to others. In final confrontation, the individual encounter is always unique, transcending cultural, historic and social patterns. The quality of uncertainty remains a constant companion of imagination. There is no way of predicting with assurance whether something will be termed as creative or not as a product, or whether a person will turn out to be creative or not. If, on the other hand, the perspective is shifted to a species specific comment, then shared creativity is what is responsible for culture.

Gandhi has been considered a creative genius by many. Gardner (1993) remarked that positioning himself in synchrony with society while also staying marginal through his experiments, Gandhi set himself up for 'radical social change' (p. 383). The remarkable solution of a non-violent struggle was perhaps critical in slowly gaining India's independence (Erikson 1993). This unexpected and unconventional strategy, deeply rooted in the Indian tradition, left the colonial 'masters' with an unusual predicament. How to deal with the half-clothed man who refused to retaliate? Many believe that this was the undoing of British rule in India. Perhaps because of his unconventional experiments, Gandhi also gathered some opposition, finally killed by one who felt he had betrayed the people of India. Creative genius almost always invokes strong and mixed reactions from others. Gandhi's story exemplifies the subtle and persevering nature of creative genius. Since such perseverance over time brings radical results, it invokes strong reactions, even resentment. In his principles of non-violence (*ahimsa*) and insistence on truth (*satyagraha*) lie the seeds of an omnipresent power, something that the common person in India identifies with and imbibes in his/her approach to the world.

The analysis of people who are known to be creative has provided us much insight into what it means to live creatively. For instance, Kakar (2013)

analyses the genius of Rabindranath Tagore, poet, writer, painter, philosopher—a complete artist, using a mix of Indian and Western perspectives on the ‘extraordinary creative person’ (p. 199). Using the psychoanalytic perspective, he remarks that creative potential often thrives in a climate of emotional conflict. As the creative seed germinates in trauma and turmoil, its growth also provides nurturance to the individual in conflicting times. He uses constructs such as Winnicott’s transitional object/space, ‘self-effectance’ or the faith in one’s own genius, work as ‘self-object’ (Kakar 2013), and the mirroring from the audience of any product, to explain the process of creativity. In all of these, life-span experiences of the person enjoy special place. Life events lend a trajectory to individual existence; complete with context, significant others, a continually building selfhood, a body of work as well as a sense of social and personal history.

Whereas the Western ideas on creativity have given central place to emotional conflict, Kakar (2013) points out that Indian theories have had little tolerance for emotional excesses, and have favoured righteousness, self-restraint, self-awareness and good character. The lives of creative persons however, have been more real: with ups and downs, strengths and weaknesses, social conformity and rejection. Raja Ravi Varma was a renowned Indian painter, a creative genius who gave innumerable Hindu gods and goddesses a ‘face’. In his biography of the famous painter, Desai (2013) highlights several vulnerabilities and Varma’s genius is explained thus: a childhood in want of affirmation of budding creativity, opportunity to work for royalty, long-term marital discord, sexual and romantic trysts, the artist’s muse, audience worship and social and political rejection; all these features are captured in the description of a lifetime.

Raina (1999) argues that the diversity is essential in understanding creativity, since creativity is culturally embedded. Indian perspectives on creativity and genius have often invoked spiritual dimensions (Kakar 2013). One important departure from Western individualism is that this notion of spirituality is seldom for the self; it is drawn from, and given back to the outside world in the form of creative work. This implies that creativity may strike an individual who is striving for the truth or spiritual understanding (Sri Aurobindo 1950). The emotion so necessary for creation might as well be located in this quest for the divine, and self-realization is the key to creativity. Thus creativity is not the product or its evaluation, but the “state of fulfilment and the expression of inner essence” (Misra et al. 2006, p. 428). As remarked by Raina (1999), the essence of human existence is believed to be affirmation of the self in the universe and to “evolve and finally exceed” oneself (p. 168), and discovery of the self and self-transformation are spiritual goals. This transcendence of time and

space, the here and now, bound spiritually with all other living beings, nature and past and future selves is a strong sustaining feature of Hindu philosophy, finding important expression in others, like religious groups. Although all individuals may not have realized their true potential, or articulate this knowledge of traditions, this ideology is pervasive and can be found manifested in many different ways even in ordinary life (Chaudhary 2004).

One important feature in this philosophical tradition is the putative abandonment of arrogance or *ahankār*. Here we find an opposition to the notion of authorship and individual creative endeavour found in the individualistic ideology. The linkage of creativity as worship prevails, and the production of music or dance was always associated with divine expression, something beyond the self. Misra et al. (2006) lament that despite such a rich and unique tradition in creativity, research in the study of creativity has been largely guided by the Western tradition, resulted in a very narrow interpretation of the construct in the university system. A great deal of effort has been placed not to lose these unique elements in cultural expressions and a concerted effort has been made over the last several decades to preserve cultural traditions through government and other enterprises. It is believed that creative endeavours could be directed at worldly aspects, spiritual dimensions or both (Srivastava & Misra 2001).

An illustrious writer and filmmaker and a cultural icon of the Indian state of Kerala, Nair (2010, translated by Krishnankutty), writes of pain in the process of creating a story. In his words:

In a heart that is filled with the anxieties of creativity.....these (everyday emotional) reactions settle into a hard knot, a weight. It becomes an additional anxiety that steadily grows and spreads. Gradually, not one but many, many anxieties begin to work themselves into the writer's mind. Until he finds out one day that his life itself, like his heart, is confused and filled with pain. The writer is then caught in a great endeavour to find order, a philosophy, a meaning for this. Disorder is the law of nature. To put things in order has been man's eternal dream. (p. 34)

He endorses the idea that creativity seeks out the individual who is in a state of readiness. "When I was young, I felt there was poetry in everything I saw, and a story in everything I heard. It was much later that I understood that while I was searching for subjects, the subjects themselves were looking for people everywhere" (Nair 2010, p. 34).

He describes how even though stories are fabricated, they have the potential to become great truths; "they become life" (p. 35) as can be seen in the stories

of great writers like Shakespeare, Dostoevsky, Tolstoy, Vyasa and Valmiki. Therefore, creative effort is also a responsibility towards others.

Whereas such work signifies the larger global and historical context of creativity, there is an everyday mundane component to creativity and its research. Sen and Sharma (2009) describe creativity as “the originality of everyday life” (p. 159). In their research on construals of creativity among teacher trainees, they found that creativity was seen as a less than perfect concept. It was the quality of the processes of thinking and creating that was given importance. For example, a person borrowing from another’s work is still indulging in a creative act as he or she in the act of borrowing is showing openness and flexibility in approach and thought. According to some of their participants, creativity could be purely emotional—such as empathy for the child or learner. Sen and Sharma (2011) describe the Indian notion of creativity as involving the core element of agency of the self or more vividly, “investing the self” (p. 23) in the creative process. Such investment can be in thought, action or emotion.

Training for Creative Activity

The Indian family is central to a person’s identity, and offspring remains closely connected to their family members for life. Especially with the co-residence of multiple generations, the persisting influence of family members reaches well into and beyond young adulthood. Unless there are serious conflicts, these ties are lifelong, as research on the Indian family has highlighted. Even among adolescents, it was found that significantly larger overlap of activities along with family members was experienced among Indians, in comparison with other countries (Verma and Sharma 2003). For this reason, the family is central to the individual, and relationships guide personal beliefs, values and activities. The family therefore, emerges as a key player in the training and sustenance of creative pursuits, it was found in a longitudinal study of a small group of children in Indian families (Sen and Sharma 2013). Through the allocation of resources, time, money and effort, parents gave intense support and motivation for their children to pursue a talent that the parents had identified early in the child’s life. The synchronicity of purpose among these families, all educated middle-class families, was their unique feature, providing both support and stimulation. In fact, it was found that the family members all agreed about the investment in this pursuit, and were thus closely bound by the activities of the child. The notion of a good fit between the person and the environment in which creativity flourishes has been repeatedly identified as a key factor among research studies (Harrington 1999).

A distinct flavour of the cultural specificity of training for creativity can be seen in the following conversation. In response to questions about his art, a well-known *Madhubani*² artist described his training thus:

I remember that my mother would spend a lot of time with painting work. I was allowed to watch, but if I tried, as a young boy, to pick up the implements, I was scolded. 'You are too young, if you paint so early, you will spoil your hands', I was told by my mother. She was strict about this, and the only way I would get around to sketching was by using sticks on the ground out of sight from my mother. Paper was too precious. By the time I was allowed to start sketching, I was so eager, that I learned very, very quickly. (Artist³ in conversation, personal communication)

Creativity has also become an industry. The psychologist Edward De Bono is one of the most successful psychologists in terms of application of his theory of lateral thinking. He advises several governments on policy with the objective of enhancing the creative potential of citizens, and promotes the idea of teaching about thinking in schools (De Bono 1985). His considerable commercial success has drawn several criticisms from equally eminent psychologists, among them Robert Sternberg, a leading expert in the field of creativity. His primary criticism of De Bono's work is targeted towards the overtaking of commercial aspects and training for creativity without an adequate understanding of the process. Notwithstanding the criticisms, De Bono has made a successful play for introducing creative training in schools. The primary task of training for creative expression among children is an important goal, and teachers all over the world will sight it as one, although practices may not often match the articulated enthusiasm.

In a delightful novella about a fictitious school where a teacher brings home unconventional and creative lessons to his class of boys became and remains one of the landmark readings for committed teachers in India. *Divaswapna* (Badheka 1932/1990), the novel about a young teacher who is determined to step outside of the regular classroom to facilitate the direct experience of the world is according to Kumar (1990) in sharp contrast to the classrooms of children today, quite lacking in the spark that Badheka was referring to. India has had many gifted leaders who have taken the challenge of education with a difference, classrooms that do not simply follow reproduced syllabi, and sometimes not even that. Rabindranath Tagore, Gandhi, Sri Aurobindo, Annie Besant, Gijubhai Badheka are some of the pioneers of this movement. Sadly,

²A traditional folk art form.

³The award-winning artist, Satyanarayan.

much of their writing and experimentation has failed to reach the mainstream classroom. Allying with nature, fearless learning, a distaste for regimented classroom transactions, incorporation of spiritual understanding of living, emphasis on social consciousness, and simplicity are some of the hallmarks of their unconventional approach. Although spirituality and personal upliftment during the course of learning was an important feature of higher learning in the traditional system of education as well as experimental centres of education, the inroads that the British were successful in making to reach inside and transform the educational system as a whole was significant. Centres of learning like Shantiniketan,⁴ the school run by Rabindranath Tagore, were exemplary institutes where creativity, the arts and literature were central to the curriculum for life and learning. The enterprise of the British Empire to completely underestimate and replace the indigenous system of education was ruthless and complete. Evidence for the contempt that was felt towards traditional Sanskrit and other learning is clearly evidenced in the speech⁵ delivered by Lord T. B. Macaulay to the British Parliament in 1835. An extract of Item 33 of the speech indicates the intentions of the colonisers quite clearly:

To sum up what I have said. I think it clear that we are not fettered by the Act of Parliament of 1813, that we are not fettered by any pledge expressed or implied, that we are free to employ our funds as we choose, that we ought to employ them in teaching what is best worth knowing, that English is better worth knowing than Sanscrit or Arabic, that the natives are desirous to be taught English, and are not desirous to be taught Sanscrit or Arabic, that neither as the languages of law nor as the languages of religion have the Sanscrit and Arabic any peculiar claim to our encouragement, that it is possible to make natives of this country thoroughly good English scholars, and that to this end our efforts ought to be directed. (Macaulay 1835)

Conclusion

Creativity and its training during childhood has become an area of tremendous global interest. Some of the endeavours have been launched enthusiastically but often without a context-sensitive understanding of creativity as human expression. The intra-mental and individual nature of creativity has been a dominant perspective in psychology. More recently, a lot of work has

⁴ <https://en.wikipedia.org/wiki/Santiniketan>

⁵ http://www.columbia.edu/itc/mealac/pritchett/00generallinks/macaulay/txt_minute_education_1835.html

focused on a culturally grounded understanding of creativity. Disciplines like cultural psychology have identified how fundamental the link between culture and the person is, and how it is difficult and even impossible to consider human conduct without taking culture into account. Every person lives within a context and by this principle, creativity cannot be discussed unless it is situated within a context, an active transaction between the person and the world. In the understanding of creativity as in the understanding of any domain of activity of human beings, cross-cultural and inter-disciplinary perspectives are essential to a reasonable understanding.

The story of creativity must therefore go beyond the narrow confines of individual psychology and travel to different parts of the world, as well as the past and even the future. Using different disciplines, multiple perspectives can be gained to find greater explanation for and meanings related to creativity and the human mind. In this chapter, we have travelled to some of the cultural nuances of creativity in the Indian subcontinent where creative expression is linked with the divine, and a person engaged in creative pursuits is believed to be reaching beyond the self, towards spiritual pursuits. This reaching beyond personhood as we understand it, going before and beyond in order to understand how and why this individual is engaged, is one of the key features of how creativity is understood in the Indian subcontinent.

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Constructive Creativity in the Context of Singapore

Ai-Girl Tan

Knowing Singapore

Singapore is situated right above the equator in the Southeast Asia region. The country has been flourished because of this strategic location that has placed it in the middle of various networks of air and sea transport. In 1965, Singapore gained independence. Since then, the society in Singapore has consciously and deliberately maintained and promoted multilingual, multicultural, and multireligious meaning making practices. After half a century of collective innovation and creative commitment, Singapore has emerged as a fast-paced information-technological city. It has gained recognition as an icon of openness and hopefulness in near all sectors of life. This chapter reviews creative processes in Singapore as socio-cultural practices that contributed to the city's constructive development. What cultural tools have the people of Singapore created or invented to support their flourishing life? This chapter also reflects in and on pragmatic creativity that has generated multifold paths of everyday creativity among one Singaporean community. Today, Singapore aspires to become an inclusive and kind society, and makes efforts for its residents to

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become resilient and creative people. This chapter concludes with suggestions on how the meaning and practice of creativity in Singapore can be conceptualized with reference to the dialogical (Buber 1937) and cultural psychological premises (Valsiner 2008), cross-disciplinary research structures (Tan 2013), and constructive creativity in education (Tan and Law 2004).

The world has changed in unimaginable ways in the last 100 years. (...) Even more astonishing is the way we are able to communicate with each other today (...). Singapore has to take the world as it is (...) What will the world be like in the next 50 years? (Lee 2013, pp. 8–9)

This chapter is about understanding the transformation of Singapore from the perspective of constructive creativity. Lee Kuan-Yew (LKY, 1923–2015), the first Prime Minister of Singapore, at the age of close to 90 years old, shared his views of Singapore's future with an attitude to embrace the world as it is. Orientating around this attitude, Singapore strengthens its strategic position as part of the larger community. Common values (or in Lee's term, 'the ideals', see Tan 2015) guide progress of Singapore's society and its creativity. The embracing attitude fits well into Viktor Frankl's (1905–1997) views on humans. According to him, as humans, we accept our inability to reach the absolute (e.g., the ideal), but believe in its presence. The conditions around us impose limited freedom within which we make choices (Frankl 1984). The embracing attitude is in line with everyday philosophy of transforming adversity (*weiji*, 危机) into opportunity for positive growth. Constructive creativity in the context of Singapore's development is about what this country is capable of becoming in the world and how it is helping its citizens and residents to grow. Development, according to Jaan Valsiner, is a co-construction or a joint construction of the psychological system of the developing person and the social environment provided by the social others who are goal-directed. The interdependent units of a dynamic system, the constructing person, structured environment, and purposive social others are fluid and have an adaptive value (Valsiner 1996, 2008). The world is part of our goal- (Stern 1906), space- (Nishida 2012), and (inter)related (Bakhtin 1984) systems. It co-determines our being, becoming, and relationships to nature (*cosmos*), to other people (*eros*), and to the larger community (*logos*; see Buber 1937). Taking the world as it is, Singapore's leaders penetrate, absorb, see, and cultivate its societal changeability in interactions (*spatial, relational*) and on a continuum of past-present-future (*temporal*) (see Dewey 1938/2002).

According to the data released by the Statistics Department, Singapore's population, as of the date of writing this chapter, reached near 5.5 million. Of

the total, 3.34 million are Singapore's citizens; the others being the country's permanent residents and foreigners. In Singapore, the total fertility rate is low, 1.19; and total mortality rate is 2. The home ownership rate, as of 2013, is high, 90.5 %. The modernized Singapore's average household size is 3.47. Singapore's population has a high density of 7615 people per square kilometer. The unmarried rates are 40.5 % per 1000 resident males, and 36.9 % resident females within the age range of 15 and 49 years old. The literacy rate, as of 2013, for Singapore's residents aged 15 years and over, is high, 98.5 for males and 94.6 for females, respectively. Years of schooling for Singapore's residents aged 25 years and over are 11 for males and 10 for females. The values of diligence, respect for seniority, and care for the vulnerable are placed side by side with the values of meritocracy, integrity, and honesty. A total of 2.6 million residents in Singapore were within the age range of 20 and 64 years old. From the statistics of the same year, life expectancy at birth is 80.2 years for males and 84.6 years for females. The ratio between medical doctors and patients is 20 per 10,000 residents. Singapore recorded a relatively low crime rate: 549 per 10,000 residents. Mobile population penetration rate is 156 %. Hotel occupancy is high, at 86.3 %. The unemployment rate as per June 2014 is low, 2 %. The global competitive index 2013–2014 ranked Singapore second in the world after Switzerland. The rankings were done based on 12 pillars of competitiveness: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. Singapore does not have external debt.

In sum, Singapore has emerged as a progressive and modernized city of possibilities with its shared values (“the ideals”) of deliberate efforts, interventions, as well as diligent implementation of policies of multiculturalism. Children in Singapore live in housing estates and go to schools near to their residence. Their neighbors and classmates comprise people of all walks of life and all backgrounds. All citizens and residents of Singapore are free to choose and practice their religions and belief systems.

Singapore's Birth

Singapore's modern history started with the announcement of separation from Malaysia by the first Prime Minister, the late Lee Kuan-Yew. On August 9, 1965, the screen of a black and white television captured this memorable birth of a new nation. The name of Singapore or, in the Malay language,

Singapura, is believed originated from the words Sankrit “*singha*” or lion and “*pura*” or city. According to the *Malay Annals*, the story of the city of the lion can be traced to the thirteenth century. Sang Lila Utama met a fortunate creature in *Temasek*. The island attracted foreign interests. It was a British colonial state from 1819 to 1962, under self-governance in the last years of this interval (1959–1962). Singapore then became an autonomous state under the Federation of Malaysia (1963–1965) joining West Peninsula of Malaysia, Sabah, and Sarawak.

Situated at the Southern tip of the Peninsular Malaysia, Singapore’s geographical position is strategic for trade and as a port. Being a country of a handful of millions, Singapore’s economy and security are subjected to the performance and dynamics of its neighboring countries in Asia and Australia, as well as in other parts of the world. For a century or more, Singaporean society has tried and shall continue trying “to maximize her space [as] she has to manoeuvre among the big ‘tree’ (interpreted as countries) in the region” (Lee 2013, p. 9). Active engagement in helping neighboring nations and countries of all regions to grow is a necessary for Singapore’s own survival and prosperity. In this sense, constructive creativity is a culture for Singapore’s future in the world.

To overcome limited physical space (*cosmos*), Singapore has expanded herself creatively through reclaiming lands. Evidently, Singapore has increased near 20 % from its original size to 718.3 square kilometers. The land area of Singapore, as of 1819, was 578.1 square kilometers, and in 1965 it was 581.5 square kilometers. Reclaiming lands from the sea has increased the size of the island, supporting a growing number of inhabitants. This continuous effort will bring Singapore by 2030 to the areas of land of 766 square kilometers. Singapore’s living environment is characteristic of a modernized garden city. High-rise buildings house an increasing number of residents including professional immigrants and workers, as well as shelter commercial, trade, and industry activities. Light and underground mass rapid train systems complement bus and taxi systems to mobilize the increasing number of commuters efficiently.

Singapore interracial creativity is flourished by translating three ‘ideals’ or ‘values’ into practice: multiculturalism, multilingualism, and multireligiosity. After its independence, Singapore strived for prosperity, happiness, and progress. Singapore’s leaders selected strategies to optimize their competencies and built relationships to others in the society and in different regions (Baltes 1987). The nation has pledged to unite all, regardless of ethnicity, language and beliefs. It has built a democratic society based on justice and equality for attaining happiness, prosperity and progress for its citizens. The pledge creates

space for people with different backgrounds to dialogue. “In (...) dialogue, a person participates wholly throughout his whole life: with his eyes, lips, hands, soul, spirit, with his whole body and deeds” (Bakhtin 1984, p. 293). Dialogue is both ontological (the way we are constituted as humans) and ethical (the way we should be) (Rule 2011). Interethnic dialogue is facilitated in Singapore by the use of the English language as the medium of instruction and work. Within each ethnic group, mother tongue is taught as a subject and a medium of instruction for civic education. News is broadcasted in four official languages: English, Mandarin, Malay, and Tamil. Creativity in dialogues engages the active exchange of ideas, resolving contradictions, searching for similarities, and the emergence of morality (see Bakhtin 1984). Dialogues, problem posing and intervention, are the tools of constructive creativity (Freire 2002).

Constructing Singapore

Constructive creativity, an example of everyday creativity, is characteristic of knowing, making, forward-looking, problem posing, and doing something for the good of the people (see Tan and Law 2004). Like other forms of creativity, constructive creativity exists in all aspects of life. Mechanisms of constructive creativity describe it as a cycle of convergence and divergence for emergence. *Converging* refers to processes such as combination, exaggeration, and association of images in the mind and in practice. *Diverging*, on the other hand, includes processes such as distortion and dissociation of what is in the mind for a certain purpose (see Vygotsky 2004). *Emerging* is built on processes such as boundary crossing and transformation. Interaction precedes and mediates development (Ponomerav 2008). Feelings and emotions exist in creative imagination. Memorization complements imagination (Vygotsky 2004). The former enables us to pass down accumulative wisdom from the previous generations to the young. The latter broadens our perceptions and perspectives in life. Using all senses (e.g., listening and seeing), faculties (e.g., intuition, emotion, and cognition), and our whole beings, we relate to what we understand and to what we are capable of becoming. We are aware of and engage in activities such as perceiving, feeling, thinking, making, doing, communicating, and helping. Creating is cyclic, iterative, and complementary. During the phase of generating (*diverging*), the unperceived part of a collateral action (Ponomarev 2008) or the unconsciousness is more important than goal-directed, conscious, and deliberate behavior. The reverse can be true during the phase of exploring (*converging*). While generating is bottom up,

unspecific, and lateral (flow of information), exploring is top-down, specialized, and hierarchical (organization of information) (see Finke et al. 1992). Generating is for the purposes of discovery, wellness, happiness, and transformation; exploring is for the purposes of knowledge creation, skill innovation, and the embodiment of a cultural product.

Two forms of existence are described in our primary worlds: “I-It” (between I and the object) and “I-Thou” (between I and the nature, the people, and the spiritual) (Buber 1937). *Constructive creativity* in the I-Thou realm is about bringing the here and now awareness into being and common grounds of peace and harmony (*he*, 和, the ideals) into existence. In the I-Thou realm, knowing and doing are guided by making, practical thinking, embodied knowledge, and tacit knowledge (Polanyi 1983). Originating in person-centered therapy (Rogers 1961), creativity that is constructive takes openness to all experiences as a prerequisite. Unconditional positive regards and freedom of choice are other prerequisites of self-discovery and transformation.

Converging

(...) three qualities define the Singapore’s success story – making the country the safest place to live and work in, treating every citizen equally and ensuring continuous success for every generation of Singaporeans. (Lee 2013, pp. 8–9)

The first wave of modern creativity research was observed after the Second World War in the 1950s in the USA (Guilford 1950). Soon after that, in Asia, Japan invented her own brain-writing techniques (*Kawakita Jiro* and *Nakayama Masao*-methods). Singapore collaborated with early creativity researchers (e.g., Ellis Paul Torrance). Torrance et al. (1970) investigated Singapore’s monolingual and bilingual creativity functioning. Monolingual participants from the Chinese and Malay descendants of Singaporean children showed strengths in flexibility and fluency; whereas bilingual descendants displayed strengths in elaboration and originality (after correction). Nonetheless, Singapore’s knowing of creativity goes beyond the reported findings of a single study.

A central focus of Singapore’s constructive creativity is knowing what is good for the larger community. Engaging in knowing, the object of the past is brought into the present (Buber 1937). “We know more than we tell” (Polanyi 1968). Knowing includes not only writing and telling about existence, but also about sensing, feeling, and bringing something into being or becoming (May 1975; Rogers 1961). Singapore experienced defeat in merging with Malaysia

and identified *three* areas of development: Creating *safety*, co-constructing *equal opportunity* to learn and to work, and *continuing good work* for sustainability and for the future (see Lee 2013). Buber (1937) articulated that life of the object is in the past, true beings are lived in the present (p. 13). Reform in education led by the late Goh Keng-Swee (1918–2010) in the 1960s focused on three areas of development: Character building for broadening perspectives in life with the “ideals”, creative use of technology in teaching for good learning well, and nurturing creative imagination of all children. “Being is disclosed to the man who is engaged in knowing, as he looks at what is over against him. (...) Only as *It* can it enter the structure of knowledge” (Buber 1937, p. 40). The development of Singapore focused on fulfilling basic needs (1950s–1970s) by raising the standard of living through economic innovative measures. “If it is constructive development, (...) we can act as a spark plug for economic progress and development in the region” (Lee 1969).

To move beyond economy-oriented development, there were calls for creating for the self (consciousness-based creating for compassion and wisdom) and for others (relationship-and-ethics-based creating for peace and harmony) in the domains of arts and culture. *Constructive* creativity is for transforming potentialities (e.g., materials, or yet to become competencies) into possibilities (e.g., processes or competencies Craft 2001). Flow is an indicator of creating when creating for the *self* synchronizes with creating for *the other* (Csikszentmihalyi 1988). Creative evolution, according to Henri Bergson (1859–1941), emerges in relaxation (Bergson 1911). *Consciousness*-based creativity for the self (Sundararajan and Raina 2015) is about engaging and participating in cultivating high-level consciousness. Self-transformation, a form of creativity emerges in everyday action, interaction, and dialogue (Kaufman and Beghetto 2009). Genuine listening to voices of varying backgrounds is a key to constructive creativity (Gordon 2011).

Deliberate efforts were made to “instill and inspire a true enduring appreciation of the life-enhancing quality of artistic expression” (Ong 1978). After decades of independence, Singapore attempted to co-construct spaces to embrace creativity. Self-actualization as a form of creativity emerges after basic needs are fulfilled (see Maslow 1943). Restoring faith in supporting socially desirable creative behavior was observed. In the words of Ong (1978):

(...) we need not worry too much about the creativity of our young citizens (...) so long as there is a proper guidance (...) and so long as there is a suitable venue for the display of their work (...) our young people will continue to produce highly creative and imaginative art works.

Diverging

The second wave of modern creativity research was observed around the 1980s. The social psychology of creativity and the multiple intelligences model (e.g., Amabile 1983; Csikszentmihalyi 1988; Gardner 1993) started to dominate theoretical and empirical investigations. Creativity was conceptualized both within the personal and social-cultural milieu. The three systems model conceptualized the person, social-institution, and culture as open systems (see Csikszentmihalyi 1996). The *efficiency*-driven education paradigm extended Singapore's quality education to the domains of giftedness, talent, culture, and arts. A change in political leadership was observed in the 1990s. Goh Chok-Tong (served, 1990–2004) succeeded Lee Kuan-Yew (served, 1959–1989) as the second Prime Minister of Singapore. A paradigm shift in the humanities was calling for discovering the other, co-determination, and co-participation (see Makhlin 2001). Spaces of self-actualization were created to enrich artistic and cultural life among the young (e.g., Young People's Galley at the National Museum, see Ow 1978) and people with disabilities (Wan Hussain Zoonhri 1981), the gifted and talent. Art education aimed to let a learner "to have some insight into an appreciation of what it takes to produce art (...) he would experience that satisfaction, enjoyment, and involvement in creative activities" (Wan Hussain Zoonhri 1983). Aesthetics is important for a balanced education and for enhancing art teachers' interest and skills to role-model how to do arts (Seet 1999). In a speech, Tamugi (1994) modeled appreciation of works artists and poets; and recited a poem.

The Asian and world economic crises were eventful for Singapore as a "co-being" in the world (Rule 2011). The decades of 1990s–2000s called for Singapore to develop abilities of all (*ability*-driven Singapore education) and to create an inclusive society for all (toward *value*-driven Singapore education). A person is *unitas multiplex* (Stern 1906). On becoming, living systems engage in *multiple paths* of creating. Open systems move in the direction of differentiation, elaboration, or a higher order of organization. Social organizations seek *multiple goals* and are composed of individuals and subunits with different values and objectives (Kast and Rosenzweig 1972). As open systems, social organizations can attain results with different initial conditions and in different ways (or equifinality). The 7th International Conference on Thinking in July 1997 was officially opened by the then Prime Minister Goh Chok-Tong, who launched the nationwide educational framework of the "Thinking School, Learning Nation" (TSLN, Goh 1997). The event was attended by eminent psychologists (e.g., Howard Gardner and Robert

Sternberg), international presenters, teachers of all schools, and educators of all levels. Prior to that, the then deputy Prime Minister, Lee Hsien-Loong, released the National Education framework (Lee 1997) and the then Minister for Education, Teo Chee-Hean, released the Information Technology Master plan (Teo 1997). These events marked a shift in the paradigm of education to ability-driven, focusing on deep learning and higher-order thinking curricula in secondary and tertiary school education as well as teacher education.

Creative pedagogies were introduced such as cooperative, student-centered learning, information and communication technologies, and cross-cultural project work. Theoretical and conceptual frameworks of creativity in the existing literature were consulted (e.g., Amabile 1983; Csikszentmihalyi 1988; Gardner 1993; Sternberg 1999; Torrance 1974). Understanding of creativity was limited to creative thinking however, one of the three higher-order thinking skills; others being critical thinking and problem solving. For quite some time, special elective courses on thinking and learning were offered to teachers in service and beginning teachers. Creativity was neither a main component of teacher education program nor a teacher competency. There were some studies on creativity in Singapore released in international journals (see e.g., Soh 1999; Ng 2001; Tan 1999, 2000). Scales were created to measure creativity fostering behavior of teachers (Soh 2000). Exploratory studies (Tan 1999, 2000) were conducted to find out teacher preference of creativity-related activities and students perceived learning activities. Established scales were used to measure Singaporean students' creativity (Ng 2001) and for the cross-cultural study on creativity (e.g., Ng and Smith 2004). The findings from comparative studies using standardized measures sent out a less favorable message to the readers, effectively that Asian students were 'less creative' than their counterparts in the West.

Creating Singapore's Future

Emerging

The second decade of the twenty-first century marked a transformation in Singapore's society as cited in the preface of Lee (2013, see the citation at the start of this chapter). Singapore emerged as an affluent society in which international creative talents can find a home. Prime Minister Lee Hsien-Loong (serving since 2004) declared Singapore as an inclusive society building on Singapore's multicultural, multilingual, and multireligious values and

practices. Children with mild intellectual disabilities are enrolled into mainstream schools. Mastery of (psychological) tools lifts the given function to a higher level (Vygotsky 1930). Assisted technologies guide learning of children with special needs (Alkahtani 2013). Trained allied educators, teacher assistants, and special education teachers are assigned to work with teachers in mainstream schools. Primary school years one and two implement reduced class size of 30. Hierarchical organization is co-constructed within the imbalanced power relation between the knowledgeable others (e.g., the leaders) and the developing persons (e.g., lay people) (Valsiner 1996). In communication with each other, according to Valsiner (1996) a meta-process of intersubjectivity (secondary to the dialogue process per se) or reflexivity operates in irreversible time, “constantly leading to creating, maintaining, and changing of the person’s sense-backgrounds of the (foreground) dialogical activity” (p. 75). Listening to voices of the vulnerable is a strategy to eliminate socially constructed disabilities (Smagorinsky 2011; Smagorinsky 2012). Genuine listening requires one to create a space in which the other’s unique voice can resonate (Gordon 2011 p. 217). According to Gilligan (2015), “voice is embodied and resides in language, it grounds psychological inquiry into physical and cultural space. (...) (V)oice is also a manifestation of the psyche, a way of communicating experience or bringing the inner world out into the open” (p. 69).

A change in leadership in Singapore stimulated new directions of learning (*eros*). The *teach less, learn more* (TLLM) framework shifted the paradigm of teacher-led learning to the student-led learning. The *enterprise and innovation* framework (I & E) allowed teachers and children to work cooperatively in business, societal-related projects. Citizenship education emphasized good values (or the ideals, *logos*) such as gratefulness and caring for others. Community service at the school levels and service learning at the university levels provided space of learning toward becoming responsible citizens and globalized persons. Singapore attained high academic achievements in the fields of science, mathematics, and problem solving in international assessments such as the Programme for International Student Assessment (PISA), a worldwide study by the Organisation for Economic Co-operation and Development (OECD) and Trends in International Mathematics and Science Study (TIMSS) established by the International Association for the Evaluation of Educational Achievement (IEA). Teachers and teaching teams in schools enrolled into higher degree programs. For the past one decade, educational research funding attained its competitive status. Eminent researchers were invited to mentor and to collaborate with the emerging researchers in Singapore.

Social emotional learning and twenty-first century skills become the foundation for developing soft skills. Singapore education has endorsed the importance of young children's education. There has been some aspiration to construct the culture of supportive education toward developing personhood and the common good. Aspirations of the twenty-first century skills (MOE 2014) include developing four qualities and their corresponding values as a confident person (e.g., adaptability, resilience, and independence), a self-directed learner (e.g., questioning, reflecting, and perseverance), and an active contributor (e.g., being innovative, taking responsible risks, and working effectively in teams), and a concerned citizen (e.g., being rooted in Singapore, being informed about Singapore and the world, and taking part in improving the life of people around us).

Boundary crossing creativity (Tan 2013) was observed. A new term of "technology" and "entrepreneurship" or "tehnopreneur" was coined to indicate the desirable emergence of a technological-and-economic style of creative performance (Goh 1999). Crises were felt during economic downturns (1998, 2004) and lives were challenged during outbreaks of epidemics (e.g., SARS in 2003). In 2006, the Prime Minister, who chaired the research, innovation, and enterprise council, approved 1.6 million dollar projects over the next decade. Three strategic research programs were biomedical science phase II, environmental and water technologies, and interactive and digital media, meant to generate a total of 86,000 jobs with value added of 30 billions (RIEC 2006). A boundary crossing campus and research center were constructed: a campus for research excellence and technology enterprise (CREATE) and, within it, a center of Singapore-MIT alliance for research and technology center (SMART). A third university, the Singapore University of Technology and Design (SUTD), is aspired to venture academic education to creativity education in technology and design to real world, such as business, economy, and the world. The SUTD has a strategic alliance with the Massachusetts Institute of Technology (MIT) and Je-Jiang University (Lee 2010a) enabling further boundary crossing (e.g., three research areas within the CREATE in the Singapore-MIT alliance).

Final Words

Constructive creativity is about recognizing the will of search for meaning, the spark of the search for meaning, presupposing and eliciting it; as such, it helps a person become what s/he is, in principle, capable of becoming (Frankl 1984). Freedom of choice comes with being responsible in relation to the other

(Frankl 1984). Under all circumstances, humans determine their processes and means of becoming (*zuoren*, 做人) (Frankl 1984). Meanings are dynamically changing (e.g., relations to the object, relationships to the other people) as they are challenged by the active person in experiencing (Valsiner 1996). In this sense, meanings created from tools (e.g., sign, symbol or language) are more important than the tools themselves. Dean K. Simonton (1999) suggested the effects of *multiple* mentorships on eminence; and effects of eminence of past generations on that of present generations, and the latter on that of the future generations. Practical and cultural relevant creativity are observed in Singapore's society: relationship-based and ethics-based. Relationships with others expressed in dialogue are constitutive of being human (Rule 2011, p. 929). *Relationship*-based creating is interpretative, communicative, dialogical, cultural, and interactive (see, for instance, Buber 1937). Values emerged with reference to bodily movements when two or more persons in shared enculturation, acculturation and (nonverbal)-communication (see Gadamar 2004). Tones of words and sounds of expressions emerge from dialogues, speeches, addresses, and presentations form emergent meanings. *Ethics*-based creating is characterized by caring, compassion, loving-kindness, and appreciative joy. It is about listening to otherness, abstraction of goodness, morality, and integrity.

Schon (1983) suggested a cycle of reflections: Reflection in action and reflection on action. In reflection in action, the person attends to the situation by connecting to his/her feelings and prior experiences. In reflection on action, the person analyzes his/her behavior and considers his or her reaction to the situation. Singapore made a conscious choice to attain success using pragmatic and practical paths (Tan and Law 2004): survival (1959–1979), efficiency (1979–1997), ability (1997–2010), and value (2010– present). The world of Singapore continues to transform with respect to the I-You realm of *cosmos-eros-logos*.

Sustainable development is a key to a *livable* life in Singapore (MEWR and MND 2008). Water is a source of life and security of Singapore (*cosmos*). Singapore has embarked on multiple research *innovations* to ensure that it has sufficient water supplies (PUB 2014): water from local catchment areas, imported water, reclaimed water known as NEWater and desalinated water. The emission of polluted air from automobiles has been monitored with the number of certificates of the right to own a car (a right to vehicle ownership and use of the limited road space for 10 years, LTA 2014) and a stringent number of cars on the road. Measures for a sustainable urban environment of Singapore include the following: reducing the level of finite particles in the air (PM2.5), sulfur dioxide level; having green space of 0.8 ha for every

1000 people, and greenery in high-rise building to 50 ha by 2030; opening up 900 ha reservoirs and 100 km of waterway for recreational activities by 2030; improving accessibility for pedestrians and cyclists and having 70 % of all journey made by public transport (MEWR and MND 2008).

Heng (2013) outlined a value-driven paradigm education (*eros*) and highlighted learning for life to support the change in holistic assessment (e.g., Primary Education Review and Implementation, PERI and Secondary Education Review and Implementation, SERI) for character development (Heng, 2012). A “good school” is one that nurtures engaged learners, enables teachers to be caring educators, and fosters supportive partnerships with parents and the community (Heng 2012). Significant contributions of teachers to the growth of the children and the future of the nation were highlighted (Heng 2014). In 2015, the value-driven paradigm of education addresses partnerships with parents as a highlight of the 50th anniversary of Singapore.

The catalysts of Singapore’s source of life are its shared values (or the ideals), which have transformed the society but remain unchanged themselves. At the dawn of its 50th year, Singapore embarked on releasing a “Pioneer generation package” in 2014, a health care program for citizens born on or before December 31, 1949, for those aged 65 years old and above in 2015, and who obtained citizenship on or before December 31, 1986 (for details see <http://www.cpf.gov.sg/pioneers/pg.asp>). The package was released in appreciation of the practice of values such as self-reliance, united with purposes, and bringing the country to the greater height (*logos*). Voices of sustaining success are permeated in speeches of the Prime Minister (Lee, 2014). The word “creativity” is used in eulogies for eminent politicians. Creativity emerges “where there are no precedents” (Goh 2015). “With a creative mind and wide-ranging interests” and “a tremendous zest for life and work”, a person would “come up with new ideas every day” for the others to study and implement (Lee 2010b). The creative practice and constructive knowing of Singapore continues, certainly varying according to time and generations. Life in Singapore is constructively creative, not without contradictory voices, but with conviction and sincerity. Its values (‘ideals’) of diversity and multiculturalism remain a guide for the Singapore society to prosper. The question is not how long this relationship between creativity and an ethical life in Singapore will last, but how can we make constructive creativity relevant for the practical and cultural life of the world to which Singapore belongs.

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Note

Names of those mentioned in text remain consistent with their preferred use in the Singapore's society: (e.g., Lee Kuan-Yew and Wan Hussain Zoonhri). A hyphen is added between two characters (for Singaporeans of the Chinese descendants) of the first name for ease of reading of the international readers.

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Conceptual and Conditional (Im)possibilities of Creative Theorizing of Creativity and Culture: Critical Reflections from Turkey Toward Globally Transformative Praxis

Aydan Gülerce

I accepted Vlad Glăveanu's invitation to contribute to this volume with pleasure for I was given the liberty 'to choose its focus depending on the issues that are most important from a Turkish perspective'. I thought I have something to say on the main topic of the Handbook that have been accumulated and transformed throughout my entire life as a person/academic-professional. Otherwise, I am not a known 'creativity expert'.

I will proceed by breaking my holistic thoughts into three main parts. In the next section, I expectedly will serve from within the assigned role of a 'local reporter' from Turkey. I will blend my accumulated observations responding to some questions that dominate the past/present empirical studies. In the following second section, I will offer some overall reflections by primarily focusing on theoretical efforts in the area of creativity and culture, including recent sociocultural critiques of the conventional/mainstream discourse. My *perspectival perspective* is inherently intertwined with my 'metatheoretical' positions and problematizations in transdisciplinary knowledge-practices (e.g., Gülerce 2013).

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So I think such dialogically distanced tone in both sections would prepare for my then foregrounding of the issue of *glocalization* (the simultaneously intertwined process of globalization and localization) of Psychology as (re)viewed from Turkish soils. I will further serve as a 'global interpreter' while negotiating various discursive voices heard throughout this writing. Thus, I expect that my reasons to show more interest in the creativity of and within Psychology in general than the psychology of and for creativity in particular will become clear.

I-Pairs: Implicit Impossibilities

Decades ago, Sternberg (1985) differentiated implicit and explicit conceptualizations of creativity. Obviously, ethnographic inquiries are interested in the former. Some researchers focused on creative individuals (e.g., Barron 1969; Csikszentmihalyi 1996; Helsen 1996). Some looked at the definitions of creativity as an abstract notion (e.g., Runco and Bahleda 1987; Runco and Albert (1990)). My inquiry is concerned with both.

The quantitative and qualitative empirical material which provide the basis for my processed and holistic observations come from multiple sources: (i) Various surveys that I have conducted on everyday cognitions, or ethnotheories, of 'creativity' (but also of 'child development', 'child rearing', 'intelligence', 'psychological maladjustment', 'love', be(com)ing a 'good person' and of a 'good society') beginning in the late 1980s. I have repeated them with different groups and foci at irregular intervals. The informants consisted of literate people who were expected to have the vocabulary related to the modern word for creativity (*yaratıcılık*), but excluding psy-students and professionals; (ii) my own systematic observations of undergraduate and graduate (psy) students in specific experiential tasks which were directly related to creativity, performed in order to experience, role-play, practice and master various professional (clinical/counseling psychology) skills as individuals or in groups in my atelier classes and field practicum supervisions; (iii) both groups' self-reported categorizations of themselves as 'non/creative' and their descriptive (nonstructured) short essays and lists of freely associated and ranked correlates of 'non/creative' agents, creativity process and creative product; (iv) my own experiential training seminars on 'creative problem solving' with middle- and upper-level managers in various organizational settings; (v) several external observations of 'creative teams' at work in various advertising and marketing agencies, and ample cognitive–personality–projective assessments and interviews with a variety of populations; (vi) 'natural observations' of and 'lived

experiences' and 'conversations' with various personal friends whose professional creativity are publicly (and even internationally) acknowledged in the fields of fine arts, music, literature, architecture and science, as well as of ample number of anonymous people and everyday events in the society; (vii) prolonged introspective self-knowledge, and self-/other-reflective analyses on why I ('person'), what I did ('product'), how I did ('process'), when I did (temporality), where I did (situational context), why I did (intentional purpose) and so forth were considered 'creative' (judgment) in whatever context they were expressed ('performance') and appeared ('perception'), and (de)valued.

In what follows, far from being exhaustive and 'rigorously' quantified, I herein will list the main constructs as I-pairs, mimicking the common genre of creativity literature. So, let us quickly (re)view how (little-c/big-C) creativity, as an abstract notion as well as under concrete specific conditions, is understood in the minds of some people living in—that is, their implicit presuppositions, conceptualizations and evaluations—an inquiry directed toward fine-tuning the concept.

Imitation and Ingenuity A highly valued and significant marker of creativity is represented by originality and authenticity. Regardless of the sophistication level of the crafting skills displayed, or the talent of the individual/team, 'reproduction' is distinguished (conceptually and categorically, of course) from creativity. 'Imitation' is devalued for lacking ingenuity. Creativity judgments frequently are based on 'performance/product', not on the 'person/process' in terms of the 4Ps of creativity (Rhodes 1961).

Improvisation and Immediacy Another distinct marker of creativity concerns the time-space. Spontaneity functions almost as a confirmation of ingenuity of creative competence. On the spot and rapid action (i.e., 'reaction time') is frequently associated with and prioritized in defining creativity. If the product/performance occurs as practical problem solving and in public, its creativity value further increases in a positive relation with the moral and communal significance attributed to the problem.

Imagination and Irrationality In terms of the material availability, imagination is considered the Siamese twin of creativity by all informants. In a sense, they are Hobbesians as they believe that imagination is a necessary prerequisite of holistic thinking and planning. It is yet another characteristic that serves as a discriminative marker between the 'creators' and the 'noncreators': The 'noncreators' are described/defined as such for 'having weak imaginative power', or 'not having imagination at all'. There is a striking similar-

ity between the groups, on the other hand, as they consider expressions of irrational thoughts or surreal ideas as an indication of creativity. When the judgments are based on the product, the age (i.e., young children) or mental health (i.e., diagnosis of schizophrenia) of the creative actors does not seem to matter.

Independence and Incongruence Apparently, some participants rationalize their conceptual position on the previous point as being regardless of artistic judgment or taste. Put differently, they give credit to independence from normative patterns as a personality feature. The presumption is that, in a socio-cultural climate of pressure for compliance with traditional conventions, any conscious and purposeful act/person that breaks the norms must be 'creative'. Here the apperceptions of 'self-confidence' in terms of 'passing the auto-censorship in public' and/or 'swimming against the current' serve as *intervening variables* in defining and detecting the 'creative person'. They consider the possibility of the incongruent performance/product having more/less creative value as a separate matter (i.e., market, or taste).

Inhibition and Impulse As a matter of fact, another significant divide between the self-claimed, publicly acknowledged or observed 'creators' and the 'non-creators' is formed around the notions of 'freedom', 'openness' and 'psychic/erotic energy'. While the former is frequently described (especially by the other group) as 'relaxed', 'free of inhibitions', 'free in self-expression', 'energetic', 'enthusiastic' and so on, the latter is described (especially by themselves) as 'shy/socially anxious', 'inhibited', 'disinterested', 'conformist/conventional', 'lacking desire/energy' and so forth. While the former groups' self-descriptions in relation to inhibition (as a personality marker) vary tremendously between both ends of the spectrum, they almost unanimously point to an almost 'irresistible impulse' to create. Some compare this 'spiritual pulse/inner push' to create to a degree of 'impaired judgment' or the neglect of other rational/responsible self/other obligations, if not 'irreality'. It corresponds to something more like Bergson's *élan vital*, Freud's *eros* or Fromm's *existential meaning*, than an 'urge' or 'instinct'.

Intrinsic Interest and Initiative Regardless of whether it is seen as inherited or as an innate structural capacity, a significant number of people agree that creative activity is intrinsically motivated. This activity is seen as proactively initiated by the creative actors, rather than as a response to some order or external imposition. Indeed, most artists particularly describe lack of motivation and even strong emotional reaction to taking commercially concerned orders or

to other 'external interferences' such as competitive contests, deadlines and so on. Intrinsic motivation as a significant marker of creativity was Galton's (1869) original thesis.

Identity and Integrity Whether in the form of 'professional X' (i.e., painter, writer, composer, etc.) and in the case of few exceptions who comfortably identify themselves as creative, or not, creativity becomes an *identity* and serves as a *way of life*. Also, what my 'creative' informants talk about seem to be more about the issue of *free will* and agentic integrity than *locus of control* or *power*. This point is intertwined with the previous point of intrinsic motivation, which also finds its incentives built in the creative action itself rather than any other external rewards such as prize or praise.

Intelligence and Idiosyncrasy More frequently, creative people are believed to be intelligent more than intelligent people are considered creative. However, creativity did not rank among the associated implicit constructs of intelligence as high as quick comprehension, fluency, social compliance, good morals, respect and self-discipline. Meanwhile, intelligence ranked the second (after imagination) among the constructs related with creativity. Furthermore, on the Osgood's Semantic Differential, while intelligence was frequently 'favorable', it was not less frequent for creativity to be ranked between 'indifference' and 'unfavorable' as a personal quality that one would like to have. Idiosyncrasy, as a form of divergent thinking, is also associated with and is seen as a strong component of creativity. Thus, my informants' ideas support early views of James (1890) as well as Guilford (1967), but not of Gardner (1993).

Innateness and Interiority Overall, there is a consensus on the psychological premise of human potentials for creativity being different at birth. However, these are seen as neither 'evenly' nor 'normally' (as in the statistically supposed Bell curve) distributed among the individuals of the entire human population. Yet, people generally think that creative persons, families, other groups, institutions or societies are innately privileged and lucky only post hoc—that is, once their creativity is acknowledged. Notwithstanding, the majority in all groups including the (self-/other-defined) 'creative persons' themselves attributes more significance to 'innate' determinants and personal abilities more than skills acquired from, and opportunities provided by, the social environment. That is the case again when they retrospectively evaluate creative dispositions and productions.

Intentionality and Invention Speaking of *free will* and *agency*, creativity is generally understood as an intentional activity. It is judged by the attainment of its initial purpose. However, an unexpected invention, despite its heuristic or humanistic value, that resulted from serendipity, accidental discovery or an unintended (child-like) play, is also separated from creativity. So, what follows the 'falling apple' or the story of penicillin also is differentiated as invention/scientific achievement. Nevertheless, persons such as Newton and Fleming are recognized as 'creative' for the fact that they had already developed the competence to make expert connections with the opportunities provided by unanticipated environmental conditions.

Idealization and Impersonalization On the other hand, acknowledgment of cumulative knowledge in the history of humanity or the contributions of unknown human peers in any creative process is judged case by case. Leonardo da Vinci and Sinan (the Ottoman architect) with their lifetime achievements are not treated equally, for instance, as Imhotep (the architect of the Pyramid of Djoser) and the achievements of the anonymous groups of hundred thousand 'Egyptian' workers. 'Creative' people (especially if they are famous historical figures) are romanticized and 'idealized'. For their 'earned' the fame creativity is believed to have, giving the benefit of the doubt, a good reason to be differentiated from the mass and be glorified as in Glăveanu's (2010) He-creativity. All agree that creativity is an indispensable descriptive characteristic of humanity; in agreement with Rousseau, they also consider creativity as an important unique human quality which separates human beings from other creatures and makes human culture survive. Yet, they object to the idea of 'ordinary creativity' of 'ordinary people'. Rather, 'creativity' is not an ordinary human activity, or 'creative people' have different characteristics that correlate with 'creativity', or make them 'creative'. While gender, economic status, urbanization and age did not appear to take any significant place among these descriptions, 'personality' did.

Immunity and Impediments On the other hand, however, the sociocultural context and physical environment are more significantly emphasized, noticed or judged usually for their immanently constraining aspects of creativity. Put differently, these *ad hoc* and *locus of control* type evaluations typically appear as 'blame' for the individuals' 'failure' rather than acknowledging the impact of the context on the actors' achievements. Creativity, by definition, also included the mastering or bypassing these environmental 'obstacles'. In other words, not being entrapped by, or being immune to, these seemed as an enabling asset. Meanwhile, in Psychology, what is frequently referred to

as *field-independent cognitive style* and *cognitive-set* are described as 'external' seductions and traps that hinder creativity and problem solving. At the same time, almost all peoples referred to the affective, motivational and interpersonal issues (i.e., exclusion, rejection, discrimination by the authority and/or peers) as the major impediments of their creative actualizations and withdrawals from creative participation.

Individualism and Intersubjectivity Creativity, defined as an ability or as a (life) style and attitude, is understood in personal(ity) terms. In the sense of accomplishment or outcome (be it individual or collective), creativity is viewed as a 'byproduct' of accumulated knowledge and collaborative experience or labor than an individual's 'solo' accomplishment. The 'locus of control' for the enabling atmosphere is explained by the existence of creative leaders in groups, managers in organizations and so forth, or the individual group members themselves, rather than being attributed to contextual conditions, or being 'externalized'. In rare cases, such as my observations and interviews in an (European franchised) advertising agency, where systematic team-work (rather than 'casual brain-storming') is an institutional *habitus*, the interpersonal work environment is given credit in terms of both affective support and intellectual complementarity. Nevertheless, the creative environment or milieu is described in terms of professional discipline, friendship, high achievement motivation, and the group being constituted by creative, inspiring, inquisitive, self-confident and humorous individual members who stay away from interpersonal conflicts, rather than its 'systemic' and 'structurally relational' qualities.

Intuition and Immanence Some of my early surveys with less urbanized, Westernized and less psychologized people, and more recent ones with all groups, point to intuitive knowledge (of *know-how*) and cultural insight as significant components in both the production and the evaluation of the creative activity or product. Most people agree that creativity highly benefits from good intuitive judgment. However, almost all presuppose the necessity of insight in the related area whether it is intuitively driven or gained by hard study and/or actual practice. In this particular meaning context, insight is understood as an ability to accurately judge the situation. That includes one's own limitations, the available material to work with, and the sociocultural context where the process-product will be/is embedded. There is also almost a strong mystical quality expressed in aesthetic/creative appreciation/judgment in favor of immanence and spirituality aspects of creative products, particularly in the domains of music and poetry.

Illiteracy and Involvement Roughly summarizing, the groups show observable differences in terms of their rationales of the effects of schooling and education on creative abilities and performances. Yet, there is a tendency to view them as negatively correlated, in some cases even detrimental, if thought of as related at all. This was also the early thesis of Torrance (1966) at the time of the development of his test that recently received some supports (e.g., Robinson 2006). As such, education in general (i.e., schooling, the highest level of diploma obtained and the number of years in formal education) is seen as either irrelevant or a hindrance to creativity among the educated and the urbanized, especially by the group of 'creative' people. Reversely, both the less educated and 'noncreative' groups tend to idealize education more in this meaning context. Interestingly, however, all people believe in the importance of intense interest, specialized training or apprenticeship to increase domain-specific creativity. This is almost described as *cathexis*, and concentrated energy, focused involvement in the subject matter and selective attention and desire that invite possibly fruitful ideas generate and refine specialized knowledge and skills.

Ignorance and Intellectualization Some artists express intentional ignorance of the works of their contemporary peers, and show heightened sensitivity to the issue of inspiration and imitation by others' creations. Most also mention strong distaste and even display negative/defensive attitude toward the rationality-/recipe-oriented interests in their products and analyses/intellectualization of their experiences during the process of creation. Or, if 'cooperative' or not 'shy', most of them are inarticulate about the process, especially if they did not master the 'obscure' vocabulary and genre in fashion. Some enjoy talking about the technicalities of the process-product freely, yet most frequently they seem to prefer to listen to others' (i.e., 'ordinary people', not necessarily 'art critics' or other artists') comments, attributions and interpretations of their 'product' and themselves as 'creators'.

Innovation and Industry Novelty in the form of industrial and scientific innovation is conceptually differentiated from novelty in the form of creativity. While the former is described more or less by the press-product orientation, the latter is characterized on the basis of person-process relationships. The majority primarily reserves 'creativity' for the 'artistic/romantic' and personal domains that is seemingly subject to less external structural-systemic and material technological support or pressure.

Importance and Investment Although creativity is valued, and almost visibly demarcated from innovative productions and renewed reproductions, it is not necessarily given high importance by all groups. In other words, it is not

equally valued as a significant asset, something to be admired or longed for in general. Quite the contrary, only some of the educated and urbanized praise creativity as a personal feature to have not only for themselves or for their children, but also for social and political leaders (hoped to be) working toward solving societal problems and building a better future.

Inter-Intra-National Investigations and In/Direct Illustrations Academic interest in creativity has been growing in close parallel to the slow development of (mainstream) psychological and educational sciences in the society. Empirical research appeared so far in the form of psychometric adaptations of creativity tests, testing the effectivity of some pedagogic method to enhance some domain-specific creativity, and replication studies (e.g., Oral et al. 2007; Toğrol 2012).

Perhaps much higher enthusiasm is evident in the fields of business and marketing and industrial design and engineering in quick response to rapid cultural *psychologization*. There is an increasing (institutional) press for innovation in some competitive industries in technology-centered and consumption-based socioeconomic change. That is also seen to a much lesser degree in the fields of science, education, arts and medicine. The ethical, legal, institutional, bureaucratic and personal issues concerning ‘copyright’, ‘patent’ and ‘trademark’ are still ignored/neglected notions, in spite of generativity and even richer creative human potentials.

On the other hand, some scholarly observations strikingly would come forward in the background of the society’s historical trajectories and the ‘encounters of third kind’ with modern/Western psychological culture diffused around the globe, something I will return to. These first and foremost signify prolonged plurality, diverse cultural arteries, rich traditional resources and their dynamic transformations in multiple directions, including extinction and renewal. Without any cultural essentialization, it is possible to caricature creativity in this land marked by extreme plasticity and paradoxical flexibility. Further contouring would depict intuitive wisdom and transcendental competence, desire for radical novelty/discontinuity as well as sentimental resistance to change/continuity, sarcastic expression/witty humor as social critique, risk taking and prompt responses to environmental opportunities, breaking normative rules/forbidding regulations, practical/instant problem solutions which are triggered by frustration toward freedom or crisis resolution, lack of premeditation/good planning and of disciplined patience/systematic persistence, weaker interest in or motivation by productivity/product than personal expression/satisfaction and interpersonal process, emotional sensitivity to approval/trust and withdrawal/discouragement in its absence and so forth.

Interpretative Impressions and Implications Although the list can be longer, for there is more that can be said, it should be sufficient to give the reader a general idea of how creativity is understood and exhibited in Turkey. In sum, nonexperts' views of creativity showed similarities to expert conceptions in Psychology, which are more diverse and usually polarized. Both the judgments and the typical appearances of creativity seem to increase in parallel to the intensity of frustration that stems from individual/collective problems to be solved in everyday life.

Ample evidence ranges widely from inventing local means of transportation, housing and energy production in rural/remote areas to saving lives in 'accidents' in the absence of instant institutional/professional aids and legitimate/technological tools even in urban/modernized areas. They usually are exhibited as using the immediately available material in the environment for different functions and purposes than they are 'assigned/designed for'. The human body is frequently included as the primary tool (without any 'mediating' device) even though 'modern technology' is 'consumed' and may be present in the (high-/low-risk) environment. Not surprisingly, therefore, *'top-down' and/or 'external' 'modernization' 'demands' for 'creativity' by the rapidly transforming societal/institutional surface structure-system are met with 'bottom-up' and/or 'internal' 'resistance' as deep traditional/cultural 'supplies'*. These frequently are perceived as artificial in both senses of the term—that is, artifact orientation, and insincerity/superficiality.

So let me conclude this section by highlighting some other I-words. In general, judgment of creativity increased in positive relation to high moral and heuristic valuations of its *impact*, and decreased in negative relation to its social *insignificance* and *instrumentalization*. My *insider-outsider's insight* points to the *impenetrability*, *immeasurability* and *individuality* (in the senses of 'singularity', 'synthesis' and 'synchronicity', not *individualism*). Hence, I would like to accentuate the *irreducibility* of the complex creative phenomena that do not make it a suitable subject for *intrusive* and manipulative positivist psychological *investigations* or *interrogations* that lose or destroy its *indivisibility* and *invisibility*.

The interdisciplinary *inquiry*, *interpretive interpretations* and *implicit implications* suggest the strong *interpellation* of majority of creativity scholars in the rigidity of disciplinary discourse in contrast to the *impermanency* of this fluid phenomenon. Thus, they call for novel ('creative?') mentality viewed from this 'traditionally (post)modern' sociocultural context that is in equally dynamic flux itself beyond the pronounced social scientific categories that should feed-forward to global knowledge-praxis.

Double Ps: Puzzling Possibilities

We have taken a glimpse at the ('cultural') conceptualizations and appearances of creativity and its fragility to, or 'impossibilities', so to speak, for scientism in psychological research. Let us now question some resilient knowledge habits and look for recently signaled 'possibilities' for conceptual generalizations in the deliberate effort of theorizing creativity and culture in Psychology. Rather than elaborating various mini- or medium-size theories of creativity, I will rapidly draw another sampling list of some axiological themes. Thus, without engaging in in-depth discussions, I will make explicit some of the closely intertwined depictions/positions, which often are in tension with one another or are paradoxical.

Paradigmatic Phases Not only it is the case that what qualifies as 'creative' and what characteristics creative people are believed to have change temporally and contextually, but theories of creativity themselves change as well. The genealogy of the concept of 'creativity' has been gradually changing in Psychology since Guilford's (1950) use of the term. Thus, for some, creativity is a universal concept regardless of the possibility of reaching a universal definition. What change are the social/discursive representations of the phenomenon.

Past Presumptions For example, creativity is traditionally understood as dependent on the originality and novelty of the product. If the outcome is nothing 'new', or a copy as in imitation or duplication, it is not considered creative. Psychometrics and personality characteristics of the creative individuals (*traits*) were given significant research attention (e.g., Amabile 1982; Barron and Harrington 1981). Andy Warhol would probably score high in a hypothetical creative personality assessment in his time, but his pop-art (in the sense the duplication) is still a controversial example of artistic creativity among art critiques.

Present Presentations Recent challenges to 'mainstream' presuppositions take an opposite position almost as a prerequisite of theorizing creativity. Therefore, continuity in cultural traditions from calligraphy to basket weaving, for example, are considered creative acts. They are not seen as just skillful copying behaviors of the predecessor's acts and models. But for some, these creative activities are possible because of prototypical schemas or *memes* that already got into the minds (e.g., Sperber 1996). For others, who are distant to, or nervous about, any

‘evolutionary’ position, creativity is ‘socio-culturally distributed’ (e.g., Glăveanu 2014; Tanggaard 2014). It is not the *I* or the *He* who creates, but the *We* (against the conventional individualistic position as well as mentalist and interiorist standpoints). Glăveanu (2013) also proposes the 5As (actor, audience, action, artifact, affordance) of creativity to replace the 4Ps in order to further emphasize dynamic and interactive qualities of this phenomenon.

Plural Principles As a recent example to the latter, Glăveanu (2010) states five principles of cultural psychology of creativity as: (1) *contextual*, (2) *generative*, (3) *meaning-oriented*, (4) *developmental* and (5) *ecological* understandings of creativity. Notwithstanding, *pluralism* and *perspectivalism* (that incorporate these five principles and more) are not included among these principles. From my *perspectival perspective*, these are some necessary conceptual conditions of possibility for creativity as well as the cultural psychology of creativity (e.g., Gülerce 2013, 2015).

Polysemic Predicates Undoubtedly, not only both of the primary constructs—culture and creativity—but also ample axiological principles committed to them have gained/lost numerous meanings in the philosophy of science and even within Psychology. Thus, they have numerous other related assertions, logical or otherwise, for a meaning-oriented approach to creativity to keep in mind. Also, all of these affirmations inherently have their own generative connotations. Thus, any disciplinary or interdisciplinary knowledge-practice must take them into account *all at once* if it does not wish to sacrifice conceptual and ecological validity.

Problematic Paradoxes In fact, any close reading of past/present creativity and culture literature easily would reveal numerous definitions for both constructs. A preference for any explicit/implicit definition is not just a simple matter of conceptual taste, of course, but also suggests a certain methodology. A typical and frequently repeated methodological error is the ignorance of the cross-disciplinary, cross-cultural, cross-theoretical and cross-logical levels in inquiry and analysis (e.g., Shiu 2014).

Process Philosophy Rather recently, claims against non-developmental and static mainstream psychology are frequently heard. They revitalize the process philosophy understanding which is typically represented by Heraclitus’s premise of the dynamic universe in opposition to Parmenides’s premise of a static universe. As its descriptive marker, both creativity and culture are seen not as ‘noun’, but ‘process/activity’ phenomena though ‘swimming against the linguistic and commonsensical currents’.

Physics of Presence Regardless of lip service being paid to process philosophy, however, psychological scientism with its methodological *habitus* has deep-seated commitments in the physics of presence, concrete, tangible and the visible material in order to reduce and measure (without necessarily sound inferences and interpretive limitations) the invisible mental constructs. Recently inactivated interests in *embodiment* in order to demystify creativity also fall into positivist scientism.

Poetic Palpability Creative wisdom, however, ‘locates’ and ‘captures’ creativity in the ‘physics of absence’—that is, ‘dark matter’, ‘dark energy’. Hence the Higgs boson, recently discovered at CERN, is called the ‘God particle’. The point here has to do not only with a commitment to a romanticist/mysterious or religious orientations to creativity. Rather, it speaks to the limitations of human knowledge even in physics (the ‘hardest’ science ever), which has been the prime role model for Psychology. Ontologically valid understandings of any complex human phenomena such as creativity require complex human orientations including poetics.

Pseudoempirical Psychology In the meantime, Psychology’s empiricism is nothing but pseudoempirical (Smedslund 1991). The meanings and (cultural) connotations of the terms used in Psychology should not be, but frequently are, ignored. Particularly from a historical standpoint, what is presumably discovered ‘out there’ is constructed by the very scientific terms we use, which are theoretically invented as in the *looping effect* (Hacking 2002). Thus, desperately sought rigor and a prestigious identity cannot be found by fishing for empirical data in pseudoscientific waters either.

Precious ‘Pathology’ Freud did not only personally illustrate human creative imagination and productivity, but also gave one of the most comprehensive accounts of creativity and culture-making. Although any search in his texts—including ‘The Moses of Michelangelo’ that he first published anonymously in *Imago* in 1914—using these two ‘keywords’ might disappoint the reader, psychoanalytic theory building, including Jung, Kriss and Winnicott, offers profound insights that take into account all 4P and 5A components of creativity. All people, in principle, have the capacity to act creatively. Again, the differential judgment between genius/creativity and madness/pathology is not based on the quality of the product, but the personality structures and the dynamic processes within their relational and historical/developmental contexts.

Purposeful Preconscious The positivist and empirical psychological approach to creativity flourished following the early biographical studies of people who

were considered geniuses by Galton (1869, 1874) and Terman (1906) and Cox (1926) who further developed the former's ('racist') work. Rousseau's antielitist philosophical views, on the other hand, were reflected in the anti-positivist and antirationalist psychological positions developed by critical figures such as Bergson and Freud, both of whom championed the role of the *preconscious* and the subjective in their accounts of creativity.

Phenomenological Primacy In fact, from an existential and self-psychological point of view, creativity is a necessity for the self-actualization of possibilities in life. As such, creativity has both negative/destructive/regressive and positive/constructive/progressive features that make one's meaningful life possible. Following Kierkegaard, May (1975) further discussed how the guilt and anxiety associated with breaking the status quo, or 'killing something in the past', is necessarily related to creativity and the actualization of possibility, so that 'something new in the present may be born'. Hence, the title of his book: *The courage to create*, where a particular kind of courage is seen as essential for creativity.

Proper Pragmatism Re-readings of early American pragmatists (i.e., James, Dewey, Mead, Peirce), or Russian sociohistorical/sociocultural theorists (i.e., Bakhtin, Leontiev, Luria, Vygotsky) appear as (ap)propriation of their approach to the present-day popular and/or proper psychology. Popular psychology invites the study of relationships as a reaction to the autonomous and bounded individual described by mainstream Western psychology. Proper pragmatist psychology, however, does not seem to show the courage to create novel knowledge and/or keep those early giants alive. What seems to be the primary obstacle is that the theoretical concepts are tweeted out of the entire theory's ethos/spirit and *intertextuality* as well as societal contexts of their own historical time, and are treated with pragmatic anxieties and *presentism*. Revisions of the questions attuned to present problems would be more proper.

This might be a good place, I suppose, to pause. So, let us quickly conclude and summarize this section by foregrounding some other double Ps. Psychology's *profound plasticity* as historically and contextually situated body of knowledge exhibited itself as adaptation to the status quo of a particular societal order in which it has flourished. Creativity and culture scholarship in psychology cannot be thought of separate from this, or as an exception. The *postmodern puzzle* as demonstrated by the rhetorics of 'the death of the author', 'the end of history' and so on is also reflected in the psychology of creativity and culture literature. Take, for instance, confusions between whether creativity is a *personal possession* or *public property*, a *peaceful passion* or *panned*

pessimism. What would be the *powerful probing* to encourage *parsimonious preservation* of the tradition on the one hand, and renewed knowledge with *permanent popularity* and *predictive power* on the other? It is not yet clear how to develop *permutational perception* and *persistent persuasion* to foster creativity. Also, minds are not made up yet between searching *pedagogic procedures* or *promising prodigies* in order to enhance creativity in (which?) society. And what for? Regardless of lacking disciplinary courage or not, at present, Psychology in general, unable to confront many worldly questions, seems to be caught up in ‘developmental arrest’—*perpetuating populism*. Creativity standards and conceptual quality of knowledge, in particular, seem to be lowered every other day and apparently paves the way to *plausible plagiarism*. Thus, at the end of the day, the psychology (of creativity) has been ‘regressive’, ‘obese’ and ‘infantile’, but not ‘creative’. From where I stand, if anything is missing, that might be *progressive politics* and sufficiently inclusive *perspectival positions* toward radical reflexivity in a critically global *psychological praxis*.

T-Triplets: Thesaurus of Transformative Trajectories

In this final section, I turn to my specific concerns to various meta-theoretical and meta-psychological issues directly relating to creativity and culture, the Turkish context being the illustrative case in point. Notwithstanding, I will continue the style/word-play with some T-words in order to highlight the main points of my argument for this chapter within the rigid disciplinary genre and traditionally linear narrative style of Western thought. I expect that an ardent reader would easily notice many implications of this meta/theoretical orientation toward creativity and culture for broader concerns with psychology’s global/local cultivation and historical contextuality. So, let me draw some conceptual differentiations via a descriptive selection of T-triplets for the sake of *intertextuality*.

Turk–Turkey–Turkishness Marked by the loss of Byzantine Constantinople in 1453 to the Ottoman rule, any Muslim, regardless of racial, ethnic origin and language, was called ‘Turk’ in Christian Europe. Putting aside a political historical analysis of the mystifications of Islam, misconceptions of the constitution of the Ottoman state and Islamophobia then and today, this is not just a trivial historical detail from a sociocultural and critical psychological perspective. As well documented by the Western historians (e.g., Brown 1996), the ‘West’ has persistently refused to pronounce the Ottoman Empire labeling it ‘Turkey’ and its ruler ‘Turks’, and un/consciously imposing their

ethnolinguistic rubric upon this multireligious, multilingual and multiethnic polity which has been the very opposite of (modern) nation-state. Ironically, the word 'Turkey' and its corresponding geography (Asia Minor) did not exist in the Ottoman-Turkish vocabulary until the twentieth century. Also, to the Ottomans themselves, the term 'Turk' referred to the peoples of central Anatolia over whom they had come to rule. In the fifteenth century, neither have they been aware and/or identified themselves with their pejorative representations of the (terrible) Turk in the West, which has not become the 'West' then. Nor, characteristically known as 'oral culture', were they interested in documenting their own representations and (scientific/creative) achievements.

So, people referred to as 'Turks' were not necessarily/exclusively Turks (whose ethnic origins go back to Oğuz Turks of Central Asia) in any sense, but rather diverse Muslims, converts and any person from just about anywhere who behaved in certain ways (*alla Turchesca*). Despite the variability—that is, extreme admirations, envy and devaluations, animosity—of social representations between the European texts (including Shakespeare's *Othello*), these descriptions, however, always pointed to radical difference, (self/other) contradictions, resistance and so forth and meant projected otherness (whatever is disliked/disowned by the Judeo-Christian West).

Another irony is that the political reform movement of the early twentieth century to replace the monarchy of the Ottoman Empire with constitution and multi-party democracy is called the *Young Turks*. As is well known in the English readership, the term 'young Turk' is used to describe 'progressive or insurgent member of an institution, movement, or political party' or a 'person who resists against authority or societal expectations'.

The Turkish Republic was established in 1923 following World War I and the Turkish War of Independence, and the country in question was called Turkey (among the other nation-states peoples of which constituted the Ottoman Empire for centuries). The word 'Turk' in the constitution was used in reference to the national citizenship of all the inhabitants of modern Turkey (without any racial/racist reference) who are ethnically and religiously diverse but have been living together and intermingling for 1000 years in Anatolia. However, the issue of ethnicity became a highly contested and reified real political and bloody topic in particular relation to the essentialist *postmodern identity politics* since the 1980s. Thus, the scope of diversity of ethnicities is worth mentioning. Andrews (2002), for instance, offered four major groupings on the basis of spoken languages: (1) *Turkic*: Turks, Azerbaijanis, Tatars, Karapapak, Uzbeks, Crimean Tatars and Uyghurs; (2) *Indo-European*: Kurds, Yazidis (Kurmanj and Zazas), Bosniaks, Albanians, Pomaks, Armenians, Hamshenis, Gorani and Greeks; (3) *Semitic*: Arabs, Assyrians/Syriacs and

Jews; (4) *Caucasian*: Circassians, Georgians, Laz and Chechens. Modern Turkish language also has many words and expressions appropriated from various other languages of different origins.

As it is frequently worded in a national(ist) narrative, the modern Turkish nation-state ‘was created from the ashes of the Ottoman Empire’ under the world-famous creative leadership of Mustafa Kemal, who is known by his later given surname ‘Ataturk’ (meaning the father of Turks). His rapid and radical revolutionary philosophical, political, legal, economic and social institutional reforms followed one another to design the new secular modern nation-state in Western fashion. These included the abolition of Ottoman Caliphate and Sheikh ul-Islam (established in 1517) and the adoption of Latin alphabet that invoked animosity in the Islamist world.

Elsewhere, I have given several accounts of diverse modernization/Westernization/democratization narratives of Turkey (Gülerce 2007) and, in the foreground, of historical trajectories of psychology, the absence of any indigenization movement (Gülerce 2006, 2011), psychoanalysis (Gülerce 2008), as well as where/how I see the ‘place’ of ‘culture’ in (cultural) psychology in general (Gergen et al. 1996, Gülerce 1996, 2015). So, the relevance of this historical ‘detour’ in this text is not only to stress that Turkey by itself is a historical example of a *creative emergence*. The point I would like to make briefly also has to do with conventional compartmentalization of knowledge and hegemonic practices as reflected on, for example, the organizations of handbooks, discourses of textbooks and so forth in academia.

Transculturality—Transnationality—Transdisciplinarity Indeed, mainstream (acultural) psychology is frequently taken for granted as being a universal science. This, of course, includes meta-theoretical presuppositions, theories, research questions, scientific metaphors, methods, measures and so on. Or, culturally sensitive (pseudocultural) psychology treats them all the same as being indigenously Western by claiming its own differentiation from it. It reproduces, however false, overgeneralized and dichotomic clichés of the tradition such as *individualistic versus collectivistic*, *authoritarian versus democratic*, *emic versus etic*, *independent versus interdependent* and so forth, by looking elsewhere as disguised/‘sterile’ laboratories of ‘different cultures’, hence ignoring the diversity within and further postponing self-reflectivity.

Culture creates illusory boundaries of meaning potentials that, by definition, includes/excludes and resists symbolization—that is, ‘lost in translation’. This may be a good place to insert a ‘translator’s note’ in the text as an example: Although the implicit conceptualizations of creativity might appear as person-focused (i.e., individualist and mentalist), this is primarily due to

the language use. It would be a serious error, however, to dismiss in ‘reading/interpreting’ that the (cultural) notion of the person is other-centered and relational/communal to begin with, is not atomist and individualist or isolated from the historical—material, social and cultural transformations. The individual with all Western connotations of the term/concept is rather a recent import in Turkey’s alternative modernization journey.

It might be worth an effort, perhaps, for creativity and culture scholarship to divert its interest a little bit toward historically situating the (post)modern scientific disciplinary demarcations in conjunction with the sociopolitical cartography of our (post)modern world (Gülerce, 2009). Just as the hypothetical scientific constructs of anthropology’s ‘culture’, sociology’s ‘society’, political science’s ‘democracy’, psychology’s ‘identity’, ‘creativity’ and so on that are invented and exported categories serving as multi-disciplinary (i.e., psycho-analytical, psychological, political, economic, sociological, anthropological, etc.) technologies, ‘Turk’, ‘West’, ‘East’, ‘North’, ‘South’ and so on are not only fictive, descriptive rhetorical devices but also essentialize and unwittingly reify scholarly un/conscious projections.

It is ironic that Psychology is allured by the category of ‘culture’ when anthropology is ‘dumping’ it in our global times as the clothes of an older sibling that are old, too small or useless. Notwithstanding, for the sake of *transformative transformations*, we could retailor the concepts of creativity and culture with epistemological—ontological—ethical—aesthetical—pragmatic concerns. Many scientific—philosophical presuppositions such as *absolutism* and *universalism*, therefore, need careful reexaminations in relation to *relativism* and *universalization* in global praxis (Gülerce 2014).

Furthermore, not only are the establishments of the modern secular Turkish state-nation and of modern secular psychological science historically synchronized events, but the same can be said about their international and interdisciplinary geopolitical locations; hence, their paradoxical identification possibilities and developmental trajectories are categorically identical. That is to say that Psychology neither is a natural science, social science, humanities discipline, nor part of the arts. Just as Turkey neither is West, East, North, nor South, by all connotations of the terms. For instance, while the West is characterized by *either/or* Cartesian mentality, the East is signified by *both-and* mentality of Yin and Yang. Space limits do not allow me to engage in a discussion on views of creativity in Islamic philosophies. Nor is it necessary for my present purpose and conceptual position which cautions against indigenization and essentialization of any psychological identity category.

As a matter of fact, what I am offering is a third, *borderline/transformative sphere*, orientation as a differentiated category from a dynamic land of deeply

seated traditions and the cross-roads of diverse philosophies for thousands of years. I describe *in-betweenness* as a *neither/nor (non)identification* trajectory, but also *transcendence beyond* (Gülerce 2012). Its *relational* patterns can be traced in any time-space of humanity independent of scientific categorical designations. That is also why I am more, or at least equally, interested in the creation and creativity of Psychology and its diffusing praxis in the global context as seen from Turkey than in the psychology of creativity in Turkish contexts, and how these issues are organically intertwined.

Hence, I opted for offering some authentically distantiated reflections from within/without the double-sided sociohistorical–politicocultural mirror of Turkey, if I were to humbly ‘contribute’ with anything at all. Otherwise, a rather recent chapter in *The International Handbook on Creativity* edited by Kaufman and Sternberg is devoted to ‘Creativity in Turkey and Turkish-speaking countries’, where the author apparently included just about everything she could find relevant (Oral 2006). On the other hand, the chaotic diversity, methodological insufficiency and conceptual confusion of the so-called Western creativity research itself with a head start of a half of a century were also revealed in other comprehensive handbooks (e.g., Sternberg 2004). Research travels around the world with its philosophical/conceptual/methodological technology and various time lags, but unexamined questions.

Triopus—Transformational Trialectics—Transformative Triangulation Not surprisingly, therefore, I have been interested in participatory observations of creatively *transformative* (personal, familial, organizational, societal, cultural) *transformations*. Hence, I am grounded in these observations and experiences and, departing from psychological–psychoanalytic-systems theoretic approaches, in radical reconstructions of conventional knowledge-practices. From the meta/theoretical perspective that I have been developing, both ‘culture’ and ‘creativity’ have indeed seen as functional conceptual categories to keep once redefined and modified as they belong to the *critical third sphere*. Thus, I found necessary particularly to draw further conceptual, ontological, epistemological, ethical, practical and aesthetical distinctions to differentiate them from their conceptual kinships or affiliations, which in my view have been interchangeably and imprecisely used in the dichotomized and polarized Cartesian scholarship.

Since I discussed the (potentially) self-reflexive coordinations of the psychological and the core notions of my conceptual matrix elsewhere (e.g., Gülerce 2010), I here will mention only briefly a few that are in direct relation to creativity and culture. For example, as the generic ‘unit of analysis’ for any scholarly endeavor from psychology to political science, I proposed a meta-

phor, namely *triopus*, where the *Imaginary* realm/register of ‘culture’ forms its ‘third eye/leg’ (e.g., Gülerce 1997). Its sustainable development depends on creativity. *Transformational trialectics* refers to the triadic and multi-level, multi-directional, multi-dimensional mechanisms of ontological changes involving the other two differentiated realms/registers than the *Imaginary*, namely the *Material* and the *Symbolic*.

Taking creativity *outside the box* of the ‘individual’, for example, and placing it *inside the box* of ‘culture’ or ‘distributing’ creativity between the symbolic and the material context just does not seem to solve the problem of Psychology’s acculturation and/or creative cultivation. That is, *culture* is either contoured by some national/regional borders and often is presumed static and homogeneous entity (i.e., *cross-cultural* or *indigenous* psychologies), or unwittingly is reduced and decomposed into abstract preemptive principles, social representations, societal structures, social roles, identity positions, normative systems and socialization activities (i.e., cultural or sociohistorical psychologies) as the disciplinary *habitus*.

Indeed, by *transformative triangulation*, I described intentional epistemological and collaborative acts of knowledge-practice communities. So, prior to running out of historical-material time-space of this text, I think it would be at least ‘aesthetically correct’ to conclude this section toward the end with one more T-triplet in order to fully justify my tittle.

Teleologicality–Temporality–Timelessness Studying creativity and culture not as static, or noun, phenomena but as dynamic, or process, phenomena also necessitates a commensurable theory of time. As mentioned earlier, almost the entire psychological research or our commonsensical theory of time rests on the old presumptions of *linear* and *teleological* time. Its religious translation would be the Judeo-Christian belief in Creation out of *ex nihilo* and divine prime mover. In physics, that would be the pre-Einsteinium notion of ‘spaceless time’. Thus, historical/developmental analyses need to master *temporality* in which every bit of real time is connected with a real slice of space. In relativist psychological discourse, this is what we supposedly mean when we talk about situated knowledge, contextualized activity and so on, perhaps with a minor exception that, even in micro-analytic rhetorics, our bits and slices are much too big and broad.

In brief, in my multitudinal and pluralist *style of thinking*, plural notions of time are also conceptualized in triadic relations—that is, linear–curvilinear–cyclical; synchronic–diachronic–anachronic. By *timelessness*, I refer to a post-Einsteinian and post-quantum views of reality where cosmic space is not actually ‘timeless’ but the probability of the bits are infinite. In my definitions

and radically pluralistic, sufficiently inclusive (ontologically egalitarian) theorizing, the concepts of creativity and culture and their mutually constructive relations belong to this 'timeless' third realm of the *Imaginary*. That is why 'our' projective meaning potentials are never lost, expand and continuously recycle throughout humanity's cosmic history.

Ending

I expect to have made clear in this chapter that whether the understanding of concept of creativity is universal (e.g., Csikszentmihalyi 1997; Guilford 1968, 1975; Plucker and Runco 1998) or different cultural perceptions are possible (e.g., Albert and Runco 1999; Lubart and Sternberg 1998; Rudowicz and Hui 1997; Sternberg and Lubart (1995)), a debate which has seemingly preoccupied/exhausted psychologists' creative energies, is a different question than whether creativity is a uniquely human (questionable) and universal (if it wants to be humane) phenomenon. Needless to mention that all these positions do not exclude or invalidate one another from a multi-level and multi-paradigmatic perspective that seeks transcendence like the one I employ.

In brief, from within such *critically glocal* (i.e., 'universal'-'Turkish'-'singular') and perspectival perspective, and in the foreground of cultural transformations from romanticist idealizations to (post)modernist technologizations that pave the way to cut-and-paste or template reproductions, political economic/academic institutional pressures 'to create' do not happily seem to lead to reflective creativity in psychological sciences. This might be because an increased interest in creativity, as a sign and result of its scarcity, serves mainly in the interest of the epistemic market and the rapid production lines of neoliberal economy.

Any talk of 'creativity and culture' cannot be convincing without genuine examinations of whose and what ideas and practices are included/excluded and why by this production line of our present academic culture. It is particularly important to deliberate and reflect on what the psychology of creativity and culture discourse wants, attempts to and might be creating within the broader and paradoxical culture and discourse of Psychology. Yet, let me end this chapter with a line from Rod Stewart's old hit called *Young Turk* which might also capture the typical attitude/motivation toward creativity of peoples in Turkey before the 'novel' sociopolitical-cultural psychological problems in our present era of *glocalization*: 'There ain't no point in talking when there's nobody listening'.

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22

Envisioning the City in Africa: Anthropology, Creativity and Urban Culture

Till Förster

Introduction: Anthropology and Creativity

As an academic discipline, anthropology has not developed a coherent, distinct understanding of creativity. Though often used as metaphor in anthropological writing, creativity remained a fuzzy notion that denoted the emergence of anything new in a social or cultural context. Whether novel things, practices or institutions grew out of individual or social agency and how that agency looked like was of secondary importance and more often presumed than thoroughly reflected. Depending on sub-discipline, anthropologists implicitly adopted different understandings of creativity. Since no general debate on the conceptualisation of creativity emerged, these different and sometimes contradictory strands of thinking remained largely unrelated until the late 1990s. Only two general books on creativity were published in the last two decades (Liep 2001; Hallam and Ingold 2007), and neither of them discussed the term creativity from a broader, interdisciplinary perspective.

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However, anthropology's theoretical weakness¹ turned into a heuristic advantage when it came to empirical inquiry. Because there was no clear focus, anthropologists documented all sorts of creative practices and products. They sometimes did so under other headings—for instance innovation, inventiveness or originality—but their ethnographies provided data from forager through post-industrial societies. Two brief examples will suffice to illustrate the breadth of anthropological research on creativity in a wider sense. They will serve to clear the ground for a more balanced conceptualisation of creativity from an anthropological perspective. The main part of this contribution is dedicated to the analysis of creativity in a complex setting, that of cities, in particular large African cities, which are usually considered to be chaotic and by the same token compelling sites of creativity. Finally, the article concludes with a short outlook at how anthropology could frame the subject of creativity in the future.

Emergent and Disjunctive Creativity Practice

Victor Turner was one of the first anthropologists to raise questions of creativity. Since the publication of his seminal book “The Ritual Process” in 1969, his thoughts about the ritual framing of creativity in rites of passage became a reference point for many anthropologists, in particular in the comparative study of religion.² Turner argued in three steps. He first built on Arnold van Gennep's (1909) early insight into the organisation of ritual passages. Such rites are, van Gennep wrote, always composed of three phases: first, preliminary rites that stage the separation of the participants from their ordinary social environment as symbolic death; second, a marginal phase when the participants are not allowed to exchange with others than themselves; and third, the participants' re-integration into everyday life, that is, their symbolic renaissance.

¹ The situation in other social sciences is barely better; for sociology, see Domingues (2000); Chan (2011), who identifies but two strands of theorising creativity: Joas (1992 [1996]) and, based on Dalton (2004); Bourdieu (1992 [1996]). Most works on creativity come, however, from the arts (in general Pope 2005), social psychology (Amabile 1983, 1996) and from philosophy (Tatarkiewicz 1980, in general Krausz et al. 2009).

² Turner developed the essential ideas of his book on a liner that took him from Britain to the USA in 1963 (Turner 1964). He explored the theme of creativity and ritual passage in a couple of publications of which many were widely read in anthropology and the humanities in general, see Turner (1967, 1974b), Turner (1982). His work stimulated one of the first general and comparative anthropological attempts to cover creativity (Lavie et al. 1993).

Turner focused on the middle part of the ritual passage, the seclusion when the participants are marginalised and separated from ordinary social life. He paraphrased van Gennep's *rites liminaires* as "liminality", from the Latin word *limen*, "threshold". According to Turner, liminality is always linked to ambiguity and disorientation. In this liminal phase of rites of passage, Turner claims, the participants have lost their former social status but not yet acquired their future status in society. So the former norms and habits of ordinary social life are suspended and the new ones not yet valid. The participants are "neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention" (Turner 1969: 95; see also Turner 1967: 93–111). Betwixt and between two different social lives, they cannot take their everyday knowledge for granted and hence are invited to experiment with old and new social roles, with things they have not been familiar with, and finally with their own possible future lives. As social roles and hierarchies are suspended, the participants live in a state of human equality, which Turner called *communitas*. Extraordinary creativity emerges in this unstructured social space, in this time beyond the everyday when the participants are free to try and do whatever they like to. For Turner, the "anti-structure" of *communitas* was a precondition of the social creativity that would blossom as long as the rules of ordinary everyday life remained suspended.

In a comparative anthropological move, Turner took his argument a step further and claimed that ritual liminality is replaced by a *liminoid* state in societies where rites of passage are no longer practised, such as modern, Western societies (Turner 1969: 164–65, 190–203; Turner 1974a, b). Social movements as the hippies of the late 1960s and the 1970s, but also the apparently inexplicable return of old religious practices such as pilgrimages and retreats in isolated monasteries of well-established businessmen were interpreted as liminoid phases. During the seclusion, the participants were liberated from the daily constraints of their respective societal milieus and able to become creative—a marginal state, from which they profited and whose insights would finally fertilise the entire society when they, the wanderers between the familiar and the extraordinary, would be re-integrated into daily social life.

Indeed, Turner argued, no society could do without such marginal men and women that explored other ways of living and alternative social orders and whose creativity would benefit everybody. Therefore, such liminoid spaces would always re-emerge when older rites lost their attraction. Theatre was, for Turner, an institutionalised time³ where actors and their audience could

³Turner (1982: 32–33, 40–41) characterised this time in different ways, but always as an "independent domain of creative activity" (33).

jointly imagine other ways of behaving, socialising, and creatively projecting alternatives to their experience of daily life. As much as so-called “primitive” societies, their modern counterparts had to provide spaces where its members were free to become creative. If they failed to do so, they would breed inertia and finally mental diseases such as alternating psychosis and depression.

Turner’s model was powerful and widely praised. It was elegantly argued and brilliant in its juxtaposition of constraints of ordinary social life on the one side and of creative freedom at the margins of society on the other. But it did not capture social reality, as many empirical studies showed (Förster 2003, 2004). More often than not, participants in rites of passage were submitted to a strict order when they went through liminal phases, and whether creativity spontaneously emerged in liminoid spaces in modern times was debatable, to say the least.⁴

More interesting is how Victor Turner thought of creativity. For him, creativity was not an individual capacity; it had to be underpinned and fostered by a social framework. In the small-scale societies that he had studied, it was a ritual framework that encouraged the actors and at the same time contained creative action. Later, when such rites lost their binding character, they were replaced by liminoid spaces, which were much more difficult to control.⁵ Creativity was not the gift of extraordinary individuals; it was a socially organised practice that fostered the emergence of creativity. Of course, Turner and his followers conceded that the participants in such rites would be unevenly receptive to such creative urges. The essential trait was, however, the *social* and *emergent* character of creative practice.

Modernist Legacies

At the other end of the spectrum stood anthropologists studying non-European art. Their approach is easier to describe and analyse as they built heavily on modernist presumptions of the individual artist’s creativity. This turn towards the individual was meant to liberate the anthropology of art from an older strand in anthropological thinking that saw, for a long time, art mainly as a mirror of religious ideas and their binding character.⁶ And as religious ideas had a collective character, ethnic groups largely replaced the artists

⁴The failure of many social experiments at the time, for instance of youth communes, is telling.

⁵Hence, the irritation that such movements caused in America’s and Europe’s bourgeois middle-class societies.

⁶This understanding of “primitive” art as a direct mirror of religion can be traced back to Carl Einstein’s first publications on African art in the early twentieth century (Einstein 1915, 1921).

as creators. Varieties of style and genre were conceived as varieties of spatial ethnic order: Each ethnic group had a distinct style, and smaller variations were supposed to be its local variations.

In this older anthropology of art, artists were thought of as merely executing such generic, usually ethnic styles and genres that had no history.⁷ In the 1960s and 1970s, anthropologists of art increasingly began to refute the presumption that the arts of Africa, Oceania and other parts of the Third World were anonymous and repetitive of religious entities and ideas inherited from times immemorial. Together with newer trends in the anthropology of religion that emphasised the creativity of new charismatic churches and religious movements in Africa and elsewhere, they became aware that artists also had a say in what they created and how they produced their artworks. The contemporary arts of Africa, Oceania and many other parts of the world, also proved that artists were never anonymous executors of a timeless tradition.

The year 1973 marked a turning point in what many activists of African art saw as a struggle against Western prejudices—namely that African artists had no or only very little freedom to create new forms of art. Warren L. d’Azevedo edited a comprehensive volume titled “The Traditional Artist in African Societies” (d’Azevedo 1973). Most of the contributions to the book attested that African artists were not void of agency, that they were indeed actively exploring the styles and genres that they had learned from their fathers. The arguments were unfolded in two ways: On the one side, the authors explored the knowledge about individual artists in African societies. In particular, the Yoruba in South West Nigeria served as an example that authorship and individual authorship and creativity was an important dimension of their art.⁸ On the other side, they examined art works that displayed alterations of style or genre.

The apparent importance of authorship among the Yoruba had few parallels in other societies of the continent. The cult of the artist as genius is a thoroughly modern phenomenon and alien for most African societies.⁹ What was declared to be an emancipation from a colonial and dated anthropology, had its own blind spots, in particular from a social perspective. Empirical research showed that authorship played a minor role in many of these societies. More

⁷ For Africa, the canon of these styles had been identified and fixed in the 1920s and 1930s. One of the first comprehensive overviews was Kjersmeier (1935–1938).

⁸ Abiḡdun et al. (1994). Susan Vogel put some of the modernist errors right when she refuted the claim that customers in Africa would travel long distances to purchase art from a particular artist. They travelled, she wrote, “because they desired the fine objects which they were assured of getting – not because they wanted to own a work of art by a particular artist, as Western collectors might” (Vogel 1999: 40).

⁹ A review of the literature is provided by Völlnagel and Wullen (2008). The chapter on Africa in this volume claims that a similar appreciation of artists exists in Africa but is based on two cases only.

often than not, individual artists were unknown outside their immediate work environment. Originality was rarely expected, rather the mastery of an established style. Workshop styles were more frequent than individual styles, and it was (and still is) not exceptional for artists to work together on one and the same artwork—in so-called traditional as well as contemporary art.¹⁰ The importance of the work environment is obvious: No artist worked or works in splendid isolation only, neither in Africa or Oceania, nor in Europe or the Global North. The workshop is and remains one of the most important institutions to stimulate creativity. It provides resources, fosters interactions with others who are competent in the field and often also offers access to an art market.¹¹

Despite its one-sidedness, modernist anthropology of art is still practised, often parallel to other, more recent trends.¹² Its approach is largely borrowed from art history. Because it was often difficult if not impossible to analyse the past processes of production—the creation of art works—anthropologists, as art historians, had to rely on the analysis of products; the art works. Creativity became visible in retrospect. Art works that introduced new iconographies or new styles in an existing canon were taken as signs of creativity. Such a conceptualisation unavoidably called for judgements whether the artwork actually did introduce something new into an existing canon. The necessity to judge artworks to be novel (and valuable) meant to situate it in a particular historical body of knowledge.

Taking the artwork as evidence, the creativity of individual artists had to be judged in relation to the existing body of the known canon of styles and genres. Since there were no other bodies of knowledge than the “tribal” styles, the creativity of African artists remained, paradoxically, related to what this approach wanted to overcome: the old colonial archive of ethnic groups and boundaries. Besides, it reproduced a profoundly modernist trope, namely the link of creativity and novelty.¹³ According to this modernist understanding of creativity, artists have to prove their originality to be recognised and valued

¹⁰ Kasfir and Förster (2013) provide an overview of how workshops frame the artists’ agency in Africa.

¹¹ Workshops are what Hemlin et al. (2004) call “creative knowledge environments” (CKEs). That artistic creativity needs a social environment has been highlighted by many scholars, prominently by Csikszentmihalyi (1996).

¹² Unsurprisingly, modernist understandings of creativity in non-Western are most often pursued by institutions close to the art market, for instance museums. A recent example is the exhibition and catalogue “African Masters” by the Rietberg Museum in Zürich, one of the most influential institutions in the field (Homberger 2015).

¹³ Tatarkiewicz (1980: 257–260). Anthropologists have often misunderstood this historical link and discussed it in general terms, assuming that it is universal, for example, Hallam and Ingold (2007: 5f.).

as artists.¹⁴ By projecting it on non-European art, anthropologists unwillingly reified a modernist, deeply Eurocentric understanding of artistic creativity. The institutional context and underpinning of such an individualistic understanding of creativity was the international art world with its criteria of aesthetic judgement, and which continues to reproduce these criteria through its institutionalised practices such as exhibition displays, catalogues, auctions and many other means.

From a more theoretical perspective, such an approach does not only run into inconsistencies, it clearly shows a different conceptual foundation than Turner's ritual theory. By focussing on the product—and not on the process—it presupposes a canon of other products, in this case artworks, that allow the distant spectator to judge the novelty of an object. Creativity is a sort of quality of an object, which testifies that the artist has been creative. In the end, such an approach produces a strange contradiction: On the one hand, it praises creativity as individual agency and originality, if not geniality, as in the modern avant-garde. On the other, it remains silent on how these works came into being. It just states that artists dissociate themselves from what was done before. Creativity is based on a *disjunctive, individual* practice.

The two largely implicit conceptualisations show that a thorough conceptualisation of creativity is indeed necessary—a conceptualisation that captures creativity in its full anthropological breadth. One may make use of the approaches outlined above as conceptual cornerstones for an anthropological study of creativity. In that sense, they hint at two dimensions of creativity. The first dimension looks at how creative practices are related to other practices. On the one end of the spectrum are emerging practices. They may build on habits that foster creative attitudes. The other end of the spectrum is exemplified by disjunctive practices, that is, by actors who intentionally distance themselves from what others do or have done. The second dimension looks at the actors, namely, whether they are individuals or loosely bounded collective or even corporate actors. The two dimensions may inform each other, but one is not dependent on the other. Collective actors may engage in emerging practices, but they may also adopt a disjunctive attitude, and individual actors may do the same.

The wide gap that empirical studies of creativity revealed demonstrates the necessity of a more comprehensive, anthropological conceptualisation of creativity—one that takes individual as well as collective agency into account

¹⁴The most prominent version of this trope is the avant-garde as a group of forerunners that stimulates artistic as well as societal innovation. Tellingly, the age of avant-gardes ended with modernity around 1960 (Bürger 1974; von Beyme 2005).

without neglecting the dimension of practice. Having these conceptual cornerstones in mind, one may search for sites where the interaction of the two dimensions is most obvious and that can tell us more about creativity from a truly anthropological perspective—a social context where the various forms of creative practices and the actors are easier to observe and to analyse than elsewhere.

The Conundrum of Urban Life

Big cities, and in particular sprawling megacities of the Global South, are often perceived and conceived as gigantic and fascinating, if not fantastic laboratories of creativity (e.g., Enwezor 2002; Myers 2011; Simone 2004, 2010; Pieterse and Simone 2013), full of “*dynamics* that are so unruly, unpredictable, surprising, confounding, and yet *pregnant with possibility*, invoking a rogue sensibility” (Pieterse and Simone 2013: 12, my emphases). Creativity is more implicitly than explicitly conceived as growing out of the urban experience—an experience that is based on the heterogeneity and unpredictability of the city as a social space where the actors are constantly urged to situate themselves anew in a context that they can neither overlook nor master. They are urged to be creative by reinventing themselves and their identities as urban actors day in and day out. This body of literature praises the city as an environment that somehow breeds creativity—though most authors leave open how that actually happens.¹⁵

The overwhelming city is an old trope in urban studies. Since Georg Simmel published his highly seminal essay on “The Metropolis and Mental Life” in 1903, his thoughts have influenced generations of sociologists, anthropologists, urban planners, designers, historians as well as art historians (Simmel 1903 [1950]). His ideas influenced Robert E. Park, Louis Wirth and other sociologists of the Chicago School of urban sociology in the 1930s,¹⁶ and when anthropology belatedly recognised the relevance of urban life, it implicitly or explicitly built on Simmel’s concepts (e.g., Hannerz 1980). Though he had modern European cities in mind, in particular Dresden,¹⁷ Simmel

¹⁵ See my critique of the assumption that creativity is a direct response to unpredictability and heterogeneity in urban life (Förster 2014).

¹⁶ In particular, the themes raised by Wirth in his seminal article “Urbanism as a Way of Life” (Wirth 1938; in general Levine et al. 1976).

¹⁷ On the occasion of Dresden’s city exhibition 1903, Simmel had been invited to lecture on the role of intellectual life in big cities but finally analysed the effects of the city on the mental life of its inhabitants (Simmel 1903).

claimed that urban life had a specific quality that acted on the senses of urban dwellers wherever they lived.

Simmel could be read as a precursor to the debates that emerged a hundred years later. He also saw the disordered, the tumultuous as the source of urban life and urbanity. His understanding of urban life was, however, a different one. Simmel's aim was to describe and analyse the mental effects of the urban, that is, in phenomenological terms; how the metropolis shaped the relationship of urbanites to their material and social environment. Had Simmel known of Africa's megacities, his descriptions would have fitted perfectly to how they looked like a few decades later. Cities are an overwhelming sensory environment, Simmel argues. The sensory experience of the urban is so stupendous, so all-embracing that a human being cannot perceive it at once and as one. Simmel understands this urban experience as deeply modern. His essay begins with a clear statement: "The deepest problems of modern life flow from the attempt of the individual to maintain the independence and individuality of his existence against the sovereign powers of society, against the weight of the historical heritage and the external culture and technique of life" (Simmel 1903 [1950: 409]).

After a hundred years, Simmel's descriptions are still sound. When moving through a city—perhaps an African city—urbanites develop sensitivity to signs and symbols that would be relevant for them while ignoring others that are of secondary or no significance. Most if not all have to pay attention at traffic and all what it entails; slow pedestrians, shaky motorcycles, giant lorries, fast cars. Traffic lights, horns, all sorts of sounds that one could qualify as noise will play a role, but urban dwellers have learned to distinguish them, to judge them immediately when they perceive them. They know that a fast car has a different sound than a slow one, they can keep a small moped apart from a powerful motorbike. They also know that bus and truck drivers can be reckless. These are skills urbanites need to live their cities, to get from one place to the other without endangering their own lives. Inhabitants of Western cities have developed such skills as well, but the population of Lagos, Nairobi, Douala and Jozi probably need them more. The latter are presumably more skilled in such matters than those whose cities are as well ordered as in the Global North.

All this has to be learned and becomes part of the urbanites' habits. It has become their second nature, as a short comparison will illustrate. For many years, I conducted field research in an African village about 90 km (55 mi) away from the next city. The village was cut off the overland roads and difficult to access, in particular during the rainy season when the only mud road was frequently flooded and impassable. Though there was a frequent exchange

with urban traders and others, most villagers had only visited the city and never lived there for a longer period.¹⁸ Most of my acquaintances and friends who visited the city talked about the urban experience as something strange and scary, absorbing as well as fascinating. Sound or rather noise made the biggest difference. “The ‘big town’¹⁹ is loud. There is noise everywhere, and you don’t know where it comes from. You don’t know where to turn to. You’re standing there and you can’t walk”, a villager in his late 30s said.

At the time, in the early 1980s, the sounds of the village were gentle and diffident. An engine immediately dominated the rural soundscape and always attracted attention. The rattle of a motorcycle or a car meant news and eventually visitors from afar. And there were few such incidents. One could pass an entire week without hearing a car—until the bush taxi passed by every Saturday to bring peasants to the market of the next town. If a car drove into the village, the younger chaps would try to get close to it and inquire whether visitors came or whether a villager had come back from a long journey. The old men and women sitting under the shady trees along the road would lift their heads and look at what happened. The arrival of a car was an event, and though it often meant a break in daily routines, it was highly appreciated. In particular for the youth, the sound of an engine had a positive connotation. It meant being connected to the wider world.

The city was something completely different. It was a space where the habitual everyday orientation of the senses did not lead anywhere. And it affected all the senses. The visual environment of a village in the 1980s was by far not as colourful as many believe an African village had always been. Plastic dishes were still rare, buckets were, if the peasants had them, made of tin and steel, and large enamel bowls were a treasure that many women received from their husbands after marriage only. Most hardware in the houses consisted of earthen pots and containers, all in the same colour as the reddish brown of the soil of which the houses were also built. Clothing was the most colourful element of rural visual culture. Younger women were wearing dark blue wrappers of a strong material, and on market day cheap and soon washed-out *fancy* cloth.²⁰ Older women still had cotton wrappers dyed with fermented mud.²¹ Even the tiniest spot of colour attracted the attention of the villagers.²²

¹⁸ Secondary school pupils and very few former civil servants that had returned to their village were an exception.

¹⁹ Senari, the language of the Senufo, does not have a noun that corresponds to “city” in English. The Senufo speak of cities as “big towns”.

²⁰ *Fancy* is a generic term for inexpensive printed cotton cloth that is used as wrapper, in general Bauer (2001).

²¹ Men were mainly wearing second hand cloth important from Europe and North America.

²² I vividly remember how my neighbour, a woman in her late 40s, took my two enamel plates and turned them in all directions to admire the green and red flower décor on its shiny white background.

When visiting the city, the villagers were thrown into a visual environment that they had had no knowledge of. Many houses were painted. They showed the bright colours of industrial paints, usually a light turquoise or a light yellow. Others were decorated with red or blue designs or script, and still others had painted pictures or signboards of what one could expect inside: shoes, cloth, building material and the else. The city was not yet as colourful as it became around the turn of the century, but compared to an ordinary village, it was an exceptional visual environment. Fashion was at the order of the day. The strong dark blue wrappers were considered to be “backward” and “rural”. A young urban woman had to wear *real wax*—cloth that displayed permanent colours as well as the wealth of her husband.

More than that, the townspeople had other ways of looking and of situating themselves in the visual cityscape—a practice that their rural relatives became aware of whenever they visited them in the city. Another villager, also a neighbour of mine, told me about him visiting his younger brother in Korhogo, then a town of some 80,000 inhabitants and today a city of roughly 240,000.²³ “I was still looking at the shop where they were selling these small radios and the ones with a cassette player. One was painted at the wall, another was behind a window, and a man who stood at the entrance was asking me whether I was looking for one. I stopped just to glance at him and the radio. I didn’t want to buy, but since he greeted me, I answered. I was looking around. My brother hadn’t even stopped! He just went on! Nor had he answered the greeting of the man. I had to run to catch up”. The villager, who was a mid-aged man and a father of three, shook his head. That was indecent behaviour, he mumbled.

In the village, townspeople then had the disputable reputation of being savvy and rude. But more than anything else, they were adapting to the emerging urban culture. They warned their rural relatives that crossing the street in front of the main market was not like walking under the giant Kapok trees in the village where rural petty traders sold their stuff. One could easily cause an accident by running into one of the dozens of mopeds. Or a car would run over the poor villager. For urban dwellers, villagers were simply ignorant and unable to find their way through the city. Receiving relatives from the village meant to take care of them, to show them the way through the cityscape that they, being “backward”, neither overlooked nor understood.

Today, almost 40 years later, the difference between rural and urban is less accentuated. Some townspeople would insist that it still exists, but that is

²³ Based on estimations as there are no reliable recent statistics, see <http://fr.wikipedia.org/wiki/Korhogo>, 20.03.2015.

perhaps more a discursive figure of thought than a social reality. Rural and urban are much more interlinked than ever, and many more villagers have lived at least for some time in cities, bringing their own urban experience back home. But urbanites still look at their rural relatives as backward, ignorant, untaught and sometimes outright stupid. Many jokes circulate about young rural women living in an urban household for the first time and breaking all the machines and porcelain dishes.

The urban experience seems to confirm Simmel's ideas about the metropolis and mental life, whether 40 years ago or today does not matter much. One has to sharpen one's senses. One needs to develop the skills of urban survival, of judging one's environment, of observing the traffic and listening to its noise, as any inhabitant of Lagos or Kinshasa could tell. But besides these general conditions of urban life—conditions that already small children will need to understand when they go to school—urbanites in Africa as elsewhere unavoidably cultivate their own, idiosyncratic views of the city. This individual view is at the centre of urban mental life, Simmel claims. Urban dwellers *aesthetically* create their homes. They develop normative judgements of their sensory experience—very much as Kant once defined aesthetic judgement: their experience of the urban grows out of their individual perceptions and conceptions. Their judgements are not exclusively judgements of taste as other, practical reasons are also relevant, but they are still judgements on sensory experience. One could argue that this form of urban life comes very close to the modern urban, with the exception that it lacks the autonomy of judgements of taste.

Based on their individual selective experience of the urban, urban dwellers in Africa create their own home in the world, as they would do everywhere else (Robinson 2006: 25–28). They move along the same streets every day, look at houses and all sorts of signs that they will find relevant to them, making themselves familiar with a particular view of the city, which is theirs and theirs only. “Home” in Simmel's sense is a specific view at the city, a selection of the innumerable signs and symbols that would be overwhelming if the urbanites did not ignore all those that would disturb their orientation. An urbanite's home is what he or she makes of the city, that is, how townspeople live their city, aesthetically appropriating it through their daily practice. As such, the younger brother's indecent behaviour is a perfect example of the blasé attitude, the “metropolitan individuality” that, according to Simmel, characterises city dwellers everywhere in the world. He ignored the shop and the vendor because he had made another, individual choice.

Townspeople spend their evenings in the same *off-licence* (a beer hall in Cameroon or Nigeria), the same *shebeen* (a bar in southern Africa), the same

maquis (an African restaurant in Côte d'Ivoire) or simply at a corner where a small shop has put a few chairs outside and where beer or, in Muslim areas, sweet green tea is served. All these are individual choices, says Simmel, and it is their diversity, the incredible diversity of urban life, that finally makes the city what it is. Visual cityscapes are, following Simmel, a collection of pictures, images and imaginations that do not leave the inhabitants untouched: they call for a choice, their mere sensory abundance is simultaneously their promise and their challenge. And, in that sense, cities in Africa are just as ordinary as any other city, as Jennifer Robinson argues (Robinson 2006). They invite their populace to make a choice, to develop their own, idiosyncratic views of the urban, and hence foster individual lifestyles.²⁴ The visual cityscape is full of pictures, overwhelming and contradictory, but the image of the city is a mental creation of its inhabitants, based on their daily practice.

As convincing as such an analysis may be—one question still calls for an answer: If every inhabitant creates his or her own mental image of the city, how comes, then, that these mental images are so coherent? The analysis is not wrong, but it seems to be one-sided as it focuses on one dimension of urban life only. So the elephant sits squarely in the room: How comes that the pictures, signs, icons, but also other sensory elements of urban life so often display a common style that the inhabitants have no difficulties to recognise? Why do cities have a specific character that both their inhabitants as well as outsiders are usually aware of, even if they disagree on what that “essence” is? If the creation of such images of the urban is a practice, it must have a social as well as an individual dimension. Are these practices appropriately framed as collective creativity? Or do they just emerge out of overlapping idiosyncrasies?

The City as Intentional Object

At first sight, city images seem to be collective as well as individual creations. They are possibly the most fascinating product of urban life. All citizens have an image of their city in mind. They orient their daily lives, lead them through the thickets of the urban sprawl, facilitate their ways to work and leisure, and often tell them where to go to meet friends. Still more remarkable is that images enhance, if not produce identification with the city. Many urbanites in Africa, as elsewhere, are proud of being from and living in a particular city. Both in Korhogo, Côte d'Ivoire, and Bamenda, Cameroon, where I conduct research,

²⁴And because of their individuality, Simmel (1903) continues, urbanites provoke all sorts of attempts to control them, to bring them back under state domination.

many inhabitants see themselves as “Bamendaman” or “Korhogolais” before identifying with ethnic groups. And so do people in many other African cities. Abidjan, Kinshasa, Douala, and Johannesburg have all nourished such emotional identifications—though elusive that identification may be.²⁵ Despite all diversity and heterogeneity, urbanites often see their cities as an entity, as a place and space to identify with.²⁶

Seeing is here meant as a metaphor. It embraces much more than mere sensory perception, thought that feeds into it. Seeing, or rather looking, is a practice that has a history (Berger 1972). It is to some extent based on idiosyncrasies of those who look at their cities, but it also iterates habitual, cultural ways of seeing that individuals have adopted over time and that they adapt to their changing life-worlds and to how others see that life-world.²⁷ Looking is as much a social practice as the production of images, which is, from an anthropological standpoint, the core of imagination.²⁸

At first sight, it looks as if city images grow out of an emerging practice that anthropologists as Turner had in mind when they were thinking about creativity. Urban life, and eventually the city *tout court*, would then somehow generate its own image, which would explain to some degree its coherence and uniformity. Its inhabitants could perhaps modify it a little by re-arranging existing elements, but the creative process itself would remain anonymous, opaque and beyond the actors’ agency. Creativity would be embedded in the countless interactions that urban actors have to engage in. And because of their number and complexity, it would be impossible to capture and analyse such emerging practices any further—only a look at the product, the image of the city, would prove this urban creativity while individuals would solely become visible as actors who construct solely their own identities and images of the urban space according to a set of fashionable pictures. Individual agency would not be much more than a kind of self-fashioning in a space of expressive competition (Weiss 2009).

²⁵ For Abidjan Diabaté and Kodjo (1991), for Kinshasa de Boeck and Plissart (2006), for Douala and Johannesburg Malaquais (2004, 2009); Nuttall and Mbembe (2008).

²⁶ This sense of locality is probably not as strong as in cities that nourish such feelings by actively branding themselves, for example, New York, Paris or Berlin, but it exists.

²⁷ The comparatively new academic field of visual culture studies has increasingly been defined in such a way, beginning with John Berger’s television series and publication of 1972 (see Sturken and Cartwright 2009 for a recent overview).

²⁸ In that sense, imagination is a social practice that generates ideas (i.e., mental representational images) about the life-world, including the society and its various dimensions. Political imagination is perhaps the best documented of such practices. It generates images and hence a common understanding of how a community should live together.

At second sight, images of cities as urban spaces raise much more serious questions: What roles do material imageries, cityscapes and daily sensory experience play when urbanites imagine their cities? How do intentions of individual and social actors work together when they create such images of the city? How and to what degree do such images foster identification with the city as a social space? And how do such imagined cities then feed back into the material design of the cityscape? Paraphrasing the urban conundrum, one could say that a city is created by its populace in two ways: as a built environment and as an imagined space.

Before addressing this dialectical relationship, we need to reflect briefly on agency.²⁹ To conceive African cities as laboratories where people constantly have to situate themselves in an environment that is excessively complex means to presume a specific social as well as individual agency. Townspeople as social actors would, because of the short time horizon of their actions and the necessities of urban life that it entails, develop an agency that puts judgement first, namely an individual judgement of situations and their relevance and irrelevance. A phenomenological interpretation of Simmel would look at such judgements as a practice—but as a practice that will inevitably develop a repetitive character as soon as the actors typify the situations they have to face in their respective urban environments. In order to sustain their agency, the actors must develop some knowledge of the daily situations they have to deal with. Else they would not be able to live an ordinary life and to sustain their capacity to act.

In the long run, the perception of the city as a physical and sensory environment is based on the sedimentation of situational judgements and hence on intentionality. The actors will focus on those elements in the visual, auditory, olfactory environment³⁰ that are relevant to them. They typify situations based on what they had experienced in the past and hence acquire knowledge of the city as their daily environment (Marchand 2010). In a more prosaic language, they live the city in a specific way, for instance by walking the same path every morning when they go to work, by stopping at the same kiosk to buy a small snack, by taking a short cut through another neighbourhood, by avoiding the policemen who control motorbikes at a particular junction, or by dropping over at a friend's place. The longer they live in an environment that has been unfamiliar in the beginning, the more their agency changes its

²⁹I adopt Emirbayer and Mische's conceptualisation of agency and distinguish three dimensions of agency: habits, judgements and imagination (Emirbayer and Mische 1998).

³⁰Basically, no sense is excluded. Balance and acceleration may serve as an example. Bafoussam, Cameroon's third largest city, was infamous for its badly pot-holed streets that shook drivers on the seats of their cars.

character. Just as villagers do, urban dwellers develop routines that inform their daily lives and acquire a more habitual agency. Perhaps, they do so to a lesser degree, but the longer the process lasts; the more they will make the city theirs. By living the city in a particular way, townspeople create and re-create it as an object of their own lives.

In a way, several cities co-exist in one. They are made by those who live the city, and therefore are the product of individuals who have a specific image of the city. Though they are created by each inhabitant, the images of the city are neither limitless nor are they completely arbitrary. First, the actors are faced with the same materiality and imagery of their respective cities. They may live in the same neighbourhood, walk through the same streets, and talk to the same people. And though each and every person may have an individual perception of that environment, there is still the same material and sensory background that continues to inform their experience.³¹ In such a perspective, creativity is not much more than the persistent recombination and variation of elements that the social actors already know—just as Claude Lévi-Strauss implicitly conceptualised it in his famous notion of the *bricoleur* who re-arranged what he had at hand.³²

Second, ways of living the city do not unfold in splendid isolation. With very few exceptions, urban people appropriate the city in a context that they share with others. Town dwellers do so together with the people they will want to encounter, and not with those who they refuse to meet, avoid or simply ignore. They perceive and socialise by moving in the city (Ingold and Vergunst 2008). Urbanites situate themselves actively in the city by their practices of encounter and distancing (Förster 2013). Making the city one's own city is a thoroughly social practice. When such practices turn into routines, the actors (re)create situations that they are already familiar with and thus enhance their ability to act. From a phenomenological point of view, such processes generate trust, more precisely generalised social trust. The actors create social spaces where specific images of the urban as a social environment are produced and iterated over time. In other words, individuals produce images of the city in their minds, but they cannot do this alone. Images of the city surely comprise idiosyncrasies, but because of the materiality of the urban and more so because of the social practice that produces such images, these are

³¹ Lynch's seminal work on "The Image of the City" (Lynch 1960) is such a materialist understanding of how images of the city emerge.

³² Interestingly, Lévi-Strauss (1962) thought that anthropologists would do precisely the same, that is, re-arrange cultural elements that they had at hand to put them into another context, that of their own culture. This perspective also echoes a strand in philosophy, for example, Boden 1990.

still collective images of the city. They are neither merely mirrors of the city's materiality nor are they arbitrary products of the urbanites' minds.

Of course, many social spaces can co-exist in a city, and the bigger a city is, the more social spaces it may host. The inhabitants of a shantytown as Kibera in Nairobi, one of Africa's biggest slums, do live in a different city than, say, the bourgeois people in Karen, an up-market neighbourhood named after the Danish writer Karen Blixen. Living in Abidjan's Cocody, the Beverly Hills of West Africa, implies other routines and social practices than getting along in Adjamé, the overcrowded popular neighbourhood right next to it. The populace's ways of living the city makes their lives distinct. And though they may both claim that they are 100 % *Abidjanais*, they share different images of what kind of city Abidjan is. Such differences are often extreme in African cities and often become the subject of political articulation. They turn into political instruments when the inhabitants make their claims to the city as "their" city or as a unit of collective consumption whose integrity is violated by the uneven distribution of wealth (Lefebvre 1968). In that sense, images of the city as social space would acquire an ideological character. They would become the subject of one discursive formation, which, in turn, facilitates social exchange and debates on whether such images are an appropriate depiction of the current state of urban society.

The image of the city is, in everyday language, an idea—an idea of a space that the city's inhabitants as social actors belong to and that they will want to live in their own ways. As an idea, the image would represent the city as a real object—and since the city is also a "real", a built environment, such an understanding seems to be self-evident. In a naïve attitude, most people take city images as (more or less appropriate) representations of something out there, as a mirror of the city as a material environment. Such an attitude will certainly work in everyday life as it helps urbanites to identify with their city and to situate themselves in it. But it fails to capture the many facets of what an image is in addition to being a mirror of a material object of sensory experience: an element of culture, a political instrument and a resource of social integration, among other things. Urban images can and do foster affection to the city as a place as well as to its society. Again, they are at once individual and collective. A profounder analysis reveals a couple of more precise properties of the city as image and vice versa of the image as city.

Two points may be deduced from the short descriptions above: First, city images have a conceptual dimension. More precisely, they bring perceptual, conceptual and pragmatic dimensions together, build on them and simultaneously relate them to each other. Second, images of the city reflect specific relationships to the city, as the description of urban social practice has shown.

Urban social practice is always based on the agency of the actors. Very much as social space, the image of the city has, in Lefebvre's words, a perceptual, a conceptual and a pragmatic dimension.³³ Moving through the city as a built environment is one dimension only, the others are mobility within the city as a social space and the actors' sedimented judgements of their experience. The latter, of course, relates back to the two other dimensions, and so do the former. All three are entangled and part of the same practice. They work together when images of the city emerge. Framing the relationship in such a way means that actors create their image of the city out of the directedness of social practice. As images, the actors create their cities as objects of their intentionality, of their way of relating to the urban life-world—which then allows them to identify with the city.

The image of the city hence does not convey "meaning". For most urban actors, the image of the city is not different from the city itself: From an emic perspective, the image *is* the city. It is something they can perceive and live every day. The naïve presupposition is to some extent a necessity for the maintenance of their agency. It would not make sense to distinguish between "real" and "fictitious" levels of urban experience, or between imageries and imaginaries. As urbanites experience their cities in a direct way, there is no reason to make such a distinction or to "bracket" the relatively natural worldview in a phenomenological attitude.³⁴

In a theoretically informed language, the image of the city constitutes the latter as *intentional object*. It is directed towards a fuzzy site, an amalgam of sensory and social experience that is different from this image. In other words, the image of the city does not reflect the urban material or sensory or social environment; it rather creates it as an object of thought and practice. By imagining the city as an object, urbanites create it as a specific city, and not just as a site where many people live. City images have a relational character: They link the agency of the actors to a site that is a built environment, a social space and a context or experience. The directedness, the intentionality that the image produces and reflects always stands in a tension to its sensory and social background and to the images of others in the urban sphere.

³³Lefebvre (1991: 38–41) and *passim*. To avoid misunderstandings, I rephrase Lefebvre's third element of space, *espace vécu* ("lived space" in the English translation) as "pragmatic" dimension in this context.

³⁴As in more recent social phenomenology, I understand the term "relative-natural worldview" (Schütz and Luckmann 1973: 92–98 and *passim*) as the sedimented collective experience of a group or a milieu, and not from the individual's perspective (see, among others, Vaitkus 1991: 82–85).

Towards an Anthropology of Creativity

The usual juxtaposition of emerging and disjunctive creative practice may serve as a heuristic tool when specific situations are examined; emerging creativity would be imminent to the ongoing daily interactions of urban dwellers while disjunctive creative practice would rather build on how individual or collective actors would distance themselves from such everyday activities. However, creativity in a complex setting as a large city grows out of a long process where different situations alternate, overlap or replace each other—and where actors sometimes engage as individuals and then again as members of a collective. From a descriptive perspective, creativity is appropriately analysed only with regard to both dimensions; the individual–collective dichotomy on the one side, and the emerging–disjunctive antagonism on the other.³⁵ Hence, creative processes call for a conceptualisation that takes individual as well as collective agency into account but also the practices the actors engage in. However, there is no direct correlation between the two axes, as the example of the image of the city shows. How this link looks like is an open question and has to be answered by empirical enquiry.

Though this appears to be a disappointing result from a theoretical point of view, there is still something to learn from how images of the city are created and what they are. First, it is clear that creativity is more than just the re-arrangement of already existing elements as they surface in urban visual culture or in the many encounters between town dwellers. Urban creative practice is more than assembling parts of a jigsaw puzzle where the picture that will emerge is predefined. Urbanites neither simply execute a preconceived plan nor self-fashion themselves out of an existing register. As actors, they bring something into being that has its own quality: The image of the city that they live, perceive and conceive.

The image of the city does not only embed different elements of the urban experience, it has an independent quality, which is the specific relationship of these elements, their configuration. This configuration grows directly out of the intentionality of the actors. The image of the city is a creation of their social practice, that is, how they live their city, or more precisely how they actively situate themselves in the urban life-world. Encounter and distanciation are the roots of this creative practice, which is both a deliberate choice and an habitual attitude. The image of the city hints at the third, projective

³⁵ For heuristic purposes, one could construct a cross that links the two dimensions, recording the degree of individual or collective agency on the vertical axis, and the type of practice as the horizontal dimension. Such a depiction should, however, not imply that the two dimensions are necessarily correlated.

dimension of their practice. The dialectical relationship between the past, the present and the future is at the core of the image of the city, which orients the actors towards the city as an object of their intentionality. Hence, the image of the city does not simply “express” or “represent” a conception that is already formed in the minds of the actors. The image is constantly adapted to the actors intentionality as they live their cities. It is neither immutable nor a fixed “meaning” of the city as an object—though it must display some stability as it orients the actors’ practice. So there is a productive tension between the image of the city as the actors’ creation and the actors’ daily practice.

In more theoretical terms, this contradicts Franz Brentano’s classical thesis that intentionality is a faculty of the mind (Brentano 1924 [1874]). From an anthropological perspective, it is rather a faculty of social practice—and so is creativity. And this also challenges his widely accepted presumption that intentional objects are “inexistent”. As urbanites do live their cities; they create them—through their practice, which lends their image of the city reality. Their creativity brings the material as well as the sensory and social environment into being.

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Part 4

Creativity and Culture in Applied Domains

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Creativity and Culture in Organizations

Saadi Lahlou and Valérie Beaudouin

Creativity in organizations is often overtly praised but in practice rarely welcome. The second statement goes against the official doxa of organizations and against most literature, often written by innovation or change advocates, which assume that only some specific stakeholders in organizations will “resist”. This resistance is seen as ambiguous, a combination of individual inertia, defending local interests, fear of getting a bad deal in change and so on. The authors of this chapter, insiders who held managerial positions in organizations and were in charge of various innovation projects, and involved pro or against many others, take the perspective that resistance is not a local phenomenon: *the whole organization as a system* has excellent positive reasons to actively resist creativity and innovation while being aware of needing them. We shall explain the reasons for this paradox and how organizations deal with it. We argue that resistance to change is a natural feature of an organizational culture.

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Introduction: Creativity Is a Problem for Organizations

Cultures create conventions and rules to make activity predictable in society. Organizations are in some respect simpler societies dedicated to a specific goal; they have a local culture (material and symbolic) dedicated to reaching this goal and surviving as an organization. Because they continuously strive to maintain things ordered and predictable, organizations are by nature averse to change. This is why “resistance to change” that has been noted by many (Alter 1993a; Bauer 1991; Dent and Goldberg 1999; Kotter 1996; Lawrence 1964). Creativity is by definition disruptive of order and therefore potentially subversive to organization.

Still, organizations understand they must adapt creatively to changes coming from their environment, and therefore make some internal changes (e.g. in what they produce or the way they deliver).

As a result, organizations are forced to be creative and to change although they would prefer not to. This creates a contradiction rarely openly admitted, resulting in “double-binds” in organizations. This also leads to “innovation”, which is a specific, tamed, form of creativity. In fact, a secret dream of organizations would be to get the gains of innovation without the bothers of the creativity bit.

Let us first look at the difference between the two notions, creativity and innovation. Of course, there are almost as many definitions as authors, but the management literature has somewhat converged.

Creativity “is the production of novel and useful ideas by an individual or small group of individuals” while *organizational innovation* “is the successful implementation of creative ideas within an organization” (Amabile 1988, p. 126).

These same ideas have been expressed in many different forms, for example:

- Innovation: the “successful implementation of a creation” (Heunks et al. 1992, p. 6)
- “An innovation process consists of two main activities: creativity and innovation. Creativity involves the generation of novel and useful ideas while innovation entails the implementation of these ideas into new products and processes” (Sarooghi et al. 2015, p. 714).
- “Creativity and innovation at work are the process, outcomes, and products of attempts to develop and introduce new and improved ways of doing things. The creativity stage of this process refers to idea generation, and

innovation refers to the subsequent stage of implementing ideas toward better procedures, practices, or products. Creativity and innovation can occur at the level of the individual, work team, organization, or at more than one of these levels combined but will invariably result in identifiable benefits at one or more of these levels of analysis.” (Anderson et al. 2014, p. 1298)

Management literature therefore offers a representation of the innovation process as consisting of two stages: a phase of creativity, carried out by individuals, and a phase of implementation and convergence, supported by organizations. Creativity would be on the human side, a psychological process, embodied and uncontrollable, while innovation is the organizational side and therefore likely to be channelled into a process. In short, thought and innovation, like all business activities, can be part of a process that should be optimized and controlled by Scientific Management. For researchers in Management and decision-makers, the problem lies in the conversion: how can we move from ideas to their effective implementation? (Sarooghi et al. 2015). To address this issue, researchers compare different forms of articulation between the generation of ideas and the implementation phases. This is made difficult by the great variety of products and organizations, as well as of the context in which they operate. Finally, there are several degrees of innovation, from mere reformulation which is a minor change of the product (e.g. new colour, packaging size of flavour) to radical innovation (e.g. from paper mail to email) which requires new practice and representations by the end user (Lahlou 1985). While the former (reformulation) can easily be produced as a process, the latter (radical innovation) requires creativity at several steps of the value chain.

Separating the creative phase from the innovation process gives the illusion that we could concentrate all the risks associated with the uncertainty in this creative phase, and allow the innovation process to get rid of uncertainty.

Section, “[Organizations Are Naturally Averse to Creativity but They Need Change](#)” will explain why organizations are change-averse by nature, and sketch what are the “installations” impacted by the changes. Section, “[Crossed Constraints and Double Bind](#)” will describe the mechanism of crossed constraints and double-bind characteristic of innovation in organizations. Section, “[Organizational Solutions](#)” illustrates some types of solutions set up by organizations to deal with the problem. Section, “[Conclusion](#)” concludes.

Organizations Are Naturally Averse to Creativity but They Need Change

We can define organizations as socio-technical entities combining people in an explicit structure with labour division to reach a goal. In that perspective, behaviours of the parts of organizations (humans, machines, subgroups, etc.) must be predictable for other elements to maximize efficiency. The main-spring of organizations is to create a series of conventions inside their domain in order to reduce transaction costs between parties (Coase 1937, 1960; Williamson 2007). This is precisely why organizations exist: they are more efficient than random systems of coordination like the market. To make transactions and behaviours predictable, organizations need a set of behavioural rules that must be followed inside its domain of action.

To this effect, organizations set up precise conventions, codes, rules, roles and procedures, regarding all domains of activity within their boundaries (from procurement and production processes to human resources management). These conventions are costly to establish, they emerge through trial and error, fights, power struggle, controversies and compromises between the various stakeholders. Every such convention represents sunk costs and often a long history of resolved problems and conflicts. They may not be the best solution, but at least one that is known to work and “satisfice” (Simon 1945). They are “investments in form” (Eymard-Duvernay and Thévenot 1983; Thévenot 1984) which organizations rightly protect against change until they appear not to work anymore (“if it ain’t broken don’t fix it”). Organizations also make sure that these conventions are applied on a daily basis. They constitute the institution of the organization; they are “how we do things around here” (Schein 1998, p. 15).

This is why organizations run control systems to ensure and enforce consistency in their operation and products. These rules can be tacit or explicit, but they always exist: an organization is a continuous fight for endurance of that structure and these conventions, a fight against the natural entropic tendency of things to disrupt and decay. Anyone who has ever been in a managerial position knows that rules should be respected at least officially; exceptions are dangerous: they may become “precedents” jeopardizing the very existence of the rule. Therefore, even when it is clear that the rules should not be applied in this exceptional case, that is rarely officially recognized and the situation is solved “informally”: without leaving a track record. That is why actual practice is different from the book—although everyone officially pretends that is not the case.

Rules (conventions) are only one layer of what organizations are made of. Organizations set up “installations” in order to perform production. Installation theory (Lahlou 2008, 2015) describes installations as a combination of *three layers of components which assemble locally to produce activity*: the physical objects in the environment (material culture), the embodied interpretive competences in the subject (resulting of cultural education, e.g. mental representations), the rules and institutions. These components are not of the same nature and are not physically located in the same substratum. Some are in the physical setting, some embodied in the people, some in the social fabric. But when they meet in the same space-time, their conjunction triggers a predictable development. This is how culture controls individual behaviour. A culture is the total sum of these installations, which locally guide individual behaviour in situ. An organization is a smaller set of such installations which it controls to a certain extent: its offices, production chain and so on. For example, the assembly line is an installation, as well as a call centre, a point of sale, an accounting department, and so on. The specific combination of the three layers emerges to the actor as a specific “situation”; this situation will usually be recognized by participants (employees, providers, clients, members of the public, etc.) as an instance of a typified situation and interpreted as such with the usual script (e.g. “assembling the product”; “welcoming the client”; “repairing the defective products”, “processing an invoice”, etc.), with minor adaptations to fit the local specificities (e.g. different types of clients, specific form of damage, etc.)

A good organization is one where the three layers of each installation are tuned to operate together: the physical setting has the best ergonomic affordances to support action, the operators have the right training to operate predictably to well-tested protocols, and the internal rules of good practice are followed in an exacting manner. This does not happen by chance: each installation (and an organization has many) is the result of a long history of investment, construction and tests.

Against that background, it is easy to understand that creativity, as the irruption of something different and therefore unplanned and not intended in the rules, is problematic for the organization. Because current operations require coordination of the three layers described above (physical setting, embodied competences, rules), the slightest “innovation” will have many effects at various levels. Innovation is like changing parts of a running engine.

While lots of people may have creative ideas locally, as the manager in charge, responsible for the potential impact a failure of the system would have; one would at least think twice before implementing the new “creative” ideas. And the same with other stakeholders. It is therefore normal that innovation

will meet “resistance” from the organization. Although this has been noted long ago (Lawrence 1964), most literature on the topic seems to take sides for the innovators; which is understandable because it is written by consultants and researchers whose job is to innovate; still the resisting perspective of the organization, while understated, is perfectly legitimate.

The impacts of a change in any of the layers of an installation will inevitably have rippling impacts in other layers: upstream and downstream in the process. For example, the organization may have to change raw materials, tools, procurement procedures, training of operators and sales forces; it may have to consider adapting marketing strategy, updating quality and security procedures, internal regulations, re-validating authorizations from regulating authorities, negotiating new contracts with clients, and so on. Risks and costs are unknown but potentially high, while the positive consequences remain uncertain. Any responsible agent or manager will therefore meet suggestions for changes with caution and oppose a series of arguments and counter-measures to avoid his or her own business unit to incur the risk of negative externalities.

Beyond this issue of change, creativity is problematic as it is an activity that is not necessarily goal-oriented. It seems that for good creativity, creators must somehow free themselves from daily reality and open a world of possibilities. Creativity would come from intrinsic motivation, and be of lesser quality when it is directed (Amabile et al. 1986; Amabile 1997). In that process, realism and the current constraints of the organization are swept away. As a result, it is likely that what is created is not compatible with the current organization.

So, by nature, organizations are ordered, regulated and conservative. By nature, creativity produces something different and unpredictable; something that will at least require change at unknown risk and cost, and may well be at odds with the current organization. Obviously, creativity in organization will be problematic.

But organizations need change. First, when they must adapt to a changing environment. Second, even in a stable environment, organizations in a competitive system (e.g. commercial organizations in market economies) may need change to fight their competitors. This is even more the case in capitalist economies because “creative destruction” is the only way to grow in saturated markets. In other words, the products must be changed, because mere replacement coming from natural (or even planned) obsolescence does not generate enough demand to keep the production growing. “Capitalism (...) never can be stationary. (...) The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers’ goods, the new methods of production or transportation, the new markets, the new forms of

industrial organization that capitalist enterprise creates.” (Schumpeter 1962, pp. 82–83). Pushed by this systemic drive, most commercial organizations in our current societies are engaged in a rat race where “innovation” is a buzz word.

As we saw in the introduction, creativity is generally understood as generation of something new, while innovation is oriented change in some useful perspective. In organizations, the idea is to harness creativity to produce innovation. In fact, creativity is accepted in organizations only because it is part of the innovation process. Nevertheless, innovation faces the same issues as creativity, as it is a disruption and menace to current practice and installations.

But, one might object, there are organizations dedicated to creativity: graphic studios, communication agencies, innovation consultancies and so on. And there, creatives, researchers and so on are paid to be creative! A closer look will show that these organizations are in fact not creative for themselves, but *for other, client, organizations*. They exist because other organizations have externalized those dangerous creative processes, as one solution to the problem, as we will see later in section, “[Organizational Solutions](#)”. In practice, in spite of some spectacular peculiarities which are part of their business show and the necessities to keep individual creators motivated and operational, these organizations can be just as averse to innovation in their own production processes.

Crossed Constraints and Double Bind

In managerial discourse, innovation (and creativity) is praised. “Literally, it is impossible to read business journals or newspapers, attend business conferences, or read annual reports without constantly hearing about the importance of innovation” (Amabile 1988, p. 124).

Innovators are encouraged to create. But, in practice, the whole management of the organization resists their efforts, whatever the management says, for reasons outlined above. This section will describe the double-bind phenomenon that results from that situation, and of which creators and innovators are victims.

Double bind is a phenomenon that was discovered by Gregory Bateson and his group in Palo Alto when studying family communication (Bateson et al. 1956) and then considered as a possible cause of schizophrenia. It is, in short, a situation of crossed constraints that remains hidden to its victims. The subject feels summoned to take action. But acting in one direction is forbidden; and acting in another direction (or not acting) is forbidden also. Moreover,

the problem is set in such a way that this double impossibility is hidden to the subject, who therefore feels restrained but without clearly understanding why. The double bind was best defined by Sluzki and Veron:

What are the essential ingredients of this phenomenon? They are its occurrence within a framework of relationships with significant others; the need to discriminate correctly [...]; the impossibility of leaving the field [...]; the impossibility of asking for clarifications (due to the vicious-circle nature of the paradox involved, and perhaps to the label of “rebellion” given to such a request for clarification); and, finally, a message that contains an injunction regarding a concrete fact and a second injunction regarding this class of facts, that contradicts the first. (Sluzki and Veron 1971, p. 400)

Why, in a large structure, does innovation necessarily encounter the problem of double bind? How does this syndrome apply to creativity (or innovation) in organizations? Let us illustrate with a naval metaphor.

Suppose the organization is a group of fishing boats operating as a fleet. The strength of this fleet comes from its number and its cohesive behaviour. So individual ship behaviour that deviates openly from the lot, breaking unity, is subversive and dangerous: it undermines the very foundation of the power of the organization—cohesion. Do not misunderstand: what is subversive is not *per se* that one ship moves away from the fleet, even though this may be a bit problematic, but rather the fact a ship *publicly displays* that she does not respect the common rule. One single divergent boat is not a big issue, but if all, or even many, of the boats start to diverge from the common agreed path, the fleet becomes a powerless mess.

Now consider an “innovative” boat decides to go in a different direction from the rest of the fleet (say: Southeast), in search for better fishing spots. Let us call the flagship “the CEO” and that adventurous ship the “Innovator”. Innovator’s behaviour, in terms of the CEO, has two aspects:

Negative: the Innovator is inconsistent with the fleet, and may therefore have a negative influence on the existence of the fleet as an organization, because she is a bad example in the short term (she shows the wrong direction) and in the long term (she transgresses the Fleet Rules);

Positive: the Innovator will perhaps find better fishing waters, which could be beneficial to the fleet.

If the Innovator indeed finds better fishing spots, a solution would be that all ships eventually go to these new spots. But this requires that:

it is ensured beforehand that these spots are indeed a good alternative for all (and perhaps what is good for a small boat is not good for the fleet); and all boats each get to go voluntarily; because the CEO does not control the helm of each boat, even though she has some influence on the captains.

The way the organization produces the latter (b) condition is by all captains obeying the authority of the CEO. Therefore, the CEO cannot tolerate that Innovator creates a precedent of not following orders.

This situation appears as a “crossed-constraint”. On one hand, the Innovator must demonstrate the effectiveness of her movement fighting against the inertia of the structure, trying to persuade other boats she needs (e.g. the mother-ship) to follow her. On the other hand, the CEO, even if she were satisfied that this is indeed a good direction to take, can openly support the Innovator *only* once the latter has managed to impose its local solution by transgressing more or less the general instructions, that is to say, *ex-post*, once the evidence is presented that this is a good solution.

So, in practice, after having shown interest, reminded the rule to the Innovator and fighting her arguments, the CEO gives (sometimes informal) clearance to go, while demanding guarantees (that the Innovator can hardly give at that point). In doing so, the CEO gives mixed signals, encouraging the Innovator to explore but reminding officially that she must stay with the fleet. When the Innovator comes back with plenty of fish, the CEO orders the fleet to go there, without officially crediting the Innovator for its discovery. (In case the Innovator finds nothing, it is likely that it will face sanctions or penalty.)

The problem comes from the fact the CEO, faced with two conflicting desires, runs two things at once:

- she wants to maintain the cohesion of the fleet;
- she would like to know if the innovating ship that he has chosen to sail Southeast will actually find a better option for the fleet.

However, she cannot allow everyone to go and explore everywhere, otherwise:

it would be a mess (and why not go due North? And why cannot my boat explore too? I'd like to sail West!) and.

we are not sure the new option is good (so one cannot change immediately set the general and say “all Southeast”).

Faced with this dilemma, the CEO may produce a paradoxical injunction because:

- to the Fleet she repeats the rule that everyone must go in the same direction, that is to say, “due South”;
- she still lets the Innovator go Southeast.

As we can see, the CEO is as much a victim of the double bind as the Innovator: she must at once, and both in the general interest, let the Innovator try, and forbid her to do so. This symmetrical aspect of double bind, and the mutual and somewhat perverse fascination that comes with it, has already been noted by Harold Searle (Searle 1958); and in the first works of the Mental Research Institute at Palo Alto: “the most useful way to phrase double-bind description is not in terms of a binder and a victim but of people caught up in a system which produces conflicting definitions of the relationship and consequent subjective distress” (Bateson et al. 1963).

This suggests the following comment: the organization must be flexible “enough” to allow internal actors do, to some extent, something not explicitly allowed (!) What is enough? There is no generic answer: how long is a piece of string? Anyhow, as the organization will always ask for security, there will necessarily be some double bind:

- “We let you try, but failure will not be tolerated”.
- “We give you autonomy but you must stay within deadlines and budget”.
- “We delegate power to you but only if you do use this delegation to do what we want”.
- “You must perform the change but keep continuity”, etc.

We see here how it falls on the situations experienced daily in organizations. We also see that such situations can occur even when the protagonists are all in good faith and sincerely seek to defend the interests of the organization. That is the general case. In fact, the same injunctions, as seen from the managerial side, are the hierarchy’s best effort to solve the contradiction of innovation in organization:

- “We cannot afford failure but we will take the risk to let you try”
- “Our resources are limited but we give you all the autonomy we can”
- “As long as you continue to justify our trust we will delegate to you”
- “Let us promote innovation as much as we can without jeopardizing the Organization”, and so on.

This last point (good faith of all stakeholders) paradoxically complicates the interaction because the positions of the players are defended with all the

more energy that they each believe supporting a just cause. This contributes to demonize the adversary, because of the attribution bias, well-known phenomenon in psychology, where responsibility of an event is more likely attributed to an individual rather than to impersonal causes (Ross 1977; Wolosin et al. 1973). Thus the “We” of paradoxical injunctions above-mentioned risks being interpreted by the one receiving the injunction, as a plural of Majesty of one who Commands, while in the mouth of the utterer it merely designates the Organization of which s(he) is only the agentic (and perhaps unwilling) instrument. Conversely, the non-execution of the instructions will be seen from above as reluctance of the agent while it is only, in terms of the latter, the results of constraints of the Environment (technical impossibility, etc.)

There is no quick fix. Cross-constraints are a natural product of the innovation problem. Alas double bind provokes in its victims feelings of helplessness, frustration and guilt. These are all the more pernicious than the origin of the contradiction is not always clearly perceived and that only the conclusion “cannot do” emerges. Double bind is usually perceptible by a *restriction syndrome* experiences (sometimes voiced) by the protagonists. The individual:

- A. *Complains of restricting himself.*
- B. *complained of being restricted by others.*
- C. *complains of being restricted by a situation (...)*
- D. *complained of restricting someone else (...).* (Jackson 1967, p. 116)

When such syndrome is expressed, one should look for crossed constraints and double bind. While crossed constraints are inevitable and not necessarily unhealthy, double bind occurs when the contradiction is hidden to the actors. This may come in different forms. For example, the contradiction can be at different logical levels. In organizations, the most frequent reasons are that the conflicting constraints come from very different sides of the organization. For instance, a constraint of productivity comes from Finance, a constraint of safety comes from National Regulations, a technical constraint comes from the Client, and the Management imposes deadlines or budgets that are not compatible with solving the above all together. Each binder only sees part of the problem and from his own perspective the problem is solvable because he is not aware of the other constraints. While, at the point of delivery, where all constraints cross, the innovator loses hair and teeth.

Eventually, discouragement and even hatred can develop. Faced with the constraints imposed, natural solutions such as fight of flight are impossible, the subject whose action is inhibited away his aggressiveness against himself, creating a stress that can eventually lead to psychosomatic disorders (Laborit 1970, 1976).

Norbert Alter, a French sociologist who also experienced leading innovation projects, describes in detail the “innovation fatigue” which affects innovators as they live a continuous uphill battle against their own organization in order to move it. The repeated experience of conflicting relations leads the actor to decide to stop his/her resources (Alter 1993b). Innovators are entrepreneurs, with no hope of gain except perhaps for their career, and their innovation endeavour will necessarily expose them to take risks and transgress rules (Alter 1998).

It seems that the fate of innovators is to be sacrificed at some point: in the battles they fight against the organization, they accumulate fatigue and gain enemies in the middle management, even though they are often supported at a higher level of the hierarchy. And when success comes, it is easier to disseminate the innovation if it is not attached to a specific name, so everyone can take ownership: therefore innovators often get frustrated of the publicity of their achievements. As for agents of special services, they will often have acted under unofficial cover of some higher-level executives, so at ground level they are seen as acting without any respect for procedures and are a bad example: black sheep, unmanageable, freak and so on. Admins usually see these innovative folks approaching their desk with anxiety because they often come with problems that cannot easily be solved with the usual regulation toolbox. Typically, the kind of things these innovators want to buy cannot be acquired by the normal (compulsory) procedures because they are not on the procurement lists; the type of experiments they require are infringing safety or security regulations; they want to set up collaborations agreements with entities outside of the normal partners of the organization, of which the status and goal is unclear but clearly raise complex legal or intellectual property issues and so on. Still these innovators have too much leverage of some kind to be easily dismissed and they will not take “no” for an answer.

Organizational Solutions

As we have seen, the situation is simple: companies know they need to innovate, but the very nature of organizations is an obstacle to innovation because of their aversion to change and uncertainty. In fact, innovation in existing organizations is so difficult that it is often newcomers on the market that innovate.

The company wants ideas implemented and successful. It would like to avoid the waste associated with ideas that abort and also to get rid of the extreme uncertainty of creativity. Just like academic institutions who want

to hire only star researchers, or someone who wants to buy only winning lottery tickets, the organization wants only good ideas that work and that are implementable; it does not want to incur the costs and risks of the creative ecosystem that is necessary to produce new ideas, of which only a few will become success stories. Finally, creative individuals are a necessary evil; they are useful, but they are subversive for the organization therefore managers think they should be controlled.

Stanislas Lem, in his novel “His Master’s voice” describes how the person at the origin of a large R&D project (“Dr Rappaport”) uses the metaphor of truffle-searching pigs to explain to his colleague (the narrator) the relation of the organization to its researchers:

[Rappaport] once read me an excerpt from a nineteenth-century volume describing the raising of pigs trained to find truffles. It was a nice passage, telling, in an elevated style typical of that age, how man’s reason made use—in keeping with its mission—of the avid gluttony of the swine, to whom acorns were tossed each time they unearthed a truffle. This kind of rational husbandry, in Rappaport’s opinion, was what awaited the scientists; it was in fact already being put into practice in our own case. He made me this prediction in all seriousness. The wholesale dealer takes no interest in the inner life of the trained pig that runs about for the truffles; all that exists for him are the results of the pig’s activity, and it is no different between us and our authorities. (Lem 1999, p. 61)

In practice, organizations do set up procedures, but remain cautious and guarded towards those whom they put in charge of this potentially subversive activity. Innovation is closely managed and controlled; creativity is carefully secluded from the rest of the organization and filtered. In modern organizations, specific people, places, times and formats have been designed to limit the risks of creativity. Researchers, “creatives”, creativity rooms, creativity moments, project mode and tests are some of the devices that have been set up for this purpose.

Of course, there are organizations specialized in doing the creativity job for others (e.g. design studios, consultancies, communication agencies, etc.); there are also in large organizations research divisions or departments in charge of doing that hazardous business; after having served years in such environments, the authors believe that even in those places creativity is highly controlled.

The general approach taken by organizations, having understood that creativity and innovation are by nature incompatible with the rest of the organization, is to create some kind of a bubble where these activities can take place. An organizational membrane will both protect the inside of that bubble from the rest of the organization, and protect the organization from the subver-

sive stuff that might happen there. The organizations consider creativity as an activity for which specific persons have qualities and appetite, believing if the organization wants to get the results and transform them into economic value, it is a necessary evil to let these creators “do their thing” in their strange and wondrous ways. But once some good thing is found, it should be taken away from the creators and transferred to responsible people in a controllable process, in order to be integrated in the organization’s standard operations. The truffle pig model.

The Principles

There are many solutions used in practice for creativity and innovation. We describe below four main approaches and six structures.

Imitation, Subcontracting and Absorption

This is innovation without creativity inside the organization. The organization tries to copy someone else’s solution to avoid the process of creativity, or subcontracts the innovation to another body. It is a rational approach to reduce risks and costs. Others had similar issues; perhaps their solution can be taken. This is done by benchmarking, and often results in “me-too” innovations. The limitation, of course, is that the company does not benefit from the innovation premium that goes with being the first to implement an innovation (reputation, good will). When the company takes a subcontractor, that subcontractor may either copy or generate ideas. Finally, the external innovation can be bought (e.g. patent) or the innovative company itself be bought. This is what large companies are doing, either to develop the innovation or to kill it in order to protect their market. This enables buying also the innovation premium with the brand.

Innovation as Problem Solving

In this perspective, innovation is seen as a possible solution to a problem (e.g. shrinking sales, dissatisfied customers, accident). Organizational change is rolled top-down; a team dedicated to solving the problem is set up. This usually comes with some systematic analysis of the situation, a rational search for solutions (which can include the benchmarking and copy above). In the case of organizational change, a committee including some top managers’

teams with change specialists (e.g. consultants) to implement the change. John Kotter proposes an eight-step model, which is typical of the structured way some consultants operate:

Step 1 Create a Sense of Urgency: Craft and use a significant opportunity as a means for exciting people to sign up to change their organization.

Step 2 Build a Guiding Coalition: Assemble a group with the power and energy to lead and support a collaborative change effort.

Step 3 Form a Strategic Vision and Initiatives: Shape a vision to help steer the change effort and develop strategic initiatives to achieve that vision.

Step 4 Enlist a Volunteer Army: Raise a large force of people who are ready, willing and urgent to drive change.

Step 5 Enable Action by Removing Barriers: Remove obstacles to change, change systems or structures that pose threats to the achievement of the vision.

Step 6 Generate Short-Term Wins: Consistently produce, track, evaluate and celebrate volumes of small and large accomplishments—and correlate them to results.

Step 7 Sustain Acceleration: Use increasing credibility to change systems, structures and policies that don't align with the vision; hire, promote and develop employees who can implement the vision; reinvigorate the process with new projects, themes and volunteers.

Step 8 Institute Change: Articulate the connections between the new behaviors and organizational success, and develop the means to ensure leadership development and succession. (Adapted from Kotter 2007)

Depending on the nature of the change, the nature of the group-in-charge will change, and they may use various internal or external resources as a project structure (see below).

Participative Innovation

This perspective relies more on collective intelligence, and tries to involve a large number of members of the organization in the process. It tries to involve users in the design process of new products, and involves stakeholders in organizational change. It is not exactly bottom-up but more democratic in its spirit than the structured approach above. Process consultation (Schein 1998) is a typical approach of this philosophy applied to organizational change.

Process consultation considers that the “client” (e.g. the organization, the end-user, etc.) owns the problem and is best placed to find the solution. Therefore, the role of the innovators (e.g. the consultant) is to help the client

solve his problem by providing and monitoring adequate processes that help a solution emerge. This may include confrontation with specialists, creative sessions, real-life tests and so on.

Experimental reality (Jégou 2009; Lahlou 2009) is a particular kind of participative innovation, where users experiment a new product or service, before it is launched to the market, with conditions close to real ones. Avatars of this are the clubs of beta-testers, invited to test and evaluate products before others. It is related to the idea of promoting lead users and building attachment between companies and an elite of users. The main issue of those approaches is how to process participation of external communities into the organizational structure, in other words how to articulate two opposite social structures: the hierarchical organization of companies and the soft organization of online communities (O'Mahony and Lakhani 2011). Experimental reality can also be applied for internal changes within the organization, by involving a team of employees in an experiment of organizational or management change.

Participative design and crowdsourcing would be applications for product design. There are many avatars of this philosophy; for example, it can be run on a continuous basis with specific implements to bring interesting suggestions bottom-up (e.g. employee innovation competition, suggestion mailboxes, consumer suggestions) or be set on ad-hoc basis.

Mixed Approaches

Every organization comes with specific mixes of the philosophies above; and often several approaches or structures coexist in the same organization and change on a frequent basis.

The Structures

The structures (and processes) of creativity and innovation put in place are very diverse. The selection below gives a range of examples.

External Structures: Subcontractor and Consultant

When the creative content, possibly some of the innovation, is done completely outside of the organization's boundaries, companies use specialized subcontractors, for example, advertising companies or R&D companies (such as Ideo or Bertin). Big companies tend to outsource part of their activity of

innovation by encouraging spin-offs which will become subcontractors; by doing this, they reduce the risk of innovation, by sharing it with other clients.

When the process of creativity or innovation is subcontracted, this is often to a consultancy. An external party comes into the company and is responsible of the creativity process, then leaves. Since the party is external, the risk is limited. Nevertheless, considering the high cost of consultants, their relative incompetence since they don't know the specific culture and problems of the company, and their natural tendency to look for another contract rather than (only) solving the problem, some large companies have internalized the consultants as a specific department, which is usually attached near to the top of the company.

The Project

The project is a transient structure created in the company, with a "sunset rule" specifying an ending date after which the project structure will be dissolved.

The project format presents the interest of being limited in time, budget and spontaneously disappear as a structure at the end of its lifetime. The commitment of the organization is limited and the risk as well. This enables disposing quietly of the persons and of the results if the organization is not satisfied with the outcome (often the case even though most projects are celebrated as successful). The project is currently the most fashionable and used format for innovation in organizations. Because the device self-destructs after it has produced a result, the innovators can be given a substantial amount of freedom and initiative within its realm. In that way, the innovating team can include members from various origins, and create its own culture appropriate to the purpose. Most research funding agencies and programmes tend to use the project format.

Projects can work well. The positive aspect is its adaptability to the problem at hand, and the capacity to provide a certain amount of agency to the project team. The main issues are first that organizations cannot help trying to control and micro-manage projects, by asking for very precise planning, lists of deliverables and imposing frequent result presentations. This is of course at odds with the rationale of providing a freedom space and adaptability to the accidents and serendipity of the creative process. One of the authors experienced being part of a multi-million project where it became clear after a couple of months that the initially planned deliverables were not very interesting, but also that the team could produce amazingly interesting results in a slightly different direction, within the same envelope of time and budget. Unfortunately,

the international agency funding the project insisted on the team realizing what was planned exactly since that was what the peer review had validated. Which the team did, with the bitter feeling of wasting public money.

The advice of the authors is that the best way to manage such research projects is to “sell” the selection committees something the team already has found, slice it to provide it exactly as deliverables in the predicted time-frame and use the resources to do something different. Then that new thing can be sold for another project and so on.

Another issue with projects is that the responsibility of the project team is limited by the project’s envelope. It is therefore frequent to see them focusing solely on their deliverables and producing negative externalities that they will not have to pay for. For example, the project will often neglect the impact on other parts of the organization, or leave unsolved time-bombs that will only explode at the transfer from creation to production or deployment. Projects, because they operate on a fixed time and cost base, will tend to ignore some issues deliberately.

Projects which involve the final users or other stakeholders in the creative process (participative design) normally involve feedback loops of test of successive versions with the users. Unfortunately, these feedbacks may come with the logical conclusion that substantial changes in the project should take place. Of course, it is usually impossible to reconsider the project’s envelope at this stage and therefore users’ opinion, warnings or ideas are ignored, hidden under the carpet, or simply translated into something that seems feasible within the project’s time and budget frame. This strategy will result in the neglected issues coming back to bite the organization at a later stage, after the project is finished; but at that time the project team will be far away and responsibility will be difficult to attribute. In an organization one of the authors worked with, this strategy was known under the colourful nickname of “running faster than the shit one spreads”.

The Internal Innovation Structures

In large organizations, entities dedicated to innovation are common practice: R&D Division, Innovation Department and so on. They can take many forms, as we shall illustrate by a decade of changes at Netcom (a large network operator, name changed).

These research/innovation entities are continuously questioned upon their effectiveness, since they are primarily regarded as cost-centres. At Netcom, the fact that a competitor has released first a successful product was immediately

interpreted as a sign of the inability of Netcom's internal structures to be innovative. While in Netcom's R&D centre several teams complained they had the same product in the drawers for years but it had not been followed by the operational branches (marketing and sales). The labour division between branches and departments is often an obstacle to innovation. At Industrust (a multi-billion heavy duty corporation) many successful R&D projects, which were far beyond the state of the art, were not taken further after the end of the project because what was found was not in the core business of Industrust and therefore found no champion in the operational branches.

Behind the innovation question in large organizations are two issues: are large organizations conducive to creativity? Can they ensure the transition to market?

Netcom's CEO, in the late 2000s, used the metaphor of the ship and fleets to describe the company: to innovate in a large structure, it was necessary, he said, to have entities dedicated to innovation, of reasonable size, that is, fleets with a relative degree of autonomy in relation to the admiral ship while remaining connected to it. This is where the tension resides. If the distance is too big, fleets can be very creative, but they will have no influence on the ship, if the distance is too short, creativity may freeze in the shadow of the ship. In organizational reforms of Netcom, one parameter was distance adjustment: R&D entities were brought closer or further of operational branches based on the results of previous situation. If the diagnosis was of too much autonomy, consultants were eager to incite stronger links (contracts, activity piloting and targets...) and vice versa.

In some large European corporations, two trends could be observed at the turn of the century. The first is to promote innovation by creating protected areas, bubbles within the organization. Those internal structures have a different managerial and organizational structure ("exception area"). Interbank (another large organization, financial) set up an open workshop where users and other companies could play with potential technologies. At Netcom, a "creative studio" (name changed) was launched in the late 1990s. The idea was to experiment a different way of doing R&D, deliberately on the user's side, with creative, artists, designers. The studio enjoyed a specific place, which greatly differed from the rest of R&D: flexible workspaces, adaptable, friendly spaces. The idea was later copied by Industrust, who already had its own "user lab".

Organizations constantly change their innovative structures. At Netcom, later, another centre was launched with extra designers and autonomy to mount and launch projects. The company finally hired a successful entrepreneur to set up an internal start-up responsible for initiating projects and protected from

the rest of the organization: simple operating rules, no reporting. Today, which large corporation does not have its internal incubator, its “garage”? These spaces are immediately suspected by those outside (especially since it seems good to work there) to be money-wasters. But the main problem faced by these protected areas within the company is that of the transformation from prototype to business. How to transform projects to merchandisable products or services?

The second trend was opposite: to create closer ties with the operational units. For example, the creation of hybrid entities composed of people from R&D, sales and information systems was considered the solution to facilitate transfer from R&D to market. The co-presence in common premises of mixed teams was expected to break down the barriers, build a common culture and create fluidity between creativity and innovation. The model was introduced by a large automobile maker’s Technocentre and reproduced at Netcom.

The User Lab

A key idea in the user lab approach is that the way clients or consumers use the products or services does not necessarily match the representations that engineers anticipated during their conception. As shown by (Akrich 1998), user can intervene on socio-technical devices in four ways: displacement, customization, extension and hijack. In that sense, predicting uses is difficult and it can be more usefully involve real users in the development process to better understand their practices and needs. In that sense, big companies have introduced in their R&D divisions entities dedicated to users in order to better drive innovation according to user response. That is the main reason for the presence of social sciences departments in these entities otherwise dominated by engineers. Those entities represent the voice of the client inside the company, they are committed to analyse how users interact with products and services. Methods from social sciences (data mining, surveys, qualitative interviews, ethnographic approaches) are mobilized to build a representation of “real” uses inside the company. These entities played an important role in the 1990s and 2000s. In France, a network of those labs was active for many years, where scientists from sometimes competing companies engaged in R2R (Research to Research) exchanges.

Open Innovation

The paradigm of *Open innovation* introduced by Chesbrough in 2003 has received much attention among managers (Chesbrough 2006). It describes the shift from a closed to an open model of innovation. R&D activity is redeployed: exploration of “horizontal innovations” by users (von Hippel 2007), start-up

acquisitions, call for external participation in innovation, involvement in networks of competitors to benefit from external know-how. R&D is forced to go beyond the walls of the organization and collaborate with competitors, customers or other stakeholders. The message is clear: stop developing in-house and see what is on the market. “COTS” (assembling or acclimating “Commercial Off-The-Shelf” solutions) is one of the keywords of that strategy. The development of the *open innovation* concept discreetly masks the reasons why companies open outwards: externalizing risk and cost. But the idea is also to fight against the NIH (“Not Invented Here”) syndrome (Katz and Allen 1982), which creates resistance to implementation of innovations of external origin.

Users are sometimes the best innovators. Companies more open to external innovation learn to look closely at what produce these horizontal networks, to capture positive externalities for their benefit. They also learn to elicit voluntary commitment of users, as a way to outsource part of their business (Beaudouin 2011). *Crowdsourcing* refers to these forms of outsourcing activities outside the firm with the “crowd”.

Other Structures

Space lacks here to describe all the techniques and structures used. Nevertheless, an important approach is to organize the ascent of ideas from staff and clients in order to select good ones. Suggestion boxes, ideas competitions (internal or external) are often used. 3M was famous for being the first to organize “bootlegging” in which employees were allowed to work on their personal projects in the company for one day a week, with the underlying idea that this would foster creativity and initiative. This is very similar to crowdsourcing, except it uses internal staff. Other companies (e.g. Google) did the same.

As said above, most solutions are transient. Organizations continuously come up with original new organizational concepts or copy each other, often running in circles and reinventing similar structures after a few cycles of management turnover.

Conclusion

Creativity is a dangerous but necessary poison. Organizations seclude it in specific time and space in various ways. As we saw, the resistance of the organization comes from good reasons; indeed few innovations make everything better.

The fast turnover of innovation structures shows that the problem has not yet found stable solutions. It also confirms how difficult it is to be a creator or an innovator in organizations. While creativity is primarily considered a psychological activity, practising it in organizations entails taking into account a socio-technical context that makes it very challenging: innovators must not only make an effort to produce something new, they must also engage in an uphill battle against their own organization.

More generally, one can wonder whether this resistance to innovation is also the case at the larger scale of societies, since it is in the nature of culture in general to reproduce and defend current practice. At first sight, societies seem less innovation-averse than organizations. The reason is simple: the defence system of larger societies uses subsidiarity. Innovations are primarily filtered at the local level of installations; each organization, each local community strives to control their own innovators. And as we saw in this chapter, they are closely monitored indeed.

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24

Giving Creative Credit Where Credit Is Due: A Socio-cultural Approach to Consumer Creativity

Marie Taillard and Benjamin Voyer

Consumption has traditionally been researched from a functionalist and utilitarian perspective. That is, earlier research viewed the act of consuming as fulfilling a range of needs, from the more basic (e.g. hunger, clothing, shelter) to the more complex (e.g. buying branded clothes to belong to certain social groups). The rise of modern societies of consumption, and their acceleration after World War II, has contributed to a change in the act of consumption, which has gradually become less of a necessity and more of a carefully planned act. This has also contributed to making the creative aspects of consumption more visible. More recently, technology has opened up many opportunities for consumers to exercise more creativity: from reaching across the globe to source authentic products from local artisans, to contributing to the development of a new LEGO model, to playing with different shades of makeup before buying one. Consumption and the consumption process—especially in their social and cultural contexts—represent particularly fertile grounds for creativity to emerge and be observed. Consumers can be creative alone, but they can also be creative in the company of others and construct new ways of consuming products, services, ideas, or experiences. That is, together, consumers develop novel products, find novel applications, invent novel solutions,

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imagine novel rituals, craft novel practices, and together they experience the benefits of their creative consumption.

This chapter investigates the socio-cultural dimensions of consumer creativity, especially as enabled by the digital revolution of the past 20 years, and shows how collective cultural contexts enable greater consumer creativity. We first argue that creativity forms an inherent part of the act of consumption and that all acts of consumption are creative in nature. We then move on to a discussion of the socio-cultural aspects of consumer creativity and show that consumers, especially in group and community settings, add value to the consumption process through creative acts.

Consumption as a Creative Act: The Role of Creativity in Consumption Practices

Creativity as an inherent part of the consumption process is relatively under-researched in the field of marketing and consumer behaviour. Scholars conducting research on consumer creativity have offered two contrasting points of view. The first perspective focuses on crafty or artistic forms of creativity (Dahl and Moreau 2007; Lowrey and Otnes 2003; Sellier and Dahl 2011), such as cooking kits or various do-it-yourself activities involving exceptionally creative consumers such as lead users or those who participate in open innovation activities (Füller et al. 2014).

A second perspective centres on creativity in the mundane problem-solving tasks of daily consumption activities. Noting that interest in extraordinary acts of creativity has resulted in less research focus on everyday consumer creativity, Burroughs and Mick (2004) heed Lubart's (1994) call for greater attention to be paid to the mundane contexts of creative activities. They suggest that the traditional two-dimensional conceptualisation of creativity as functional and novel (Hennessey and Amabile 2010) be enlarged to include an aesthetic dimension. This third dimension, Burroughs and Mick (2004) argue, would help bridge the gap between artistic and problem-solving (or exceptional and mundane) forms of consumer creativity. A concrete example of consumer creativity that combines the functional with the aesthetic is the solution adopted by a cash-strapped consumer who updates her tired-looking coffee table by sawing off the legs and replacing them with copper tubing (Burroughs et al. 2008). Burroughs and Mick (2004) report that situational factors, such as involvement and time constraints, cause individuals to favour the functional over the aesthetic and novel dimensions of creativity, whereas person factors, such as locus of control and metaphoric thinking ability, drive creativity more generally across the three dimensions.

Research suggests that the dichotomy between artistic or aesthetic and problem-solving forms of creativity is false: problem-solving processes are very much at work in purely aesthetic forms of creativity. For example, Getzels and Csikszentmihalyi's (1976) exploration of the creative vision shows how art students find and solve problems in the process of producing art. A solution to Burroughs and Mick's (2004) concern about underestimating consumer creativity therefore is not simply about adding an aesthetic dimension to the conceptualisation of creativity but about recognising the many different forms of problem solving in which individuals, and consumers more specifically, engage in their daily lives. Problem solving can range from the very functional, such as a cheap way to update old furniture, to the purely aesthetic, such as expressing a particular emotion, or tension, through art. Getzels and Csikszentmihalyi (1976, p. 248) focus particularly on the problem-finding phase and discuss how this phase is common to all forms of creativity—'perceptual, theoretical, social, political, mechanical, or whatever'. Creativity, they claim, depends on how the individual approaches the task, whether the problem ('what must be done') is presented (i.e. identified) or discovered (i.e. left for the individual to formulate), how many and what kinds of alternatives are considered, how many and what kinds of strategies are employed, and whether further solutions are considered beyond the first. The authors argue that this model can be applied to different domains, including the scientific and social.

Problem solving is certainly the focus of one of the early accounts of consumer creativity by Elizabeth Hirschman (1980, p. 286), who defines consumer creativity as the 'problem-solving capability possessed by the individual that may be applied toward solving consumption-related problems'. This broad definition is useful in that it encompasses any sort of problem solving typically associated with consumption. For example, when cooking, a creative consumer might address a problem such as lack of the required amount of butter for a recipe by adding margarine. Similarly, a consumer who cannot find his favourite brand of tomato sauce at the supermarket might decide to make his own sauce, using canned tomatoes and fresh basil. Conversely, by characterising creativity as a capability, Hirschman's view clashes with current research in creativity, which conceptualises creativity as both process and outcome.

Berthon and colleagues (2007, 2008) provide a different perspective on consumer creativity. They distinguish between consumer creativity (process) and the work performed by creative consumers (outcome). Their focus is on how firms can encourage creative consumers to exercise their creativity to create better outcomes. Moreau and Dahl (2005) find that consumers enjoy seek-

ing creative solutions and that their creativity benefits from input constraints (i.e. either limited resources, such as unavailability of the right ingredients or budgetary restrictions, or the requirement to use certain resources), provided that they are not time constrained. Under high-constraint situations, consumers abandon a straightforward 'path of least resistance' information-processing strategy to adopt more creative processes, resulting in more creative outcomes. In a subsequent study, Dahl and Moreau (2007) focus on the motivations of creative consumers and show that they value the inherent constraints of certain products, such as kits, models, recipes, and patterns, because of the creative solutions they demand. The authors argue that the instructions that come with these products act as constraints that allow consumers to find an enjoyable balance between perceived autonomy and perceived competence.

The most sweeping review to date on consumer creativity is that by Burroughs et al. (2008). The authors adopt a systems or confluence framework, discussing in turn the creative product and the creative person, contextual and environmental dimensions of creativity, and how creative consumers systematically integrate these different elements.

Creativity as an Intrinsic Component of Consumption

Recent research begins from the premise that creativity is part and parcel of everyday consumption (Taillard et al. 2014). Consumers seek solutions in every consumption activity in which they engage or in which they experience. Epp and Price (2011, p. 36) highlight the gap between market-mediated offerings and 'what the customer is trying to accomplish'. In other words, the market cannot adequately meet the complex, elaborate, ever-changing, and highly individual needs of consumers. An increasing number of firms recognise this disconnect between the market and their offerings as untapped opportunities for value creation and focus their product development and marketing efforts, including their segmentation strategies, on the jobs that customers aim to accomplish through consumption (Sawhney 2006). For example, the same smoothie can be sold as a vitamin booster for under-the-weather consumers, as a healthy snack for school children, or even as a convenient breakfast on-the-go. This strategy takes into account the role of consumers as integrators of resources (Vargo and Lusch 2004), who fashion solutions to their daily activities out of their own personal resources (knowledge, passion, creativity, money, ingredients, and so on) and those they find in the market (products,

services, brands, ideas, experiences), within their communities (other consumers' knowledge, passion, and so on), and within their physical environments (in their gardens, attics, and so on). In integrating resources, consumers reap positive benefits: in effect, they create value for themselves.

Unlike early linear and mechanistic models, consumption is now considered a complex, multifaceted, and dynamic phenomenon (Court et al. 2009; Samson and Voyer 2012)—a problem-solving 'journey' that consumers control and deliberately design to suit their own objectives and circumstances. This conceptual shift is exemplified by a move among practitioners away from the metaphor of the 'purchase funnel', into which they drive the consumer, and towards that of an engaged consumer exercising creative control over his or her self-guided, experience-based 'decision journey' (Court et al. 2009). More specifically, this journey begins with a trigger, a realisation by consumers that they require a solution that will help them get a certain job done (Christensen et al. 2005; Epp and Price 2011; Sawhney 2006; Tuli et al. 2007). This trigger and realisation clearly echo the artist's 'what must be done' problem-finding phase discussed by Getzels and Csikszentmihalyi (1976). These notions of 'what must be done' and 'getting the job done' cast light on the role of agency (i.e. the performance of intentional action) in problem solving and creativity (Anscombe 1957; Davidson 1963). Examples of 'jobs done' range from the mundane, such as getting breakfast on-the-go, to the aspirational, such as taking a much-needed pampered break or increasing one's confidence when appearing in front of a large professional audience.

After the problem-finding phase, the next phase for consumers involves identifying and evaluating possible solutions, a problem-solving task that also requires creativity. The consumer creatively assembles and considers a set of solutions, some of which are market-mediated and others that are crafted to address the specific contextual, emotional, or practical requirements at hand—buying a smoothie, going to a day spa, buying a designer suit. These unique solutions include not only products and services but also experiential features of consumption, such as with whom the consumption experience will be shared, at what point in time and for how long, where the experience will take place, how it will be prioritised against others, what resources will be allocated, and so on. Seeking solutions is itself a creative process in which consumers ask others for recommendations, perform research, compare options by trying them out, and more, again in a deliberate and personally relevant way. To the extent that each solution is unique to the context and the individual (and the job he or she is trying to get done), we assert that the crafting of the solution is a creative act, akin to that described by Getzels and

Csikszentmihalyi (1976). Thus, there is an important need to explore consumer creativity as a significant resource both for the firm and for consumers.

This broader perspective is anchored in the previously discussed common understanding of creativity as a phenomenon that is not only specific to 'historical' (exceptional) achievements (Boden 1994), but also ingrained in everyday life practices in the form of 'mini-c' (Boden 1994; Kaufman and Beghetto 2009) types of creativity: mundane acts such as the production and interpretation of verbal communication, the adjustment of actions to their changing context, and the creation of new personal meanings. This view echoes the cyclical processes of internalisation and externalisation that the Russian psychologist Lev Vygotsky proposed as characteristic of creativity (Glăveanu 2010; Moran and John-Steiner 2003). Consumption as a process includes the assimilation of meaning and practice and their transformation and externalisation in action, a dynamic that makes acts of consumption, themselves thoroughly integrative, true acts of creativity. The notion of affordance (Costall 2012; Gibson 1966) is useful here. Gibson (1966, p. 285) defines affordances as 'what things furnish, for good or ill. What they afford the observer, after all, depends on their properties'. Costall (2015) characterises affordances as 'resources of human agency'. This characterisation is notable in light of recent research by management scholars who view resources as different from the physical or intangible artefacts that consumers or firms integrate in creating value for themselves (through consumption or production): 'resources are not, they become' (Vargo and Lusch 2004, p. 2). A resource is part and parcel of human agency: only after human agency is exercised on an artefact, with the intention of accomplishing a given action, does a resource come to be. As a result, the affordance of an act of consumption depends not only on the properties of the product or other artefacts (tangible or not) consumed, but also on the actor's agency in getting a job done. In our view, affordances reside in the solution 'furnished' by a product or brand that has been actively 'resourced' by an agent trying to get a job done: they are at the meeting point between the artefact and the agent (but do not constitute the outcome itself: meaning or value). This, of course, is where creativity is crucial—in crafting that solution (by way of integrating resources) that gets this particular job done.

A mundane activity such as the consumption of a cup of coffee provides a good illustration of the creative solutions consumers harness to get their jobs done. From assembling and mobilising the resources to fit their needs or mood, to engaging in the service encounter, to trying out new flavours and customising that cup of coffee according to their tastes, coffee drinkers make creative choices at every step of the journey depending on the job to be

done: a morning caffeine boost or a post-lunch treat; a shared moment or a break from others; a reviving, jarringly bitter espresso or a soothingly unctuous cappuccino; a quick gulp or a leisurely sip. Beyond the product itself, service, being human by nature, is intrinsically subject to variability in the way it is delivered and received: it involves interactions in which the consumers design their participation, again according to the situation at hand. Their knowledge, experience, and motivations change from one consumption episode to another, varying with each episode and resulting in different meanings for what may appear to be the same action across time. As such, consumption offers the perfect playground for consumers to exercise their creativity through processes of internalisation (creative appropriation) and externalisation (creative expression) (Glăveanu 2012). In contrast, work on consumer creativity to date, as thoroughly reviewed by Burroughs et al. (2008), does not take the full consumption journey or experience into account. We see a need for researchers in marketing to better align themselves with recent systemic views on creativity (Glăveanu 2010; Hennessey and Amabile 2010). Recent advances in consumer research have indeed shown that understanding consumer creativity requires going beyond the analysis of individual acts of consumer creativity, to take into consideration the broader socio-cultural context and more holistic view of consumption (Taillard et al. 2014). The socio-cultural environment appears not only as a key trigger of consumer creativity but also as a force that shapes value creation in the consumption process. While the topic of creativity underlies much of the rich literature on consumer culture, it is rarely discussed explicitly. We now uncover some of this research and emphasise the socio-cultural aspects of creativity and consumption.

Socio-cultural Perspectives on Creativity in Consumption

In the past three decades, a deeply socio-cultural approach to consumer behaviour has developed and emerged as an influential paradigm known as consumer culture theory (CCT). Early work by Sydney Levy (1959) and, later, Russell Belk (1976) and Elizabeth Hirschman and Morris Holbrook (1982) began shaping CCT, which was subsequently formalised in Eric Arnould and Craig Thompson's (2005) classic article. This now well-established sub-discipline of consumer research has brought together expertise from sociology, anthropology, social and cultural psychology, linguistics, and other social disciplines. Inherent in much of the CCT-inspired research is the notion that consum-

ers' idiosyncratic consumption practices emerge in and also help shape their socio-cultural environments. It is in these environments that consumers find and give meaning to their consumption behaviour; it is these environments that 'frame consumers' horizons of conceivable actions, feeling and thought' (Arnould and Thompson 2005, p. 869). This 'distributed view of meaning' (Hannerz 1992, p. 16) reflects the many social and cultural factors and dimensions of the consumption experience.

At the core of CCT are the deeply personal and meaningful actions of individuals and groups of individuals throughout the 'consumption cycle' (Arnould and Thompson 2005, p. 871): consumers creatively use marketplace resources, products, and brands to forge their own identities and establish their own consumption sovereignty, whether by adopting the values of a brand or resisting them (Holt 2002). Holt (1995) introduces a typology of consumption practices that emphasises the role of 'consumption objects' in shaping personal and interpersonal consumption practices. According to Holt, these practices are expressed through four metaphors. The first, consumption as experience, focuses on the emotional and psychological emotions that consumers feel during the act of consumption. The second, consumption as integration, centres on how consumers integrate the meaning of objects. The third, consumption as classification, captures the cultural and personal meaning of objects, which are used to classify those who possess them. The fourth metaphor, consumption as play, refers to how consumers play with the purchase to further develop their connections and relationships with an object.

Throughout the CCT literature, consumption is considered a social and cultural productive activity shaped by the individual needs and wants of the consumer, aimed at or in concert with an audience, and using 'consumption objects' (brands, products, experiences) as resources to create specific outcomes. Again, here, consumption is a problem-solving process, albeit a complex one in which many different factors influence behaviour. For example, the practice of 'commoditising' is a consumer's deliberate distancing from market-facing activities (Schau et al. 2009) and is associated with consumers' common mixed feelings about the brands they bring into their consumption experiences. Consumers question brands' tactics or how much control they exert and often find creative, 'emancipatory' ways to resolve these ambiguities (Boulaire and Cova 2013).

While many of these individual practices remain individual and private, many others are performed more publicly, either by design or simply by circumstance. Consumption practices are often shared. By bringing consumers together and enabling greater sharing of experiences and meaning

in forums, social networks, chat rooms, and so on, digital technology has greatly enhanced opportunities for cultural forms of consumer creativity. Schau and Gilly (2003) analyse the creative strategies that consumers adopt to craft their identities online. Kozinets et al. (2008, p. 344) propose a typology of such digitally mediated consumer communities along two dimensions: the 'collective innovation orientation', reflecting the goal directedness of the community's creativity, and the 'collective innovation concentration', as a marker of the level of concentration of creative activities among members. These two dimensions define four types of communities. First, crowds are creatively focused communities in which creative activities are dispersed among members. Examples of these communities are crowdsourcing sites such as Threadless in which consumers propose and vote on T-shirt designs for production. Second, hives are the most creatively goal-oriented and concentrated communities, comprised of self-selected consumers who engage in deliberate, intensive creative activities. Examples include NikeTalk forum (Füller et al. 2007) in which consumers post, discuss, and review their individual Nike shoe creations. Third, mobs are communities in which creativity is not goal-directed but is concentrated among a small group of passionate and creative consumers. An example of such communities is wikis, which depend on a small number of contributors whose collective creativity derives from their diversity and whose work benefits large groups of people. In these communities, creativity is individual but is recognised collectively. Fourth, swarms involve large groups of consumers contributing to activities that are not specifically intended to be creative. Consumers who participate in swarms engage in activities such as 'liking' on Facebook or reviewing books on Amazon.com that contribute to collective creative outcomes without being individually creative. A benefit of this typology is that it highlights different forms of collective creativity—more or less goal directed and relying more or less on the individual creativity of group members. It suggests that collective creativity can be derived not only from the work of creative individuals (whether their creativity is goal directed or a by-product of their activities), but also from the networked effects of the diversity of a small group of dedicated individuals in a mob or the large-scale dissemination in a swarm.

The nature of collective creative processes among consumers or in organisations is still somewhat elusive. Hargadon and Bechky (2006) suggest that the solution lies in the interactions that take place between actors engaging in four elements of collective creativity: help seeking, help giving, reflective reframing, and reinforcing. The first three types of activities are highly interactive and constitute back-and-forth interactions between actors: one person asks for help, others offer help, and still others reflect on the prob-

lem and reframe it in a creative way. The fourth, reinforcing, is associated with the feedback processes that encourage the first three activities and with the norms and beliefs of the group or organisation. In other words, collective creativity is a result of the cognitive and communicative processes that take place as actors express their own thoughts and mentally represent or reflect on others' thoughts according to their own frames, beliefs, knowledge, and so forth. At the same time, existing norms and beliefs inherent to the group itself serve to constrain the creative process. Kozinets and his colleagues (2008) offer a somewhat different perspective based on 'learning/consuming' and 'doing/producing' activities. These two frameworks can actually be reconciled as chains of internalisation and externalisation processes and, in that sense, reflect the work of Vygotsky (see Moran and John-Steiner 2003). These accounts shed better light on the creative phenomena resulting from highly interactive digital channels, as described previously.

An analysis of the conversations that take place between consumers on an online platform suggests that the very mechanisms of conversation perform the functions of Hargadon and Bechky's (2006) four phases of collective creativity. A study of consumers engaging in an online cooking forum (Taillard et al. 2014) demonstrates the creative outcomes that result from consumers posing a problem, offering to help, reframing the problem, and encouraging each other's participation through creative conversational tactics. As consumers acknowledge each other's responses, more creative solutions are proposed. A participant eventually reframes the problem (shifting the focus from the size of the oven to the ability to display a large platter of turkey for Thanksgiving), triggering the sharing of a new creative solution. When proposed, the new solution is validated by several influential participants and becomes widely accepted. This is a collective outcome that is clearly superior to any solution suggested by individual consumers (Hargadon and Bechky 2006).

A socio-cultural perspective on consumer creativity often associated with CCT is provided in post-modernist accounts of consumption. Firat and Venkatesh (1995) suggest that consumers participate in the 're-enchantment of consumption' to liberate themselves from the modernist conventions and constraints. Among such re-enchanting experiences is engagement in consumer 'tribes' (Maffesoli 1996). In the introduction to their collection of essays on *Consumer Tribes*, Cova et al. (2007) explore four dimensions of these tribes, each of which reflects clear elements of creativity. First, they describe tribes as activators of brand meaning who engage with brands on their own terms and bring playfulness and creativity to the table. Second, tribes can also act as entrepreneurs who view their creative activities as those of 'legitimate marketplace actors' (p. 20) and who contribute willingly to the brand's ecosys-

tem. Third, the authors suggest a darker side of tribes; as 'double agents', they can 'breathe magic breath into dead and dying things, but also suck the life from thriving brands' (p. 12). Fourth, as plunderers, they seize ownership of brand property (typically intellectual property) to craft new artefacts.

Kozinets's (2007) account of *Star Trek* as 'Wikimedia inno-tribes' is a clear example of the last type of tribe. Members' dissatisfaction and hunger for authenticity drives them to hijack the *Star Trek* television series format and franchise to produce and distribute their own original episodes. Less controversial and subversive examples of entrepreneurship include the very active AFOLS (Adult Fans of LEGO) who publish their own magazine and books, run their own websites and e-commerce platforms, and work side-by-side with the brand to design and promote products, events, and more (Antorini, et al. 2012).

Fantasy and creativity are clearly at play in the work of Otnes and Maclaran (2007) within a community of British royal family enthusiasts, whose creativity is expressed both in their imaginative rituals and in their fantasies of events and opportunities to build connections with the royals. Finally, examples of double-agent tribes include the hijack and re-appropriation of traditional French Cognac brands by rap artists such as Jay-Z (Carreyrou and Lawton 2003). Whether through their use of brand names in rap lyrics, their consumption of the liqueur on stage, or their invention of new cocktails, these influential performers publicly challenge the tradition of Cognac. How much the Cognac brands actively encouraged the hijack has been widely debated. Wipperfurth (2005) distinguishes between two types of brand hijack episodes: co-created and serendipitous. In either case, brand owners lose some level of control of their brands to consumers who creatively redefine them to better express their own values. Evidence clearly shows that such episodes, though highly challenging for brand marketers, can lead to desirable buzz and to positive injections of fresh ideas into the brand's image and value, as illustrated by the Cognac brands whose plummeting US sales were lifted thanks to the creative lyrics of Busta Rhymes and other rappers (Carreyrou and Lawton 2003). Hijacking and associations between brands and consumers' creativity can, however, sometimes lead to questionable outcomes, as illustrated by the episodes between Burberry and the 'chav' community in England or between Lacoste and communities from Parisian suburbs.

These examples of brand appropriation demonstrate an important point about the intended or widely accepted affordances of brands or other consumption artefacts, such as Cognac, which is consumed ritualistically in a snifter after a traditional French meal. It is clear from these examples that 'canonical' affordances (Costall 2012) are not immutable. Whereas the

canonical affordance of Cognac may have been related to traditional French *bon vivant* consumers, it has shifted to a younger, more diverse crowd as an assertion of power and playfulness. It is plausible that as certain creative affordances turn productive for the actors who resource them, they tend to be re-produced (Sperber 2006) and to eventually become new canons. Cultural transmission does not create carbon copies but rather allows contents to evolve towards greater relevance (Sperber 2006). One element present in the cited hijacking examples, whether aggressive or collaborative, is that consumers, organised in communities, inject their creativity into gaps in brand meaning, into hollow spaces left untapped by brand marketers, and into unexplored territory. Consumers are searching for greater relevance, for richer affordances. These gaps in brand meaning are, in effect, invitations, intentional or not, for consumers to enter, explore, and sometimes set up house. This suggests that consumer creativity, whether in communities or among individual consumers, is not only irrepressible and unstoppable but also highly valuable for brands that want to expand or reposition their offerings. Cognac brands have certainly benefited greatly from repositioning themselves as more casual and versatile. Burberry used the 'chav' episode to reposition certain fashion lines with greater 'street cred'. As consumers become creative together and find greater relevance in the affordances they resource, they contribute to the creation of valuable outcomes for the brands with which they choose to engage. This important role of consumer creativity has not yet been captured in a systematic way in the literature and requires a broad framework that encapsulates the different elements we encountered in the consumer research literature. Drawing from existing frameworks on the socio-cultural aspects of creativity (Glăveanu 2012), we now turn to discussing a new framework for consumer creativity.

Creative Consumption in Action: The Five-A Framework of Creativity Consumption

Recent research in the field of creativity has highlighted the socio-cultural dimensions of creativity. Glăveanu (2012) suggests that traditional individualist models of creativity (e.g. the four Ps of creativity; Rhodes 1961) fail to account for the roles of audiences and contexts. As we discussed in our review of consumer creativity, both are especially important in this domain. Instead of the four Ps, Glăveanu proposes a five-A model of creativity-integrating actors, their actions, audiences, artefacts, and the affordances that enable

creative acts. In the same way, we conceive consumption as a social action that connects consumers, other actors, audiences (e.g. employees, the media, retailers), and resource affordances (from consumption artefacts) with specific purposes (jobs). We argue that the five-A model of creativity helps illustrate the social nature of creativity and explain how consumers create value for themselves in the act of consumption.

Using this framework, a consumer is an actor who exists and acts within an existing network of social relationships. Creative processes emerge in this relationship between actors (consumers) and their audiences (other consumers, employees of firms, media, and so on), organised in social networks. Audiences, consisting of a wide range of stakeholders, are always multiple and diverse. Product and service consumption are both examples of actions the consumer performs, coordinating behavioural and psychological elements of social origin through dynamic and inter-linked processes of internalisation and externalisation. We suggest that these actions constitute the resource-integrating activities of consumers who are exercising their agency by accessing artefacts as resources, making use of their affordances, adapting them creatively to their own purposes, and integrating or appropriating them into their own consumption, all within a thoroughly cultural and social context. Creativity is embodied not only in products (e.g. specially crafted coffee) but also in processes (e.g. the dynamic nature of an online forum) that are, at the same time, cultural creations or artefacts. These artefacts embody value inscribed in both physical presence and intangible meaning—this value is available when a consumer accesses a given resource that ‘furnishes’ an affordance. Finally, creativity does not take place in a vacuum but accesses cultural resources that afford certain creative actions rather than others. These affordances express both the materiality of artefacts and the normativity that guide the consumption process.

In the case of the coffee-drinker actor/consumer, the actions of selecting the café (and brand), crafting the interaction with the service employee, ‘designing’ her own coffee, sipping the coffee from a ceramic or paper cup, and walking around with the branded coffee cup all involve an element of creativity. The artefacts are the specific cup of coffee the customer creates for herself and, as a result, the value produced and experienced through her creative act of consumption, for both herself and the organisation. The crafting of the coffee and its associated experience are facilitated by a series of affordances that result from the properties of the coffee cup, the brand (and, in particular, the consumer’s representation of the brand), the café locale and its equipment, and any other element enabling value creation. Finally, the audience consists of employees, other customers, and anyone the customer discusses her experi-

ence with later. In summary, consumers (actors) create experiences and their inherent value through their consumption (creative actions) in interactions with other consumers and stakeholders (audiences), accessing resources to exploit their properties and affordances.

What this brief analysis suggests is a vision of creativity and consumption as deeply social actions, in which the different actors of the consumption process—consumers, organisations, and audiences—construct value. The five-A model of consumer creativity, which we offer here, illustrates the idea that value is not ‘within’ the person or object but rather ‘distributed’ in the social process of creating artefacts and their meaning/value.

This creative ‘value creation process’ is particularly notable in cases in which consumers band together in more or less formal communities. Schau et al. (2009) identify 12 creative practices through which community members across a range of case studies contribute to value creation both for themselves and for the brands they consume. Their practice-oriented approach is important because it ties in with structuration theory (Giddens 1979) in suggesting that creativity creates structure while also being constrained by it. In other words, through their creative practices, consumers contribute to the emergence of creative communities, which in turn constrain these same practices. These structurations, or emergences (Sawyer 2005), are of great interest to firms that can encourage and/or harness them. For companies, consumer creativity represents an untapped source of value beyond the inspiration for product and service development. Understanding and encouraging consumer creativity opens up opportunities for companies to benefit not only from the creative work of individual consumers trying to get their jobs done but also from the social and cultural effects of consumers exchanging practices and moving towards more relevant affordances.

Conclusion

In the applied domain of consumption, creativity scholars can find a virtually unlimited number of applications. Consumption, in the way marketing scholars have currently conceptualised it, has shifted from a type of routinely structured process to a nonlinear one, open to social and cultural influence. The growing role of broad consumption communities of diverse stakeholders in consumption processes highlights the importance of understanding the social and cultural nature of consumption.

The advent of the digital age has also accelerated and broadened the exchange of knowledge and information among consumers and allowed them

to come together to find creative solutions to get their jobs done. As such, their creative endeavours benefit not only from the diversity of large crowds but also from the processes of information exchange—the internalisation and externalisation that allow solutions to be developed at the same time as creative practices that build communities. The acceleration of these internalisation and externalisation processes through digital media not only fosters greater creativity, but it also enables diverse stakeholders to exert a constant pressure on brands, products, and other market offerings towards greater relevance for a broader range of consumers. Brands that recognise this phenomenon can reap the benefits by staying ahead of the market.

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Creativity, Culture, and the Digital Revolution: Implications and Considerations for Education

Jonathan A. Plucker, Jacob McWilliams,
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The final decades of the twentieth century saw a *social turn* in research on learning and cognition (Gee 2000; Latour 1992), characterized by a shift away from individualistic notions of intellect and toward a view of knowledge as socially constructed. Across the social sciences, this sociocultural push led to an increased focus on the role of context in shaping human activity. Indeed, it is hard to find a field or subfield that has not seen significant sociocultural work in recent years (e.g., Azzarito et al. 2014; McNerney et al. 2011; Ratner 2011; Wagoner 2014).

This work, of course, is based on much earlier sociocultural scholarship, including the work of Vygostky (1978), Leonti'ev (1978, 1989), Bakhtin (Baerveldt 2014), among many others,¹ and whose emphasis on relationship

¹Although we note that much of this work was published in the first half of the twentieth century and only available in English decades later. See also Wertsch (1981).

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between individuals and cultural forces gave rise to sociocultural theories that place cognition outside of individual minds, situating it instead across individuals and the cultural artifacts and tools with which they interact (Kaptelinin and Nardi 2006; Wertsch 1995).

Scholarship in the social sciences has attempted to account for this shift—with scholarship on talent identification and development, including creativity, in tow. The change in conceptions of talent, however, have been largely confined to a refinement of the role of social context in defining and delimiting talent, creativity, and genius, and less on a serious consideration of the role of digital technologies in shaping shifts in cultural norms about creativity, talent, intelligence, and related constructs.

In their call for an increased focus on the role of context in talent identification and development, Barab and Plucker (2002) briefly describe dominant ideas within several major strands of sociocultural theory, using these to argue that any activity that is considered “talent” is essentially *transactional* in nature: It is the product of an individual who has been located within a context that offers opportunities for the individual to act in ways that can be appreciated as exceptional. The authors describe talent, then, as

a set of functional relations distributed across person and context, and through which the person-in-situation appears knowledgeably skillful. In other words, ability and talent arise in the dynamic transaction among the individual, the physical environment, and the sociocultural context. (p. 174)

In the last decade, this view of talent, creativity, and intelligence as situated and distributed has increasingly been the focus of serious analysis. However, this work is not universally accepted (or even acknowledged) by the majority of scholars in any of those fields. For example, these tensions are exemplified in the work of Subotnik et al. (2011), in which they note that changing social contexts alter how talent can be defined and cultivated (e.g., the emergence of new domains in addition to changing standards for creativity in well-established fields such as swimming). This suggests a conception of talent as socially defined, even as the authors offer a definition of giftedness as highly individualistic and largely independent from social norms (see Subotnik et al. 2012, and related commentaries).

A number of scholars outside the field of creativity accentuate the social in the development of talent (e.g., Govaerts et al. 2011; Kim and Hannafin 2011; Zheng et al. 2009), and some theoretical developments over the past few years suggest that researchers within the field are also moving in this direction (e.g., Glăveanu 2010a). The growing acceptance of the role of the social in delimiting and determining the emergence, identification, and development of creativity may play a role in moving the field forward.

Sociocultural Perspectives on Creativity and Talent

Given the importance of sociocultural perspectives in the social sciences and calls for more work on sociocultural approaches to creativity (e.g., Glăveanu 2010a, b, 2011a, b; Rudowicz 2003), the lack of recent relevant work in this area is surprising. Even broadening the “field” to include entrepreneurship does not yield a great deal of additional work.

For example, the scholarship on entrepreneurship has become quite active and complex over the past generation. Given that entrepreneurship not only creates new businesses and yields profits for the people involved but also fosters the rapid growth of societies and economies, sociocultural perspectives would appear to have significant value in understanding the nature of entrepreneurship and the complex relationships between entrepreneurs, their environments, and the many sociocultural systems in which they operate. However, most research in this area tends to focus on economic and financial aspects of the topic (Erikson 2002; Thornton et al. 2011), although management and some cognitive perspectives are occasionally used (e.g., Neergaard and Ulhøi 2007; Zahra et al. 2004).

One exception that speaks to the potential value of sociocultural perspectives is a study by Abimbola (2007) of entrepreneurs in Nigeria. The study attempted to determine the impact of sociocultural triggers in this West African country on how and why people do business in terms of social capital, social status, dissatisfaction/displacement experience, and the perception of wealth and the ethnic and cultural belongings. However, as is the case in other, similar research, sociocultural factors played a secondary role to financial and economic issues (see also Namdari et al. 2012).

Barab and Plucker’s (2002) previously mentioned attempt to examine the role of culture in how technology influences creativity and talent development is worth additional examination. They approach issues of cognition, ability, talent, expertise, and intelligence in education as a situated approach to learning and knowing, conceptualizing these constructs as functional relations distributed across content and people.

From their perspective, talent is an internal trait that is a characteristic feature of people. Therefore, the terms “talent” and “ability” are often used interchangeably. It is emphasized that talent development may refer to all people, while talent only to some of them. The authors argue that traditional views of talent development and existing ability conceptions should be reconceptualized to acknowledge advances in human understanding of achievement and learning. For example, intelligence is traditionally treated as

a personal construct, and cognition is the relationship between learners and their environment. Barab and Plucker state that the process of learning should be defined in relation to the *context*.

Barab and Plucker critique dominant perspectives on talent, particularly those that position talent as an internal trait; they argue that the terms “talent”, “ability”, “expertise”, and “intelligence” often minimize the importance of context. The authors reframe talent as distributed across person and context, and provide examples of “smart” contexts that enable people to enact practices that position them as highly skilled, even talented. Talent is viewed on the basis of fundamentally situated ability description and as a transactional process that presupposes the use of individual transformations, environment, and the sociocultural world. At the same time, talent development is treated as the process of doing that includes individual transformations. In terms of ecological description of effectiveness, talent development presupposes the transformation in relation to the contexts through which a person realizes his/her transformation.

Thus, Barab and Plucker are reacting to the failure of traditional perspectives of talent and creativity to explain the sociocultural structures, contexts, and relations that enhance the emergence of talented interactions. Barab and Plucker propose that talent and ability should be treated as a set of relations that get their actual meaning through dynamic transactions. Hence, talent is the use of multiple resources of the sociocultural world demonstrating the particular relation propensity, and that talent exists as a part of learners’ practices and may be distributed across different resources that enhance their interaction. The development of talent should not be treated as an isolated activity as it depends on the context and is externally arranged. It should be recontextualized as a participatory process that includes practice, while meaning is an essential part of an ecological system. Therefore, talent and talent development should be referred to as contextualized acts, and education for talent development (and creative development) should focus on contextualized participation rather than acquisition of knowledge (see also Plucker and Barab 2005).

The Digital Turn and Creativity

Much as the social turn had major implications for the social sciences, we are now experiencing what has been labeled “the digital turn” (Given 2006; Mills 2010; Uricchio 2009), representing shifts in cultural practices that have emerged around and through digital technologies. Increasingly, people

are called upon to interpret and represent ideas in multiple modes (Jewitt and Kress 2003); to follow and participate in communication threads that cross multiple media platforms (Hull and Katz 2006; Jenkins 2006; Jenkins et al. 2012; Lan 2013); and to work collaboratively to complete personally and socially meaningful projects (Jenkins et al. 2009). Success in these areas requires an ability to navigate communities and information sources that rely heavily on text-, image-, and video-based communication formats (Cope and Kalantzis 2000; Lankshear and Knobel 2007). These formats are characterized by a high degree of persistence, searchability, replicability, and scalability (boyd 2008) and call for new modes of thought in order to effectively navigate, manipulate, and circulate ideas and work through these platforms.

From this perspective, creativity both now and in the future is dependent on both new technical skills and new mindsets (Lankshear and Knobel 2006). New technical skills involve facility with specific new technologies and the ability to make effective use of new software and hardware in one's work. New mindsets are required regarding conceptualizations of knowledge, participation, and valued activity, with expertise and authority distributed among people and technologies, information is viewed as highly manipulable, and social value grows via circulation of ideas. These technical and social practices have collectively been labeled multiliteracies or multimodal literacy (Cazden et al. 1996; Cope and Kalantzis 2000; Luke 2000), new media literacies (Jenkins et al. 2009), or computational literacy (DiSessa 2001; Wing 2006).

The emergence of these new literacies are also leading to new domains and shifting the very notion of what counts as a domain. As Subotnik et al. (2011) note, an important issue in the identification and development of talent, including creative and entrepreneurial talent, is the emergence of new domains; many of these domains are linked to the invention and application of new technologies. To complicate matters further, technologies are changing what counts as innovation in nearly all domains.

McWilliams and Plucker (2014) provide an example from the domain of cooking, in which new technologies have led to significant changes in how food is prepared and consumed. The bigger change, however, is in how world-class chefs think about food, from how they innovate to which ingredients they use (McGrane 2007). As renowned chef Paul Liebrandt noted in an interview, today's creative standard for an elite chef is to be able to synthesize an increasingly lengthy—and increasingly technology-laden—culinary history, since “[t]oday's chefs must absorb everything that's gone before” (Moskin 2009). Being a highly creative chef today is very different from mastering innovative cuisine a generation ago, and the domain will be quite different a generation from now.

In addition, we are also experiencing a shift in what counts as a domain. Collaboration, facilitated by “hacker literacy” (Santo 2011) or “reading with mouse in hand” (McWilliams and Clinton 2013), increasingly helps translate ideas into innovation, particularly in technology-rich domains. When people view all information as modifiable and flexible, new possibilities for creative application emerge. To date, there are few systematic efforts to identify and develop a disposition toward tinkering with and modifying information. The creative cognition work of Ward and colleagues (Ward 2007; Ward et al. 1999) hints at possible interventions, as does the emphasis on creativity within frameworks for teaching twenty-first century skills (Partnership for 21st Century Skills, 2013). But the research base is surprisingly thin, especially regarding definition and evaluation of these skills and dispositions (see National Research Council, 2012).

Digital Technologies and the Creativity Excellence Gap

The stunning growth in the complexity, utility, and pervasiveness of advanced technology in our lives is occurring within the context of considerable inequality—in many cases rapidly growing inequality—within and among countries. These factors may create sociocultural contexts in which certain privileged groups of students develop the literacies that are critical for future creative productivity—and, by extension, become dominant voices in shaping what counts as “success” and “talent” in educational, creative, and workplace contexts—while their less-privileged peers are left behind. From a sociocultural perspective, this situation illustrates that the less-privileged students, regardless of their creative potential, are highly unlikely to ever be seen as creative or innovative (see Lenhart et al. 2010; Wei 2012; Wei and Hindman 2011).

Jenkins et al. (2009) argue that the social skills and cultural competencies that comprise the new media literacies are a “new hidden curriculum” that shapes young people’s participation in educational, cultural, workplace, and civic activity; they call for a deeper consideration of how best to support learners in accessing this hidden curriculum. We believe this must be extended to a consideration of how best to identify and develop creativity, as sharp differences in these literacies can have profound effects on whom will have opportunities to develop their talent in the future. This raises the specter of creativity excellence gaps, differences in the outcomes for students based on demographic characteristics (Plucker et al. 2010, 2013; Rutkowski et al. 2012).

For example, American adolescents and young adults appear to have nearly universal access to digitally networked technologies, yet the degree to which young people capitalize on that access appears to be related to socioeconomic status, ethnicity, and gender. Hargittai (2010) reports significant differences by ethnicity in internet-based skills. Asian-American and White (non-Hispanic) college students scored higher on awareness of internet-based terminology than Hispanic and African American students, with even greater disparity in skill scores between male students and female students. Research has long established a gap in use of media for obtaining information about current events and civic issues, and this trend is continuing in internet use patterns.

Hargittai and Hinnant (2008) conceptualize these gaps as disparities in the use of the Internet for capital-enhancement, those activities that “improve their human, financial, political, social, and cultural capital” (p. 603). Discrepancies based on gender, ethnicity, educational attainment, and SES extend into an important “Web 2.0” practice: Creation and sharing of user-generated content. Correa (2010) notes that motivation and perceived skill level are key factors correlated to online content creation, further noting that women are far less confident than men in their content creation skills and less likely than men to share content online. Hargittai and Walejko (2008), studying trends in adolescents’ creation and sharing of content online among teens, found that parents’ level of educational attainment was positively correlated with online content creation. They further found that although African American teens were more likely to create content online, they were less likely than White and Asian American teens to *share* what they had created online. The implications for creativity are clear: As the sociocultural context of creativity and entrepreneurship becomes heavily technological integrated, many young people will develop neither the technological literacies nor mindsets needed to develop their creativity optimally—yet more privileged children will have ample opportunities to do so. Disparities in capital-enhancing use of digitally networked technologies may possibly widen opportunity gaps and other forms of inequality at unprecedented rates.

Although schools are increasingly positioned as a site for addressing these gaps, little headway has been made to date. Schools around the world are increasingly technology-rich learning environments, with reliable, high-speed internet access, advanced hardware, and readily available technology consultants. Yet too often, tools that can be used for supporting capital-enhancing activities to promote creativity are relegated to test preparation and library-replacing research activities. School servers often block access to user-generated content, as well as content creation and sharing sites and social networking sites, which is frequently paired with limited access to media cre-

ation software and tools for creating and circulating creative content (Ahn et al. 2011; Jansen 2010; Warschauer and Matuchniak 2010). For example, although the iPad can be used to teach students how to make and share multimedia projects involving video, audio, and images along with written text (Ostashewski and Reid 2012), this tool is far more commonly used to support engagement with traditional academic content (Murray and Olcese 2011).

This leaves teachers little room to help learners develop the skills, cultural competencies, and confidence to negotiate the collaborative knowledge-sharing and problem-solving activities that increasingly characterize success in digitally networked learning and workplace contexts.

There exists, therefore, a new excellence gap that cannot be measured by current standardized tests: The gap in access to and support for learning with new media technologies. This gap becomes increasingly formidable as it overlaps in many ways with the widening gap in traditional academic success described above.

And, of course, for many millions, if not billions, of people around the world, the lack of access to high-speed internet and high-quality hardware and software leaves them on the bottom end of the creativity excellence gap, with few prospects of being able to close the gap (Gulati and Yates 2012; Kruger and Gilroy 2013).

The news is not all bad, however. The digital turn in the social sciences has led to an increased focus on how theories of learning and instructional approaches can account for the role of new media in fostering learning and participation. Importantly, the findings that emerge from this scholarship are being operationalized in research and educational settings around the world. For example, Ito et al.'s (2009) foundational study of youth engagement with digital media offered a framework for supporting learners' activities with digital technologies; the three categories identified in the study have been translated into a learning space designed by the YOUMedia project at the Harold Washington Library in Chicago (Austin et al. 2011). Jenkins et al.'s (2009) text identifying the social skills and cultural competencies that make up "new media literacies" has been adopted by educators around the country; working in tandem with this text are pedagogy-focused groups such as the National Writing Project, whose efforts have emphasized supporting teachers in integrating and assessing digital media projects in literacy classrooms (Herrington et al. 2009). New digital technologies have shown particular potential in supporting culturally relevant pedagogical approaches that target learners from traditionally marginalized populations (Ladson-Billings 1995; Lee 2003). For example, Enyedy et al. (2011) developed math instruction using digital tools such as global positioning system software, easily downloaded census data,

and user-friendly mapping software in which learners in Los Angeles examined issues of race and social justice in their local communities. Lee (2003) offered a framework for culturally responsive design in multimedia contexts; this framework urges designers to consider the assumptions implicit in the structures of multimedia communication and creative tools.

The use of technology to promote student creativity tends to fall into two broad categories of activity. First, technology allows students to do tasks more efficiently and quickly. The basic task of writing has changed drastically in only 30 years, transitioning from typewriters to word processors to computers with word processing programs to cloud-based software that allows a student (or group of students) to write virtually anywhere, at any time, on a range of devices—leading to what Brandt (2014) has referred to as “the rise of writing” in everyday life. The process of creative writing can occur much more quickly, in a variety of contexts, than it could just a generation or so ago. Another example is the creation of student films, which has occurred for decades. But the growth of inexpensive, high quality and user-friendly hardware and software has put video creation within the grasp of huge numbers of students around the world. Yet another example is accessing information, the raw material of much creativity. A student sitting on a park bench can still access a huge percentage of the world’s information via a smartphone.

Second, technology allows students to be creative in ways that would have been very difficult, if not impossible, only a few years earlier. The creation of complex infographics, use of wikis, and social networking, among many other strategies and approaches, were previously either not possible or not realistic for students to use in creative ways and for creative purposes (see Saxena 2013; Steinberg 2015; West 2013). Digital media and design has seen a particularly strong focus as both a set of technology-based tools and strategies for creativity and as a creative product itself (Peppler and Kafai 2007; Sinker 2001).

These two categories are not mutually exclusive, of course: Presentation software both facilitates student sharing of their work and allows for presentations to include unique features that would previously have been difficult to incorporate (e.g., animation, video clips, links to other information and resources). But these categories provide a framework for considering how technology is and can be used to foster student creativity.

It should also be noted that the use of these technologies means that students can do something, such as using a smartphone and editing software to create their own short film, but that does not necessarily guarantee the quality of their work. For example, the first author recently watched some videos posted to the Internet of an acquaintance’s child performing an original piece of music, with the entire video filmed, edited, and uploaded using a

smartphone—a technological feat that was impossible only a few years earlier. The use of technology was in itself a creative act, as was the musical performance being documented. However, the quality of both the recording and performance were not great. Although students should not be held to professional standards in their use of technology, educators should keep in mind that professional-level proficiency is an important goal of talent development (Subotnik et al. 2011).

Conclusion

Within the last generation, the explosive growth in technology-mediated social interactions has led to deep cultural shifts—not only in how people create, circulate, and communicate ideas and creative works, but also in how they connect with others, collaborate on shared projects, and develop relationships with others across physical and digital communities. Knowledge and expertise are often distributed across human and technological networks, and the generation of creative or innovative work is an increasingly shared endeavor. These shifts have led to changes in how educators theorize the relationship between context and creative ability (e.g., Glăveanu 2011b; Plucker and Barab 2005). Recent innovations in a range of professional and artistic domains have led to rapid changes in what counts as “creativity” and what constitutes creative production, and questions of authorship and ownership of creative works are increasingly complicated.

These cultural shifts have had a strong influence on creativity development and on creativity excellence gaps. Educators who aim to prepare learners for the digital turn are faced with the challenge of supporting their students in engaging with collaborative, connected social networks and activities in an era that continues to treat knowledge and creativity as the skills possessed by individuals, and that maintains strict prohibitions on sharing and co-creating knowledge and creative products. They are faced with new forms of inequality: Gaps in access to and support for developing the social skills and cultural competencies that are increasingly paired with creative work today.

We argue that the role of context in creativity development has radically changed over the past generation. Indeed, our theoretical understanding of how context interacts with creative ability has deepened (e.g., Glăveanu 2011a; Plucker and Barab 2005), and the explosive growth in technologically mediated social interactions—which would have been almost impossible to imagine 20 years ago—has perhaps forever changed traditional conceptions of what one’s “context” truly entails.

These contexts have strong influences on creativity development and creativity excellence gaps, and the digital turn that is occurring around the globe presents both opportunities for closing these gaps and perils for widening them. There is no reason to believe, of course, that smart contexts will fully salve the social wounds that continue to stratify countries by race, class, and national and regional origin. However, these technologies mark the beginning moves of a cultural shift so deep that the full implications of the digital turn are likely to be unclear for some time. Given that this revolution is likely to be a long one, we take it as a good sign that many educators and researchers are seriously considering the implications of these changing, technological contexts for education and the development of all students' creativity.

An important next phase is for empirical work that can help detail strategies both accounting for digital and new media literacies in identifying creativity and nurturing these literacies in creativity interventions. And instead of studying merely how technological tools can foster creativity (e.g., Chang 2011; Fairbank and Williams 2001; Nemiro 2004), researchers should acknowledge the transactional, iterative nature of creativity development, which means, from a sociocultural perspective, that the uses of technology to develop creativity will almost certainly make technology integral to the creative process *but also change the nature of the technology*. Future conceptual and empirical work on the relationship between creativity and technology will benefit greatly from the adoption of a sociocultural lens.

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Creativity and Culture for All? Enhancing Cultural Participation in Museums and Galleries

Eric A. Jensen

Visitors to museums, galleries, and festivals make their way through experiences that have been designed to immerse them in particular visions of creativity and culture. These formalized visions of creativity generally privilege the historical legacies of wealthy individuals and families, often presenting a very limited concept of creativity that fails to resonate with large segments of the public. In many ways the curated creativity put forward in art museums and galleries clashes with the rich diversity of creative expression taking place in everyday life. This clash between formally curated creativity and everyday creativity has helped to erect an invisible social and cultural wall between the most prestigious cultural institutions and members of the public who feel such high culture is “not for them” (e.g. Bourdieu and Darbel 1991/1969). From this chapter’s discussion of the role of everyday creativity in unlocking access to curated creativity, we can see the fundamental nature of creative expression across different segments of society.

To date, researchers have made little headway in developing a rigorous and valid theoretical understanding of these members of the public as active agents critically negotiating between institutional visions of creativity and culture, and the personal, social, and cultural visions that motivate their engagement in such activities. In particular, scholars of museum studies have not paid

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sufficient attention to the ways in which an individual's everyday creativity interacts with the curated creativity in a museum or gallery. Art museums and galleries are meant to be places in which the intrinsic human capacity for creativity is celebrated, displayed in its various forms over the decades, centuries and millennia. In principle, this should be a social inclusive domain that resonates with publics from across the socio-economic spectrum. However, in practice there is a longstanding pattern of such spaces for representing creative expression acting as driver of cultural distinctions between different social classes, reinforcing social inequalities. Indeed, access to elite institutions of creative expression in Western cultures has long been restricted to the privileged. The failure to construct a sufficiently diverse and inclusive form of creativity in art museums and galleries may help to explain the exclusionary role cultural institutions have come to play in modern societies.

This chapter focuses on the role of audiences' creative expression in encounters with creative artifacts within formally curated culture. The chapter presents an empirical case study that sheds light on the ways that cultural audiences (dis)engage when encountering opportunities for creative expression within a museum context. The case study uses ethnographic methods to explore the creative responses of young mothers entering the hallowed halls of institutionally consecrated creativity for the first time as adults. Their responses show the pull of creativity as a way into cultural participation, as these mothers develop new cultural meanings with their children through guided craft activities and engagement with high art. The chapter shows that everyday creativity can provide a bridge into the exalted creativity on display in the world of museums and art galleries.

There is a common view of art museums, not as beacons of creativity, but as bastions of social and cultural distinction and exclusion. This chapter begins by a key study within the social scientific literature in past decades that has underpinned this view. A large-scale European study of art museum visitors conducted almost half a decade ago identified a number of barriers to inclusion, based primarily on class and education level (Bourdieu and Darbel 1991/1969).

Duncan (1995), for example, drawing on Bourdieu and Darbel's findings and arguments, even suggests that museums are "engines of ideology" (p. 3) designed to serve the interests of the state, city, consumerism and patriarchy. Such conclusions demonstrate a persistent suspicion that the exclusivity of museums serves to reinforce class, gender, and other distinctions. Duncan (1995) describes this view of art museums as the "political" theory of art museums' power to affect audiences and perpetuate social divisions. However, in recent years there have been increasing efforts to reach out beyond the

conventional bourgeois audiences for fine art in order to bring in a broader range of visitors to art museums. It has been argued that museums and other cultural institutions can offer significant contributions toward a more inclusive social base of visitors (e.g., Lawley 2003).

However, precisely how this social inclusion agenda can be implemented given the entrenched socio-cultural barriers has not been explored in sufficient detail. For example, a recently published UK government report on a major government-funded National/Regional Museum Partnership Programme shows that for most museums community inclusion work is relatively new, and that such outreach activities are “very resource-heavy, demanding staff with specialist skills and experience, and a commitment to opening up the museum to new ideas and new ways of working. Not all museums in the programme seemed able or ready to cope with that” (Greenhill et al. 2007, p. 43). This report found that “some museums...were failing to grasp what was needed” (p. 38) to widen access and community participation. Yet there is little robust guidance available about what is needed to achieve social inclusion for cultural institutions charged with curating civilizations’ consecrated creativity. For many cultural institutions, authentic and effective work to promote social inclusion work is hampered by a lack of clear guidance about how to go about it. Indeed, not only are effective social inclusion programs hard to find amongst museums and galleries, there remains a significant evidence gap between the aspirations of those museums who do believe in the potential benefits of engagement with the arts, and the existence of reliable and valid data demonstrating such benefits.

Social Class and Cultural Exclusion

Cultural sociologist Pierre Bourdieu has done significant work to demonstrate the relevance of the social class-linked “cultural capital” factor in people’s appropriation of culture. Bourdieu’s term cultural capital refers to a cross-domain type of non-economic resource that is deployed to establish and maintain distinctions between people that are exclusionary in nature. Cultural capital, in Bourdieu’s model, is not simply accrued like money. The value of this form of capital emerges through struggles for dominance, power and resources by social agents and institutions that often have competing interests in keeping the dimensions of a given cultural field in place to maintain their privileged positions. Bourdieu’s generative book *Distinction* uses this concept to uncover methods of exclusion that operate beneath the surface in social reality. Indeed, the study underpinning *Distinction* was more recently

recreated in the UK context, with the findings re-emphasizing the intertwined nature of culture and social class (Bennett et al. 2009). These exclusionary processes operate across a range of domains, including the arts, sports (Stempel 2005), reading habits (Wright 2006), and so on. The systemic patterns revealed through Bourdieu's analysis help to explain how equity problems are reproduced through social relations over time, even after financial barriers to cultural inclusion have ostensibly been addressed (for example, through free entry to museums and galleries).

As part of a large-scale research project on European art museums, Bourdieu and Darbel (1991/1969) argued that social class was a paramount factor in both the enjoyment (or not) of art and in patterns of rejection of art museum visiting. On the basis of their research, they posit that "museums for all" is in fact "false generosity, since free entry is also optional entry, reserved for those who, equipped with the ability to appropriate the works of art [through their middle or upper class upbringing], have the privilege of making use of this freedom" (p. 113). Clearly this argument draws on Bourdieu's aforementioned classic study *Distinction* (1984), which shows the role of "taste" in constructing cultural distinctions along class lines. Yet, inherent in Bourdieu's model is the agency of the individual, which enables them to develop creative responses to new and on-going circumstances.

Recently, the Understanding Everyday Participation research project in the UK has sought to challenge the status of museums and art galleries as the guardians of culture in society. They have argued for a new look at everyday forms of culture that have for too long been overlooked and undervalued.

This project proposes a radical re-evaluation of the relationship between participation and cultural value. We are used to thinking about the benefits of the arts as a traditional way of understanding culture and its value but what about the meanings and stakes people attach to their [often creative] hobbies and pastimes? [...] Orthodox models of culture and the creative economy are based on a narrow definition of participation: one that captures engagement with traditional institutions such as museums and galleries but overlooks more informal activities such as community festivals and hobbies. The project aims to paint a broader picture of how people make their lives through culture and in particular how communities are formed and connected through participation. (<http://www.everydayparticipation.org/about/test-showcase-page>, last accessed 20 February 2015)

This projects builds on work by researchers such as Lemke (2000, p. 284), who argues that meanings are made and remade as "the trajectory of the

developing social person takes him or her from classroom to classroom, from school to schoolyard, to street corner, to home, to the shopping mall, to TV worlds". The case study in this chapter evaluates the possibility that everyday creativity can be used as an intervention to connect culturally excluded individuals and the orthodox cultural institutions led by art museums and galleries that curate the venerated creativity of Western societies.

Case Study: Everyday Creativity and Cultural Participation

This case study focuses on a group of socially excluded young mothers. It examines the experiences of these mothers using ethnographic data collection and open-ended questionnaire data, examining their responses to a series of creative activities put on by an art museum (the Fitzwilliam Museum in Cambridge, UK). How do different forms of everyday creativity connect with previously excluded visitors as a way into high culture? How do creative processes promote or delimit any cultural value that might emerge from this encounter? These are the questions I address in this section.

The museum's aim for the family outreach visits on which this case study focuses was to introduce the mothers to the museum, enhance their engagement with institutionally recognized art, and give them an experience which instills confidence in an otherwise unfamiliar cultural setting. Young mothers who attend short child play sessions at a local community center were invited by the museum education officer to participate in this outreach activity. A playgroup leader at the community center invited mothers attending the play session in the week before the scheduled museum-based family outreach visit. The mothers had to arrange their own travel to get to the museum on the day of the outreach visit.

The outreach visit was comprised of the following three elements, lasting a total of about two hours:

1. *Arrival and greeting* (approx. 15 min). The mothers arrived in ones and twos with their children. They were ushered through the reception area and into the studio/workshop room downstairs, where they were offered tea and cookies.
2. *Gallery Visit* (approx. 20 min). The mothers and children were led upstairs from the workshop through the main gallery and into a specific room where the education officer invited everyone to sit down, and got out a

storybook (storytelling being the first iteration of the everyday creativity used in this intervention). The story was chosen because it corresponded with an aspect of the museum collection; the education officer then highlighted this correspondence to the mothers participating in the program. A different room within the museum galleries and concomitantly a different story were selected for each of the two visits examined in this study. The first visit was to a gallery with pre-twentieth century paintings and furniture; the second was to a room filled with pre-World War I pottery and fine china. Here animal toys were used as the next form of everyday creativity designed to connect with culturally excluded visitors.

3. *Studio-based craft workshop* (approx. 80 min). Upon completion of the story, the education officer led the mothers and children back downstairs to the workshop. This was done slowly, allowing the mothers and children the opportunity to stop briefly and look at objects in the museum collection on their way out. Once in the workshop, the next form of everyday creativity, a craft-based hands-on activity that was explicitly linked to the museum collection (and the story read by the education officer), was explained and then handed over to the mothers and children to conduct together. Halfway through this period, the education officer introduced a second craft activity to be carried out by the mothers and children. Linked to the gallery component of the visit, the craft activities changed for each session. Thus, an internally consistent theme was maintained for each outreach visit.

Data for this study were gathered primarily through photographically documented ethnographic observation and qualitative interviewing over a period of four months, including two outreach visits at the museum and four data collection trips to a local community center during the playgroup session. Access to the participants for this study was obtained through an organizer/leader who facilitated the loosely organized community center playgroup meetings attended by the young mothers for their very young (under 3 years old) children to play in a group setting. In general, sampling for the study was as inclusive as possible, seeking participation from a broad range of mothers in this group. Participation in the museum-based aspects of the research was effectively self-selecting based on whether the mothers arrived with their children at the museum for the outreach activity. All such individuals were included in the sample.

The total sample size was 13 mothers. The mothers who had been to the museum sessions range in age from 17 to 22. One mother had a level two qualification in childcare (i.e. two years of post-secondary education), which was the highest education level within the group. Most of the mothers had no secondary school qualifications.

A major component of the present study was ethnographic data collection in the form of non-participant observation punctuated with short, informal qualitative interviewing during the outreach visit experiences. The observation dimension of this research was documented in part through taking numerous pictures on a digital camera (about 250 over the course of the outreach visit). Field notes also were taken during the ethnographic observations. All interviews were conducted at the community center playgroup meetings and the museum. They were recorded, professionally transcribed and analyzed systematically following standard procedures (for details, see Jensen and Holliman 2009) with the assistance of the computer-aided qualitative data analysis software program *Atlas.ti 5.2*.

Using Everyday Creativity as a Bridge to Consecrated Creativity

The results presented here integrate ethnographic observation data from the outreach visits to the museum, with interview and qualitative questionnaire data collected over a four-month period before, during and after the museum visits. In this section, I focus on the relationship that participants have with the museum, the role of their experiences of cultural institutions, their expectations of the outreach visit, and their perceptions of each component of the facilitated visit observed for this case study.

There was a clear development in the demeanor of the mothers over the course of their visit to the museum, which I will argue is due to the integration of everyday creativity into the participants' appropriation of the formally curated creative content of the museum. Early in the visit, the mothers arrived looking reticent and tentative. They continued to appear uncertain and ill at ease—speaking only rarely, maintaining a stiff posture and not smiling—throughout the initial greeting over tea and biscuits, as well as in the first half of the walk through the gallery. However, from the first period of story reading (a form of everyday creativity that takes place in the home) in one of the larger rooms in the gallery, the mothers began to appear more at ease (e.g. more relaxed posture, more smiling). Most mothers sat on the floor with their children while the story was being told, whilst two mothers sat on a nearby bench and chatted quietly. Overall, this creative activity provided a manageable introduction to a small selection of the museum's collection. However, once the mothers were back in the workshop listening to the instructions from the education officer for the craft activity, they appeared to revert to their initial reticent demeanor. Once the workshop-based craft activity was

fully underway, mothers once again seemed to relax and visible indicators of this reticent demeanor dissipated entirely as they engaged in the prosaic creative activity of producing craft materials in a low-structure context.

Play and Toys as Everyday Creativity Bridges to High Culture in the Gallery Space

Tina drew attention to the use of toy animals as a creative tool from everyday life for engaging children with the curated creativity of the museum collection. It is noteworthy that this technique of handing out toy animals to the children during the storytelling activity was also used to involve the mothers, with the bag of toys sometimes handed to the mother to administer. Once again, this serves to demonstrate the value of using creativity (informal play) as a bridge to widen participation in the otherwise inaccessible creativity of the art museum's collection.

The children were each given one of the toys used in the story in the second visit, then invited to go around the gallery identifying other animals in the collection. The children then carefully inspected the objects displayed in this gallery. Tina commented on the use of animal toys in this gallery-based component of the outreach visit.

Interviewer: Is there anything you think worked particularly well?

Tina: The toys worked well as we were going around [the pottery room]. That worked pretty well. Down to like their level. (Interview at Museum at End of Visit—9/2/10)

The mothers who accompanied the children as they walked around the museum considered this aspect of the visit highly effective. The use of animal toys engaged the mothers in the activity through everyday creativity in the form of play, rather than allowing them to be passive bystanders while the education officer delivered the story activity. This active role for mothers is important to ensure that mothers begin to feel comfortable in an unfamiliar environment.

Perceptions of Craft Time After the gallery visit, the education officer led the mothers and children back to the studio room, in which had begun their visit with tea and biscuits. First, the education officer explained the craft activity linked to the collection. At this early stage, the body language of mothers indicated reticence and hesitance (e.g. leaning away from the education officer, stony-faced expressions, arms folded, stiff posture), as can be seen in Fig. 26.1.



Fig. 26.1 Mothers' hesitance at beginning of craft time (24.11.09)



Fig. 26.2 Mothers displaying initial reticence at beginning of workshop time (24.11.09)

As soon as the mothers and children began creating their craft objects, initial reticence (see Fig. 26.2) melted away and the mothers gave every indication of becoming fully engaged in the activity with their children. Informal but creative activities can encourage integration and familiarity in an otherwise inaccessible environment.

Indeed, interview participants consistently praised the craft component of the visit. In the following extract, the craft time was highlighted as a positive experience for the participant's daughter.

- Interviewer: Was there anything about the workshop that worked particularly well?
- Jenny: I think because they [the children] do like making stuff and that, it's just the sort of thing like clay and stuff, and I don't really have a lot of those kind of materials at home. But it's something for them to make. So that sort of stuff [worked particularly well]. Just general different things. Yes, it's good. [Participant turns to her child.] You liked it, didn't you? Having a run around? (Interview at Community Center after Visit—1/12/09)

In addition, the craft activity could be viewed as a means of connecting the museum collection with the important child activity domain of play, an important form of everyday creativity. The following extract shows the perception of this craft time as a form of play.

Interviewer: What kind of things do you think she got out of [the museum visit]?

Katie: It's just playing with all that different stuff, all the creative stuff that she doesn't have at home. It's just that sort of stuff. It was nice for her to do different stuff and playing with the other kids and stuff. It's a good environment for her. (Interview at Community Center after Visit—1/12/09)

In addition to the dimension of play, the extract above highlights the importance of the social dimension of the craft-based activity ("playing with other kids"). Participants also reported that the craft activity effectively linked with the children's broader interests. In the following extract, Sarah highlights her daughter's general interest in similar craft activities.

Sarah: She loves to learn to cut and stuff; she watches Mr. Maker on CBeebies [a children's television show] and then she tries to copy him. (Interview at Museum during Visit—9/2/10)

These interview extracts show how mothers viewed the craft-based component of the outreach visit as an effective way to engage the children through a form of play focused on art. It was also clear from observing non-verbal communication that the workshop activity allowed both mother



Fig. 26.3 Mother and child engaged in workshop activity (24.11.09)

and child to engage together in the craft activities linked to the museum's collection. Indeed, despite the initial framing of the workshop activity as solely focused on the children's enjoyment, through the medium of everyday creativity the mothers were as actively involved in this process as their children (see Fig. 26.3).

Discussion

O'Neill (2002, p. 24) offers a helpful summary of the context this chapter addresses:

The demand that publicly funded art museums contribute to the creation of a more socially inclusive society poses a fundamental challenge to many assumptions about what these institutions are for and to how they function. To go beyond providing mere physical access to the presence of works of art (even if this is free) to providing intellectual and emotional access to the meanings of the works of art for all potential visitors [...] will require changes in the conventions of art museums.

There is an uncomfortable and seldom-discussed gap between informal, everyday expressions of creativity such as the craft activity analyzed in the case study, on the one hand, and the formally recognized and curated

expressions of creativity that are consecrated by cultural elites and celebrated on the walls of art museums and galleries. While everyday forms of creativity are easily accessible to publics from all walks of life, the exalted masterpieces in museums have long been a source of cultural distinction that reinforces social inequality. Moreover, cultural institutions are powerful players in the field of cultural consumption with particular interests in preserving and policing the distribution of capital within their field to maintain their own privileged positions. This may restrict their comfort in widening the tent to allow everyday creativity to be valorized alongside the creative products of fine artists. Indeed, a normative proposal in keeping with Bourdieu's project would target injustice by highlighting how "legitimate" forms of culture are constructed and policed by the institutions invested in the preservation of their own position in the field. It is worth highlighting in this respect that the solutions to cultural exclusion do not involve merely increasing the prevalence of public reverence for high culture and its institutions, just as they are. Rather, we must attend to and challenge the role these institutions play in the legitimation and distribution of cultural capital within their fields of practice.

Nevertheless, the case study suggests that everyday creativity can be an effective way into engaging those who have traditionally been excluded from high culture with formally curated creativity. The very low level of prior interaction with cultural institutions presented an initial barrier to these individuals' attendance at the Fitzwilliam Museum. However, this barrier was addressed for a number of disadvantaged young mothers through the opportunity to visit the museum as part of a facilitated group with creative activities that provided a bridge between the individuals and the institution.

Everyday creative activities provide a way to bring play into the visit to encounter formally curated forms of creativity. It is clear that this approach of using everyday creativity-based interventions can reach individuals who may otherwise not be engaged by cultural institutions at all. It is crucial for participants to take an active role in the everyday creative tasks as their pathway to engaging with the formally curated cultural displays in the museum. Such an approach provides an empowering experience for those engaged, overcoming the normal barriers relating to the need for cultural capital to approach such forms of curated creativity. The case study presented in this chapter offers preliminary evidence that the everyday creativity that populates people's lives across demographic categories can be a resource for enabling greater cultural and social inclusion. By harnessing these kinds of creative activities, cultural institutions can broaden their reach and ultimately begin combatting the social and cultural inequality that surrounds so many of the

most prestigious cultural institutions. Moreover, the fundamental nature of this everyday creativity could provide a basis for shared understanding and interest well beyond the realm of public engagement with high culture and formally curated art.

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27

Creativity and Culture in Engineering

David H. Cropley

Introduction

Culture can be interpreted in a variety of ways, not least in the literature on creativity. Lubart (2010), for example, cites House and Javidan (2004) who described culture as a set of “...shared motives, values, beliefs and identities...that result from common experiences of members of collectives...” (p. 15), while Puccio and Cabra (2010) subsume *culture* as a component of the broader *creative work environment* (see Fig. 27.1), defining organisational culture as a set of “...values, traditions and beliefs...” (p. 155) that is specific to a particular organisation.

At the same time, creativity research has also focused considerable attention on the so-called *Press*—variously referred to in terms of *environment* or *climate*, and differentiated in terms of the external, *social* environment and the internal, *organisational* environment (e.g. Cropley 2015). As Puccio and Cabra (2010) note, however, the terms *culture* and *climate* are frequently used interchangeably. This blurring of terms may have the

effect of focusing discussions of culture too narrowly on the *Press*, in the tradition of the 4Ps (e.g. Rhodes 1961; Barron 1969), with the result that

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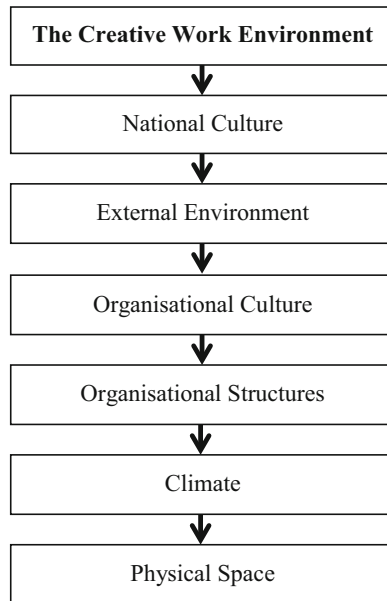


Fig. 27.1 Components of the creative work environment

studies of creativity and culture lose sight of the role that *person*, *product*, and *process* play in shaping, and being shaped by, “the way that things are done around here” (Lundy and Cowling 1996, p. 168).

To make this point more explicit—the study of creativity and culture is more than the study of the *Press*. A formal definition of culture makes this clear. The Collins Concise Dictionary (2001) defines culture as “...the attitudes and general behaviour of a particular social group, profession, etc.” Creativity and culture in engineering is therefore a study of all facets of creativity—person, product, process and press—as they pertain to the practice of engineering.

Lubart (2010) described three aspects of culture and creativity, the first of which is of special relevance to the present discussion: “does creativity mean the same thing in different [organisational] cultural settings?” (p. 266). I answer this question, in relation to an engineering cultural setting, in five stages:

1. By recognising that creativity is a key driver of the wider process of *innovation*;
 - (a) In particular, innovation involves a series of stages, and can be described as *paradoxical* with regard to the 4Ps.
2. By defining a universal cultural *baseline* of person, product, process and press across the innovation process;

- (a) This model describes the particular blend of 4Ps that favour innovation at each stage of the innovation process.
3. By describing *the way creativity is done* in the engineering domain to show that it is a special case of a more general process of innovation;
 - (a) It would be unreasonable to expect engineering cultures to align to innovation cultures if the two domains did not overlap. However, if engineering is a special case of the innovation process, then it is *not* unreasonable to examine the relationship between the two cultures.
 4. By defining a typical engineering culture in terms of the 4Ps;
 - (a) What is the typical engineering culture described in terms of the 4Ps, and therefore relatable to the more general innovation culture?
 5. By examining the *alignment* of engineering cultures to the generic innovation culture;
 - (a) Is the typical engineering culture actually well-aligned to innovation? If not, where are the points of difference, and how can these be addressed?

In this way I will be able to establish a basis for studying if, and how, creativity in engineering (i.e. *innovation*) differs from creativity in other cultural contexts.

Creativity in Organisations: The Process of Innovation

In organisational settings, creativity is rarely simply the process of ideation or divergent thinking. Rather, creativity is the front-end of a larger and more complex process of innovation. Roberts (1988), for example, divided innovation into two stages or phases: *invention* and *exploitation*. Invention was characterised as the *generation* of novel products and processes—*ideas*, in other words—and is thus synonymous with creativity. Exploitation, on the other hand, was seen as the *implementation* of these ideas. Bledow et al. (2009) made a similar distinction and explicitly linked the first phase (invention) to creativity. Cropley and Cropley (2010) distinguished between the *generation of effective novelty* (i.e., creativity) and the *exploitation of effective novelty* (i.e.

innovation). These sources help to make two points clear. First, creativity is a necessary, but not sufficient, part of innovation. Second, innovation is a process that consists of at least two distinct phases.

In fact, the process of generating and implementing ideas—*innovation*—has a history that pre-dates the modern creativity era and its catalyst (Guilford 1950). Prindle (1906), for example, studied inventors, concluding that every invention is the result of a series of small, compounding and linked steps. Wallas (1926), in probably the best known example, developed a more sophisticated model of seven phases: encounter (a problem or challenge is identified), preparation (information is gathered), concentration (an effort is made to solve the problem), incubation (ideas churn in the person's head), illumination (what seems to be a solution becomes apparent), verification (the individual checks out the apparent solution) and persuasion (the individual attempts to convince others that the product really does solve the problem). Rossman (1931) formalised the steps in a comparable fashion, proposing seven phases: observation of a need or difficulty, analysis of the need, survey of all available information, formulation of all objectively possible solutions, critical analysis of these solutions for their advantages and disadvantages, the birth of new ideas and experimentation to test out the most promising idea. Applying these concepts to a particular field of activity, Hadamard (1945), writing about the psychology of invention in the field of mathematics, identified four phases of invention: preparation, incubation, illumination and precisising.

More recently, D.H. Cropley and Cropley (2012) drew these together to illustrate the relationship between creativity and innovation, and the stages that are relevant to the generation and exploitation of novel and effective ideas (Table 27.1).

Therefore, to understand creativity in an organisational context, not least in engineering, requires us to understand that creativity forms part of a larger process—innovation—comprised of a number of distinct stages.

A Dynamic Innovation Culture

In addition to developing a characterisation of the innovation process in terms of a *series of stages* involving idea generation and idea exploitation, Cropley and Cropley (2012, 2015) and Cropley et al. (2013) drew on Csikszentmihalyi's (2006) conclusion that the creative process includes distinct phases that draw on *different psychological resources*, to create a model of the intersection of the

Table 27.1 The stages of the innovation process

Phase	Key features	Characterisation
Preparation	Knowledge acquisition; problem recognition	Invention (creativity)
Activation	Problem definition and refinement	
Generation	Development of a broad range of <i>possible</i> solutions	
Illumination	Identification of a subset of <i>promising</i> solutions	
Verification	Selection of a single, <i>optimal</i> solution	
Communication	Development of a working prototype	Exploitation
Validation	Implementation of the finished product	

4Ps with each phase (Table 27.2). In fact, the model expanded the traditional 4Ps into a more detailed 6Ps by giving greater weight to the components of the person—namely motivation, personal properties and feelings. Thus, not only is creativity in an organisational setting characterised as a series of stages or *phases*, but each phase has a unique profile of person, product, process and press factors that tend to favour innovation, *in that phase*. Therefore, an ideal *innovation culture*—the attitudes and general behaviours of a particular group, in a particular setting—can be expressed as a *dynamic* series of changing values—expressed, for simplicity, as dichotomous poles—of person, product, process and press, specific to each phase of the innovation process (Table 27.2).

The key to understanding creativity and culture is therefore to understand the *paradoxical* nature of innovation and the psychological resources that drive it. Innovation is not simply a one-size-fits-all process in which favourable aspects of the 4Ps are *uniformly* favourable. Instead, different states of the 4Ps—convergent thinking or divergent thinking, for example—take on special significance depending on the particular phase of the process that is active at any given point in time. Culture, insofar as it represents a snapshot of those poles of the 4Ps, is similarly dynamic in nature. In simple terms, the culture that favours innovation during the phase of *generation*, for example, is very different from the culture that favours innovation during the phase of *verification* (see Table 27.2). Indeed, we might describe the culture of innovation as, in fact, a system of phase-related sub-cultures.

It follows, therefore, that to understand creativity and culture in engineering, we must compare a typical engineering culture, expressed in terms of the 4Ps, with the dynamic innovation culture characterised in Table 27.2.

Table 27.2 Innovation phases and the 4Ps

Process	Poles	Invention (creativity)						Exploitation	
		Preparation	Activation	Generation	Illumination	Verification	Communication	Validation	
Personal motivation	Convergent versus divergent Reactive versus proactive	Convergent	Divergent	Divergent	Convergent	Convergent	Mixed	Reactive	Convergent
Personal properties	Adaptive versus innovative	Mixed	Proactive	Proactive	Proactive	Mixed	Reactive	Reactive	Reactive
Personal feelings	Conserving versus generative	Adaptive	Innovative	Innovative	Innovative	Adaptive	Adaptive	Adaptive	Adaptive
Product	Routine versus creative	Conserving	Generative	Generative	Generative	Conserving	Conserving	Conserving	Conserving
Press	Routine versus creative High demand versus low demand	Routine	Creative	Creative	Creative	Routine	Routine	Routine	Routine
		High	Low	Low	Low	High	High	High	High

Engineering as Innovation

Although it is implicit in this discussion, some further explanation of why engineering and creativity/innovation can be compared in terms of culture is warranted. A key to understanding the intersection of creativity and culture in engineering is identifying what it is that engineers *do*? What is the common, unifying purpose that defines the activity called engineering? There is a consistent answer to this question. Jensen (2006), for example, says that “Engineers solve problems” (p. 17). This process defines steps that include the ability to:

- understand and define the problem;
- apply standard approaches to solving the problem;
- “supplement the standard solution methods with creativity and insight” (p. 18).

Burghardt (1995) described the engineering profession as one “devoted to the creative solution of problems” (p. 2), while Horenstein (2002) takes a different tack, explaining that “design” is what engineers do (p. 22), and that “design can be defined as any activity that results in the synthesis of something that meets a need” (p. 22). Brockman (2009), in comparison, also links engineering to needs-driven problem solving, noting that problems arise from a drive to “satisfy mankind’s complex needs and desires” (p. 3). Buhl (1960) stated that “a designer is one who satisfies mankind’s needs through new answers to old problems.” (p. 9). He continued this theme stating that “The designer must deliberately create new products and processes which will fulfil mankind’s needs. He must be creative in all stages of problem solution.” (pp. 9–10).

Before we can examine this match between theory and practice, we must first acknowledge that, in an engineering setting in particular, it is difficult to separate creativity (in the sense of the *generation* of effective novelty) from innovation (in the sense of the *exploitation* of effective novelty). Creativity is a necessary, but not sufficient, component of a complex and non-linear *process* of developing technological solutions to the needs and problems of humankind. Therefore, understanding creativity and culture in engineering requires us to understand *innovation*.

While it is true to say that engineering encompasses many varied activities, an essential core—indeed, a defining characteristic—of engineering is design. Dieter and Schmidt (2012) remind us that “... it is true that the professional practice of engineering is largely concerned with design; it is often said that

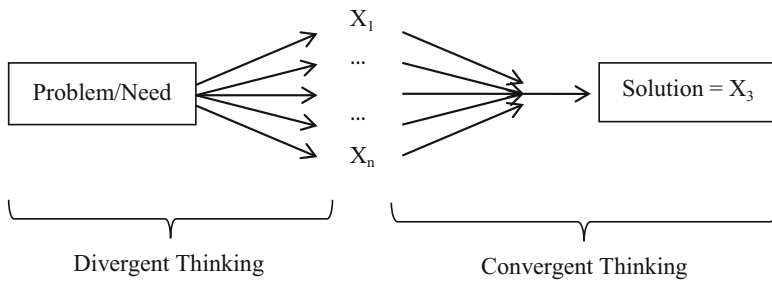


Fig. 27.2 Convergence and divergence in problem solving

design is the essence of engineering” (p. 1). Citing Blumrich (1970), they characterise the process of design as “to pull together something new or to arrange existing things in a new way to satisfy a recognized need of society” (p. 1). Dieter and Schmidt (2012) describe the essence of design as *synthesis*.

Horenstein (2002) contrasted design with other essential activities in engineering by focusing on the process of solving problems. He stated that “If only one answer to a problem exists, and finding it merely involved putting together the pieces of the puzzle, then the activity is probably analysis ... if more than one solution exists, and if deciding upon a suitable path demands being creative, making choices, performing tests, iterating and evaluating, then the activity is most certainly design. Design can include analysis, but it must also involve at least one of these latter elements” (p. 23). The core of engineering practice is therefore design, but that design activity involves two *stages*: a stage of creative synthesis, followed by a stage of logical analysis. The first stage is synonymous with divergent thinking (Guilford 1950), while the second is synonymous with convergent thinking. This may be illustrated as shown in Fig. 27.2 and we usually think of this process proceeding, as illustrated from left to right.

The key point of this discussion is that engineering—characterised especially as *design*—is, like innovation, a process of stages. Not only that, but the stages are largely identical across the two activities (see Cropley 2015 for a full discussion). Engineering can be thought of as a special case of the more general process of creative problem solving, or, *innovation*.

Engineering Culture

In order to address Lubart’s (2010) fundamental question “does creativity mean the same thing in different [organisational] cultural settings?” (p. 266), it is first necessary to characterise the typical engineering culture. To facilitate

Table 27.3 Elements of cultures

Elements of engineering culture	Engineering people	The engineering profession		Engineering places
Elements of innovation culture	Person	Process	Product	Press

comparisons with the generic innovation culture described previously (i.e. Table 27.2), the typical engineering culture, inasmuch as it can be identified, can now be expressed using the framework of the 4Ps. However, one of the difficulties in drawing comparisons between a psychologically oriented model of innovation (the 4Ps), and the extant culture of engineering, is that the respective constructs and terminology can be significantly different. Nevertheless, it seems possible to identify, in engineering literature, research that examines three categories that relate to engineering culture:

1. The characteristics of engineering *people*—in particular, gender;
2. The characteristics of the engineering *profession*—especially, cognitive style and;
3. The characteristics of engineering *places*—most notably, management culture.

These may then be mapped onto to the psychologically oriented 4Ps, to facilitate the comparison on engineering cultures and the more general culture of innovation (Table 27.3).

Engineering People

It is difficult, in any discussion of engineering and culture, to overlook the influence of gender. The purpose of this chapter is *not* to explore the underlying issues that have given rise to a profession, and therefore a culture, dominated by males (Frome et al. 2006; Jagacinski 1987; McIlwee and Robinson 1992; Robinson and McIlwee 1991), rather, this pervasive cultural characteristic is taken as fact, and used as a basis for discussions of culture in the context of engineering and innovation.

Perhaps the most important consequence of the male-dominated nature of engineering cultures is revealed by research on creativity and gender. Cropley (2002), for example, explored creativity and gender from a general, psychological perspective along the lines already outlined. He began by listing personal characteristics thought to be *linked to creativity* independent of domain (Table 27.4).

Table 27.4 General personal characteristics associated with creativity

Motivation	Personality	Social skills
Goal directedness	Openness	Team work
Persistence	Flexibility	Willingness to do it alone
Curiosity	Independence	Willingness to risk looking
Risk taking	Acceptance of things	foolish
Curiosity	that are “different”	Communication skills
Unwillingness simply to	Self-image as innovative	Confidence in a group
carry out orders	and daring	Willingness to admit not
Desire to do things	Tolerance for ambiguity	having an answer
differently	Sensitivity to problems	Low level of respect for
Drive to reveal one’s own	Mental toughness	“sacred cows”
unusual ideas to others	Autonomy	Willingness to be
Mastery drive	Self-centredness	disrespectful to authority
Desire for acclaim	Intuitiveness	Willingness to risk hurting
	Playfulness	people’s feelings

These characteristics were then used as the basis for an analysis of the relationship of gender and creativity. As *psychological* categories, *male* and *female* are probably best regarded as *stereotypes*—they describe common and general patterns, but are neither all-encompassing nor exclusive, and are shaped by culture such that they can be regarded as socially constructed (Lorber 1991). However, accepting these labels as reasonable descriptors for the purposes of the present discussion, it can be argued that differences exist between males and females, with regard to creativity. Lipman–Blumen’s (1996) distinction between male and female “achieving styles,” for example, suggests that there are characteristics of cognition and personality that are stereotypically male or female. Table 27.5 summarises a selection of these. The contents of the table are based on discussions in Millward and Freeman (2002), Powell (1993) and Schein (1994), and strongly reflect the analysis of Maccoby and Jacklin (1974); however, these are mapped into categories more reminiscent of the 4Ps for the purposes of this chapter.

The key point, for a discussion of engineering culture and creativity/innovation, is that when the general characteristics associated with creativity (Table 27.4) are mapped onto the *stereotypes* of males and females (Table 27.5), it appears that the *male stereotype* aligns to the characteristics associated with creativity *better than* the female stereotype! There are several important issues associated with this that have a direct bearing on the discussion of creativity and culture in engineering:

1. Engineering is male-dominated, and there *appears to be* a male stereotype of creativity—a typical constellation of attitudes and behaviours;

Table 27.5 Personal characteristics associated with *Male* and *Female* stereotypes

	Female	Male
Cognition	Concrete	Abstract
	Narrowly focused	Broadly focused
	Convergent	Divergent
	Intuitive	Logical
Motivation	Irresolute	Persistent
	Seeks security (avoids risks)	Takes risks
	Seeks to avoid failure	Seeks success
	Reactive	Proactive
Personality	Pursues long-term goals	Pursues short-term goals
	Cautious	Daring
	Empathic	Egocentric
	Timid	Aggressive
	Sensitive	Insensitive
	Oriented toward feelings	Oriented toward ideas
	Lacking self-confidence	Self-confident
	Responsible	Adventurous
Social properties	People-oriented	Task-oriented
	Wants to be liked	Wants to be respected
	Communicative	Taciturn
	Slow to come forward	Seeks limelight
	Allows herself to be dominated	Tries to dominate others
	Gives in to authority	Challenges authority
	Fears criticism	Fights back when criticised

2. However, creativity is embedded in a broader process of innovation;
3. Therefore, the male stereotype that appears favourable when restricted to creativity may be *unfavourable* when applied in the broader context of innovation.

Of course, the issue of stereotypes is more complex both in relation to creativity, and engineering, than it is possible to convey here. Stereotypes are heavily influenced and, in fact, determined by the social and, in the case of engineering, organisational environments (Press). Stereotypes exert a strong influence on aspects of experience, such as the way boys and girls are educated or treated by their parents, and by society. Millward and Freeman (2002) linked society's stereotypes of male and female directly to management by drawing attention to evidence indicating that the stereotypes have consequences for the way female managers are regarded by their seniors (and thus for factors like authority and promotion), as well as for females' actual management behaviour. In fact, Schein (1994) concluded that the stereotypes exert a drag on female managers from the very beginning of their careers. It has been suggested (Cropley 2015) that in engineering these stereotypes

play a negative role even *before* a female embarks on an engineering career, and may be the single most important factor in the poor participation rates by women in engineering degrees, and subsequent engineering careers. An important mechanism through which stereotypes affect the behaviour of females and males is also *role expectations*. Scott and Bruce (1994) showed that these expectations have direct effects on creative behaviour. For instance, not only do male managers expect their female colleagues to avoid risks, but the women too are familiar with the stereotype and the associated role expectations, and often tend to behave accordingly.

Lipman–Blumen (1996) carried out an extensive analysis of male–female stereotypes and the way males and females are shaped into different achieving styles during the process of psychological development. There are a number of psychological mechanisms that could lead people to acquire existing stereotypes:

- imitation (Bandura 1962);
- identification with the same gender parent who conforms to the stereotype (Hoffman 1971);
- differential reinforcement by parents, teachers and the like of what are perceived as gender-appropriate behaviours (Fagot and Leinbach 1993), or
- the view that acquisition of clear gender roles is vital for healthy psychological development (Kohlberg 1966).

Thus, even if they are no more than stereotypes, a society's ideas on gender can affect not only what others regard as normal in men and women, what duties women are assigned, and so on, but also, through internalisation of the stereotypes by women themselves, what ambitions they develop, what kind of management behaviour they exhibit, and what careers they choose. More recent research has also addressed this issue through the construct *stereotype threat* (Spencer et al. 1999). One obvious conclusion from this is that the benefits that might be gained from the qualities and characteristics of the minority of female engineers are lost—female participation fails to reach a threshold level that might overcome the negative effects of stereotypes.

For the present discussion, the important outcome of a discussion of gender, creativity, innovation and engineering is that what at first might appear to be an advantage (a male-dominated profession apparently replete with the characteristics that favour creativity) is, at best, an advantage in *some phases* of innovation and, at worst, a serious disadvantage in other phases of innovation.

It is also interesting to look at empirical evidence for relationships between gender, personality, creativity and engineering. Williamson et al. (2013), for

example, conducted a large study of both engineers and non-engineers, examining specific personality characteristics, many of which are relevant to discussions of creativity. Although there are limitations on the generalisations that can be drawn from the study, it is noteworthy that the sample of engineers ($n = 4876$) was comprised of 3998 males (82 %). The study used the Personal Style Inventory (Lounsbury and Gibson 1998) to assess a number of relevant aspects of personal properties, motivation and feelings. When comparing the male-dominated engineers to a very large sample of non-engineers (for which no demographic breakdown is given beyond $n = 75,892$), it is possible to conclude that the engineers were significantly more intrinsically motivated and tough-minded, and equally open-minded and adept at team work as the non-engineers. Without drawing unwarranted conclusions, these data do suggest that the male-dominated engineer sample is *distinctly different from* the non-engineer sample. In many ways, this is sufficient to make the point that a culture dominated by one gender (engineering) has a profile of personal characteristics that may align to aspects of those characteristics that favour some phases of innovation, but not others. In other words, in the context of innovation, a male-dominated culture is likely to be both a blessing and a curse. In practical terms, this means that the culture of engineering organisations is facilitatory, in certain phases, but inhibiting in others.

The Engineering Profession

Along with the characteristics of the engineer—the person—another important factor shaping engineering culture is the character of profession itself and the manner in which it is passed on to those entering the profession. Despite efforts to embed creativity, innovation and other associated attributes in engineering curricula (e.g. Radcliffe 2005), and despite the considerable attention among employer groups, professional bodies and accreditation agencies (see Cropley 2015 for a discussion of this issue in relation to engineering), it is also acknowledged (Kazerounian and Foley 2007) that creativity has largely failed to make its way into the engineering curriculum.

Cropley (2015) offers at least three reasons for this disconnect between creativity and engineering, each largely stemming from issues in the way that engineers are educated:

- A problem of *overspecialisation*—a narrow and deep focus on particular engineering specialisations, leaving little room for creativity, and other associated competencies;

- A problem of *pseudo-expertise*—a focus on factual, declarative knowledge at the expense of the conditional and procedural knowledge needed to develop genuine, adaptive expertise that drives professional engineering creativity;
- A problem of a *lack of knowledge*—simply put, a poor understanding *about* creativity among educators, and a preponderance of unchallenged myths. Engineers don't understand what makes something and someone creative, and therefore don't know how to develop creativity in others.

From the perspective of the engineering profession, encompassing education, employers, professional bodies and so on, the resulting engineering culture, at least as it relates to creativity and innovation, is convergent and analytical. I have suggested elsewhere (Cropley 2016) that the dominance of a reductionist, analytical mindset in engineering is driving the problems identified above, and leading to the development of *i-shaped* professionals (and not the desired *T-shaped* professionals described, for example, by Oskam (2009)). There is substantial, and longstanding, evidence to support the existence of a predominant *cognitive style* in engineering that favours some phases of innovation, but inhibits others. Kolb and Wolfe (1981), more than 30 years ago, described this as the *professional deformation* of engineers (p. ii), recognising that the mentality of the profession could lead to an undesirable inflexibility in cognitive style. More recently, Lumsdaine and Lumsdaine (1995) noted a strong preference for a logical, analytical thinking style among engineering faculty, and their data suggested that students shifted *away from* a preference for creative thinking over the four years of their engineering degrees.

Like the case of gender, the practical result of this dominant professional cognitive style is a culture that is reasonably well-aligned to some of the phases of innovation—those where convergence is favourable—but misaligned to others, where divergent thinking is required.

Engineering Places

The third element that characterises an engineering culture is the place where the activity occurs. The environment, of course, has a number of levels, as alluded to earlier (Puccio and Cabra 2010)—ranging from the broad, social environment to the more immediate organisational environment. One aspect of the latter that is important for shaping engineering culture is the *management* culture.

Schein (1996) discusses management cultures in the context of differences between three sub-cultures: executives, engineers and operators. Of particular

interest for the present discussion are his “assumptions of the engineering culture” (p. 14). These include:

- “Engineers prefer linear, simple cause-and-effect, quantitative thinking”;
- “Engineers are safety oriented and overdesign for safety” (p. 14).

The key is, once again, the identification of a general engineering culture with specific characteristics that impact directly on creativity and innovation. Schein’s assumptions tie the engineering culture back to a pattern that is analytical in thinking and risk-averse in nature, and focused on “designing humans out of the systems rather than into them” (p. 14).

Kunda (1986) presents other examples of the environment of an engineering organisation shaping culture and impacting on innovation. Discussing organisational *structure* specifically, and citing findings from an ethnographic field study of the engineering division of a large, high-tech firm, he notes a “...vague, decentralized, chaotic...” (p. 20) structure that contributed to “...an aura of ambiguity that, depending on context, is either celebrated as a source of creativity, or seen as a pain in the neck” (p. 21). Furthermore, describing orthogonal formal and informal reporting structures and their impact on individual and group responsibilities, Kunda (1986) notes a “... highly political and rapidly shifting social environment that many agree characterizes the industry, its organizations and personalities” (p. 25).

Kunda (1986) also describes aspects of the *social* nature of the work environment in his study of the engineering firm. Engineers enjoy different levels of status, depending on the kind of work they do. “Development of new products is the glamorous work. This is seen as the essence of creative engineering” (p. 26), while “Other engineering groups in the Engineering division are involved in lower status support activities...” (p. 27). Flowing on from this is a variety of incentives and pressures that, echoing Lundy and Cowling (1996), directly impact on how engineering innovation actually gets done. The practical consequence, once again, is a culture in engineering organisations that aligns quite well to some phases of the innovation, but equally, is misaligned to others.

Although the picture is complex and multifaceted, it is clear an engineering culture *can be* identified with particular characteristics that can be expressed in terms of the people, the profession and the places of engineering. More specifically, this culture can be translated into a form that is readily comparable to a psychologically oriented model of innovation, expressed in terms of the 4Ps—person, process, product and press. The picture that is emerging, however, is one of a mismatch between an engineering culture defined by a fairly

static constellation of particular values of the 4Ps, and an innovation culture that is characterised by a *dynamic* blend of phase-dependent sub-cultures.

The (Mis)Alignment of Engineering and Innovation Cultures

It is now apparent that there are significant points of difference between a typical engineering culture—the framework of the values, motives, attitudes and beliefs—expressed in terms of the 4Ps, and the culture associated with innovation. This is all the more surprising given the general similarity between engineering and innovation—both are focused on the generation and exploitation of effective novelty.

The explanation for this mismatch lies in the fact that the innovation culture defined in Table 27.2 is a theoretical ideal. This is how innovation *should* happen. In contrast, the typical engineering culture identified in previous sections—male-dominated, overly convergent, often risk-averse, linear and quantitative—is only one instantiation of how innovation *actually* happens.

We can identify at least three ways in which the real and the theoretical cultures misalign. The static, engineering culture is characterised by a particular kind of person. That person is likely to be male, and while reasonably open-minded and motivated, he prefers analytical approaches to problems that seek to discover the one-right-answer that must exist. While this is ideal for a phase like *verification* (see Table 27.6), it will be obvious that an organisation full of such people will also struggle, for example, with the *generation* phase.

In a similar fashion, the static, engineering culture is characterised by a particular process—convergent thinking. This is likely to have been ingrained in the mind of the engineer as part of his education. He has been taught to prefer unambiguous, well-defined problems that involve finding the right answer, eliminating uncertainty and minimising risk. As was the case with personality factors, this is ideal for a phase like *verification*, but not for a phase that requires divergent thinking. Even if the organisation itself recognises the need for divergent thinking, it is constrained by the ability of its engineers to adapt to the styles of thinking that favour innovation in *all* phases.

Finally, the static, engineering culture is characterised by a management culture that often reinforces attitudes and behaviours that favour only some phases. Not only is creativity psychologically challenging for many individuals—requiring openness, tolerance for ambiguity and so on—it is also challenging for managers responsible for the activities of the organisation. If tolerance for uncertainty makes an individual psychologically uncomfortable, it makes

a manager financially and temporally uncomfortable. Organisations are usually constrained by resource pressures—time and money—and creativity, as Amabile (1996) has demonstrated, needs adequate resources. Engineering cultures therefore are more likely to be characterised by a high-demand management environment. Deadlines must be met, budgets not exceeded and scarce resources used efficiently. This high-demand environment will facilitate some phases—once again, *verification*, to take one example—but will hinder efforts in other phases—*generation*, again—that are best served by a low-demand management environment.

The practical implication of this misalignment is clear. The engineering culture that is well-represented by the constellation of ideal values in the phase *verification* extends outwards to other phases in a practical, engineering setting (see Table 27.6). Where that constellation aligns, either wholly, or largely, with the *ideal* innovation culture, as it does in *verification*, as well as *preparation*, *communication* and *validation*, then innovation is facilitated. However, where the engineering culture fails, wholly or largely, to align (indicated by the crossed out terms in Table 27.6), as is the case in *activation*, *generation* and *illumination*, then innovation is hindered.

One of the key questions posed early in this chapter was how creativity differs in engineering from other cultural contexts. The answer lies in the fact that engineering *should be* an outstanding example of how the generation of effective and novel ideas—creativity—feeds a wider process of exploitation and implementation—innovation. The point of difference arises in how the theoretical ideals of innovation are realised by the day-to-day realities and constraints of engineering. Real-world engineering has evolved with many constraints that serve to block some parts of the innovation process. However, creativity itself is really no different in engineering compared to any other cultural context—the differences lie in everyday constraints that each cultural context builds for itself. The key to successful creativity, and innovation, is being able to recognise those constraints for what they are, and either remove them—for example, by breaking down the gender bias in engineering—or to steer around them by adapting the culture to stay aligned with the ideal.

Summary

Many engineering organisations may feel justified in thinking that their performance with respect to innovation is fair, or even good. *One-size-fits-all* models of innovation—what's good for innovation is always good for innovation—do nothing to dispel or challenge this belief. However, many engi-

neering organisations may be like the proverbial statistician whose head is in an oven, and whose feet are in a refrigerator. *On average*, things feel quite comfortable! However, in this chapter I have explained that the *paradoxical* nature of innovation—in effect, a succession of phase-related sub-cultures—means that many engineering organisations are *under*performing with respect to innovation. Probably the most pervasive reason for this misalignment is the male-dominated nature of the engineering profession. From this particular structural characteristic stems a unique profile of personal, psychological attitudes and behaviours, cognitive style, organisational climate and management style, influenced by the way engineers are taught, and how they judge and value creativity and innovation. Where this profile naturally aligns to innovation, engineering organisations perform well. However, across the full spectrum of the innovation process, it is almost axiomatic that the engineering culture that is doing well in some phases must be doing *badly* in others.

How is this issue to be resolved? There are many possible approaches, each with merits. A great deal of attention has been given, in recent years, to shifting the emphasis in engineering education to the achievement of outcomes expressed in terms of broad sets of graduate qualities (e.g. Radcliffe 2005; Walther and Radcliffe 2007; Walther et al. 2011). In other words, change the attitudes and behaviours of the men entering the engineering profession to align better to the requirements for successful innovation. This is certainly one possible way to tackle the problem. Equally valid, however, and perhaps far more beneficial, is to fix the structural problem that constrains engineering cultures.

Rebalancing gender in the engineering profession is about far more than equity. A recent report—*Innovation by Design: The Case for Investing in Women*—published by the Anita Borg Institute (2014) highlights research findings which make a compelling case that “diversity powers innovation” (p. 5). Two key advantages of diversity stand out for engineering organisations:

- Increased innovation;
- Better problem solving and group performance.

In terms of engineering cultures, and the alignment to an innovation culture, I have already established why this should be the case. Many of the misalignments identified earlier—those phases where the 4Ps of a typical engineering organisation fail to align to the ideal—stem from the influence of the male-dominated gender bias of engineering organisations. The same misalignments could be addressed not by trying to change the male engineer to be more stereotypically female at certain points in the process, but instead

to draw on the strengths that female engineers and managers could bring to the culture.

A reasonable conclusion that can be drawn from this chapter is that a typical engineering culture, characterised in terms of the 4Ps—person, process, product and press—suffers from significant misalignments when compared to a generic innovation culture. In other words, the *attitudes* and general *behaviours* of this particular profession, constrained as they are by structural factors like gender, are not *uniformly favourable* to the attitudes and behaviours required for successful innovation. However, that statement masks important details. While *on average* engineering cultures may exhibit modest, or even quite good, alignment, the paradoxical nature of innovation—what's good for innovation in one phase may be bad for innovation in another phase—means that typical engineering cultures are strong at some aspects of innovation, but weak at others. The solution, driven by a recognition that a problem exists, lies in more effective engineering education, better diversity and more dynamic approaches to managing the innovation process.

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Creativity and Culture in Visual Art

Aaron Kozbelt

Introduction: Art, Biology, and Culture

For many people, visual art is *the* paradigmatic domain of creativity. Sawyer (2006, p. 177) observes, “painting is always the first example that comes up in class discussion [of creativity]” and the popular image of the artist continues to pervade everyday notions of creative activity in contemporary Western society (see also Glăveanu 2014). Visual art is a ubiquitous outlet of creative expression, appearing in some form in every known human culture: witness Brown’s (1991) inclusion of decorative art as one of 67 human universals. Visual artistry in some form has likewise been identified as or closely associated with a basic domain of the human mind, as posited by several psychological theorists (e.g., Feist 2004; Gardner 1983; Karmiloff-Smith 1992).

One aspect of visual art’s cultural ubiquity is the fact that humans are to a great extent visual creatures. A large proportion of the brain is either dedicated to or involved in processing visual information. The visual system processes diverse types of information (including form, color, and motion) and in everyday situations must deal with efficiently establishing a stable, interpretable percept despite ambiguous, transient, or incomplete input (Palmer

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1999). Most visual art can be regarded as another kind of visual degradation; even highly ‘realistic’ artworks, which artists create in an attempt to mimic the visible world as closely as possible, entail a significant loss of information compared to perception of the real world, with a concomitant set of choices on the part of the artist about what to depict and how to depict it (Gombrich 1960). This point applies with even more force to more stylized or abstracted depictions. Throughout history, visual artists have exploited numerous technical devices to facilitate the visual system’s perception and recognition of the content of images, including means of rendering contours, depth cues, and illumination (Melcher and Cavanagh 2011). Thus, in visual terms, many different styles of artworks can be readily understood using basic principles of perceptual processing.

Art’s ubiquity, wedded to the potential—indeed, readily observable—variety of artistic styles across different times, places, and groups of people, suggests that it is an ideal domain for studying fundamental themes in cross-cultural creativity. The most prominent and pervasive theme in this context is a tension between aspects of artistic creativity that are cross-culturally variable versus consistent. One can make a biologically grounded argument that many aspects of art should be similar across cultures. Humans everywhere share a highly evolved visual system with a common neural architecture, which has been beautifully adapted by natural selection for processing electromagnetic radiation in order to arrive at an understanding of the structure and content of our surroundings. In this view, artistic productions that have any claim on the visual modality must be predicated on this underlying biological basis, and this process of ‘canalization’ (Waddington 1942) highly constrains the kinds of art that people are likely to find worth spending time creating or viewing (see also Wilson 1998).

Besides biology, culture is another factor impacting visual artistic creativity. Broadly speaking, one can define culture as “an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men [*sic*] communicate, perpetuate, and develop their knowledge about and attitudes toward life” (Geertz 1973, p. 89). The symbolic aspect of cultural transmission is perhaps most obvious in the case of language. Claims about the power of culture over cognition take strongest form in the Whorfian hypothesis of linguistic determinism, which states that individuals experience the world based on the structure of the language they habitually use (Whorf 1956). For instance, it is striking that a content analysis of 27 widely spoken African languages found no terms equivalent in meaning to ‘creativity’ with back translation (Mpofu et al. 2006)—a hint at significant cultural differences in basic conceptions about creativity.

Like language, visual art is another fundamental aspect of culture involving the transmission of meaning via symbols. Most visual artworks combine symbolic and perceptual elements; in any artistic tradition, artists employ a body of specialized knowledge relevant to the production of their work (Gombrich 1960; Kozbelt and Seeley 2007; Kozbelt and Ostrofsky 2013). The passing down of this body of knowledge from generation to generation constitutes an artistic tradition within a particular culture, and differences in this knowledge base undergird differences in style in different times and places. These differences, however, do not only concern stylistic variation among final artistic products. Many aspects of art vary across cultures: in the expectation and development of what artworks should be like in terms of particular media or subject matter; in how artists approach the creative process; in the social functions of an artwork and its relation to social status; and in how art is defined in the first place.

A basic question about any observed cross-cultural variability is the extent to which it fundamentally transcends our human biological origins and predispositions. Indeed, the relation between and relative explanatory power of biological and cultural influences are thorny and pervasive issues in coming to an understanding of any complex human activity, including artistic creativity. Cole (1996), for instance, provided a comprehensive and historically sensitive discussion of the conceptual and methodological tensions between various disciplinary-based ways of understanding and culturally contextualizing human mentality and behavior. Cole's attempt at an integrative approach may be contrasted with other perspectives, which favor either the nature or the culture side of the debate. For instance, one widely held view, sometimes dubbed the 'Standard Social Sciences Model' (Tooby and Cosmides 1992), essentially holds that culture trumps biology, and that biology itself is relatively unimportant for understanding contemporary human behavior. Tenets of this model include the notions that people are born more or less a blank slate and that the brain is a malleable, general-purpose computer; these imply that socialization and culture (rather than biology) are the main influences on behavior, and that thus cultures are free to vary in any direction on any trait. The alternative proposed by Tooby and Cosmides, the so-called 'Integrated Model,' argues the opposite positions. It attempts to understand how cultural factors are themselves constrained by our evolutionary heritage and is consistent with the above characterization of biological canalization.

Applying these two perspectives to cross-cultural creativity in visual art yields a range of possible theoretical positions on the relative importance of biology and culture. Strong views on either side emphasize the explanatory role of either biology or culture, at the expense of the other. To put it

in somewhat caricatured terms: if biology trumps culture, then the practice and products of art should be cross-culturally quite similar; if culture trumps biology, then virtually anything (even an inverted urinal or a pickled shark) might count as ‘art’ in some context. The goal of this chapter is to examine the evidence and arguments for each of these perspectives and to discuss how one might move forward in better understanding the nature of creativity in visual art.

Scope of Coverage

To gain traction on a topic as complex and diverse as cross-cultural artistic creativity, one must demarcate the scope and limits of how the topic will be treated. Here I focus primarily on two- and three-dimensional handmade artifacts involving depictions of recognizable subject matter: mainly drawings, wall and easel paintings, and sculptures. I am not concerned with contemporary ‘art’ that is purely conceptual or performative.

I also limit the cultures I examine to historical periods. Prehistoric art, most gloriously manifested in the cave paintings of Chauvet, Lascaux, and Altamira, should in principle figure into any discussion of biological and cultural aspects of visual art. However, we know next to nothing about the cultures of the individuals who produced the earliest artworks. Given the scant, entirely archeological evidence, it is difficult to articulate any cross-cultural implications. However, the long pre-history of art underscores the ubiquity of visual art among *Homo sapiens sapiens* and extends the range of known artistic styles beyond those found in historical eras. Moreover, quantitative analyses of depictions of animals in cave art have revealed several findings of interest, for instance, in the use of T-junction outlines to give a sense of three-dimensional form (Biederman and Kim 2008), or in the exaggeration of particular features to distinguish different species (Cheyne et al. 2009)—a clue that certain aspects of depiction may have a strong biological basis.

In examining cross-cultural data from historic periods, more kinds of evidence become available than just the artifacts themselves. For instance, studies of contemporary non-Western cultural groups (especially tribal populations) have largely taken the form of ethnographic case studies, detailing the cultural context and concepts for understanding the practice of art by a particular people. Studies of earlier historical periods (in the West, say) involve a range of sources, including literary accounts and, for contemporary industrialized cultures, the range increases still further, to include laboratory and historiometric studies.

With these points in mind, I next review the evidence in support of cross-cultural variability, followed by the evidence for cross-cultural consistency.

Cross-Cultural Variability

Within the camp of those who advocate a predominant importance of culture in understanding creative activity, it is possible to demarcate a range of opinions, from a solipsistic post-modern denial of biology's relevance to more nuanced assessments based on various lines of evidence in anthropology and psychology.

Literary, Cultural, and Sociological Studies

At one notorious extreme lie post-structuralist, post-modernist, and deconstructivist philosophers and literary critics, who have argued that 'the author is dead' (Barthes 1968/2001). This view is based on the assertion that everyone creates their own inner world by accepting or rejecting endlessly shifting linguistic signs, and what counts as 'art' is merely an arbitrary cultural convention with no external validity. Here I simply reject this viewpoint, noting in passing Wilson's (1998) comment that post-modernism "is blissfully free of existing information on how the mind works" (p. 234).

Other scholars in domains like art history and social theory have emphasized the importance of understanding how the concept of visual art is understood cross-culturally. A key motivation in much of this research is a cautionary check on one's own assumptions, that is, in not leaping to the conclusion that the way art is defined and practiced in the modern West is the only possible way. Indeed, even within the relatively narrow scope of the history of fine European art, some scholars have argued for significant change even in very basic concepts. For instance, Shiner (2001) contended that the current concept of 'fine art' was only invented in the West in the eighteenth century; prior to that, art was primarily defined in terms of skill (Greek: τέχνη) whereby an artist was a skilled maker, a work of art was the useful product of skilled work, and appreciation of the arts was integrally connected with their role in the rest of life (for similar arguments, see Becker 2000–2001; Lange-Eichbaum 1932). Others (e.g., Elkins 2002) have emphasized that any narrative of the history of art is bound to be biased and have explored alternative 'histories' as counterpoints to the archetypical Euro-centric triumph-of-realism account (e.g., Gombrich 1950/1995).

Among other notable cultural perspectives on art and aesthetics is Bourdieu's (1979/1984) famous sociological discussion of how judgments of taste are related to social position, and indeed are themselves acts of social positioning. Based on multiple lines of evidence, Bourdieu argued that individuals with a high volume of cultural capital (e.g., education) largely determine what constitutes taste within a culture, while those with lower volumes of capital accept this state of affairs, and the distinction between high and low culture, as legitimate and natural. Bourdieu's position suggests judgments about art involve a strong element of status and social class consciousness, rather than being based on purely aesthetic qualities.

Anthropology

Anthropological studies of the indigenous artifacts produced by members of various cultural groups constitute an important line of evidence for cross-cultural variability, especially for understanding the creative process as well as the social functions and definitions of art. The case for the preeminent importance of culture in artistic matters is most memorably made in certain ethnographic case studies, which often detail the difficulties in translating artistic sensibilities and achievements across cultural boundaries. For instance, Bohannan (1966) famously described her failed attempts to relate the story of one of the West's supreme aesthetic achievements, Shakespeare's *Hamlet*, to the Tiv people in Nigeria.

Other ethnographic investigations of how art is practiced reinforce cross-cultural variability. Many of these studies are landmarks in the history of cultural anthropology, including Boas's (1927/1955) book, *Primitive Art*, and Lévi-Strauss's (1972/1982) book, *The Way of the Masks*, both of which examined the indigenous arts of Native Americans of the Northwest Pacific Coast. Another well-known ethnographic investigation, oft cited in the creativity literature, is Maduro's (1976) account of traditional Hindu painters in the Indian village of Nathdwara. These painters represent a distinct, strictly inherited caste whose members produce works in one or more of 18 established genres of religious painting. Their conception of their activity differs markedly from Western stereotypes: works are generally anonymous, the most important qualities of a painter are regarded as humility, self-effacement, and lack of self-assertion, and the artists speak of their activity in avowedly spiritual terms; only a small percent report experiencing a sense of individual psychological growth or personal struggle in their work (see also Hallman 1970).

Culture can also have a strong effect on the possible scope of creative activity. Many studies have documented specific aspects of artistic styles that do

or do not permit deviation from established norms. For instance, in figure carvings of the Yoruba people in Nigeria and Benin, the ear and face are given standardized treatment, but more creative opportunities pertain to objects held in the figure's hand, a figure's costume, and the arrangement of figures (Bascom 1969). In many such instances, religion and ritual are active deterrents to innovation. For example, among Indian Nathdwara painters, depiction of fundamental religious motifs is not open to change, but variation is permitted in subthemes or non-religious subject matter, like landscapes or calendar art (Maduro 1976). Similarly, among the Ashanti people in Ghana, creativity is encouraged in wood carvings of secular objects but not religious ones (Silver 1981). For the Lega people in the Democratic Republic of the Congo, it is essential that newly carved wooden animals used in rituals not depart from previous instances (Biebuyck 1973). And an extreme instance of strict adherence to convention involves Maori artists of New Zealand, in whose tradition "innovations were not permitted" and "mistakes were...evil omens" (Firth 1925, p. 283).¹

Psychology

In psychological research on creativity, as in anthropological studies, to the extent that issues of culture and visual art have been directly addressed, researchers have often emphasized cross-cultural variability (Lubart 1990, 1999, 2010; Ludwig 1992; Niu and Sternberg 2002; Rudowicz 2003; Westwood and Low 2003). Indeed, some well-developed theoretical psychological perspectives on creativity have implicitly or explicitly endorsed a very strong view of the primacy of culture. One prominent example is Csikszentmihalyi's (1988, 1999) influential systems view of creativity, which reformulates the question of 'What is creativity?' to the question, 'Where is creativity?' The systems view proposes that creativity is not an inherent property of any object; rather, judgments of creativity emerge from the interaction between the current body of knowledge constituting a *domain*, individual *creators* producing variations on that knowledge, and individuals constituting the *field*, who are in a position to decide which of those variations are worth preserving as part of the domain for the next generation of creators. Along the lines of Bourdieu's (1979/1984) discussion of taste, Csikszentmihalyi's model gives great scope for a wide range of social judgments and definitions of creativity.

¹ For additional examples of cross-cultural variability in aesthetics and artistic creativity, see, e.g., Anderson (1989), Attenborough (1976), Biebuyck (1969), Forge (1967, 1973), Jopling (1971), and Sawyer (2006).

Likewise, Sawyer's (2006) book-length treatment of the modern science of creativity repeatedly emphasizes the inadequacy of individualist (e.g., psychological, biological, and computational) approaches, arguing instead for the necessity of a socio-cultural perspective. To cite one representative passage (p. 113) echoing many themes described above:

...psychological theories of creativity are based on our cultural conception of creativity as an individual trait. This individualist conception of creativity is dominant in Western cultures, but anthropological research has discovered that it's not universal (cf. Purser and Montuori 2003). And historical research has discovered that the individualist conception of creativity is relatively recent, and wasn't common 500 years ago. These disciplines show that to fully explain creativity, we need to move beyond individualist perspectives.

Outside the realm of studies of creativity, considerable psychological research on general inter-cultural differences has reinforced the importance of cultural differences. Perhaps the most notable such contribution is Nisbett's (2003) book, *The Geography of Thought: How Asians and Westerners Think Differently...and Why*. Reviewing evidence from a number of empirical studies, Nisbett concluded that culture powerfully influences cognition, in that people actually think about and perceive the world differently in different cultures because of differing ecologies, social structures, philosophies, and educational systems. While Nisbett does not discuss creativity directly, Baer and Kaufman (2006), in a chapter in *The International Handbook of Creativity*, cite his argument and claim that Nisbett's "general conclusions are probably as true for creativity as they are for the kinds of cognition he does discuss" (p. 10). This may yet be an open question, perhaps especially as it pertains to creativity in visual art, but in any case it again demonstrates the willingness of many psychological researchers to entertain a likely strong influence of culture on creativity (see also Cole 1996).

The distinction between East Asian (Chinese, Japanese, and Korean) and Western (European and North American) modes of creativity is the most commonly discussed cross-cultural comparison in the psychology of creativity. Studies in this vein have yielded several basic points of contrast, which are also reflected in their respective artistic traditions. The key distinctions tend to be that Western creativity emphasizes novelty and innovation, and is product-oriented and more individualistic, while Eastern creativity emphasizes adaptive value and continuity with tradition, and is process-oriented and often

more collective in nature (Lubart 1999, 2010). Additionally, the Eastern view of creativity often includes a state of personal fulfillment or expressing an inner essence or ultimate reality, as well as emphasizing emotional, personal, and intrapsychic factors (Chu 1970; Kuo 1996; Maduro 1976; Mathur 1982). Along these lines, Li (1997) contrasted Chinese ink-brush painting and modern Western painting, characterizing the former as a ‘vertical’ domain in which some elements are essential and others are modifiable, and the latter as a ‘horizontal’ domain in which novelty is supposedly allowed in virtually every aspect.

This issue has also been investigated from the perspective of historiometric studies of creativity, which use quantitative archival measures to address psychological questions. While much research in this tradition has focused on cross-cultural commonalities, direct cross-cultural comparisons have also occasionally been made. One example is Kozbelt and Durmysheva’s (2007) study of Japanese *ukiyo-e* printmaking (c. 1670–1865), which is almost certainly the best-documented non-Western artistic tradition. Almost 2000 illustrations of datable prints by 44 artists were found in 36 art books and used to examine a number of questions about lifespan creativity. While *ukiyo-e* artists showed some similar trends as their Western counterparts (such as an average career peak around age 40), some differences emerged, specifically with Japanese artists showing a more positive relation between career peak and eminence, and older artists creating the most iconic prints (such as Hokusai’s *Great Wave* and *Red Fuji*, both done in the artist’s seventies). A quote by Hokusai (cited in Dormandy 2000, p. 105) nicely summarizes the essence of East Asian artistic creativity:

From the age of six I was in the habit of drawing all kinds of things. Although I had produced numerous designs by my fiftieth year, none of my work done before my seventieth is really worth counting. At the age of seventy-three I have come to understand the true forms of animals, insects and fish and the nature of plants and trees. Consequently, by the age of eighty-six I will have made more and more progress, and at ninety I will have got significantly closer to the essence of art. At the age of one hundred I will have reached a magnificent level and at one hundred and ten each dot and each line will be alive.

Hokusai’s remarks reinforce key aspects of the Eastern sensibility. This great creative genius does not even mention innovation or departures from tradition, in stark contrast to the typical Western view, in which originality is the *sine qua non* of creativity.

Cross-Cultural Commonalities

The preceding discussion of cross-cultural variability has raised a number of issues suggesting the importance of cultural factors in determining the particulars of how artistic creativity occurs within a given social group. One might interpret this evidence to mean that one should not expect the artistic practices or products of one culture to be really understandable or appreciated by a very different culture—as in Bohannan's (1966) experience with *Hamlet*.

However, for every instance of such failure, there are cases to the contrary suggesting that significant creative achievements can transcend their culture of origin and become universally relevant and inspiring. Dürer expressed astonishment at Aztec artifacts freshly brought from the New World. Goethe was famously enraptured upon encountering the work of the great Sanskrit poet Kālidāsa, written some 14 centuries earlier. The aesthetic response of nineteenth-century French artists like Degas, Monet, and van Gogh to Japanese *ukiyo-e* woodblock prints by artists like Hokusai and Hiroshige, or of early twentieth-century artists like Picasso and Matisse to the art of sub-Saharan Africa speaks to this same point. Such instances echo the nineteenth-century 'rediscovery' of earlier creators within European artistic traditions, like that of J.S. Bach by Felix Mendelssohn and others, or Sandro Botticelli by John Ruskin and Walter Pater, or Jan Vermeer by Théophile Thoré. I suspect that every aesthetically sensitive person can recall a personal encounter of some work from an unfamiliar tradition that provoked a strong aesthetic response.

Such examples suggest that creative art is not completely culturally specific, but that there may be meaningful aesthetic universals that transcend particular traditions. Along these lines, foreshadowing the following section, Currie (2012, p. 113) noted, "A number of careful and sensitive studies indicate that while the aesthetic conversations of traditional, small-scale societies are carried on in ways very different from our own, respect for skill and attention to the aesthetic effects skill can achieve – effects, that is, we recognize as aesthetic – are generally present." I now examine some of this evidence.

Empirical Studies of Cross-Cultural Aesthetic Preferences

A foundational point in arguing for the possibility of cross-culturally shared aesthetics involves careful empirical tests of that proposition. A number of pioneering studies by Child and colleagues (e.g., Child and Siroto 1965; Ford et al. 1966; Iwao and Child 1966), as well as some later investigations (e.g.,

Chen et al. 2002), have investigated this issue directly, generally finding statistically reliable positive correlations among raters from different cultural groups. As Chen et al. (2002, p. 171) noted, such “results run counter to the belief that there are wide cultural variations in the evaluation of and attitudes toward creativity.” This conclusion begs the question of possible explanations for such effects, to which I now turn.

Evolutionary Explanations

The most direct explanation for cross-cultural universals in visual aesthetics and creativity is grounded in evolutionary biology (e.g., Wilson 1998). The capacity for artistry ultimately arises out of a backdrop of evolutionary pressures promoting the survival and reproduction of organisms, which provides a strong perceptual and information-processing basis on which to seek universals relevant to aesthetics and artistic creativity.²

Numerous hypotheses about the purposes and functions of art have been advanced, which imply different specific evolutionary mechanisms (see Dissanayake 2007). One candidate is that art represents a genuine direct adaptation, whereby the human aesthetic sense is an inevitable outcome of our sense of safety, order, and well-being, in that we respond to visual patterns associated with survival (e.g., Bradshaw 2001; Lohr and Pearson-Mims 2006; Orians 2001; Orians and Heerwagen 1992). An alternative view is that artistic skill arose through a Darwinian process of sexual selection (e.g., Dutton 2009; Miller 2000, 2001), whereby artistic virtuosity functions as an honest signal of good genes. This perspective posits a somewhat different point of origin for our aesthetic sensibilities—that “aesthetic judgement evolved as a functional part of social and sexual cognition, not as a side-effect of perceptual psychology” (Miller 2001, p. 20)—but it again affirms the idea that humans have systematic, canalized aesthetic preferences that are the result of evolutionary processes. Yet another perspective views human artistry as a by-product of other adaptations, rather than an adaptation in its own right. This view of aesthetics as evolutionary ‘cheesecake’ (Pinker 1997) or ‘spandrels’ (Gould and Lewontin 1979) suggests a greater degree of intercultural flexibility in human aesthetics, as well as a greater methodological emphasis on studying aesthetics via popular works, rather than esoteric, if revered, masterpieces.

² Indeed, I have argued that the scientific study of aesthetics and creativity would benefit from considering which aspects of these phenomena might be comprehensible not just cross-culturally but across different intelligent species throughout the universe (Kozbelt 2014).

Psychological Response to Features of Artworks

With the possible exception of the by-product view, evolutionary explanations for the phylogenetic development of the human capacity for visual aesthetics are typically construed as having canalized particular universal aesthetic preferences. The laboratory investigation of these preferences is the second oldest branch of experimental psychology, empirical aesthetics (Fechner 1876). Fechner examined issues such as preference for rectangles of different proportions, along the lines of famous Golden section, which has since been the subject of an enormous amount of empirical research (e.g., Green 1995; Höge 1995; Konečni 2003). Almost a century later, research on empirical aesthetics reached a climax with Berlyne's (1971) book, *Aesthetics and Psychobiology*, which emphasized basic psychological and biological principles like hedonic selection, habituation, and peak shift as explanations for human aesthetic preferences. Berlyne attempted to articulate a laboratory-based, falsifiable, data-driven 'aesthetics from below,' in which basic features of a visual stimulus were studied in terms of their aesthetic impact.

The goal of finding objective ways to characterize features of artworks, with an eye to understanding their aesthetic potency, has been pursued in a variety of ways. For instance, Hatcher (1967) developed a by-hand coding system for analyzing, describing, and comparing art forms regardless of content, style, or medium. Other scholars have developed theoretical accounts that can aid image analysis cross-culturally, such as Willats's (1997) distinction between drawing systems (perspective, oblique projection, and orthogonal projection) versus denotation systems (silhouettes, line drawings, and optical denotation).

More recently, computing-intensive analyses of the objective statistical properties of artworks have yielded some notable findings. For instance, the principle of compositional balance in artworks, related to Arnheim's (1988) notion of 'the power of the center,' has been examined by computing—for each point on the surface of a painting—a color 'weight' representing a vector from the center of a three-dimensional red-green-blue color space and then applying physical mechanics formulas (Firstov et al. 2007). This analysis yields the position of the overall colorimetric barycenter of the image (essentially its chromatic center of gravity), which, interestingly, is typically very close to the image's geometric center. Other research (reviewed by Graham and Redies 2010) has examined statistical regularities of artworks, particularly the overall distribution of fine- versus coarse spatial frequencies in images. Notably, in artworks spanning different cultures and styles, this distribution tends to be scale-invariant and fractal-like, just like natural scenes; this is true even for artistic depictions of faces, despite the fact that photographs of faces do *not*

show scale-invariance. In the aesthetic realm of color, studies have revealed that average preferences reflect the statistics of how much people in general like objects that are characteristically those colors (see Palmer et al. 2012)—a finding consistent with explanations stressing aesthetic evolutionary response as a non-arbitrary evolutionary adaptation.

Neuroaesthetics

An underlying assumption of evolutionary models and many psychological studies is that the human aesthetic faculty is essentially a property and result of brain activity. In the last 20 years, with the advent of non-invasive neuro-imaging techniques, the field of ‘neuroaesthetics’ has emerged, with the goal of understanding the neural substrate of aesthetic experience, preference, and judgment (Cela-Conde et al. 2011; Chatterjee and Vartanian 2014; Skov and Vartanian 2009; Zeki 1999). Theoretical approaches in neuroaesthetics often echo psychobiological principles, as in Ramachandran and Hirstein’s (1999) ten universal principles of art: peak shift; perceptual grouping and binding; contrast; isolation; perceptual problem solving; symmetry; abhorrence of coincidence/generic viewpoints; repetition, rhythm and orderliness; balance; and metaphor.

Empirical studies within neuroaesthetics vary considerably. For instance, in one pioneering study, Smets (1973) found a sharp peak in brain alpha wave desynchronization when persons viewed abstract designs with 20 percent repetitiveness of elements—the equivalent amount of order found in simple mazes, pictographs in numerous Asian languages, and Mondrian paintings; Wilson (1998) claimed that “the 20 percent redundancy effect appears to be innate” (p. 230). Many more recent neuroaesthetics studies have attempted to identify brain regions associated with various aspects of aesthetic experience—for instance, in identifying an alleged ‘beauty’ center in the medial orbito-frontal cortex (Ishizu and Zeki 2011), or finding activation of the default mode network during intense aesthetic experiences (Vessel et al. 2012). Given its inherent reductionism, it is unsurprising that neuroaesthetics is often viewed with suspicion by scholars interested in cross-cultural variability (see Dissanayake 2007; Sawyer 2006).

Other Psychological Aspects

Attempts to find cross-cultural commonalities have also taken other psychological forms, emphasizing basic mental processes that are broadly applicable to aesthetic and creative cognition. Mechanisms that have been

posited to undergird aesthetic cognition include conceptual blending, categorization, cross-domain mapping, metaphor, image and force-dynamic schemas, and others (Turner 2006). Along similar lines, Martindale (2007) proposed a theory of aesthetics accounting for some 25 fundamental aesthetic effects with reference to basic properties of neural networks. Emblematic of this basic-mechanisms approach, Martindale argued that the principles of psychological aesthetics are mostly “principles of general psychology rather than principles of aesthetics per se” (p. 181).

More recently, the principle of psychological essentialism has also been applied to aesthetics. Psychological essentialism posits that humans tend to assume that individuals have underlying invisible essences that determine the categories they fall into (Bloom 2010). In art, aspects of psychological essentialism like contagion—the degree of physical contact of an object with the original object—appear to be important determinants of aesthetic—and monetary—value (Newman and Bloom 2012). One might be tempted to interpret the aura surrounding artistic geniuses and masterpieces in the contemporary West as a corollary of the advent of the concept of ‘fine art’ (as in in Shiner 2001) and thus purely a culture-specific tendency. On the contrary, however, psychological essentialism appears to be culturally ubiquitous and widespread in ritualistic behavior and magical thinking (e.g., Biebuyck 1973), as in the process of selecting the 14th Dalai Lama (Bloom and Gelman 2008).

The Creative Process

Potential cross-cultural commonalities apply to not only the visual aesthetic properties of finished artistic productions, but also to the creative process itself. Several strong theoretical claims have been made about universal aspects of the creative process. For instance, Campbell (1960) posited that *any* ultimately creative idea necessarily arises from a blind variation and selective retention model of creativity (see also Simonton 2011). A related notion is Dawkins’s (1983) ‘universal Darwinism,’ which argues that *any* life in the universe will have evolved through the process of Darwinian natural selection, and which seeks to explain evolution across a range of natural and social science domains. Other, non-Darwinian interpretations of the creative process have also been advanced (e.g., Gabora 2005), as have views of the creative process involving changes of timing as a means of introducing novelty (e.g., Kozbelt 2009).

Historiometric Studies

Another point of cross-cultural commonality is rooted in historiometric studies that use archival metrics like citation indices to address questions about high-level creative achievement across many domains. For instance, some studies (e.g., Simonton 1997) have examined how creativity unfolds over the lifespan, typically finding a career peak around age 40, which also appears to be consistent across many cultures. Murray (2003) found that the statistical distributions of eminence in both Western and various non-Western cultures are uniformly highly positively skewed, indicating that a small number of great creators tend to dominate their respective domains. Murray's investigation also revealed extremely high reliability among sources used to catalog the contributions of individual creators, even when the sources span cultures.

In terms of art-specific findings, surely the most provocative and well-developed theoretical model is Martindale's (1990) quantitative, psychobiological-inspired model of trans-historical stylistic evolution in the arts. In this theory, artistic creators seek critical attention for their productions, and must therefore produce work that is ever more attention-grabbing. Martindale argued that the most effective way to meet this goal is to strive for novelty, either by producing more unusual combinations of ideas (i.e., engaging in more 'primordial cognition') within an artistic style, or developing a new style altogether. His theory predicts that over the generations within an artistic tradition, arousal potential increases, while primordial cognition and stylistic change oscillate in an inverse relation to each other—since only one or the other method of introducing novelty is necessary to increase arousal potential. Importantly, Martindale documented precisely these trends across a wide range of art forms and cultural traditions (including 18th dynasty Egyptian and ancient Greek visual art, as well as in East Asian traditions). This again underscores commonalities across cultures and historical periods in the creative arts. Poignantly, in one of his last papers, Martindale (2009) also argued that creative dynamic leads inexorably to the exhaustion and death of artistic traditions: "The high arts were defined in a way that guaranteed that they would evolve in a specific way and die in a specific way" (p. 139).

Future Directions

What to make of these multidisciplinary lines of evidence that on the one hand suggest important cross-cultural variability in the practice and conception of artistic creativity and on the other hand suggest strong commonalities

in the way these varied practices play out? These latter lines of evidence bear on aesthetic evaluation, possible evolutionary mechanisms for the origin of our aesthetic faculty, common features and statistical properties of artworks, neural substrates and psychological mechanisms of art-related cognition, and how artistic styles evolve over time. In my view, at least in the domain of visual art, perspectives emphasizing cross-cultural consistencies appear to be better supported than those emphasizing cross-cultural differences. But both points of view have much of value to add to the ongoing development of a science of creativity. The main challenge moving forward is to find ways to productively integrate these two sometimes antagonistic perspectives, in the service of understanding how biology and culture interact and potentially co-evolve, in order to answer basic questions about the nature of artistic creativity.

The exercise of overtly comparing biological versus cultural influences, either in opposed isolation or as part of a more integrative endeavor (see Cole 1996), raises fundamental questions about creativity. As in any scientific endeavor, making progress entails a need for careful measurement assessment of creative and aesthetic constructs (Kozbelt and Kaufman 2014) to address basic questions about the relative contribution of biological versus cultural influences on creativity, as well as their interaction. For instance, what is the scope for cross-cultural variety in a domain like visual art? In creators' ceaseless quest to innovate, how far against the grain of canalized aesthetic preferences can novelty go before works become incomprehensible? Is there scope for the co-evolution of creators and audiences in this dynamic? What is the psychobiological distinction between attention-grabbing (as in Berlyne 1971; Martindale 1990) and attention-keeping aspects of artworks, that would, for instance, feed into the process of the creation of aesthetic canons?

A final point concerns the role of the individual. Broad characterizations of cultural differences (e.g., East versus West) overlook the great individual variability in methods and approaches within any culture. For instance, Galenson (2001) documented tremendous differences among modern Western artists' approaches to creativity (highly pre-planned versus trial-and-error) that are associated with differences in career trajectories (early- versus late-peaking, respectively). This pattern was also found for Japanese printmakers (Kozbelt and Durmysheva 2007), and it would not be surprising to find strong individual variability in any complex artistic tradition. Biebuyck (1969, p. 6) speaks to this point, which encompasses many themes throughout this chapter:

Some authors speculate about the absence of the concept "artist" in most primitive societies. There is no equivalent for "art" either, yet nobody doubts that primitive societies have produced objects that are pleasing and that strike one as

beautiful...Undoubtedly, whatever the stringencies and conventions of style, purpose, and expectation, the individual element is a powerful factor in explaining differences. Artists necessarily differ in training, in skill and technical proficiency, in maturity and social position, and in personality. Society can impose upon its artists a certain objective matter and style but the artist himself has his [*sic*] own personal conception of the subject matter, a particular feeling for the style, and a certain technique in executing the form.

These thoughts serve as a valuable reminder of the importance of the individual in any balanced discussion of creativity and culture. In the archetypical theoretical agon between impersonal evolutionary biological canalization and impersonal socio-cultural forces, the role of the individual can become lost. With apologies to socio-culturally minded apologists for cross-cultural variability and creative collaboration, it is ultimately the masterworks created by individuals of genius, that make visual art (and its sister domains like music and literature) worthy of our lasting, enthralled, and grateful attention, regardless of their culture of origin.

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29

Wonder Woman and the Polycultural Contexts of Everyday Creativity

Ian J. Grand

... it is not the creativity of one individual but the creative action of many, young and old, working together or apart, at different times and in different settings, all immersed within a physical and symbolic environment that affords but also constrains their expression. This is, in fact, the creativity that concerns me here, creativity as it takes place in everyday life and real contexts, the creativity of the 'ordinary'. (Glăveanu (2014), pp. 1–2)

I should like to come back to a subject on which I have spoken before, the continuous creation of unforeseen novelty which seems to be going on in the universe. (Bergson (1946), p. 91)

Everyday Creativity

By the mid-twentieth century, major shifts in scholarly thinking about creativity had occurred. Instead of exclusively studying the content and process of so-called high art, authors Abraham Maslow (1962), Therese Amabile (2011/1983), and others began to concentrate on processes of creativity that

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had been out of the purview of traditional approaches. The role of the creative process in identity formation and development was studied as well as the social contexts of creative endeavor. Montuori and Purser (1999) turned from a narrow focus on the lone hero as creative genius to looking additionally at collaborative creative activities in communities and performance.

In a further extension of this thinking, the creativity of the everyday began to be explored. Richards (2007), for example, looked at daily living as location of processes of daily creativity in terms of both interpersonal engagement and values and the production and use of goods and services. The title and contents of Richard's 2007 book—"Everyday Creativity and New Views of Human Nature"—are emblematic.

This turn can be seen as analogous to the changes of focus of seventeenth-century Dutch tavern painters like Adrian Brouwer (1605–38), Adriaen van Ostade (1610–85), Jan Steen (1626–79), and their contemporaries who had moved from the allegorical and symbolic depiction of myth and religious themes or portraits of the landed and high born, that had previously been prevalent, and painted instead the scowls, card game plays, and carousing in taverns, celebrations and daily living they found in the everyday world around them. A woman pours milk or hangs laundry or dog scratches itself; the light pours in a window, and all these become subjects of the aesthetic gaze.

For scholars of everyday creativity, creativity was seen as occurring everywhere; the distinction between high art and the ongoing creativity of the rest of life was found to be misleading. Runco (2014), for example, looked at the underlying processes of high art and everyday creativity as having the same constituents. Both the kinds of creative work that occurred in daily living and the ways that that work got developed became the subject of scholarly inquiry. Daily living itself was seen as inherently creative and a view of "distributed creativity" (Glăveanu 2014) emerged in which multiple creativities occurred, simultaneously influencing, influenced by, and independent of each other.

This chapter will continue these explorations of everyday creativity in several specific domains that can potentially enhance our daily living in this time of increasingly fragmented and multiple social meaning and practice. It looks to underlying aspects of daily creativity as ways to rethink, rediscover, and renew ourselves and our sense of participation.

The chapter begins with an exposition of the daily creativity of young children emphasizing play, continual experimentation alone and with others, and the deepening of sensory, movement, and linguistic possibility through interactions with others. It looks at the creativity of the social as well as the creativity of work with materials; and it describes what I have come to emphasize as pre-production process of creativity.

A second line of reflection in this chapter looks at the constant play of individual creative activity in contexts of popular culture and sociocultural and socioinstitutional influence. With a focus on everyday creativity we can also look at how emotion, feeling interventions, and value making are ongoingly negotiated, navigated, constructed, and modified, and the role of sociocultural media and institutions in our emergent affective realities. The recursive shaping of creative possibility through media, books, schooling, games, and contact with people from many cultural backgrounds is considered.

The chapter concludes by looking at how an understanding of the complexity of everyday creativity can lead to a vital, transformative embracing of polycultural creativity and synergy. Examples are given of initiatives that speak directly to this envisioning of new cultural possibility and tools that can help us navigate together new possibilities of everyday becoming.

Following a long line of philosophers from Heraclitus through Bergson, Castoriadis, Whitehead, and Glissant, I hold that we are always unceasingly creative, that there is a daily creativity by which we make our worlds. From the time of our infancy we are continuously and ceaselessly involved in making and remaking world and making and remaking ourselves, alone and with others. We play and create and are given access to kinds of play and creativity through our interaction with other children, adults, formal and informal schooling, and the media. There is a continual interaction and interplay between larger socio-historical conditions and contexts and individual and group creativities. In this view, we are organismically tuned to play with, explore, juxtapose, and make phenomena.

At the same time, from the very beginnings of our lives, we interact with other people and objects in the world creatively, becoming with them sites of everyday creativity. That said, we can be, and are, diminished or expanded in our abilities to act creatively in the ways we are encouraged, discouraged, aided, or thwarted in the sociocultural contexts in which we live.

Enhancements and Diminishments to Creative Becoming

I have long been interested in the nonverbal and nonverbal/verbal grounds of everyday creativity, the plays with others and materials that are exploratory without a product or goal in mind. And so I begin this chapter with descriptions of what I will call pre-production creativity.

For me there is a ground of creative activity that is precursor to the forming of products and to which daily creativity must return for its revitalization in either individuals or collectives. I am concerned with the experimentations and plays which are not yet finished products but are the ephemeral laying down of practices of combining, recombining, juxtapositions of materials or self-image.

We can begin with observing infants. Infants are in an ongoing practice of exploring the world and their own possibilities (embedded in social contexts). They coo and gurgle and make a variety of pre-verbal and pre-socially learned choreographed sounds and movements. They play with their toes and movements large and small, as well as play with objects in their surround, for their own felt pleasure and possibility.

These sounds and plays occur in environments of sound and play and they are also mediated and channeled socially. Feuerstein (Kozulin and Rand 2000) notes that children's experience is mediated by caregivers who call attention to, name, and emphasize particular aspects of the environment following cultural expectations and emphases. Speech patterns and rhythms and gestures of relatives and neighbors, sounds and movements of natural worlds and cities become the ground for creative interaction and play.

In their interactions with the people and objects around them, children imitate, experiment, juxtapose, invert, and augment what they encounter. Tronick (2003), for example, shows how children develop subroutines of play that differ with different caregivers. They initiate the play when caregivers come into the room or respond appropriately to the play initiated by the other. They also can, and do, take the play rehearsed with one caregiver and bring it into the play with another. Play routines are developed mutually, either child or the other initiates sound or movement play, and are extended as new elements are added. These plays are nested as well in what is considered culturally to be appropriate or meaningful in some way.

Play is multiply sourced and developed. The development of subroutines with father, siblings, grandparents, and other caregivers is crucial as well as the play with the mother. Interactional play can involve members of larger communities to which infants belong. Gottlieb (2004) notes how Beng children in West Africa sing songs to newborns welcoming them to the world, and introducing them as well to a world of dance and social sound making. Gottlieb also notes how older siblings involve younger siblings in play. In all this there is a creative play with self and others, alone and mutually mediated, which forms ground for later creativity.

As they grow older, children extend their play with others in contexts influenced by multiple social surrounds. Corsaro (2003) describes various aspects

of children's play in a preschool in Italy where children created a number of games, not learned from adults, which they then passed on through generations of children. One game was the "Garbage Man" that began with the children's watching the weekly removal of garbage and then running to the fence calling out to the garbage man. In another, the children took plastic containers they were forbidden to play with, put rocks in them and went around the schoolyard as "bankers."

Currently children are ongoingly involved in polycultural play and participation in multiple traditions that lead to the development of what Rogoff et al. (2007) call "repertoires of practice." They note that: "...children develop fluency in multiple forms of participation based on the multiple traditions in which they are engaged... selecting, rejecting, and transforming multiple ways of engaging the world" (pp. 491–492). Later on, they add: "In the process, children in turn contribute to the formation of routines and practices available to the next generation" (p. 492).

Children's creative play is both verbal and nonverbal, non-symbolic and symbolic. They juxtapose objects—twigs and rocks and pieces of grass, climb trees, run, and dance for the sake of these activities themselves. They bend over and look at scenes from between their legs or go from place to place to get different views.

In play with Legos, Erector sets, Lincoln Logs, Tinker Toys, and simple blocks, children further gain the ability to see and build in multiple dimensions. With these ready-made tools children play with possibilities of varying spatial, affective, and interactional organization. This spontaneous play with sound and color and shape and the feel of things is all part of what will later develop in realms of their own—painting, music, architecture, space designing, and daily living.

I saw a young girl in Sausalito at the time of the annual return of the herring to San Francisco Bay. Thousands upon thousands of herrings were in the waters, and pelicans and gulls were circling and diving for the fish, coming up to guzzle them down and then returning to the churning water where seals dove as well, undulating in the water. Other gulls pecked at the rocks where the herring lay their roe.

The girl sat for a while on a concrete breakwater, watching all this and clawing her hand and wrinkling her face in a play growl back to the sea and animals. She got up and went to another place further back and then started a dance. She stomped three times alternating the foot that was stomping. And then hopped, landing on both feet. This was followed by a play growl and clawing of the hand. This sequence was repeated several times, with breaks as she went closer or away from the water, and then repeated all again.

The girl's play here was built with sound and rhythm and gesture. It explored and altered rhythms, facial and hand gestures, some perhaps derived from something seen somewhere, perhaps on video or film, the muscular feeling, in the context of bird and seal and herring. She was playing with no product in mind, exploring the alterations of herself in the context of the sea and restrictions of the landing she was on.

In another illustrative story, three-year-old Joshua sat on the pew in his grandfather's African American Baptist church watching and listening as a group of child gospel singers performed. He then got up, moved into the aisle and began to both imitate and dance in a new way to the sound of the group.

In Joshua's church there was a choir and band that continually produced new music. The church also had street missions, prison missions, a food clinic and a wide range of work and education initiatives. Revival was an operational concept and revival and revitalization were thought to come through daily works and communal prayer. All of this formed the background for his act of dancing.

Again, there is no one immediate product here but rather a ground from which products grow. There is in all this both an organismic and social creativity. The girl in Sausalito responds to that environment on that day with a play of movement and sound of her own. Similarly, Joshua is embedded in a community in which other children are bounced on the laps of their relatives in response to the music being played. People in the church respond to the music and the rhythmical exhortations of the minister through bodily movement, each in his or her own way. It is in this weekly environment of church that Joshua stands and dances and creates images for himself and others from which new creations will be built.

The return to this daily play is renewing. In a famous story in jazz circles, saxophonist Sonny Rollins, a popular saxophonist at the time, making recordings and performing in nightclubs, suddenly stopped all public performance. Instead, he went every day to practice under one of the bridges in New York to regain the creative exploration in which his improvisations of rhythm and sound were grounded. Rollins did eventually return to public performance but had felt that first he needed to stop and explore some new and different ways of playing, to return to the exploratory roots of music making. Charlie Haden, the Bass player with the Ornette Colman group, talks about how their work together was a constant field of improvisation and discovery in which they were continuously learning how to listen and play in new ways whether rehearsing, practicing, or performing. The key for them was the continual return to experimentation and collaborative extension of their basic approaches to the music.

While creativity always occurs as organismic/environmental engagement, it is important to see, as in these examples, both the inbuilt organismic capability of shaping and reflexive shape shifting as well as the shaping mediation that come from the surround throughout the lifespan. Environment and organism differentially and synergistically shape and affect each other in creating, becoming, and developing both new contents and processes of everyday creation.

Recognizing this heuristic distinction enables us to look at practices of the individual on the one hand and the environmental conditions and influences on the other. I can, for example, practice scales, chord progressions, tonalities, and rhythmicities as I develop my musical craft and, unless I do this work, my playing is diminished. On the other hand, we can begin to talk about what aspects of the surrounding contribute to the forming of individual and group creativity. And then, of course we can look at each moment's creative emergence in terms of the components of intrapsychic and interpsychic configurations of possibility. This is true of relationships and public roles as well.

There is a triple process here. Inbuilt organismic creativity and the mediation of the social and natural surround lay ground for social practices of mutuality and disagreement in the development of creativity.

Play with Media and Pretend Play

I turn now to a discussion of the role of media in the creative forming of senses of roles, values, selves, and interactions. With the ubiquitous spread of media of various kinds, it becomes important to look at the how we now are influenced by, impacted by, and create with our interactions with the media throughout the lifespan. Figures and tropes from the media live in us as representations in our psyches. They grow with interactions with other figures from our childhood and familial interactions and we use them in a complex calculus of identities and meanings. This aspect of psychic representation and creativity needs a closer look.

In "The Stolen Lipstick of Overheard Song," Dyson (2003) begins with a story of a mother who was driving her five-year-old daughter to school when the song "I'm Going Down ['Cuz You Ain't Around]" played on the car radio. The daughter sang the song in a bluesy voice that was surprising to the mother.

Dyson says that the girl "...like her close school friends did not only slip on musical voices from the radio; she appropriated them from church and school, from movies and television." She talks about children's "replaying and

transforming of media texts,” noting that “young children are surrounded by voices emanating from boxes and screens of various sites, as well as from the people with whom they share their lives” (p. 149). The children were part of a multi-ethnic school and they learned songs, expressions, and movements imbued with other children’s cultural backgrounds.

The everyday aesthetic is audible in many neighborhoods, day care centers, and playgrounds as children learn songs and rhymes from other children. They use these verses to regulate clapping, jump roping, and other games; to pass judgment on the deviant; and to simply enjoy themselves ... These oral performances are notably more vulgar, more raucous, more focused on sexual and power themes than any songs adults deliberately teach children. (p. 151)

Children take the songs, sounds, and rhythms from one place, imitate and transfigure them, and apply them to new situations as well. Dyson gives another example:

...when the first graders were looking through their kindergarten portfolios, Noah commented that “I done that real good.” Denise immediately broke into lines from a James Brown (1965) classic “I Got You/I Feel Good.” (p. 156)

Pretend play offers children a prime context for cultural and linguistic exploration and socialization of one another. They permit play with various social identities or “voices” that are otherwise restricted from them ... In this exploration and reflection of social norms children create alternative social realities in which they hold positions of authority, power, and control, and in doing so, may also challenge and transform them... (Paugh 2012, p. 172)

In pretend play, roles are taken and in taking a role a child extends his or her ranges of self-enactment. In a gloss on Mead (1967), the I that I am plays with the many me’s I have practiced and new me’s acquired from watching and acting like others. In playing characters taken from home, or school, or television, the child extends the possibilities for feeling, moving, and reflexivity.

Puppet shows and puppet and doll figures become ground for exploration of multiple emotional and expressive enactments. Both alone and in dyads and groups, children take on the stances, voices, and actions of figures from books, cartoons, media and daily life. They direct each other in the nuances of character development.

We can become D’Artagnan, or Plastic Man, or Superwoman, or Mu-Lan. The materials of play are bodily enactment and imaginative tropes, both

individual and collective (Morin 2005). "All for One and One for All," we might shout, imitating the Three Musketeers practicing a new sense of collective functioning in the process.

These imitations and transformations employ somatic expression and gestures, along with verbal language. Roles are composed from linguistic and somatic plays with affect, tone of voice, pitch, gesture, breath, tightening of muscles, and facial expressions.

As a boy, I loved the satiric comedy of Sid Caesar, a master of physical comedy. In the sketches that he and his fellow players performed on their weekly TV show in the mid-twentieth century U.S.A., there was an emphasis on the bodily shapes of characters. Caesar also imitated the sounds and cadences of languages, his characters speaking a prototypic French or Italian or German or Russian.

I in turn imitated Caesar imitating and becoming these characters. It was recursive (Morin 2008). I imitated the imitating and in the imitating became different. Possibilities for action, expression, and self-enactment were expanded. I became, in play, something other. Currently, I use this play of non-verbal interaction in training students becoming psychotherapists to experience aspects of the speech and movement patterns of their clients.

All of these activities form a ground of creative practice. In each play there are, again, recursive developments in which the child or group's vocabulary of gesture, color, shape, excitation, and meaning are changed. They enter each new encounter with the skills, perceptions, and feelings gained from other ones. This recursiveness changes both the play and, more generally, the way individuals and groups learn creative enactments. Pretend play is of course extended in theater rehearsal and the tuning of a role that is done by the actor, child, or adult. It also becomes ground for the development of senses of self and interactions.

Comics, novels, magazines, television, and film influence and form contexts for play and the development of personal and social roles and identities. Children also play a variety of video games in which they create avatars, landscapes, and story lines, as well as respond to various fictional threats and possibilities.

Tsai (2007) developed coding schemes tracing differences in depictions of women in Chinese and American magazines as well as the activities of boys and girls in leading Taiwanese and American children's books.

As they predicted, pictures in American women's magazines showed more excited smiles and fewer calm smiles than Taiwanese women's magazines. This difference could be seen in men's magazines as well. In their analysis of best-selling children's books, they found that the American books showed bigger, more excited smiles and more activities of high arousal such as running.

In another example of the cultural mediation of behavior, the early Nancy Drew series of novels for girls gave an image of a strong independent girl who rides off and solves mysteries. Many women I have interviewed who have read these novels endorse the influence they had on their sense of creative efficacy and empowerment. At the same time, the novels depicted African American women in a denigrating way.

In *Teddy and the Mystery Parrot*, a boys' novel of the same period, 10-year-old Teddy says he will have a better time than his sister on their summer outing. The boys go to an island and fish and camp (Garis 1938). The girls are not permitted by the boys to join them because they will scare the fish away with their excessive chatter. Teddy shrewdly bargains with the untrustworthy, dark skinned Gypsy folk who claim to know where his lost parrot is and has an adventure with an escaped circus bear while his sister is sedately helping their mother set up the cabin (p. 65). There are clearly both gendered and cultural hierarchies of being that run through the book and form specific kinds of representations in the minds of its readers.

In Umberto Eco's novel *The Mysterious Flame of Queen Loana* (Eco 2005), the protagonist finds his way to a secret room in the home in which he grew up in Italy where he discovers the comics, magazines, posters, record covers, and other media artifacts that informed his childhood understandings. The materials found are from the 1930s, and through them Eco shows how the Italian Fascist propaganda of the time took characters from US comics and made them Italian. More darkly, he shows the racism and anti-Semitism in the propaganda posters and children's books of the time.

Interactions with the media in solitary or polyadic engagement lead to a complex play of representations and enactments of values in our conduct of our living. We come into contact continuously with the many characters and process of meaning that form our psyche and these are evoked as well in our interactions with each other. Looking at these closely in their creative aspects allows us to examine what kinds of embodied world making we are interacting with and gives us tools for both description and intervention. Wonder Woman Historian Jill Lepore (2014) shows how the comic book character Wonder Woman evolved and devolved embedded in her socio-historical surround and demonstrates the character's influence on how people conceived and enacted women's roles. First created in 1941, Wonder Woman was an Amazonian trained superhero who fought fascists, dictators, and everyday miscreants.

The book has a richly illustrated section of the scenes from the comics with commentaries. (Note to Reader: The section is unnumbered, and in the follow-

ing references to the section I have indicated the author and the page number of the insert section)

In a 1943 scene, one male character notes with frustration (and satirical illustration) that by 1944 there would be more than 44 million women involved in the War effort. That meant that they would be taking over and doing so-called men's work in the world. There is also an image from the same period of Wonder Woman going after "Dr. Psycho," her three-headed nemesis (the heads being Hitler, Mussolini, and Hirohito), who is also an opponent of women's rights (Lepore, Insert 14).

According to Lepore, Wonder Woman changed after the War to become more docile and more "domesticated." Like her sisters of the Rosie the Riveter Era, she returned, and was returned, to a pre-war social mentality, to an allegedly less powerful role in society. In a 1949 strip, a now weakened Wonder Woman, no longer independent, is being carried, smiling, across a river by Steve, her long-term partner in a trope that had been used in other places that depicted a strong man rescuing a weakened woman such as the cover of a Tarzan novel in which Tarzan carries a collapsed Jane through the jungle away from the harm of a raging elephant (Lepore, Insert 14).

By the early seventies, however, Wonder Woman had become a symbol of sorts for feminist issues and matters of strength, participation, and intervention. *MS* magazine had her on the cover of their first issue in which Gloria Steinem said, "Looking back now at the Wonder Woman stories from the forties, I am amazed by the strength of their feminist issues" (Lepore, Insert 16).

Note the circularity in all this. Certain images and tropes are employed to valorize ways of behaving. These behaviors are imitated and embodied, rejected, or altered. As with Wonder Woman, other fiction and figures of the media surround become imitated and played with, and form the ground of new ways of living. Images are produced and disseminated as memes.

These memes are mimed in turn by individuals and groups of individuals. In a humorous example of this process, Lepore points to the 1970 feminist satire comic "It Ain't Me Babe." It contains a story in which "Veronica ditches Archie for Betty, Petunia Pig tells Porky to fix his own dinner, and Supergirl tells Superman to get lost" (Lepore, Insert 15).

Anthropologist John Caughey (1984) notes that people identify with media figures, become them in pretend play, and have what they think are real relationships with them. We also internalize multiple figures from various communities in which we participate. Because of our existence in and representation of polycultural media and interactive worlds, these voices and

enactments, taken from specific socio-historical environments, can be both personally and collectively conflictual.

And so, for example, coming from the Wonder Woman story and others like it we can be conflicted in balancing home life and work life. Contemporary partnership and parenting models can conflict with older ones. Spiritual and religious beliefs can be in conflict with secular understandings and identifications. We take on, play with, multiple figures from the media in the creative play of building directions of meaning and performative enactment; and the figures we create can be synergistic or conflictual. Spokane Indian novelist Sherman Alexie writes about these conflicts extensively. In his article “I hated Tonto (still do),” Alexie (1998) says:

In the movies, Indians arose accompanied by ominous music. And I’ve seen so many Indian movies but I feel like I’m constantly accompanied by ominous music. I always feel that something bad is about to happen. (Alexie 1998, n.a.)

Alexie notes that he rooted for John Wayne as Wayne in “The Searchers” searched for the niece he was going to kill because she had been “soiled by Indians.” “I hated those savage Indians as much as John Wayne did,” he said:

I’m always aware of how my whole life is shaped by my hatred of Tonto. Whenever I think of Tonto, I hear ominous music. (Alexie 1998, n.a.)

And then he notes that Indians in the movies he was watching were largely played by White Men:

I mean, I knew I could never be as brave, as strong, as wiser as visionary, as white as the Indians in the movies...I was just one little Indian boy who hated Tonto because Tonto was the only cinematic Indian who looked like me. (Alexie 1998, n.a.)

At the time, I am writing this, multiple TV and film depictions of queer couples and queer marriage and transgender role enactments have laid ground for greater creative play with gender possibilities. Women’s groups have continued to move social institutions toward equality of pay and power. How sport, music, game is done is changed and changing. At the same time, there is strong, organized, cultural mobilization against all this that is also enacted. Social roles and identities are no longer simply traditionally given—or at least not that alone. That is, there is tension and conflict and both generative and paralyzing dialectic among the multiple values and emphases of behavior portrayed and internalized.

Complex senses of self and other and interaction now collide and mix, and these processes are crucial for us to understand in our attempts at understanding the current states of our everyday creativity.

Diminishments of Creativity

Continuing these themes, I turn now for a moment to a rehearsal of what we commonly know to be the diminishment of daily creativity in cultures around the world. In her chapter “The Role of Play in Fostering Creative Culture,” South African teacher Hasina B Ebrahim (2013) emphasizes a contemporary problem common to schooling in many areas of the world. There is a demand that children already begin in preschool the kinds of basic cognitive learning that will, it is thought by some parents and teachers, give them a head start in the educational world. What gets excluded is play, creative arts, and the underpinnings of creative thought, both individual and collective. In this context, she says, “the compliant child rather than the creative child is valued.” (p. 22)

Hennessey (2013) says that as a primary school teacher she became concerned that “our schools were killing children’s motivation and creativity (p. 39).” Hennessey continues:

Almost without exception, the five-year-olds in my mixed-age classroom began their educational journey wideeyed and excited about everything put in front of them. ... Yet by the time these same students had reached the age of 8 or 9, far too many of them had become rule bound and selfconscious. Their intellectual fearlessness in the face of challenges had been replaced with a cautious, “let’s keep it safe” attitude and a reluctance to try new things. (p. 39)

Anthropologist Dorothy Lee, writing in 1959, wrote about a problem in collective and individual creativity that still exists. She had moved to a Midwestern US city because she thought the school system there valorized learning based on social participation in strong contrast to the rampant individualism she had found elsewhere. When she went to the open house, she first visited the class of her seventh grader son. There was a mural depicting the ancient Egyptians and she was horrified to see all the lifeless horses in the mural. She couldn’t see her son’s work there—he often drew horses that were fiery and spirited—and the teacher said that his were so different from the others they had to be removed.

When she went to her daughter's fourth grade class she saw a Thanksgiving mural.

All the Pilgrims were alike, all the Indians like without deviation... The teacher explained that the first round the figures had all looked different so she had to cut out patterns and give instructions for the children to follow (p. 17)

Lee goes on to compare the ideas about the group here with those she had studied in her fieldwork among the Hopi Indians of the Southwestern United States:

I had studied the Hopi where, within a strong group structure, each person had a unique significance (p. 19)

She talks about the Hopi community as having a structure where there was *both* strong community and strong individual contribution and meaning.

This last issue is crucial. Montuori and Purser (1999) and Glăveanu (2014), among others, have pointed to the overemphasis on the creative individual as heroic. At the same time, now we have the problem of the group being valorized over the individual. The development of a stance that sees the interactions of groups and individuals as creative ground is critical.

As noted above, it is, despite the inherent ongoing creativity of our everyday functioning, easy to lose sight of this creativity in more developed everyday practice. It is indeed possible to lose touch with the play and wonder of the everyday, individually and collectively. Private and public bureaucracies, blue- and white-collar conformities, and religious and spiritual conventionalities can and often do stifle the creative imaginations of individual and groups. We still do not know how to teach ourselves to be collaboratively creative in small or large measure (Grand 1988). A good deal of personal and public angst can be seen in the diversion away from the immediate experiencing of aspects of creative practice.

All this being said, we can begin to look at how historic and contemporary cultures and communities do devise means for ongoing revitalization of everyday creativity, and how they are developing new forms of collective exploration.

Mix and Mash

...there is an important and potentially fruitful connection between improvisation and the lived experience of complexity, and that improvisation and creativity are capacities we would do well to develop in an increasingly unpredictable, complex, and at times chaotic existence. Montuori (2003, p. 236)

When the Trinidadian Calypsonian Lord Kitchener arrived in London, he was asked to do a Calypso on the spot. Kitchener began to sing “London, is the place for me; London is where I want to be” which he later recorded. In a similar vein, American folksinger Pete Seeger was asked to sing something about the Ladies Auxiliary. He did. “Oh, the Lady’s auxiliary is a fine auxiliary, if you need an auxiliary, call the ladies auxiliary.”

In each case, and in countless others like them, there was a practice that allowed a rhythmic, rhyming tune production to spontaneously emerge. What is important for our purposes is that there are cultural traditions that valorize the making of song—or art, or literature—from daily occurrence or, as well, the spontaneous speech of street corner evangelic witnessing, or productions of improvised music.

The singing of blues singers, for example, involves a small number of chords with a multitude of rhymed word plays. There are improvised and practiced variations of sound, utterance, lyric, all of which are done inside the basic structure.

I like the so-called DooWop street corner music of black neighborhoods in the 50s and 60s, in which small groups of singers would sing together, compose and replay songs, engage in a jostling play of sound and rhythm. Similarly, in the New York Bronx of the 70s, street corner and home studio plays with rhythm, cadence, movement, and sampling became hip-hop. Records were scratched rhythmically, and words of protest, and new rhythm and rhyme, new beats, juxtapositions, and mixes occurred.

In the Caribbean, innovations like Calypso and Reggae were created that included new beats and sound mixes and elements of political and social critique, as well as the reflections on the daily difficulties and possibilities of living sung about in the Blues.

And all these musics mingle and enhance each other. There is a circulation of the music and new styles and kinds of music are created throughout the world. Berkeley-born jazz composer and instrumentalist David Murray plays with a Senegalese guitarist as well as the Go Kwa masters of Dominica. The music of Bollywood influences music in Trinidad and Canada.

Chicago avant-garde jazz musician Henry Threadgill (Chinen 2009) says he heard and gravitated to Boogie Woogie on the radio,

“But I was listening as much to Serbian music and country and western music and classical music as I was listening to jazz and blues,” he said, describing a pattern that would also rule his working life, once he took up the saxophone. “I’m playing in polka bands, I’m in classical orchestras,” he recalled. “I’m in the house band at the Blue Flame, and that was it. I’m playing in marching bands,

mariachi bands, Latin bands. I'm learning all of this broad music, from [Handel](#) to who knows what." (Chinen [2009](#), n.a.).

In Trinidad, Carnival becomes a setting for different groups to make costumes, practice calypsos, and play mas. Themes for carnival figures are taken from local and international images. Arnold Schwarzenegger as Terminator and Sylvester Stallone's Rambo, for example, were major figures in different Carnivals of the 1990s. In preparing for each year's Carnival, Steel bands throughout Trinidad and Tobago compose and practice new tunes.

What is crucial here as well is that there are practices of mentoring, collaboration, and group and individual practice, all of which lay ground for improvisatory inspiration to occur.

In our era there is a plethora of new technologies available that permit us to create information, and allow us to exist in many virtual times and spaces. We develop play lists, share photos, films, and ideas, play music or compose together over long distances. You Tubes make it possible to see images, hear music, and check out social and political events, both historic and current.

Rather than living in the linear and monolithic cultural narratives of our pasts, we now live in a polycultural technological milieu in which we can visit multifarious and differentiated websites and pass the information and images to each other. Information and viewpoints from local communities around the globe "travel" to multiple other communities. Cell phone cameras record and send real-time images of events of various kinds.

There are also combinatory musical plays occurring everywhere, processes generally impossible in so wide a scale in earlier eras. The dying Welsh language, for example, is being resurrected through contemporary youth groups playing Welsh Hip-Hop. In one TV performance, a Welsh rapper performs wearing a Che Guevara tea shirt.

Similarly, Guatemalan groups are creating Mayan Hip-Hop. One group consults a shaman for the words that will be incorporated with contemporary Hip-Hop beats into new productions. Hopi musicians combine contemporary Reggae and traditional Hopi medicine songs, and traditional Okinawan songs are combined with hip-hop beats. Michael Tilson Thomas, long-term conductor and musical director of the San Francisco symphony orchestra, noted that at one point, "we were playing Boulez, but we were listening to James Brown." Brown, known as "the Godfather of Soul," was a famous Rhythm and Blues composer and performer.

It is just this kind of mix and mash that I want to emphasize here and explore as one aspect of the new daily creativity of our time. With Gilmore and Spooky ([2008](#)), I see a combinatory revitalization and a revival of the

creative occurring everywhere. We live in a polycultural spin of identity plays, meanings, and values enabled by new technologies of production and transmission. With the new polycultural ubiquitous there is both conflict and difference to be worked, as well as great possibilities for new creative emergence in our senses of self, other, and meaning.

With extensive immigration and shifts in neighborhoods and schools we encounter cultural lifestyles, histories, and comportments different from those of our immediate familial backgrounds. There is not one cultural story, but multiple simultaneous and asynchronous stories. There are plural narratives, plural variations and enactments of roles and values in conflict and in creative emergence.

The promise here of course is the coming together and emergence of new narratives and new forms continually influencing, shaping, and reshaping each other. But there is also the confusion and loss of identity that can come with the new cosmopolitanism. We need, I think, new ways of thinking about and doing this play of polyontic becoming that characterizes the everyday creating of our time.

Fostering Everyday Creativity

There are a number of initiatives and understandings I want to indicate here that point to ways to build the new sensibilities and fluidities we need to navigate our current era. One aspect noted above is the return to a matured version of childhood pre-production creative play that consciously juxtaposes things and aspects of the everyday and returns to earlier plays with materials and figurative enactments.

John Cage, for example, listened to the sounds of the city around him, its textures and rhythms for materials of new becoming—his and his works—and laid ground for a possibility of seeing and hearing and organizing anew. Cage's practice is reflective and recursive. He uses chance and random events in his music and visual art. A stone is dropped, a line is drawn combined with a random play with inked coins, Zen and other stories are combined with splashes of sound. He listens and draws and, in the listening and drawing, is changed.

Similarly, composer Oliveros (2005) calls for a practice of Deep Listening—a use of oneself in listening and performing alert to the possibility of construction, deconstruction augmentation, diminishing of any sound element; the surprise that heralds new possibilities. Karen Stackpole (2011, personal communication), percussionist for the group Vorticella, listens for sounds of

everyday objects that become a vocabulary for play in performance. “Listen to this!” she said to me, tearing a piece of paper, and then another. Brenda Hutchinson takes sounds from daily contexts—a mental hospital, people on the street, children’s toys—and mixes them in sound compositions.

The North American poets Diane diPrima, Alan Ginsberg, Walt Whitman, and William Carlos Williams point us to everyday language, cadences, and things as a source of our creative vitality. From the experiments of DaDa and Surrealist artists, we learn a new kind of composing that in many cases re-uses things and forms that have been discarded or abandoned and joins them with other pieces from the present and future.

Another direction crucial to our fostering the ground of everyday creativities is exemplified in San Francisco’s Exploratorium and other science centers around the world. According to Sally Duensing, one of the features of many exhibits in these museums is that they allow children to “fiddle with” organized phenomena (Duensing 1987). In the exhibit called Light Island, for example, adults and children play with angles of light through to manipulation of light sources, prisms, and so forth. Other exhibit materials are carefully chosen to make both certain explicit points about the phenomena and also to allow visitors to take this learning into new creative possibilities.

The outcome here can be surprising. One visitor to the Exploratorium wrote to Frank Oppenheimer, the Founding Director of the museum, that she had gone home and felt empowered to rewire a lamp. There was no one exhibit or groups of exhibits dedicated to lamp restoration. But the engagement with objects and ideas in creative, immediate ways had encouraged her profoundly.

Several analytic approaches are also interesting in the return to creative play. In Kalfian Sandplay work, for example, people choose figures from an array of figures on shelves in a therapist’s office and place them in a shallow box that has a ground of sand. The people engaged in the play work with sand and water, making tunnels or mounds or circles or smoothing or ruffling the sand; they place the figures chosen in the sand, building stories and plays in the configurations of sand, water, and figure they create (Bradway et al. 2005).

Through this process, through time, creative movement begins to be restored to psyche. Children and adults become more able to get past places where they are stuck and develop more flexible responses to their environments. Sandplay can also be used to teach creative collaboration where trays are made by members of a dyad or group who take turns placing figures.

Along similar lines, child analyst D. W. Winnicott (1971) played what he called a “squiggle” game with his clients in which they would draw a squiggle and he would follow. The game went back and forth until some coherence

was reached, a new creation mutually formed. There is a rethinking of our psychology required here. The mentoring and mutual collaboration around creativity become central. The loss of this creativity, particularly in times of great change, leads to difficulties in living. Both Jung in his work with active imagination (Jung and Chodorow 2007), Rank (1989/1932) with his emphasis on creativity, Winnicott, and Maslow (1962) held this immersion in creative process at the heart of a view of optimal psychological function. We now have to extend thinking to understand our creative imperatives in terms of our current polycultural, fragmented, and creative emergences.

In a public institutional example of the enhancement of creative play, Venezuelan President Luis Herrera appointed Luis Alberto Machado the Minister of State for the Development of Intelligence in March 1979. Machado's assignment was to raise the intelligence of the nation through the establishment of programs that fostered creativity and creative intelligence. A small descriptive pamphlet was issued by Machado in 1982 that reads like a manifesto of creativity:

This project is aimed at offering the community as a whole, an adequate material to encourage a self-educating permanent process. One that may contribute to the development of each human being's infinite potentiality.

The very purpose of these efforts aimed at encouraging human potentialities is to contribute to the improvement and self-fulfillment of every man [sic] in a permanent self-educating attitude. One that may lead him [sic] to respond to society in an autonomous way, rid of all submission and dependence... (Machado 1982, p. 26)

In Machado's approach, as well as other practices described here, there is both distributed social creativity (Glăveanu 2014) and a return and revitalizing of the idea of the amateur. In another Venezuelan initiative, Dr. Jose Antonio Abreu started bringing poor children from the most impoverished barrios to learn classical music and play in orchestras. The program flourished and, as of 2008, over 3000 Venezuelan youth had participated (Turnstall 2013).

In another example of a public initiative, a dialogue game called Play/Decide has been used in various public settings such as informal science centers and museums to facilitate experiences of collaborative discussion and decision-making around a variety of public issues. Topics developed have included discussions of HIV as public health issue, nanotechnology, and climate change. Research and dissemination of this project was funded by the European Commission.

In the Decide process six to eight participants read, discuss, and debate issues for one and a half hours. In the play of the game Policy, decisions emerged from sometimes strikingly different beginning positions held by participants. A woman in one session who began with strong opinions dramatically says, “Oh I don’t know what I believe!” in response to the issues and ideas being raised. In doing the activity, new openness to other people’s ideas frequently occurs. Groups begin to come to decisions that incorporate various viewpoints after sometimes-heated debates. Play/Decide is a good example of a public initiative that promotes public, collaborative creative inquiry.

In a final example of current initiatives that encourage new possibilities for everyday creativity, Gutierrez (2008) describes and analyzes the work of the UCLA Migrant L S Institute at UCLA. This program brings children from migrant worker family background into a program that adopts quite extraordinary approaches in designing a situation where: “the object is the constitution of what Gee (1996) calls a ‘social semiotic toolkit’ that extends students’ repertoires of practice in ways that enable them to become designers of their own social futures.” (pp. 30–32)

The program utilizes various means to promote collaborative and collective social imagination including social, critical, and sociocultural theory. There is a return to pretend play both individually and collaboratively as participants re-enact aspects of their pasts as well as imagine and take on roles for their future becoming.

According to Gutierrez,

Social dreaming, a concept rooted in Freire (1970), serves as a central conceptual metaphor elaborated throughout the course of the MSLI (Espinoza, 2004) in everyday and classroom language, the embodied concepts of teatro, the texts, and other related metaphors... to help students redefine both the “world as it is today” and the “world as it could be.” (34)

Gutierrez notes that the program emphasizes the fluid learning occurring between home and school and “what takes hold as children and youth move in and across the various settings and contexts of their everyday lives” (p. 6).

Thus, the text and its production are at once personal, socially mediated, and, hence, heteroglossic-situated both locally and historically. From this perspective, a sociocritical literacy is a syncretic literacy organized around a pedagogical approach that focuses on how individuals and their communities influence and are influenced by social, political, and cultural discourses and practices in historically specific times and locations (Cruz 2006 in Gutierrez 2008, pp. 6–7)

Gutierrez indicates concrete tools in the development of personal and social futures.

As Montuori notes, our current reality “requires what was lacking from the creativity of Modernity, namely generative environments where creativity, exploration, hope and dreams of a better future can be nurtured and developed collaboratively” (Montuori 2011, p. 225).

The Dance of Complexity

Life in a complex world, and a life which reflects and values the complexity of both self and world, requires the ability to improvise—to deal with, and indeed to create, the unforeseen, the surprise (Montuori 2011, p. 240).

Our very experience of the daily is changing on a number of fronts, and we now live with greater complexities of cultural meanings and clashing values. In the Introduction to his 1914 book “Concerning the Spiritual in Art,” Russian painter Wassily Kandinsky had noted that the work of artists at any time is grounded in the culture of their epoch.

Every work of art is the child of its age and, in many cases, the mother of our emotions. It follows that each period of culture produces an art of its own which can never be repeated (Kandinsky 1914, p. 1)

For Kandinsky, there was a sense that there was a *Zeitgeist*, an underlying trope of a given time, a culture in which possible forms were nested. By contrast, we live in a time in which we are immersed in and draw from many traditions, ancient and current, and are multiply influenced in our feeling and beliefs by the multiple communities in which we participate. Images of roles and virtues and right living drawn from varying sources are held, sometimes conflictually, sometimes confluently. Syncretisms and conflictual misunderstandings abound. In the public world of the everyday, there are vociferous allegiances to limited and parochial positions. And we have yet to find ways to creatively engage difference and collaboration.

Everyday experience, and by extension everyday creativity, is polysemous, associative, and proliferating. Nuanced and blatant complexities of behavior and feeling influence, exchange, and alter the moment-by-moment and long-term functioning of individuals, groups, and social practices.

As Grand and Chiaia noted (Grand 1988), there is in collaborative creativity a messiness of intertwined and chaotic interaction, as well as synergic and

smooth constructions. We need to learn how to function with disparities of enacted values and embodied beliefs. And this requires practice in multiple realms of creative collaboration.

In this situation we need to develop new pedagogies and practices of daily creativity. In the current era of polycultural interchange, this investigation becomes particularly important as cultural tropes, behaviors, and affects are multiply influenced and multiply influencing in ways we have not begun to understand.

Ung (2015) indicates one aspect of this new understanding when she notes that:

Culture is inherently difficult to define due to its multifaceted nature (e.g., dimensions of collectivism and individualism within a group)...As someone of mixed ethnicity and generational status (my maternal great-great grandparents emigrated from Sicily, making me a third generation American, and my father emigrated from Cambodia, making me also a first generation American), I question the concept of distinct “cultural” groups (p. 37)

This change in perspective has come quickly. Pollock and Van Reken (2009) first published a study of children living in countries other than their countries of origin in 1999 calling it “Third Culture Kids: Growing Up Among Worlds.” By two years, they had changed a crucial designation for their subjects whom they now called cross-cultural kids realizing that all kids, everywhere (generally) now were embedded in a wide range of polycultural influence.

In 2001 we added the term cross-cultural kid (CCK) to our lexicon to include all kids who for any reason had grown up deeply interacting with two or more cultural worlds during childhood

What is it we are studying in the traditional TCK “petri dish”? Bottom line: It is here we can begin to see the first results of a great, but not yet fully explored, cultural shift of our changing world—the difference between being raised in a monocultural environment or a many layered cultural setting (p. 106)

We are, now, immersed in a complex, many-sourced creative becoming, socially and individually. This requires new sensibility about how we actually create our worlds in the midst of this complexity. As post-colonial, post-modernist, post-fundamentalist, post-normal, post-gendered, and traditional communities and positionalities come into increasing contact and dialogue in public institutions, we need to find ways of engaging that have not yet been created.

We have also opened our understanding of meaning making in interaction to go beyond the linear and monologic. Martsin (2012), for example, notes that some of the tools of the new Idiographic Science (Salvatore et al. 2012) allow us to draw upon on the social-semiotic theory of multimodality (Kress 2010) in which we look at how other modalities in addition to speech could be taken into account in the conceptualization of meaning making (p. 262). In all this we move from the monological and monoperspectival to the polysemous, from the ongoing continuity of the predictable and unified to senses and fears of fragmentation and disorders in the ground of becoming. We become participants in the making of the worlds but we have not yet developed the thought and tools that would help us in these new necessities. What we can learn from thinking about Everyday Creativity is a new sense of human becoming that would be grounded in play, mutual participation, reflective reflexivity, deep connection, and a sense of the possibilities and problematics of the polycultural.

Vilhauer (2010), for example, sees the philosopher H. G. Gadamer contributing the notion of play to a redefinition of what human being is. In this vision, we are not solitary observers, but are rather “participating being(s)-at-play in the ongoing ‘event’ or ‘game’ that is the human form of life” (p. 112). Every moment contains the possibility of creative understanding, “an understanding that is enriched through that back-and-forth movement in which he [sic] works things out with others and learns something new” (p. 112).

In this new vision we are called upon to participate in the emergence of different senses of the human enterprise. Martiniquan poet and essayist Eduard Glissant suggests that there is great opportunity here.

If we rediscover the fact that we can change through exchange with others, without losing ourselves or our true nature, then we are able to glimpse what I would like to call worldness, which is our common condition today. (Glissant 2002, p. 287)

And again, the lesson is that a plural, multiplying, fragmented identity is no longer given or thought of as a lack of identity, but rather as a huge opening and a new opportunity of breaking open closed gates (p. 288). As we recognize greater complexity in daily living and social participation, we are called upon to develop new tools for self and communal renewal. Some of these may well include: the ability to play with materials and ideas with self and others that allow for juxtapositions of color, sound, movement, texture, feeling, and affect; the ability to change, shape-shift, and allow new ideas, embodiments, values, and senses of self and other to develop; the ability to collaborate and

collectively dream the future; the recognition that there are multiple interactions and mutual influences in the multiple communities of practice to which we belong; and the development of socio-critical abilities to analyze and dialog with others in the creating of daily realities.

In all this we can redefine ourselves, and envision what a contextual and polycultural participation might look like and how we can become more conscious contributors to the everyday creativity in which we are immersed.

In the late 1980s, Dizzy Gillespie, the founder of Be-Bop and co-founder of Afro-Cuban Jazz was invited to the Cuban Fifth International Jazz Festival in Havana. In an interview there he predicted a future that is in fact now coming to fruition.

I figure in fifteen or more years the music of Cuba, Brazil, the West Indies and the U.S.—It's going to be integrated. That's when you're really going to hear some music. Because we're going to bring our own gospel... and our jazz... and our shouting. We're going to bring that and the Cubans are going to bring their Mambo and their Conga, the Brazilians their Samba and the West Indians have their Calypsos. And it's all going to be one music. And I want to be here to see it. (Holland 1998/2005, n.a)

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Part 5

Cross-Disciplinary Perspectives on Creativity and Culture

30

Creativity as a Developmental Ecology

Matthew Walls and Lambros Malafouris

A hunter readies an arrow and lifts his bow. Aiming at a prominent tuft of grass, he draws back the bowstring, and lets the arrow fly. This scene is from the Netsilik Ethnographic Film Series which followed the daily activities of an Inuit group in the Central North American Arctic over the course of a year (Balikci and Brown 1967) (Fig. 30.1). In the sequence, the hunter had just completed assembling the bow, and with his young child watching, was testing it against practice targets. His son, who had enthusiastically traced a predictive finger along the path the arrow would take, runs to retrieve it. It is a simulation—one of many preparations leading to a key moment when the community intercepts large herds of caribou as they migrate southwards for the winter. The fall caribou hunt was one of the most important annual events for the Nattilingmiut¹ through which they created a subsistence by caching

¹ The Nattilingmiut are referred to by a variety of names in the literature, including the Netsilingmiut, or Netsilik Eskimo. In this essay, we specifically base discussion around Nattilingmiut caribou hunting practices, but note that many of the described practices apply to other closely related Inuit groups in the Central Canadian Arctic.

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Fig. 30.1 Sequence of images from the Netsilik Ethnographic Film series where a hunter is testing a sinew-backed bow in preparation for the caribou hunt (Balicki and Brown 1967)

enough meat for the early winter, and preparing enough hides for clothing and shelter.

The skills and cultural practices through which people engage the world in ordinary daily life are not a typical field that is addressed in the interdisciplinary literature on creativity, particularly where definitions of creativity are tightly linked to extraordinary innovation in a historical sense. Yet creativity permeates episodes of skilled practice such as the hunter shooting an arrow. Even in the simulated environment in which he is practising, no two attempts can be the same, and a successful shot is the outcome of careful responsiveness to situational relationships between the hunter's body, the bow, and the target. To use the bow in an actual hunting scenario involves many more complex environmental contingencies, where the hunter must read the landscape, anticipate how the caribou herds will navigate the terrain, and work with other hunters to coordinate action. And for his son to become a hunter, it will take years of focussed training to develop the requisite sensorimotor and environmental awareness. Nattilingmiut caribou hunting is the developed capacity to sense and creatively engage with a dynamic world that changes even as arrow is drawn back against the bowstring. By creating a subsistence, hunters develop awareness and understanding along currents in the lived world.

In this chapter, we follow calls within anthropology to see creativity as a situated, ordinary, and central feature of human life (Gell 1998; Ingold 2011; Liep 2001; Malafouris 2013, 2014; McClean 2009). We define creativity in ecological terms, as the joining of relationships in a dynamic world to find or sustain form, and we consider the role of creativity in shaping human awareness and experience. Creativity in this perspective is to be found within the physicality of skilled practice, rather than internal mental states. As a prime example of creativity in the lived world, we follow the orchestration of perception and improvisation involved in the Nattilingmiut caribou hunt. Through the caribou hunt, we advocate the importance of ethnography in addressing

prevalent misconceptions about the relationship between knowledge, cognition, materials, and skilled practice. Hunting, as we shall demonstrate, takes place by changing relationships between the community, the caribou herds, and the landscape. Through creative improvisation in hunting, individuals develop sensory awareness, physical fitness, and personal experience. We argue that knowing itself is a fundamentally creative process involving social, material, and environmental dimensions that are situated in intergenerational praxis. By shaping the development and ecology of mind, creative improvisation in turn shapes the community.

Creative in Theory

As researchers and participants in university life, we are unavoidably actors in a historically contextual knowledge economy where creativity is treated as a commodity. We daily engage implicit understandings of what creativity entails and how it is achieved and valued. 'Is this creative?' is a question that lurks the activities of grading students, reviewing peers, comparing job applicants, or assessing funding proposals (most often as a matter of attribution to an individual). This is important to recognize, because in framing creativity itself as an object of academic study, in defining it, choosing contexts where it can be observed, or even engineering an intelligence that can be creative, there is the possibility of projecting deeply ingrained assumptions onto the world beyond the campus. One such area where we may see a reflection of ourselves, is the tendency in the cross-disciplinary literature to define creativity as the production of the novel, often as transcendence over the totality of human experience (Boden 2004; Hennessey and Amabile, 2010; Kaufman and Beghetto 2009). This leads to hierarchies of creativity, in which the hunters and their subsistence on the tundra, find themselves at the opposite end of the scale to the entrepreneur billionaires of Silicon Valley.

In this opposition of new and established concepts of culture, tradition, and practice, with their self-implied continuity and collectivity are seen more as solid entities from which creativity departs, than themselves fields of research (Glăveanu 2012; Ingold and Hallam 2007). And where the ordinary practices of daily life and learning are accepted to involve creativity, it is often seen as improvisation—but treated as a lesser form than 'true creativity' or paradigm-shifting innovation (Liep 2001). Deleuze and Guattari (1987), refer to this sense of creativity as one of capture and reification of difference, of commodification, and territorialization. This is particularly evident in concepts of plagiarism, copyrights, or patents, where creativity has a definite outcome

that can be represented, owned, or stolen. There is an assumption of a fixed and stable world, which creative acts can add to only once. In such conceptions of creativity as capture, there is a concern for attribution that most often construes creativity as a mental process within an individual's mind, separate from their life processes, embodied experience, and social developmental. The further questions of creativity are pushed into the psychology of the individual's mental processes, the more it espouses an implicit model of cognition as a matter of representational computation, which occurs separate and prior to action in the world (Deleuze 1994; Malafouris 2013).

This underlying model of creativity as a strictly internal process of representational thinking is under challenge as situated perspectives, such as enactive cognition, embodied cognition, and the extended mind flourish (e.g. Chemero 2009; Gallagher 2005; Goodwin 2013; Hutchins 2010; Hutto and Myin 2013; Thompson 2005). Building on a variety of perspectives, situated cognition sees perception and action as distributed and ecological in character (as per Bateson 2000; Gibson 1979; Merleau-Ponty 1996; Vygotsky 1980). This is especially apparent in questions of development and learning, where knowledge and awareness of self is constructed through movement and an interdependence of the body, social relations, material engagement, and the environment. As Malafouris (2013) advocates in his formulation of Material Engagement Theory (MET), the implication for understanding creativity is that as with the mind, it is distributed, and found in the techniques and material relationships that constitute things. Understanding creativity and the mind in ecological terms raises concern over traditional research designs in experimental psychology—particularly where experiments attempt to shut out the heterogeneity of the world by observing creativity in the carefully controlled environments of the laboratory or studio. If creativity involves materially and environmentally situated cognition, then it is a topic that must be studied out in the lived world. This draws special attention to anthropological tools—archaeology and ethnography—for their focus on life processes, the becoming of communities, and patterns of perception and action in a dynamic world through time (Hutchins 1995; Lave and Wenger 1991; Malafouris 2008, 2014; Walls 2016).

Creative in the Lived World

Anthropology pulls questions about creativity into the lived world, where Heraclitus' tenet that it is not possible to step into the same river twice is most apparent (Bateson 2000). People dwell in an environment that is perpetually

coming into being through processes that connect and unfold in scales that link the momentary to the geological, and the local to the planetary. Within this dynamic ecology, things which seem differentiated, such as bees, flowers, farms, and cities, are connected through mutually dependent relationships. Bateson (2000), Deleuze and Guattari (1987), and Ingold (2011) argue for understanding creativity in ecological terms, as something that is less a matter of imposing pre-imagined form onto matter (the ‘hylomorphic model’) as it is of perceiving, following, and gathering together relationships. When we create, Ingold (2011, p. 178) argues, we are ‘intervening in fields of force and flows of material where in the forms of things arise and are sustained’. Creativity is to be found in skilled practice because it is through technique that we find and attend to the potential for form and stability (Ingold 2011, p. 51; Malafouris 2013, p. 208). By following and working with flows in material, the outcome of creativity is pockets of stability or form. For example, once shaped and fired, a ceramic pot serves a purpose in storage until it cracks and is discarded. The threads of a fishing net are woven together and prevent fish from escaping until they break and have to be repaired. Bateson (2000) referred to these stabilities as ‘plateaus’ which hold and sustain their form only through practice and maintenance. Creativity, then, must be understood and defined as the changing of relationships within a dynamic ecology.

This impermanence, relativity of pattern, and creativity as joining of flows in a lived world, is evident in the Nattilingmiut caribou hunt. As with other closely related Inuit groups in the Central Canadian Arctic, the seasonal pattern of traditional livelihood for the Nattilingmiut shifted between sea ice hunting camps in the winter, to living on the tundra during the summer (Balıkcı 1970; Bennett and Rowley 2004; Rasmussen 1931). These groups hunted with a variety of skills adapted from those brought to the Central Arctic by their ancestors during the Thule migration about 800 years ago (Friesen and Arnold 2008; Maschner and Mason 2013). The tundra region to the West of Hudson Bay (often referred to as ‘the Barren Grounds’), is extremely flat, full of swamps, lakes, and rivers, and for most of the year offers little opportunity for hunting. However, for a brief period in the late summer/early autumn, the landscape comes to life with the annual migration of the caribou herds which number in the 100,000s. The caribou, which have spent the summer dispersed in small grazing herds, begin to aggregate and move southwards *en masse* towards their wintering grounds. At this time, the caribou are particularly fat and have new coats of fur in preparation for the winter.

What the Nattilingmiut create through the fall caribou hunt is a subsistence—a temporary stability in the relationship between the community

and their environment. Nattilingmiut conducted the hunt to procure and prepare enough supplies to carry the community through a difficult period between the late fall and mid-winter (Bennett and Rowley 2004). In the fall caribou hunt, the community would use a variety of strategies which were situationally dependent, and could involve archery, traps, or ambushes at river crossings with kayaks (Balikci 1970). It was essential to dry and cache enough meat, process skins for clothing and shelter, prepare sinews for sewing and cordage to sustain the community until the ice conditions permit sea-mammal hunting. Indeed, due in part to the lack of wood sources on the tundra, even the bows the Nattilingmiut used were a special type made from caribou or musk-ox antler supported by a complex braid of sinew backing to give the bow its strength (Balikci 1970, p. 39; Crawford 1983). During the migration, the movement of caribou herds through the landscape is channelled by geological features, such as crossing points at lakes and rivers, which provide hunters opportunities to intercept large numbers at certain locations with a degree of annual predictability. Yet there are unpredictable situational contingencies and challenges that make intercepting and successfully hunting enough caribou difficult. The caribou have their own sensory awareness and move together as a herd; they can smell, hear, and see hunters and, if alerted to potential danger, they can move much faster. There are many environmental contingencies that can affect the timing and movements of the herd, such as an early frost, bad weather, or a shift in the wind (Rasmussen 1931). Hunting, for the Nattilingmiut, requires perceiving the contingencies of the situation at hand and responding skilfully to unfolding relationships between the community and the herd.

Skilled Practice as Improvisation

The creating of a subsistence in this ecology of the Nattilingmiut, the caribou, and annual movements of both through the tundra, is a matter of technique, or skilled practice. Technique and skill are often construed as the application of templates or schemas that exist separate and prior to the physicality of action in the world—and do not typically fall into the subject matter of creativity where it is defined as innovation, or triumph over the established. From a situated perspective of cognition, however, this is a misunderstanding of practice that is tied to the Cartesian separation of mind and matter. It is a division that can be recognized in parallel academic prioritization of theory over practice. Indeed, within communities of practice, there can be tightly bound notions of right practice, rules or ‘recipes for action’, which can intuit-

tively feel 'uncreative'. Close ethnographic studies, however, reveal that skilled practice is a matter at all scales of improvisation and conflation of perception and action in relation to an unfolding flow of activity at hand (Goodwin 1997; Malafouris 2008; Walls 2016). This is tied to another misconception of skill as automation; the idea that expert practice is a matter of rules committed to muscle memory, and is not conscious. The outcome of skilled practice is never certain; it involves a 'workmanship of risk', where success in making is the outcome of attention to the task at hand (Ingold 2000, 2011). For example, carpentry, pottery, or making a subsistence, all deal with heterogeneity of context and unpredictability at different scales, and success is the outcome of careful attention and improvisation. To examine the permeation of improvisation in the activities of the caribou hunt, we trace the orchestration of preparation and action involved at two different scales. First, the corporeal interaction involved in preparing and shooting an arrow, and then the actions that bring the hunters close enough to the herd to take a shot. We emphasize here that these are just two examples taken from a suite of interrelated skilled practices such as butchering, drying, and caching the meat, or preparing and sewing the skins.

The posture the hunter assumes to shoot is well described and depicted in the Nattilingmiut ethnographic literature (Rasmussen 1931, pp. 76–7; Balikci 1970). It is a half-kneeling position, often with the lower knee raised slightly above the ground, with one foot forward, to the body with the target. This is clearly illustrated in the numerous episodes of archery in the Netsilik Ethnographic Film series, allowing a frame-by-frame (24 per second) analysis of the actions involved in a shot. For example, in the episode depicted in Fig. 30.1, as the hunter readies the arrow, his eyes scan over the target and he subtly shifts his posture in reference to it. With his eyes fixed on the target, he puts the arrow between the bow and the bowstring, and knocks the arrow's base so that the other end rests in the crook where his bow hand (left) grips the stave. Three fingers of his right hand hold the bowstring with the arrow pinched between the first and middle finger. The hunter raises the bow by straightening his left arm out towards the target, and simultaneously begins to draw the bowstring back towards his right cheek, lining up the arrow with his gaze. With both arms expanding away from the body, the tension between them increases, and the hunter must compensate to maintain the posture and keep the arrow in a position conducive to the desired trajectory. Drawing the bow and aiming occur simultaneously, in coordination, and there is no discernible pause between this building of entropy in the system and the shot.

Indeed, it is better to say the hunter releases the arrow, because he simply opens the fingers of his right hand. In this moment, the shot as a process

becomes irreversible and the pacing of the action moves from the hunter's control and into the bow. However, the outcome remains uncertain, and even in the brief moment the arrow is propelled along its path between the bow hand and the stave, its trajectory remains contingent on the hunter's bodily attention. If the hunter's posture is altered by the force of the bow straightening itself, or by the sudden release of tension between the arms, that alteration will become a condition of the arrow's path as it leaves the bow. Seconds after the arrow has cleared the control of the hunter, his posture and gaze remain orientated on the target, evaluating the outcome.

In the practice session depicted in Fig. 30.1, the target does not move. In a real hunting scenario, however, being in the right place to seize the opportunity for an accurate shot follows a cascade of preparations, adjustments, and positioning of the hunters in relation to the movements and behaviour of the herd. Throughout the year, the community is preparing for the caribou hunt, timing their movements and coordination of other subsistence activities to travel and be in a suitable place to intercept the herds before they leave the tundra for the year (Balikci 1970; Bennett and Rowley 2004; Rasmussen 1931). The primary challenge is that the tundra is very open, flat, and empty, with view shed stretching tens of kilometres in most directions. Even approaching the caribou, and getting close enough to shoot involves an intimate knowledge of the landscape's nuances and an understanding of how the herd will navigate river crossings, marshes, lakes, and other geographical features. The community must anticipate locations where it will be possible to intercept the herd, and coordinate their movement to avoid being seen, heard, or smelled by the caribou.

'There was no rigidly established strategy in stalking, the hunters constantly having to make ad hoc decisions and adapt to rapidly changing circumstances', Balikci (1970, p. 41) described in his ethnography. Most strategies involving the bow required more than one hunter to influence behaviours on the part of the caribou as a herd. For example, some of the community would mimic the movements or sounds of wolves to drive the herd towards locations where hunters with better cover were waiting in ambush. Throughout the tundra, arrangements of stones to act as drive lanes are a common archaeological feature, which were placed to augment geological features to help channel the herd towards certain locations in the landscape or to provide cover (Fig. 30.2). Even once the caribou are in range of the bow, understand how their actions will affect others in the community and act appropriately so that the community can catch enough. In situational contexts where cover was not possible, hunters would approach the caribou by pretending to graze and make noises like a caribou—the half-kneeling posture the hunter adopts in firing the



Fig. 30.2 Inuksuit drive lanes positioned to direct the movement of Caribou by augmenting landscape features. Photos from Nunavut, Canada by Matthew Walls

arrow mimics the shape of a caribou in profile. By all accounts, caribou hunting required both patience and endurance (Balikci 1970; Rasmussen 1931). It could involve quick movements to keep downwind of the herd, crawling long distances to maximize cover, waiting in cold and uncomfortable conditions, and communicating silently and intuitively with other hunters to coordinate action. The consequences of unskilled practice were very high for the community; a wrong move could send the herd running in the wrong direction, resulting in hours of lost time, potentially impacting future opportunities.

Participating in the caribou hunt requires capacities for awareness and response that are fundamentally sensory, kinaesthetic, and social in nature. As seen through both scales, the caribou hunt involves a cascade of improvisations to alter relationships between the corporeal, the environmental, and the material. From both scales of observation, ‘right practice’ is not defined in relation to a pre-extant schema, but rather judgement and recognition of context. The knowledge involved in hunting it does not exist as a blueprint, or representational knowledge accessed from a cultural library of rules that govern technique. The hunters cannot simply follow an if/then program because that form of intelligence, dependent on a pre-extant model of the world, has neither flexible resilience nor confidence in the flow of activity as the herd moves through a heterogeneous landscape.

Improvisation and Becoming a Hunter

To copy from a master means aligning observation of the master’s performance with actions in a world that is itself suspended on movement. And this alignment calls for a good measure of creative improvisation. There is creativity, therefore, even (and perhaps especially) in the maintenance of an established tradition. (Ingold 2011, p. 179)

Skilled practice, as seen through the caribou hunt, clearly involves capacities that are developmental in nature. Learning is a matter of attunement, which shapes and expands the hunter's awareness and ecology of mind. To improvise, one must be able to perceive the ecological relationships they work with and against to create form. This directs attention to the relationship between creative practice and the life process of becoming a hunter, because it is not just an individual who acts in the hunt, but a skilled hunter with developed experience. Another common misconception about skilled practice is that the nature of its existence between individuals and generations within a community is a simple matter of transmission. This prevalent notion that technical knowledge exists separate and prior to the physicality of creative action, and it is then internalized with high fidelity between individuals, is another instance of Cartesian split of mind and matter evident in Saussure's *langue* and *parole* (Goodwin 1997). Indeed, in a skilled community there can be many rules for conduct or tightly bound notions of right practice—but mistaking these for the actual knowledge involved in practice is an equivalent error of going to a restaurant and eating the menu card instead of the dinner (Bateson 2000, p. 285). Situated cognition argues against the conception of knowledge as representations, but rather is contextual to material, environmental, and embodied relationships in experience and movement (Ingold 2000; Deleuze 1994; Thompson 2005). Indeed, the sensory and kinaesthetic forms of knowledge involved in skilled practice must be rebuilt in the situated experiences of each generation in a community.

Becoming a skilled hunter is a process that takes years of careful training to develop the requisite physical fitness, social relationships, sensorimotor ability, and confidence. For the Nattilingmiut, this was a lifelong process that started in childhood with simulative activities, such as games, that helped to build sensory awareness and strength (Balikci 1970; Bennett and Rowley 2004). This fits into the broad pattern of Inuit childhood across the arctic, where there is a strong cultural emphasis on experiential learning in personhood (Briggs 1970; Stern 1999; Walls 2012). As part of the community, children were around the family during seasonal movements and preparations; they witness the making and testing of bows, the maintenance of the drive lanes, and archery competitions during winter aggregations. As they got older, children and teenagers would begin shooting with the bow; first at practice targets, and then by hunting ptarmigan around the camp. Learners would also participate with the community in the caribou hunt by helping to direct the herds towards the hunters, or helping with the butchering and processing of hides, before becoming hunters themselves. The forms of knowledge involved in hunting exist between generations not through a matter of passive

transmission, but rather of co-construction. In learning, the community can direct attention to a beginner's practice, offer advice, and provide a framework for learning; but developing the sensory and kinaesthetic forms of knowledge involved in hunting depends on the learner's practice (Gibson 1979; Ingold 2011; Vygotsky 1980).

This process of co-construction can only take place immersed in the flow of environmental processes, which offer resistance and opportunity for learners to observe and adjust their performance through improvisation. For example, a beginner can only develop accuracy and range with the bow by physically using it, in a context where there is environmental feedback, or resistance, against which they can judge the effectiveness of their actions (Sennett 2008). The number of times an individual shoots an arrow between childhood and their first successful hunt is incalculable. Repetition, another aspect of practice that seems opposed to innovation-based models of creativity, is critical to building the attuned capacities for awareness and response involved in the caribou hunt. But the recursive nature of practice should not be mistaken for automation (Deleuze 1994). With each shot, the hunter becomes a new self; they increase their personal experience and develop their coordination (perhaps indiscernibly), changing all subsequent shots (Bateson 2000). Through practising with the bow, the hunter's body changes as they build muscular strength, posture, and endurance. While learning may have a recursive character, perfect repetition in a dynamic environment is not possible, because with each action the hunter is changing the corporeal relationship between themselves and the world. Attunement takes place through this oscillation between action and feedback, intention and effect, with the result that perception and action merge. Becoming a skilled hunter then is not a process of internalization, but of making finer and finer adjustments and linkages between perception and action. And we emphasize here that there can be no final stage of *enskilment*.

In this way, the process of becoming a hunter takes place through a developmental ecology which involves an interdependence of movement, social relations, materials, bodies, and the environment. Much of the hunter's process of becoming, of shaping their sensory awareness and knowledge is owed to the materiality of the bow and the actions and relationships between the hunter and the world that the bow affords. Consider again the episode of practice in Fig. 30.1 The hunter can only know and adjust the relationship between his posture, the target, and the arrow's path by drawing back the bowstring and feeling its resistance. Viewed in a developmental perspective, the materials act as a scaffold around which the hunter develops attention and fitness. By building accuracy and range, hunters change the proximity

and types of sensory engagements that must take place between the community and the caribou herd. This gives certain features of the landscape their significance in terms of cover and wind direction, offering opportunities to intercept the herd. In turn, the landscape and the sensory awareness of the herd, which govern the proximity the hunter needs to approach the herd, shape the actions of the hunters in their recursive practice towards the target. Viewed in this developmental perspective, changing the corporeal relationship between the hunters, the caribou, and the landscape, is not only making a subsistence within a dynamic ecology, but also creating the self. The hunter may say 'I shot the arrow' as retrospective view, but that developed self, as a skilled hunter extends beyond the brain and skin through materially and environmentally situated practice (Malafouris 2013 p. 216). Hunting as creative engagement then, involves shaping the mind within a field of situated field of relations, as much as it is a matter producing subsistence. The idea of improvisation as joining with an ecology becomes clearer in this context (Deleuze and Guattari 1987). Changing relationships in the environment becomes part of an individual's subjectivity—their unique capacity to perceive and act in the world, developed through their experiential life history.

The goals of situated cognition and MET to deepen our understanding of the relationship between minds and things not only highlight improvisation as fundamental to knowing, but also frames communities themselves as emergent in creative practice. In understanding learning as attunement, each individual's skill may be contextual to their personal history rather than an internalized super-organic and external stock of knowledge but, in a skilled community, subjective individual experiences converge with those of others participating in the same patterns of ordinary life. This shared subjectivity, what Merleau-Ponty (1996) referred to as intercorporeality, is emergent between individuals attuned to the same subtleties of environmental flows and relationships. Through the caribou hunt, individuals in the Nattilingmiut community develop similar types of physical fitness, adjust their performance to the same flow of activity, and learn to sense and respond to the same nuanced ecological relationships. Rather than adherence to particular rules or norms of conduct, it is intercorporeality that patterns emergent praxis, what Lave and Wenger (1991) refer to as a community of practice. Indeed, experience, acquired through perception and action in ordinary daily life is a core aspect of Bourdieu's (1977) concept of *habitus*, which refers to the durable dispositions, values, skills, taste, and posture that characterize and pattern the manner through which a community acts in the world. This is a very important observation which returns to the assumed opposition between tradition and creativity inherent to models based on innovation.

Creating a subsistence is central to the continuity of the Nattilingmiut as a community of practice, not just through sustenance, but by cultivating intergenerational experience and disposition. A successful caribou hunt creates a stability in the relationship between the Nattilingmiut and their environment—this consists of several months of food and materials to live on the tundra until a new season brings different opportunities. This stability is temporary, and must be renewed each year through a cascade of improvisations that span and link the life process of individuals, the seasonal movements of the community, and moments of skilled practice. In many places in the Arctic, material aspects of this relationship between various Inuit groups and the caribou remain on the tundra, and include the drive lanes and hunting blinds, the stone caches for storing dried meat, and patterns in the caribou bones found in association with tent rings (e.g. Brink 2005; Friesen 2013). From an archaeological perspective, these present a narrative that demonstrates the relationship between the Nattilingmiut and closely related Inuit groups has persisted since their ancestors first migrated into the Central Canadian Arctic about 800 years ago. Year after year, the Nattilingmiut have renewed the relationship with the caribou herd many times over as a community of practice through time, shaping experiences and connection between generations. This existence of a community through time might casually be regarded as tradition, something that is conservative and permanent in its existence unless impacted from the outside. Yet its existence and character through time must be understood by what Bateson (2000) and Deleuze and Guattari (1987) have described as a plateau—a stability that exists only through continued improvisation and attention. Durability and resilience in this narrative, from the dispositions in the hunter's posture as they shoot, to the timings of seasonal movements as a community, can only exist through creative improvisation.

Concluding Thoughts

The assumed link between creativity and novelty is deeply ingrained in the academy—even in writing creative papers about creativity, tropes of fighting against convention, offering new perspectives, or exposing common assumptions are difficult to avoid. In this chapter we have attempted to follow calls within anthropology to consider creativity not as exceptional or idiosyncratic, but a far more ordinary feature, close to the heart of human life (Gell 1998; Ingold 2011; Malafouris 2013, 2014). We see the caribou hunt as a prime example of creativity in the lived dynamic world, where hunters must perceive, follow, and improvise relationships in environmental processes to create

a subsistence—a stability that exists only through sustained improvisation. And through creative practice there are subjective forms of awareness, experience, and embodied responsiveness that emerge through joining the flows of an unfolding and dynamic ecology. Creativity is fundamental to patterning the continuity of intergenerational experience. It is only through creativity that cultures and traditions exist.

There are hierarchies of creativity within the interdisciplinary literature, which position the improvisational creativity of ordinary daily practice as a lower order than innovation. As we have noted, these place the hunters creating a subsistence on the tundra at the opposite end of an implied scale to innovators, such as the billionaire entrepreneurs of Silicon Valley. This is particularly evident, for example, in Boden's (2004) often cited separation of h-creativity (historical) and p-creativity (personal), or Kaufman and Beghetto's (2009) Four-C model. The essence of these views was described most eloquently by Liep (2001, p. 12) who says: 'If "conventional creativity" spreads like an ocean on the surface of the world, 'true creativity' rises like peaks here and there'. We see this conception of creativity more as a reflection of the historically situated world, from which the enquiry starts, than an insight. The creativity of hunters who renew community relationships to the caribou herd, and the creativity of inventors or artists who claim ownership of their captured difference, may not be so different in terms of process. Both create through perceiving and intervening in forces and fields in the lived world—and creativity takes place through an ecological mind constituted through movement and experience. When studies of creativity define special categories on the basis of 'innovative' in a historical sense, is it still creativity under study or the historically situated world of capture and commodification from which the inquiry starts?

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Creativity and Culture: A Sociological Perspective

Janet Chan

Introduction

Like other disciplines, sociology has undergone a great deal of change over the years (see Giddens 1987). Sociologists are approaching their work in a diversity of ways and increasingly this diversity is celebrated rather than regarded as a problem. In this chapter I present a sociological perspective on creativity and culture by drawing on the work of the French sociologist Pierre Bourdieu. Bourdieu's writings on culture are well known and respected, even though some weaknesses of his framework have been subject to debates. The use of Bourdieu's theory for understanding creativity is a more recent development, but a logical one given his writings on the sociology of art and the sociology of science. To illustrate the strength of Bourdieu's theory for relating creativity to culture, I will examine the dynamic ways in which creativity can be manifested under different cultural conditions.

The chapter is organised as follows. I will start with a discussion of the concept of culture in sociology, highlighting some of the key contributors and issues in current debates. The next section will discuss briefly how creativity has been conceptualised in sociology. This is followed by a summary of Bourdieu's theory of practice as a useful framework for conceptualising

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both culture and creativity. By exploring the concept of practice and drawing on ideas from Lyng (1990) and Lippens (2012a, b), the next sections examine four ways in which creativity can be manifested: as institutionalised cultural practice, as cultural edgework, as cultural transcendence, and as cultural transformation.

The Concept of Culture in Sociology

As Kurasawa (2004) observed more than a decade ago, sociology has been undergoing an identity crisis, especially in relation to the study of culture: the rapid rise of ‘cultural studies’ in recent decades has threatened to relegate sociology to a marginal position in this field (2004: 53–54). Indeed, Alexander and Smith (2001: 135) have argued that ‘there is anything but consensus among sociologists specializing in the [the study of culture] about just what the concept means and how it relates to the discipline as traditionally understood’. This lack of consensus is said to be a ‘manifestation of deeper contradictions relating to axiomatic and foundational logics in the theory of culture’ (2001: 135). They suggest that there is a fundamental ‘fault line’ between *cultural sociology* and the *sociology of culture*—the crucial difference being whether culture is treated as a dependent variable or an independent one in relation to social structure (2001: 136).

The study of culture does not have a long history in sociology. Writing more than three decades ago, Williams saw the sociology of culture as a ‘very late entry’ into the field of sociology and at the time little more than ‘a loose grouping of specialist studies either of communications... or of the rather differently specialized field of “the arts”’ (1981: 9). In fact, Wuthnow et al. (1984: 2) have suggested that the social sciences as a whole were ‘in danger of abandoning culture entirely as a field of inquiry’. This is demonstrated by the fact that theoretical and empirical research in the social sciences—from the Marxist tradition, to symbolic interactionism, to social psychology, to studies of social movement, formal organisations, social networks—had paid scant attention to the study of culture.

The definition of culture is not straightforward. Wuthnow et al. defined it provisionally as ‘the symbolic-expressive aspect of human behavior’ which includes ‘the verbal utterances, gestures, ceremonial behavior, ideologies, religions and philosophical systems’ (1984: 3). For Williams, the term ‘culture’ has a plurality of meanings from a *process* (cultivation) to a ‘*configuration* or *generation* of the “spirit” which informed the “whole way of life” of a distinct people’ (1981: 10). He has argued that a sociology of culture or cultural

sociology (these terms were used interchangeably at the time) should therefore be 'concerned with the social processes of all cultural production', including the analysis of institutions and formations, social relations, signifying systems and forms, processes of 'reproduction', and 'the relations between these and other institutions, practices and work' (1981: 30–31, 208–209).

A variety of approaches have been used by social scientists to analyse culture. In the mid-80s, Wuthnow et al. (1984) examined the contributions of four prominent theoretical perspectives to the study of culture: phenomenology (represented by the work of Peter L Berger), cultural anthropology (Mary Douglas), neo-structuralism (Michel Foucault) and critical theory (Jürgen Habermas). Each theorist brings a distinctive way of looking at culture: Berger emphasises the importance of 'socially constructed *meaning*' that people create and share; Douglas highlights the 'role of ritual and symbol in the production and reproduction of social relations'; Foucault does not in fact look at culture but focuses on 'how culture was produced in relation to the creation of knowledge, or to the emergence of the subcultures of economics, politics, history, etc.'; Habermas provides a distinctive critique of ideology and recognises the role of culture in the legitimation of the state (Wuthnow et al. 1984: 25, 131, 153, 222, 217–8). These different approaches partly reflect the different disciplinary, philosophical and national backgrounds of the theorists. Wuthnow et al. see them as complementary and 'together they contribute greatly to an understanding of the complex and multi-dimensional nature of culture' (1984: 240). One of the key contributions of the four theorists was to emphasise 'the patterns, rules, and the relations which are evident at the cultural level', a departure from the earlier tendency for cultural analysis, especially within sociology, to 'reduce culture—its causes, its form and quality—to social structural considerations' (1984: 247–248).

It was the reductionist tendency to cultural analysis that became the central plank of Alexander and Smith's (2001) critique of the sociology of culture. For Alexander and Smith, culture and social structure should be uncoupled analytically, so that the focus of analysis is on the *meaning within* this internal environment, not how it relates to the external structures. The authors claim that sociology has historically 'suffered from a numbness towards meaning' in the sense that human action is depicted as 'insipidly or brutally instrumental' without reference to the 'internal environments of actions that are established by the moral structures of sacred-good and profane-evil' (2001: 138). They suggest that classical founders of sociology, Durkheim, Weber and Marx, were preoccupied with the 'ongoing crises of modernity' and mistakenly believed that these transformations had 'emptied the world of meaning' (2001: 138). Even Parsons who saw the importance of 'values' did not accord culture with

autonomy, instead ‘functionalist logic ties up cultural form with social function and institutional dynamics’ (2001: 139). While giving some credit to the Birmingham School’s analysis of cultural hegemony, such as Paul Willis’ (1977) *Learning to Labour*, an ethnographic study of working class young people in the UK, Alexander and Smith are highly critical of Stuart Hall et al.’s (1978) *Policing the Crisis* for linking the moral panic over mugging to the ‘economic logic of capitalism and its proximate demise’ (Alexander and Smith 2001: 140). Other theorists and researchers of culture that are classified as part of the ‘weak program’ include Bourdieu, Foucault and a group of researchers that study the ‘production and reception of culture’ (2001: 142). Alexander and Smith, however, do not rule out the possibility that culture is related to social structure but insist that culture must be ‘analytically autonomous’:

Only after having created the analytically autonomous culture object does it become possible to discover in what ways culture intersects with other social forces, such as power and instrumental reason in the concrete social world. (Alexander and Smith 2001: 138)

This advocacy for a ‘strong program’ of cultural sociology is not without critics. Kurasawa describes the tendency of Alexander (2003) to ‘rely on a “strawman effect” that caricatures and quickly discards such other frameworks instead of seeking to establish a conversation with them’ (2007: 59). Alexander’s insistence on the absolute autonomy of culture is, in Gartman’s view, problematic:

The problem with Alexander’s demand for ‘analytical autonomy’ is that it assumes what it hopes to demonstrate. By initially bracketing out the influence of economic and utilitarian relations in its formal analysis of culture, it assumes that cultural forms are not themselves affected by these constitutionally, from the inside. The only relation between culture and economy that this method allows is an external, fortuitous intersection of preformed forces. But the best materialist analysts of culture, including Bourdieu but also Lukács (1962, 1973), Jameson (1971, 1981) and Adorno (1984, 1994), argue that the very forms of culture, not merely its contents, are inextricably and internally constituted by the economic organization of society. Alexander’s demand for analytical autonomy arbitrarily and capriciously precludes this competing position without attempting to disprove it. (2007: 383–384)

While debates about the merits of various approaches to the study of culture will continue, I would argue below that much can be gained from engaging with and extending Bourdieu’s theory to provide a rich understanding of

creativity and culture. As Swartz (1997: 285) observes, Bourdieu's sociology of culture 'spans the four traditions and their key theorists that Wuthnow et al. (1984) identify as decisively shaping contemporary approaches to the study of culture':

Like Foucault, Bourdieu searches for deep structures of cultural and social life that are linked to power. The dynamics of power intersect with all aspects of cultural life. Like Douglas, Bourdieu sees culture in terms of categories of social classification; cultural distinctions euphemize underlying social distinctions. Like Habermas, Bourdieu examines critically received cultural categories, and shares with Habermas a concern for epistemological status of a science of culture. And like Berger, Bourdieu shows that macro structures are also objects of social construction by actors. (Swartz 1997: 286)

Gartman (2007) thinks that Alexander's (2003) arguments 'seriously distort and misstate Bourdieu's theory', although Gartman, like others (e.g., Swartz 1997), agrees that in Bourdieu's framework, 'culture generally serves to reproduce, not contradict social structures'. Nevertheless, Gartman suggests that some of these issues were addressed in Bourdieu's later work (e.g., Bourdieu 2000) and that Bourdieu's 'weak program' is 'actually stronger, both conceptually and empirically' (2007: 382).

The Concept of Creativity in Sociology¹

As discussed in Chan (2011), creativity has traditionally occupied a marginal position in sociology and, until the recent decades, few attempts have been made by sociologists to theorise creativity (Joas 1996; Domingues 2000). This is not to say that the social aspects of creativity are ignored by researchers, but they often appear as vaguely defined variables such as 'social environment' or 'social influence' in a 'shopping list' of individual, psychological and organisational factors associated with creativity. Although creativity has 'cropped up every now and then in sociological theory'—such as in Weber's notion of charismatic leadership, Durkheim's 'collective effervescence', Marx's active and creative subject, and so on—the tendency to marginalise creativity was common to sociology in all the main national traditions' until recent years (Domingues 2000: 468). Among the social theorists who have approached issues related to creativity, two major theorists stand out as having made

¹This section draws heavily on Chan (2011). To avoid the cumbersome use of quotation marks, it uses text from Chan (2011) without formal attributions.

significant advances towards a useful sociology of creativity—the German sociologist Hans Joas and the French theorist Pierre Bourdieu.

Joas (1996) uses a sociological theory of action to conceptualise creativity. He argues that in addition to the two predominant models of action—*rational* action and *normatively oriented* action—there should be a third, overarching model that ‘emphasizes the *creative* character of human action’ (1996: 4). In fact, he asserts that ‘there is a creative dimension to all human action’ (1996: 4). For Joas, normal action is habitual and ‘pre-reflexive’: goals of action are usually not well defined, but actions take place within a social, historical and corporeal context through routinised habits. Creativity is what happens when these habits are ‘interrupted’ and the actor succeeds in reconstructing the context through new ways of acting or thinking. The flaw in Joas’ framework, according to Dalton (2004), is that it sees creativity as a separate phase from habitual action. This implies that an action cannot be both creative and habitual, but such a framework would run into problems when explaining certain types of action. For example, when creativity is a routinised activity such as in artistic practice, it is both a break with habitual action as well as a form of habitual action. For creative practice such as that among musicians, routinised action can be a ‘foundation for creative action’ (2004: 609).

Chan (2011) has reviewed the literature on social dimensions of creativity and argued that a useful sociology of creativity should recognise that the definition of creativity is domain-specific and socially, culturally, or politically constructed by the relevant community; it should also account for variations in creativity in different domains, social groups, organisational units, geographical areas, and historical epochs; it should provide conceptual tools for taking into account variations in skill, knowledge, motivation, access to social networks and resources, and types of social environment; and it should explain how creativity is possible by examining the relationship between social structure and human agency. To this end, she has suggested that Bourdieu’s theory of practice (with some minor modifications suggested by Dalton (2004)) provides the ingredients and the architecture for a framework that goes some way towards a coherent and useful sociology of creativity.

The next section will briefly recap Bourdieu’s concepts and discuss its utility for the study of culture and creativity.

Bourdieu’s Theory of Practice

Bourdieu’s theory of practice (see Bourdieu 1990; Bourdieu and Wacquant 1992) provides a set of useful tools for making sense of both culture and creativity. To the lay reader, the word practice suggests actions that are repeatedly taken,

and hence it has a natural affinity with culture, especially aspects of culture such as rites and rituals. It may be a bit more difficult to think of creativity as practice, since creativity in popular conception is not about routine but breakthroughs. However, in sociology, the word 'practice' has a particular meaning. In its most general formulation, practice is 'an organised constellation of different people's activities' based on 'practical rules, understandings, teleoaffective structures, and general understanding' (Schatzki 2012: 13, 15). Bourdieu compares social practice to playing games. He uses the metaphor of a game to explain his concept of *field*. In a game there are players. The game is competitive, so players play to win, usually by accumulating scores (what Bourdieu calls *capital*, which can be both economic and non-economic, such as political, cultural, social and symbolic). Players obviously have to know how to play the game; they acquire this knowledge through training and socialisation, to the extent that it often becomes their second nature, a feel for the game (which Bourdieu calls *habitus*) that generates automatic reflexes rather than calculated moves. Bourdieu postulates that there are many relatively autonomous *fields* in society, each with its own 'game' that assigns different values to different kinds of capital. People who play a game occupy different positions in the field, depending on the amount and value of the capital they possess, and their actions are guided by their habitus. In most cases, habitus is shaped by the field a person operates in, although the family, the school and other forms of socialisation can also affect a person's habitus. Bourdieu's framework suggests that practice results from the interaction between the field and the habitus. Where fields are stable, habitus are unlikely to change; hence practices become institutionalised.

How are these conceptual tools useful for theorising culture? Bourdieu's concept of culture is succinctly summarised as follows:

Culture provides the very grounds for human communication and interaction; it is also a source of domination. The arts, science, religion, indeed all symbolic systems—including language itself—not only shape our understanding of reality and form the bases for human communication; they also help establish and maintain social hierarchies. Culture includes beliefs, traditions, values, and language; it also mediates practices by connecting individuals and groups to institutionalized hierarchies. Whether in the form of dispositions, objects, systems, or institutions, culture embodies power relations. Further, many cultural practices in the advanced societies constitute relatively autonomous arenas of struggle for distinction. (Swartz 1997: 1)

In Bourdieu's framework culture is both a form of capital and a set of embodied dispositions in the habitus. Different cultural practices exist in different spheres, which can be nation-states, geographical regions, communities,

organisations or small groups. These are the fields (or subfields) of social practice. Within each field, people develop a habitus that generates various assumptions, values, cognitions, dispositions and ‘rules of thumb’, including ways of thinking, classifying, working and talking that are acceptable within the field. By and large, the habitus generates strategies and actions that help people maximise their capital within the field. It is responsible for the formation of self-identity as well as social dispositions of members of the field. For example, members of an ethnic community would have learned—consciously or unconsciously—the language, customs, values and attitudes that would guide their actions and words so that they feel at ease or connected with this community. This does not mean that everyone within this community is equally at ease or connected; those who have more capital that is valued by the community (e.g., social capital in terms of networks or cultural capital in terms of language facility) are more at ease or well-connected than those with less of such capital. People whose habitus is developed in one particular field may find it extremely difficult to adjust to another field that is very different (a fish out of water, cf. Bourdieu and Wacquant 1992: 127). This explains why newcomers to an organisation are often nervous about whether they are doing the right thing, and why foreigner visitors to a country whose culture they are not familiar with feel uncomfortable or challenged. The durability of the habitus is something that accounts for the cultural stability of some organisations or communities, but this stability is increasingly under threat as changes in the field become more frequent and more radical (e.g., globalisation, advancement in ICT). Bourdieu’s framework has been found to be useful for understanding organisational and occupational cultures, as well as socialisation processes (see Chan 1997, 2015; Chan et al. 2003).

As discussed in Chan (2011), Bourdieu’s conceptual tools are also useful for theorising creativity, even though he has never used the term ‘creativity’; instead, Bourdieu has analysed the field of cultural production and the field of scientific practice (Bourdieu 1969, 1975, 1993). Artistic and scientific practices emerge from the interaction between the field (the art world or the scientific world) and the habitus (the know-how of creating artwork or doing science). Thus, artists operating in the highly competitive artworld (or a subset of it) acquire a habitus (through education, mentoring or hard work) that generates strategies and ways of working that maximise their capital, e.g., prestige in the artworld. Similarly, scientists operating in the equally competitive field of scientific research acquire a habitus that helps them maximise their capital, e.g., accolades and prizes in their field. In other words, artists and scientists are engaged in creative practice when they are doing their job well.

This way of theorising may seem at odds with popular notions of creativity. If creativity is the production of something novel and useful, how can merely ‘doing your job well’ be considered creativity? It may be argued that the practices artists and scientists engage in can only be regarded as creative if they result in some kind of ‘breakthrough’ (e.g., the production of artwork, literature, or scientific papers that revolutionise the field). In fact, the sociology of creativity is premised on the fact that creativity is not an attribute of a person or a process, but a product that is judged to be creative by a relevant knowledgeable community. It is possible that an artist produces ‘good art’ (which is judged to be ‘good’ by the artworld), but never consciously tries to be ‘creative’.² Similarly, a scientist can contribute incrementally to knowledge in science without making a ‘breakthrough’ that is regarded as revolutionary (see Kuhn (1962/1970)’s notion of normal science).

Does creativity require something more than ‘doing one’s job’, even if a person is a worker in a ‘creative’ industry? As pointed out in Chan (2011), Dalton is concerned that Bourdieu’s framework offers only a ‘restricted realm of creativity’ and therefore does not provide for a ‘robust conception of creative agency’:

Bourdieu does not seem to allow here for the type of thoroughgoing reconstruction of principles, goals, or methods that a fully rational or creative actor hypothetically could produce. For Bourdieu, creativity is always a restricted set of strategies embedded in the bodily hexis and the logic of a particular social milieu... Habitus is flexible and open-ended but continues to place significant bounds on the ‘horizons of possibilities’ that Joas describes. (Dalton 2004: 613)

Dalton’s suggested solution is to ‘sever the connection emphasized in Bourdieu between habit and received cultural and social patterns’ and construct a new model of creativity that combines the best of Joas’ and Bourdieu’s models by reaffirming Joas’ idea that ‘creativity is an inherent feature of action that exists within both highly routinized activities and within more self-evidently creative conduct’ (2004: 615). In other words, the necessity to innovate is part of an overarching *habitus* that people share, regardless of their *field* of practice. When faced with obstacles and difficulties, people may follow the habituated way of dealing with problems allowed in their *field*, or they may question or challenge these accepted ways and act in a creative way that transcends or

² In fact, our research shows that only 14 per cent of the art students in our study nominated ‘to do something creative’ as one of the motivations for going to art school (Chan et al. 2015: 33). Nevertheless, the majority of art students in the study (77 per cent) thought that art practice was inherently creative (Chan and Brown 2006).

transforms their *field*. This is consistent with Kuhn's (1962/1970) account of the 'scientific revolution' that requires a 'paradigm shift'.

I would argue below that by expanding on this framework, creativity is possible through a variety of means. It is important to recognise that the form creativity takes can depend on the nature of the field and the intentions of the players. Where a field is stable, creativity can be a form of institutionalised cultural *practice*, as described above. But if a field is changing rapidly, or if a player is put in a different and uncomfortable position in the field, creativity can emerge as a strategy of cultural *revolt* in search of 'control over emergence' (Lippens 2012a). Such revolts can take many forms. Where players seek to push or negotiate the boundaries between fields, creativity can become a kind of cultural 'edgework' (Lyng 1990). Alternatively, where players seek to go deeper within the field to reinterpret it, creativity provides an avenue for cultural *transcendence*. Finally, where players seek to recreate the field, creativity can be a tool for cultural *transformation*. These ideas will be discussed in more detail below.

Creativity as Institutionalised Cultural Practice

As described earlier, creativity is very often manifested in institutionalised cultural practices, especially among artists and scientists. In fact, Rehn and De Cock have argued that creativity need not always be defined by novelty or originality:

By valorising novelty over the pre-existing, one turns creativity into part of a modernist narrative of unending progress and the necessity of continuous capitalist development. By valorising originality, one hides away notions of production and work, not to mention history. (Rehn and De Cock 2009: 229)

For the majority of workers in creative fields, creativity is doing well in their area of practice, be it music, visual art, performance, design, science or engineering. In these fields, creativity is judged by domain-specific standards of excellence rather than novelty *per se*. As Krauss (1981: 52) reminds us, originality is itself a cultural concept that had no place in certain types of art practices and is becoming meaningless as art practices have engaged with reproductive technologies and artists have sought to transgress the 'culture of originals' (see also Rehn and De Cock 2009).

But what happens when creativity in the form of novelty is privileged in a culture, as it appears to be in contemporary society (see, for example,

jagodzinski 2013)? According to Bourdieu's framework, in a field of practice where novelty is highly valued as a form of capital (we can call it creative capital, or more simply novelty), the habitus is oriented towards strategies that will maximise novelty. This means that novelty will permeate the assumptions, perceptions, attitudes, values and methods of workers in this field. Consciously or unconsciously, workers will strive for novelty in what they do. An example is the current emphasis on innovation in both corporations and non-profit organisations. This emphasis on innovation is pervasive, as seen in corporate slogans such as 'Think different' and government rhetoric such as 'Creative nation'. I would argue that this emphasis on novelty or innovation does not necessarily increase the 'level of creativity' (even if it could be measured) in a corporation or a nation. Rather it creates several distinctive features of the habitus: a discourse of novelty, a rhetoric of experimentation, and the valorisation of risk taking.

Discourse of Novelty The pervasiveness of commercial culture in civil society is a well-documented contemporary phenomenon. While commercial enterprises continuously invent and market new products to consumers, governments and communities are also jumping on the bandwagon of innovation in their discourse. Thus, artists are motivated not simply to produce artwork but to create personal 'brands' (Bilton 2013) and narratives about the distinctiveness of their work. Artworks that have shock values such as those of Damian Hirst and others fetch millions and are show-cased in prestigious museums and galleries. Scientists are similarly asked to justify funding by highlighting their projects' significance and innovation and motivated to label their research achievements as 'breakthroughs' (Miller 2013). It may be naïve to think that calling something innovative or new makes it novel or creative, but in a culture that sees creativity as the main game, *not* calling something innovative is not a sensible strategy for survival. This means that writers do not just write books, they go on book tours to promote them. Similarly, artists do not just create art, they give lectures to explain their work. Scientists do not simply do experiments, they go on television to dramatise what they do. It is all part of branding and marketing to make sure that new artistic or scientific products are described to a wider audience as novel or creative (see Chan 2013; Chan et al. 2015).

Rhetoric of Experimentation It is well recognised in the literature on creativity that trial and error is necessary to reach an eventual breakthrough. This suggests that organisations should not penalise workers for making mistakes,

rather they should encourage them to experiment. Experimentation is something both artists and scientists do regularly in their work, but the rhetoric of experimentation is often no more than rhetoric, even in the artworld and in the scientific community. Novice artists may be motivated to experiment in order to create a distinctive style that may win them a place in the artworld, attracting the attention of galleries or critics. Yet experimentation does not necessarily work. Established artists may regularly put out new work but they may be less likely to experiment by taking serious risks if it jeopardises their position in the field. Scientists who have invested heavily in their reputation or expensive equipment are similarly unlikely to deviate from their established path of research. As Kuhn (1962/70) has demonstrated, it takes a lot more for scientific revolutions to happen even after anomalous results are observed.

Valorisation of Risk Taking Risk taking is related to experimentation, but goes further in the sense that one's security or position may be seriously jeopardised. The business world has a tendency to glamorise risk taking as the hallmark of entrepreneurship. The media is especially attracted to success stories of risk takers such as the founders of Apple Computers, yet it is strangely silent about the failures of unfortunate or incompetent risk takers. As suggested in the last section, artists and scientists may be attracted to the rhetoric of experimentation, but taking serious risks is not necessarily a career-enhancing move. No doubt some risk takers survive to become successful artists and scientists but we will never know how many risk takers never made it and had to sacrifice their future in their honest attempt to break new ground.

If this analysis is correct, then a culture of novelty may be no more than a set of slogans and a lot of wishful thinking about experimentation and risk taking. Doing one's job well can lead to great literature being written, great art being created, or even great science being done, but it won't necessarily satisfy the novelty criterion. How, then, do we explain the emergence of creative practices that represent 'thoroughgoing reconstruction of principles, goals, or methods' (Dalton 2004)? One way in which this kind of creativity emerges is through cultural *revolts*.

Creativity as Cultural Revolt

Bourdieu's framework has often been associated with social reproduction rather than social change, but as Swartz (1997: 213–214) points out, where a change in the field has resulted in a 'sharp, rapid change in opportunity

structures’, creating a crisis, ‘reproduction gives way to either resignation or revolt’. Bourdieu did not, however, specify the conditions under which the disjuncture between the field and the habitus would lead to revolt rather than resignation (Swartz 1997: 216). His description of Gustave Flaubert in *Rules of Art* (Bourdieu 1996) does provide an example of how a changing field can lead to a necessity for creativity (see section ‘Creativity as cultural transformation’). Bourdieu has also suggested that when an individual’s position is changed within a field, it creates heightened awareness of the ‘discrepancy between the subjective habitus embodied in agents and the objective structure of fields’ which can lead to a ‘break with the established ideology’ (Gartman 2007: 406–407):

It is likely that those who are ‘in their right place’ in the social world can abandon or entrust themselves more, and more completely to their dispositions (this is the ‘ease’ of the well-born) than those who occupy awkward positions, such as the *parvenus* and the *declasses*; and the latter are more likely to bring to consciousness that which, for others, is taken for granted, because they are forced to keep watch on themselves and consciously correct the ‘first movements’ of a habitus that generates inappropriate or misplaced behaviours. (Bourdieu 2000: 163)

While research on such situations is rare, there is some evidence that frequent and intense interactions among scientists working across diverse disciplines can increase the likelihood of creative breakthroughs (Hollingsworth and Hollingsworth 2000). It may be the case that when scientists work in such discipline-diverse organisations, they no longer occupy the same privileged positions as they did when they were experts in their own discipline, and hence they become more conscious of the taken-for-granted assumptions they and others bring to the field and hence more likely to break with conventional wisdom.

To explore creativity as cultural revolt, I have found very useful Lippens’ (2012a) analysis of the ‘culture of control’, or what he calls ‘radical sovereignty’. Even though on the surface a culture of control seems diametrically opposite to the rhetoric of creativity, it is quite appropriate to think of creativity as a ‘form of life’, i.e., ‘a way of life in constant, *becoming* formation’ (2012a: 352). It can be argued that the driving force behind creativity is very much this desire for absolute sovereignty—to be able to control the present by exploiting the present, to control the future by creating that future, and to contain the past by redefining that past. Lippens suggests that this desire underpins a variety of ‘wildly divergent and contradictory’ practices

(2012a: 353). He distinguishes between three types of ‘radical sovereignty’ which he illustrates with the work of three painters. I will label these as three further manifestations of creativity: creativity as cultural edgework, creativity as cultural transcendence and creativity as cultural transformation.

A note of caution is in order. Even though individual artists are cited as examples of cultural revolts, it is important to recognise that successful episodes of ‘revolt’ are not based on individual achievements; rather, they depend on creative collaboration and sympathetic communities for diffusion of practice. As history has shown, cultural ‘revolts’ either dissipate or eventually become part of institutionalised cultural practice.

Creativity as Cultural Edgework: Negotiating Boundaries

The first type of radical sovereignty described by Lippens is one in which ‘the self unrelentingly flees *all* code and *all* law’ (2012a: 353). He sees this as similar to the risk-taking behaviours characterised by Lyng’s (1990) concept of ‘edgework’. The sociological literature on edgework provides some useful insights into creativity, although it has never been used in this way. Scholars have focused on life-threatening activities such as extreme sports, dangerous drug taking or high-risk sexual activities. The essential element of edgework is the negotiation of boundary, usually between life and death, consciousness and unconsciousness, health and permanent disability, so the stakes are high, the level of uncertainties extreme, and the consequences drastic.

Edgeworkers are usually motivated by nothing more than the experience itself, which is both powerful and seductive. This seductive quality is not unlike what Csikszentmihalyi (1996) has called ‘flow’ among creative workers or what Seligman (2011) calls ‘engagement’, one of the dimensions of wellbeing, but edgework is much more than being in a transcendent or hyperreal space; it requires enormous courage (what Goffman (1967) calls ‘character’) as well as extremely high level of skills. To be a successful edgeworker is to survive, to be on the living, conscious and healthy side of the boundary, and yet edgeworkers are willing, indeed eager, to risk being on the other side. Successful edgework is accompanied by an objective sense of authenticity or hyperreality:

... the ontological significance of doing edgework is reflected in participants’ descriptions of the experience as ‘authentic’ or ‘hyperreal’ because they perceive it as being more real than the reality of everyday life ... As a fully embodied activity that disrupts the interpretive processes involved in everyday

problem-solving, edgework generates a sense of an objective reality uncontaminated by subjective cognition. (Lyng 2014: 449)

The physicality of edgework ('embodied activity') is an important factor in this experience of authenticity, as it is totally unconnected with any rhetoric or hyperbole about breakthroughs or novelty.

Edgework shows how creativity is possible by edgeworkers pushing the boundary of acceptability but still managing to stay within this boundary. An artist or scientist who takes extreme risk in her/his work but ends up on the other side (no longer accepted as an artist by the artworld or a scientist by the scientific community) is not creative by definition. The cultural cliché about a 'mad' artist or scientist is not particularly applicable when in effect the creative worker is no longer a worker in the field. To use Bourdieu's terms, edgeworkers willingly push the limits of their habitus to an extent that they are in danger of dropping out of the game forever. Yet surviving edgework requires the edgeworker to trust their habitus:

...managing serious risks in highly dangerous circumstances demands that one act automatically and almost instinctively to ensure a successful outcome. Thus, it could be said that the closer one comes to the edge, the more that structure recedes and agency is liberated, which at one level accounts for the intense feelings of self-determination that participants report about the edgework experience. (Lyng 2014: 453)

In most activities that involve creativity, the negotiation of boundaries is not about life and death in the corporeal sense; only those who are at the 'cutting edge' of artistic or scientific practice would see their work as risking the life of their artistic/scientific career. Courtney has argued that the 'demand for the unconventional ... is the attitude essential to avant-garde artists in their resistance to mainstream, popular, hegemonic production' (2005: 94). Both he and Lippens (2012a) cited Jackson Pollack's art as an example of edgework:

He still operated inside a creative community whose work and styles had enormous influence on his. Nevertheless, no one debates the novelty of his mature work of the 1950s. Pollock's art still influences artists today, such as Brice Marden, Hermann Nitsch, Arnulf Rainer and Susan Rothenberg. All owe a debt to the autonomy of the expressive gesture and the Eastern aesthetic of the calligraphic form. (Courtney 2005: 94)

This suggests that great skill is required to negotiate the boundary of acceptable practice successfully.

Much of the writing on edgework has been about individual risk taking. Sjoberg (2005) reminds us that the kind of risk taking celebrated by society (e.g., risk taking by entrepreneurs) requires collective (e.g., group, organisational, both formal and informal) support in order to succeed. The viability of edgework is therefore contingent on the existence of social or institutional arrangements that encourage or discourage such activities. Just as academic freedom and tenure can encourage risk taking among researchers, the availability of public or private funding may lessen the financial hardships faced by edgeworkers in a variety of fields, including the arts, hence minimising the risk involved in attempting unconventional or ground-breaking works.

Edgework is not necessarily an assured path to creativity. Lippens suggests that radical edgework may be self-limiting and ultimately self-defeating: edgeworkers who dive ‘head-over-heels into raw nature’, after abandoning ‘their controlling self’, risk having their capacity to control emergence undermined, leading them to deal with life events automatically (rather than creatively) when they return to ‘real life’ (Lippens 2012b: 34).

Creativity as Cultural Transcendence: Reinterpreting the Field

The second type of radical sovereignty is one in which ‘the self attempts to flee *all* law and *all* code while retreating into the supposed emptiness of the *hole*, or the void in which it assumes dwells at the heart of existence’ (Lippens 2012a: 354). It ‘occurs in and through detached reflection, decision and existential choice ... In short: through transcendence’ (2012a: 354). The paintings of Rothko are used as exemplars for this desire for ‘absolute solitude’ (2012a: 359):

To be radically sovereign, here, is to be a void of reflection. It is to be a reflecting chamber. In that chamber the tragedy of the human ‘drama’ is reflected upon; or better: in there, in the chamber’s void-like, codeless ‘internal freedom,’ the tragedy of human existence is, quite simply, reflected. It is precisely the human tragic predicament that Rothko wanted to ‘communicate’ ... to his audience: the ‘basic human emotions—tragedy, ecstasy, doom and so on,’ ... (Lippens 2012a: 359)

This approach to art practice is very different from risk-taking or edgework. It is also not about following traditions or conventional practice. An example from our study of artists (see Chan et al. 2015) stands out. Joanna (not her

real name) is an accomplished Australian painter of national renown. When interviewed about her artistic motivation and intention in making art, 'looking for meaning' was central. She tried to 'achieve a space that's ... ordered and unified... full of itself and also on the threshold of something else'. When describing her work process, there was a strong sense of solitude and a desire for transcendence:

[My] approach is quite open. I believe in discipline, in working daily... I get anxious, but then ... generally the act of painting is unsettling... You need to give up something. You constantly need to give up things in painting, and that's unsettling, in order to look for something more, and unless you look for something more, you can't have a really good painting. And to look for something more, you constantly look to give up things...

The isolation of the artist is, in Joanna's view, not about being self-absorbed or selfish, but a by-product of being totally involved in and present with the work:

...when you get involved with the work, you stop having needs ... you don't have the need to socialise ... you need to be present. And so in order to be present, you forget about your needs... when you really get so involved with the work, ... you won't even stop to eat.

This search for meaning, order and unity can be gruelling but when it happened, it was enormously gratifying:

...after you've gone home empty-handed and you work for months and months on it, and you know you haven't got a sketch or not a skerrick, not a piece of paper, not a line that you kept. Sometimes five, six months of hard work, not a thing survived. And you go home again ... full of anxiety and panic. The following day, you wake up in the morning, and resolve to go back to the studio and feel happy and full of joy to be involved with the work again, to have another go at it. And I remember there was such occasion in [year] when I struggled for six, seven months, and I was erasing everything, and I had nothing, I went back ... I was working sometimes 12, sometimes 14 hours a day ... and I remember that when things began to happen and then something shifted and I must have known, I had such a good day in the studio one morning, feeling that nobody in the world wanted another painting from me and I really need to finish another painting. So what I needed to do is follow through, and then things happened that day, so whilst I reached a state of calm, where I accepted, and so I like that stage, where you don't feel compelled to ... push

anything into a product. That's the most gratifying stage really, because then you can really get on with the work and follow it through.

While Lippens has described this approach as 'fleeing' from all laws and codes, Joanna's transcendence is not about escaping the past or the present, but *reinterpreting* it. She described how she started to see subtle aspects of famous artwork that she never noticed before. In her view, it was the 'subtle construction' and the 'vulnerable structures' that create poetry as well as precision in a painting. Creativity in Joanna's work lies in this acceptance of both openness and precision.

Creativity as Cultural Transformation: Recreating the Field

The third type of radical sovereignty Lippens describes is one in which control is achieved through creation, which he sees as holding more promise than edgework or transcendence. This involves bringing '*newness* in the world' while engaging with the law and code that currently exist. Instead of an attempt to escape, there is a 'creative transformation' of the law and code (Lippens 2012a: 354). Here the work of French painter Paul Rebeyrolle (especially *Le Cyclope* 1987) is used as an exemplar:

To be sovereign, in Rebeyrolle's Cyclops world, is to be creative. Only in the act of creation does one have control over emergence. Real sovereign resistance, here, is that which occurs through the very process of creation itself. (2012a: 362)

Rebeyrolle was known for his innovative techniques in combination with his desire for representation 'without distortion':

Unflinching worker, he experimented unceasingly, drawing from his materials, in a unique and often surprising manner, the weapons with which to reply to the violence of the subject. Inert, they take life, a life that explodes, well beyond the frame: wood, earth, stone, scrap iron, electric wire, iron wire, hessian, hair, horse hair, feathers, birds took part in this birth. Mixed together by the paint, they became paint. His mastery of the technique and of composition drove him to be ever-more demanding, the desire to be as accurate as possible, to represent without distortion. The works of Paul Rebeyrolle constitute a manifesto that once again uses a path that has been little used in the history of painting, that of Goya, Géricault, Courbet, who he admired. A steep and rough path, the one of

combat against the blindness of men. The path of a committed painter, witness and critic of his time. (RoGallery.com 2014)

An example from the literary field was provided by Bourdieu (1996). It relates to Flaubert's writing which represents a 'creative transformation of the field's elements, without the creator having to separate himself from them':

...around 1850, the young writer found himself before a literary space shaken by the debate between the partisans of art for art's sake and the partisans of social art. Concerned with distancing himself from what, to his mind, was a mediocre controversy, Flaubert will succeed in his coup, refusing the alternative by surpassing it. Beginning with *Madame Bovary*, he perfects a formula where the height of refinement consists in speaking of real-life trivialities (such as news items) in a flawless style, where the sentence 'stands on its own.' As a result, his initial impotence turns into an extraordinary creation. (Dubois 2000: 99)

Cultural transformation can also be the result of encounters with a different culture. Oiyama (2013: 408) coins the term *dochaku*, originally a Japanese term meaning 'of the land', to describe the creative process where 'a fresh idea from outside [is] adopted and adapted to suit the local environment, often to the point where it is eventually considered "indigenous" to the locality'. One example was the work of Frank Lloyd Wright who adopted Japanese aesthetics and spatial concepts 'transforming and incorporating them relentlessly into his art, creating a new unity that met his stringent philosophical, aesthetic and functional requirements' (2013: 410). Oiyama describes the 'attractor' (in this case Japanese aesthetics and Lao-tzu's philosophy of space) as a 'habitus breaker'; this creates a new awareness and, where it encourages change, can result in a 'challenge to the status quo', and when successful, affect 'the structure of not only the habitus but possibly also of the field, thereby remaking their nature':

Wright responded to something universal in the 2500-year-old philosophy of space by Lao-tzu, understood it through the examples of Japanese architecture, re-contextualized it to function in the 20th century American environment, and particularized it to solve specific architectural problems in his own way. At the same time, the depth of his solution was such that it had universal essences to offer. These essences deeply affected the sense of space of his day, and are affecting us still today. Thus the result of that particular incident of *dochaku-ka* eventually restructured the habitus and field of many artists, societies and cultures the world over. (2013: 419–420)

Conclusion

In this chapter I have focused on using Bourdieu's sociological framework to conceptualise creativity and culture and to explore how the two concepts relate to each other. By extending Bourdieu's framework and drawing on ideas from Lyng and from Lippens, I have argued that Bourdieu's theory is useful for understanding creativity both as institutionalised cultural practice and as a form of cultural revolt. Cultural revolt can be accomplished through cultural edgework, cultural transcendence, or cultural transformation. In popular usage creativity connotes a timeless and invariant ideal, while culture has always been understood to be context dependent, but from a sociological perspective, both creativity and culture are fluid and malleable. This chapter has demonstrated that the two concepts are also inextricably intertwined: the meaning of creativity is ascribed by cultural rules; at the same time, creative acts can redefine culture.

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A Creative Industries Perspective on Creativity and Culture

Chris Bilton

This chapter adopts a historical perspective to show how ‘creativity’ has been defined in relation to changing approaches to the creative and cultural industries in cultural policy and management, focusing on the UK introduction of ‘creative industries’ as a major cultural policy theme in 1997.

Recent cultural policy towards the so-called ‘creative industries’ has tended to treat creativity in terms of individual creativity and talent. Explicit creative industries policies date from the late 1990s, in particular from the UK government’s *Creative Industries Mapping Document* (DCMS 1998) launched in 1998. The definitions, terminology and assumptions of UK creative industries’ policy were widely imitated in other countries, notably in the United Nations’ *Creative Economy Report* (UNCTAD 2008) and in national cultural policies.

However, the policy rhetoric of ‘individual creativity, skill and talent’ contrasts with a longer view of ‘creativity’ amongst those working in the arts and with academic and policy perspectives on the ‘cultural industries’. Here there is a greater emphasis on the collective processes which underpin cultural production. ‘Creativity’ is no longer solely the preserve of creative genius. This

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earlier policy tradition has continued to be championed in academic circles and assumes a sociocultural definition of creativity.

Latterly this notion of collective creativity in the creative and cultural industries has received new impetus through an emphasis on consumer creativity or 'creative consumption'. This third perspective on creativity has been facilitated by new digital tools which have increasingly 'democratised' the creative process, as well as reorienting the creative industries value chain from cultural production to cultural consumption. In this context, creativity is democratised and associated with everyday participation; an open-ended definition of creativity is informed by a 'postmodern' refusal to privilege one form of expression, or one definition, over another.

These opposing tendencies have never been resolved. As a result, attempts by both cultural policy and management to engage with creativity and the creative industries have been thwarted by contradictory assumptions and objectives. This chapter will consider the 'creativity' of the creative industries from a historical perspective, beginning with the *Creative Industries Mapping Document* from 1998. The chapter will then revisit earlier definitions of the 'cultural industries' from the 1980s before reverting to contemporary perspectives on creative consumption.

'Individual Creativity, Skill and Talent'

In 1998, the *Creative Industries Mapping Document* defined the creative industries as

those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. (DCMS 1998)

The document set out to map the scope of the creative industries in the UK, categorised into 13 sectors. The economic contributions, in terms of gross domestic product (GDP), export earnings and employment statistics, were highlighted in a series of tables and graphics. Politically, the document signalled the importance of the 'creative industries' in UK cultural policy, absorbing the older categories of 'arts' and 'cultural industries' and establishing a link between creative talent and economic growth ('through the generation and exploitation of intellectual property'). The definition highlighted individual creativity and innate talent as something with an independent, prior existence, separate from collective systems. It also focused primarily on

outcomes rather than processes, especially economic outcomes in the form of intellectual property. The accompanying list of 13 branches of the 'creative industries' was more pragmatic, drawing a line around an existing set of activities rather than developing the conceptual definition introduced at the start of the document.

The reasons for applying a new definition to an existing field were themselves largely expedient in relation to policy priorities for the incoming 'New Labour' government of 1997. In this case, the policy objectives had already been set, including the development of a vibrant 'creative economy' to replace Britain's declining manufacturing industry, capitalising on some of Britain's perceived strengths in a global market (e.g., the export earnings derived from British music and broadcasting) and the development of 'creativity' among young people as a part of UK education policy. The arguments, data and definitions around creative industries were tailored to fit these policies rather than used to inform policy. Despite some conceptual problems with the original definition (are there any 'uncreative' industries?), this pragmatic logic may explain why the terminology has survived. The definition was repeated in the 2001 mapping document (DCMS 2001) and in subsequent UK cultural policy reports. From here, the definition was seized upon by other national governments (e.g., Taiwan, Germany, Australia); only United Nations Educational, Scientific and Cultural Organization (UNESCO) and France held out strongly for the older 'cultural industries' tradition (this will be explained further in the next section).

Inevitably, there were criticisms from those working in the subsidised arts (theatre, classical music and other performing arts, museums and galleries) who feared the government's new interest in 'creative industries' would marginalise them. There was also concern that the new emphasis on individual talent and marketable outcomes placed too much emphasis on the economic impacts of creativity rather than on social development and social change. The first of these concerns proved unfounded; government cultural policy has remained marginal to commercial creative industries and is still predominantly focused on 'the arts' rather than commercial popular culture. The second accusation that cultural policy had taken a 'neo-liberal' turn towards marketising the individual talents of the creative industries and their profitable products as mere commodities would cast a longer shadow.

For the purposes of this chapter, government policies towards the creative industries are considered in so far as they manifest attitudes towards creativity. The first of these assumptions is that creativity is above all a matter of individual talent or genius, in line with early (and much discredited) 'trait-based' theories of creativity. The second assumption is that creativity can (and

should) be defined by its outcomes, in particular by its measurable economic outputs. A third assumption, less explicit than the other two, is that creativity occurs at the start of the creative industries value chain, at the point of idea generation or ideation. This is where ‘intellectual property’ is ‘generated’, in order to be subsequently ‘exploited’.

These assumptions have recurred both in UK government policies and in approaches to management of the creative industries more widely. The education policy of ‘Creative Partnerships’ (an Arts Council England initiative to build partnerships between cultural organisations and schools) was referenced in the 2001 Mapping Document. As noted by Choe and Neelands (2010), education policy in England repositioned ‘creativity’ as an ability to generate ideas; from here, ‘creativity’ was elided with ‘innovation’ and ‘entrepreneurship’ through curriculum reforms and through agencies such as Creative Partnerships and NESTA (Seltzer and Bentley 1999). The old question as to whether creativity can be taught remained unresolved, but there was an assumption that creativity is a ‘special’ talent to be released, rather than a universal capacity which can be cultivated in every child (NACCE 1999). Above all, ‘creativity’ in schools was geared towards economic outcomes rather than artistic or social transformation; creative young people either would get jobs in the burgeoning creative industries or would generate profitable innovations and intellectual property assets in the wider economy.

In a management context, the separation of ‘creativity’ as a discrete stage in the value chain isolates creative work and creative workers from the organisational systems which sustain and inform them. This division of labour can lead to dysfunctional relationships between workers and between competing objectives and priorities in the organisation. Consequently, at the time when UK government was focusing on individual talent in creative industries policies, creative industries practice was beginning to move in the opposite direction towards a more holistic approach. In the advertising industry, the ‘siloining’ of individual talent—the tendency to protect ‘creative’ copywriters and art directors from commercial realities—was seen to be ineffective. Instead, creative inputs were needed across all aspects of the agency, from client liaison to planning and media buying. The 30-second television commercial was being overtaken by multimedia, multiplatform campaigns, and planners were replacing creative directors at the core of the agency. Creativity was no longer the possession of a few maverick ‘creatives’ who could have a stroke of genius followed by a long lunch, while the rest of the agency revolved around them; instead, multiple agencies and individual talents cooperated to deliver a ‘full service’ to their clients. Creativity in advertising came to be defined in relation to strategic planning or the choice of media channels rather than merely the generation of ‘creative’ ideas.

Changing models of creativity in advertising reflect a recognition in business that creative ideas are not enough (Levitt 1963); the development and implementation of ideas is also part of the creative process. Across all the creative industries, there has also been a gradual blurring of the lines between idea generation and the ways in which ideas are packaged and experienced further along the industry value chain. Ideas are cheap; their value depends on how they are delivered and to whom. All of this leads to a more 'democratic' model of creativity which is no longer the preserve of special talents or a special type of thinking. This more collaborative, more process-based model of creativity is also deeply embedded in cultural practice; it predates the politicised definition of 'creative industries' and recalls the older framework of 'cultural industries' from the 1980s.

The Culture of Creativity

Before 1997, commercial media and entertainment industries were referred to as 'cultural industries'. The phrase had its origins in Adorno and Horkheimer's critique of the 'culture industry' which described the commodification of culture through mass reproduction and the 'mass deception' of audiences. Reacting against negative stereotypes of popular culture and mass consumption, activists and cultural workers in the 1980s introduced the plural 'cultural industries' to highlight the democratic, emancipatory potential of popular culture as an alternative to the 'elitist' art of mainstream cultural institutions. The first cultural industries policies in the UK emerged in cities like London, Manchester, Sheffield, and Liverpool, led by left-wing metropolitan councils who wished to divert arts subsidies towards grassroots cultural participation (Garnham 2005; GLC 1986). Today 'cultural industries' is still preferred by many academic commentators over the more recent policy rhetoric of 'creative industries' (Hesmondhalgh 2002; Jeffcutt and Pratt 2002).

Whereas 'creative industries' are constructed around an individualised model of creative genius, 'cultural industries' referenced the collective roots of individual creativity in shared values and traditions. Cultural policy took an interest in popular cultural technologies including video, film workshops and music recording and in the diversity of popular working class art forms, especially those emerging from ethnic and cultural minorities. Many of these popular cultural forms had been the focus of academic cultural studies, particularly in the work of Raymond Williams and Stuart Hall. Williams' description of a 'structure of feeling' within which both artists and audiences construct meanings and values is in turn linked to a Marxist theory of 'base

and superstructure' in which artistic 'culture' is shaped by social structures and institutions, especially social class (Williams 1973, 1977).

Where Williams and Hall deviated from orthodox Marxism was in their belief that culture in the aesthetic sense can shape social structures as well as the other way around (Williams 1971; Hall 1980); as with Gramsci's theory of cultural hegemony, culture (and by extension the 'cultural' industries) thus became for Williams and Hall a site where contested meanings and values battle for dominance. Williams and Hall were influential figures in the emergence of cultural studies as an academic discipline in the 1970s and 1980s, notably in the Birmingham Centre for Cultural Studies.

In contemporary cultural policy studies, the influence of Williams and Hall has largely been superseded by that of Bourdieu, especially his theories of taste and cultural capital in cultural consumption and his analysis of the field and 'habitus' of cultural production. Like Williams and Hall, Bourdieu was interested in the social and institutional forces which shape cultural production and consumption within a defined field (Bourdieu 1993). In the USA, Herbert Gans, Herbert Schiller and Noam Chomsky developed a comparable theoretical approach to media studies, again highlighting the institutional power structures which frame the production and reception of cultural and media products (Schiller 1989; Gans 1974).

From this cultural studies perspective, the 'cultural' industries reflected not only an aesthetic culture of ideas and self-expression but also a sociological culture in which social class, ethnicity, gender and the industrial and political structures of power shape individual consciousness. In particular, the cultural expression of working class communities and ethnic minorities during the 1980s was seen to be expressed not in the 'official' culture of high arts and established arts institutions, but through commercial popular culture, sometimes by reading against the grain of the received text or by wilfully subverting mainstream interpretations (Willis 1990). Cultural studies highlighted the subversive subcultures and self-projections made possible through the cultural industries, including television, film, popular music and popular fiction. Cultural policy makers in turn picked up on this 'alternative' reading of the cultural industries as a source of a progressive, emancipatory politics—the antithesis of Adorno and Horkheimer's view of the culture industry as mass deception.

According to critics of the 'creative industries' discourse, it is precisely this radical, progressive politics of the 'cultural industries' which has been washed out of the new, business-friendly, politically colourless model of creativity and creative industries described in the previous section (McGuigan 2005).

It may also explain why many academic critics prefer to hold onto the terminology of 'cultural industries', and why 'cultural industries' was considered a politically risky concept for a modernising 'New' Labour government in 1997 seeking to distance itself from the cultural policies of left-wing city councils such as London's Greater London Council (GLC), 'the People's Republic of Sheffield' and the other metropolitan councils which had been disbanded by the Conservative government in 1986.

Where does creativity fit into this account of the cultural industries and cultural studies? Williams' 'structure of feeling' and Hall's analysis of social class in popular culture highlight a collective consciousness behind individual self-expression. The sociological analysis of culture by Bourdieu also emphasises the significant effects of the 'field' or 'domain' within which creativity occurs. Finally, cultural studies highlight the ways in which audiences or 'consumers' renegotiate meanings according to their own experience, and suggest that this experience is itself shaped by the same institutional frameworks as the field of cultural production. The process of creativity, first as an active shaping of expressive possibilities by social context at the point of production, then as an active reinterpretation of meaning at the point of consumption, takes precedence over the product.

In order to release this everyday creativity, cultural industries policies in UK cities like London and Sheffield attempted to build an infrastructure which could open up creative expression to all, especially those who for economic or social reasons had not previously had such opportunities before. Rather than seeking out individual talent, cultural policy focused on providing technologies, resources and professional support for those outside the charmed circle of high culture and subsidised arts. Whether or not such policies were actually successful, the ideology behind them was premised on a collective, participatory model of creativity. Individual creative talent might be nurtured as a result, but the stated aim of urban cultural industries policies was to enable a social process of collective creativity.

This version of collective creativity fits with what has become a dominant paradigm in creativity theory, described by Keith Sawyer as the 'sociocultural' model (Sawyer 2006, 4). The 'field' and 'habitus' described by Bourdieu are comparable to the 'field' and 'domain' in the systems theory of creativity described by Csikszentmihalyi (1988). Access to resources, knowledge of the domain or domain-specific expertise, relationships with other creative individuals and contacts with 'gatekeepers' who can approve and support the creative act all become integral to the creative process (Becker 1982; Csikszentmihalyi 1988; Weisberg 1993, 2010). From this perspective, the individual talent and original ideas prioritised in creative industries policies are not enough;

cultural industries policies focus instead on the processes and systems by which these talents and ideas are nurtured, recognised and developed.

Cultural industries policies also highlight the collective norms and assumptions which validate creativity. Original ideas may be novel, but to qualify as creative ideas, they must also be valuable (Boden 1994, 75–75). That perception of value depends upon collective norms in a defined field (Wolff 1993). To become an artist and to be recognised as such, cultural producers must shape their work to fit with traditions and technical standards prevalent among fellow creators and with expectations and needs of audiences. Value judgements conform to the dominant beliefs and institutions in the field. This remains true even if their work attempts to transform or transcend those norms and expectations; such radical transformations must still be framed in a language or form which others can understand. This fits with Margaret Boden's argument that creativity consists in shifting or stretching the boundaries of an existing paradigm rather than thinking outside them (Boden 1994, 79–84).

In terms of creativity theory, the cultural industries also encompass a multistage, multidimensional model of creative thinking. Where the creative industries highlighted individual creativity at the point of ideation, cultural industries (and cultural studies) acknowledge the bigger picture of institutions, technologies, resources and intermediaries which add value to that original idea or individual. This more inclusive approach mirrors the multiple competences identified in Kirton's Adaption-Innovation Inventory (KAI) (Kirton 1984), De Bono's thinking hats (De Bono 1993) or Belbin's team theory (Belbin 1993). Where creative industries policies and management focus on innovators, cultural industries take in the work of adaptors and the full range of collaborative networks and systems which connect adaption and innovation.

What both the cultural industries and the creative industries discourses have in common is a focus on cultural production. Whether cultural production comes from individual talent or results from social circumstances and tectonic shifts in the 'structure of feeling', the primary outcome is still an act of creation. Yet cultural studies also points to the importance of audiences and consumption as the site where meaning is created. This acknowledgement of the power of consumers adds a further dimension to the cultural/creative industries, and another perspective on the theory and practice of creativity. Like the 'cultural industries' perspective of the 1980s, discussions of creative consumption in the creative industries again highlight the social and collective systems which frame individual creativity. This time the focus moves from production to consumption.

Creative Consumption

If ‘sociocultural’ models represented the dominant paradigm in creativity research in the early 2000s, there are signs that paradigm may be shifting towards a more consumer-centred model in the creative industries.

The products of the creative industries are ‘symbolic goods’. The meaning and value of these goods depend primarily on a subjective act of interpretation by consumers. This results in high levels of unpredictability and requires a ‘creative’ approach to strategy. Definitions of creativity require a combination of novelty and value, but attributing ‘value’ in the creative industries is problematic. As Holden notes, ‘value’ can take many forms (Holden 2004). According to the 1998 mapping document, the creative industries may generate economic value through the production of intellectual property. The creative industries also generate social value, in the form of desired social outcomes such as community cohesion, new forms of identity, well-being or cultural diversity (such claims were at the core of 1980s cultural industries policies)—as well as some less desirable social outcomes (exclusivity, nepotism, selfishness). Clearly, they also produce aesthetic value. But whichever criteria are used (economic, social or aesthetic), the true measure of value cannot be accurately known until the point of consumption.

The subjectivity of value in the creative industries is not in itself a new discovery. Audiences, despite the best efforts of market research and critical assessments, have always been unpredictable. What is perhaps new is both the speed with which consumers can communicate their opinions, and the direction of communication. The flow of communication is no longer a call and response between producer and consumer, but peer to peer exchange amongst consumers. New production and distribution technologies have ‘democratised’ value in the creative industries by making this communication more widespread and more rapid, allowing consumers in effect to generate their own value around shared experiences. In many (but not all) cases, the consumer response is raw and unfiltered, bypassing the intermediaries, including media critics and industry gatekeepers (Hirsch 1972), who would previously have interpreted and manipulated such responses.

The other new development is the short step from commenting on shared cultural experiences to co-authoring them. Given the availability and affordability of tools allowing everybody to create and share content online, the distinctions between home-made and professional work, between producer and consumer, have shrunk to the point of invisibility. ‘Vloggers’ on YouTube are amateur critics turned cultural producers with their own channels and their own followings. Word of mouth success through the peer-to-peer network

translates into conventional publishing and distribution deals, but the value has been discovered and created within the network.

When *Fifty Shades of Grey* was self-published, its initial success depended on a word-of-mouth success among readers through social media likes, shares and blogs. This in turn led to a film deal and persuaded a mainstream book publisher, Vintage, to offer the author E.L. James a conventional publishing contract. Would the book have been picked up by a publisher without that initial vote of confidence by readers? Most reviewers and many publishers remain unimpressed by the literary merits of James's book. The subject matter (erotic thriller, told from a woman's point of view for a mainly female readership) is unfamiliar and risky. In effect, the wisdom of the crowd substituted for the normal gatekeepers (publishers, agents, reviewers) in assessing the future value of the book. That route to publication has been followed by other self-published authors, bloggers, musicians and film-makers, with traditional publishers increasingly willing to follow the social media hits rather than attempting to lead public taste.

Again, the 'Do-It-Yourself' culture of self-publishing and amateur creators is not in itself new, albeit digital technologies have significantly lowered the barriers to entry in terms of cost and quality of production. What is more significant is the social character of social media. Value is generated collectively through 'shares' and 'likes'. Even though objectively most users know that reviews on Amazon or TripAdvisor are subject to fraud and self-promotion, consumers tend to trust horizontal communication amongst fellow consumers over vertical communication from marketers and 'experts'. The value component in creativity is accumulated through the uses and recommendations of fellow consumers, not from any intrinsic properties in the product. The value thus created is part of the 'cognitive surplus' which Clay Shirky identifies with Wikipedia and YouTube (Shirky 2010); millions of interactions between consumers add value to cultural content, and the cumulative weight of multiple recommendations and shares creates value more effectively than the most carefully orchestrated media and marketing campaigns.

The result is an everyday creativity in which the line between professional and amateur, producer and consumer, 'good' and 'bad' art becomes blurred. Creativity becomes an interactive, collective process in which the distinct stages of value creation bleed into each other and where consumption becomes an active part of the creative process.

Creative consumption democratises the creative process, inviting consumers to remix, repost and re-edit original material, as well as produce DIY content of their own. At its best, the new online creativity is liberating, playful and democratic, allowing ideas to spread and trigger new reflections rather

than being locked into the commercial restrictions of 'intellectual property'. At its worst, this is 'death of the author' with a smiley face. Andrew Keen (2007) describes the new 'cult of the amateur' as a collective dumbing down, threatening the integrity of our culture and the livelihood of our artists.

Other commentators have expressed concern over the loss of any consensus on creative value. Once the gatekeepers who previously legitimised one art work over another are removed, anything goes. As Carey observed, a work of art today is whatever the recipient considers to be a work of art (Carey 2005). Linked to this observation is a third source of anxiety, the narcissism of contemporary cultural consumption; the consumer becomes more important than the product. Social media commentators like Malcolm Gladwell (2000) and Seth Godin (2000), echoing Marshall McLuhan, have argued that in the viral spread of information online, the messenger becomes more important than the message. Certainly, social media discussion forums on news and gossip websites, on Facebook and on Twitter show users constructing and promoting an online identity and personal profile as much as they are responding to a given topic. In relation to theories of creativity, the creative input becomes less important than the creative output.

Above all, creative consumption shifts the emphasis towards *how* rather than *what* content is being consumed. In the creative industries, this means moving from a value system centred on the value and integrity of intellectual property towards a model based on consumer engagement and participation. The emergence of new gatekeepers like Apple, Amazon, Facebook and Google in the creative and media industries, replacing or challenging the dominance of traditional publishers, distributors and media companies reflects and consolidates this shift, reconfiguring the balance of power in the creative industries. With their relentless focus on consumer engagement (and the consumer data which underwrite their revenues), these new gatekeepers facilitate the sharing economy; to varying degrees, they may also be complicit in systematically eroding the intellectual property rights of content creators. In order to continue growing their businesses, they are continually offering new tools for creative consumption, encouraging consumers to believe that creativity is a universal activity for all, not the craft of a talented minority.

Individual creativity, skill and talent have been superseded by an awareness that 'making is connecting' (Gauntlett 2011); by sharing ideas and working collaboratively, ordinary people can achieve 'collective creativity'. Some of them may have ambitions to pursue an individual creative career, but the majority will be happy with a different kind of achievement, creating and sharing information and experiences for their own enjoyment. This might even be seen as a return to a more ancient tradition of creativity, rooted in

community and shared rituals, predating the emergence of the professional creative artist in the modern era. Theories of postmodern marketing refer to the ‘tribalisation’ of markets, in which consumers manufacture their own shared identity through consumption (Cova 1996).

Creativity in this context becomes a form of shared expression, with value and meaning produced at the point of consumption rather than in the mind of the creator. Creative consumption is democratic, inclusive and playful; it meets the criteria of novelty and value. Whereas the ‘creative industries model’ focused on economic outcomes and the ‘cultural industries model’ focused on the social outcomes of creative outputs or ‘content’, creative consumption insists that creative outputs are themselves absorbed within a collective social process. The work of creativity is never done, but continually reshared and reinvented (Lessig 2008).

Three Perspectives on Creativity

In the final part of this chapter, I will consider the implications of these changing changing perspectives on ‘creativity’ for policy and management in the creative industries. In this chapter, I have outlined three models of creativity. The first is associated with the ‘creative industries’, as formulated by the UK government and replicated in creative industries policies worldwide. The second reflects a longer perspective on the ‘cultural industries’ of the 1980s. Finally, I have highlighted a third perspective on creativity shaped through the reconstructed creative industries of today, where social media, creative consumption and the tribalisation of meaning relocate creativity from cultural production to ‘creative consumption’.

In the context of this handbook’s focus on creativity and culture, these changing models of creativity also reflect different models of culture. The ‘creative industries’ model of creativity views culture as a set of aesthetic outputs, disconnected from ‘cultures’ in the anthropological sense. In contrast, the ‘cultural industries’ perspective sees creativity emerging organically from an anthropological model of culture as a ‘whole way of life’. Finally, the more participatory model of creative consumption reflects a sociological interest in culture as a set of relationships and identities continually in flux, refracting both creativity and culture through changing users and contexts.

One of the aims of this handbook is to highlight the variety of perspectives arising in different fields and disciplines. ‘Creativity’ in the creative industries has suffered from semantic dilution—this lack of definition may itself be politically expedient, allowing policy makers and those working in the field

to apply the term liberally like ‘political margarine’ or ‘magic dust’ in order to vindicate particular policies or practices (Tusa 2003; Jeffcutt and Pratt 2002). The uncertainty extends to the creative industries themselves (and to the cultural industries before them); it is notoriously difficult to acquire accurate data on the scope and value of these industries because statistical categories have tended to be adapted to the political argument of the moment rather than vice versa (Selwood 2006). This strategic vagueness has served the interests of politicians and practitioners, allowing vested interests to exaggerate the scope and significance of the creative industries, to legitimise investment and other policy interventions and to demonstrate a supporting narrative of success and growth. Definitions of creativity have accordingly switched opportunistically between the three versions of creativity outlined in this chapter (Fig. 32.1).

Across these different versions of ‘creativity’ in the creative industries, there is a fundamental tension between a view of creativity as the product of individual genius and a view of creativity as a collective process. This in turn sets differing priorities for policy and for management.

The individualistic, output-driven model of creativity promoted in the UK government’s Creative Industries Mapping Document is allied to a neo-liberal policy which trusts in the transformative power of individual talent rather than in any external intervention. For managers, the individual talents do not require active management, only selection; the managerial approach is based on the recruitment and retention of talent, and the provision of a conducive, unpressured environment in which creative individuals can take risks and thrive.

The ‘cultural industries’ model implies a closer alignment with social policies towards inclusion and diversity. It requires managers to intervene in the creative process, in order to achieve the right alignment between people, process and culture, for example, by adjusting the balance in a creative

	‘Creative Industries’	‘Cultural industries’	‘Creative consumption’
Source of creativity	Individual skill and talent	Shared ethos / values of producers	Collective experience of consumers
Unit of analysis	Outcome	Process	Product + process
Value of creativity	Economic – GDP, employment	Social – community, inclusion, diversity	Personal – identity, self-expression
Theoretical perspective	Romanticism / trait-based theory of creativity	Sociology of culture / systems theory of creativity	Postmodernity / complexity theory (‘order for free’)
Model of culture	Aesthetic	Anthropological	Sociological

Fig. 32.1 Three perspectives on creativity in the creative industries

team (Kirton's Adaption-Innovation Index), channelling resources to develop promising ideas, or connecting one part of the organisation to another.

The 'creative consumption' model requires a focus on marketing and on optimising the customer experience rather than managing the creative process itself, but again requires managers and policy makers to take a more active, facilitating role. This has been reflected by a power shift within the creative industries from traditional intermediaries concerned with investing in and exploiting intellectual property to new intermediaries concerned with facilitating and monetising exchange and interaction among consumers.

Most psychological and organisational definitions of creativity contain two components, novelty and value (or 'fitness for purpose'). Such a combination in turn derives from a combination of divergent thinking and convergent thinking. Individual creativity, skill and talent might be associated with divergent thinking, producing a stream of novel ideas injected into a predictable system by maverick outsiders. Collective creative processes might be biased towards convergent thinking, emphasising the collective values and uses which shape individual creativity and the valuable outcomes of a creative process. If either of these modes of thinking dominates, the creative outcome is also skewed. Too much divergent thinking results in an excess of novelty which will not necessarily connect to perceptions of value among users. Too much convergent thinking results in an excessive emphasis on valuable outcomes, reinforcing existing models and preconceptions without introducing the necessary element of surprise to come up with novel solutions. The challenge is to combine these modes of thinking to achieve a bisociative combination which is both novel and valuable.

In this chapter, the 'creative industries model' is associated with an individualistic form of self-expression, which prizes originality and talent. The role of the manager is to provide space for the talented individual to operate, free of constraints and inhibitions. The 'cultural industries model' is associated with a shared 'structure of feeling' in which individual ideas both reflect and reconfigure shared values. Managers are much more actively involved in this version of creativity, nurturing, orchestrating and connecting; indeed management itself becomes part of the creative process. If the 'creative industries model' carries a risk of self-indulgence and irrelevance, the 'cultural industries model' risks becoming repetitive and pragmatic rather than transformative.

The challenge for the creative industries is to connect these different dimensions of creativity (novelty plus value) and creative thinking (divergent/transformative versus convergent/incremental) in order to produce marketable products. It could be that 'creative consumption' offers such a connection,

because it combines individual unpredictability with collective systems, and because the original idea is linked to the valuable extensions of that idea by users. The individualistic creativity of both the content creator and individual consumers combine with the social creativity accumulated through the iterative sharing and adapting of ideas amongst users. The creative process is iterative and incremental, with the potential for unexpected twists and reinventions through the sharing and mediation of ideas and for added value through social interaction. The managerial effort becomes one of following rather than leading the creative process, capturing and repackaging consumer-led innovation and developing interactive, experiential platforms which connect consumers and producers.

Creative consumption has the potential to open up new forms of creativity as users exploit the availability of new tools and networks to remix and reinvent cultural content. Two obstacles threaten to undermine this potential. First of all, intellectual property laws are premised on a Western legal emphasis on individual authorship and ownership, in which adaptations and reworkings of original content may be regarded as infringement of the creator's rights; extensions to the term of copyright and legal precedents favour established creators over new entrants.

The other threat comes from the diametrically opposite direction, with global intermediaries happy to promote a sharing economy in which intellectual property laws are cut back to allow users to exchange content for free. However, this collective creativity is itself commodified and exploited as a means of extracting consumer data and selling advertising. Creative consumption thus ceases to have any meaningful value beyond the generation of information about the consumer. Whilst participants in creative online communities might feel 'creative' and 'connected', their work is only valued for the number and frequency of interactions they generate, not for any intrinsic creative meaning or effect.

All may not be lost. Alongside the global corporations like Facebook and Google, independent creative enterprises and creative individuals are also 'sharing' content with users and finding new ways to generate creative value. Songwriters, writers and film-makers are working with fans to add value to their own work and to create shared creative experiences through live shows and customised interactions among users. This is a new creative economy, where artists and users can both benefit from creative consumption, rather than seeing the profits going to third parties in the form of advertising revenues.

Conclusion

The ‘creative industries’ is a relatively new coinage. Following its introduction in the UK in 1998 (and following from Australia’s ‘Creative Australia’ before that), the ‘creative industries’ have placed creativity in the centre of a new industry sector which is driving the emergence of a new ‘creative economy’. The marriage of creativity and commerce was initially an expedient one, and this chapter argues that the ‘creativity’ of the creative industries was not well understood or defined by policy makers, possibly quite deliberately. Nevertheless, the concept has matured from an initial emphasis on ‘individual creativity, skill and talent’ to a more complex definition which encompasses the older ‘cultural industries’ perspective on creativity, as a social process and one which generates social value as well as economic outcomes. The growing attention paid to ‘creative consumption’ in the creative industries highlights a new model of creativity, in which an original creative idea merges with the creative iterations of that idea by consumers. This raises challenges for the creative industries themselves, notably regarding the legal definition of authorship and copyright and the need to develop new business models which can build on and commodify creative consumption.

It also challenges definitions of the ‘value’ of creativity. ‘Value’ both in creativity theory and in the creative industries remains a contentious issue. For many critics (McMaster 2008; Jowell 2004; Holden 2004; Tusa 2003), creative industries policies seemed to abandon faith in the intrinsic quality of art for more instrumental goals. Whereas the instrumentalism of ‘cultural industries’ had been rooted in *social* policy goals (inclusion, access, participation, diversity), the new rhetoric of ‘creative’ industries favoured *economic* instrumentalism. In the creative consumption model, the value of creativity depends on commodifying consumer experiences. According to this logic, a novel idea is made valuable through its use, not through any intrinsic merit or quality. That answer may be either liberating or depressing, depending on the creative uses we make of it.

Belatedly, cultural policy makers in the twenty-first century have begun to reconnect creative industries policy and rhetoric with the dominant paradigms in academic discussions of creativity—in particular, the realisation that creativity is essentially a social process and definitions of creativity must take account of the social systems around ‘creative’ individuals, products and processes. ‘Creative consumption’ offers a way of reconnecting individual creativity and social systems, novel ideas with collective value. Alongside other paradigms and perspectives considered in this book, creative consumption

in the creative industries offers some alternative answers to an old puzzle, through the gradual maturing of an empty concept into something more provocative and challenging.

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A Literary Studies Perspective: Creative Communities, 1750–1830

David Higgins, Cassandra Ulph, and John Whale

Introduction

Despite the emergence of post-structuralism across the last four decades, the field of literary studies still largely understands “creativity” as an expression of individual authorship. No one would deny, of course, that authors respond to influences and operate within networks. However, as suggested by the persistence of individualised biographies, single-author studies, and author-based societies and events, “the author” remains the focus of much critical endeavour. At best, the idea of the author offers a useful explanatory paradigm for how literary production works; at worst, it can be a distracting fetish that obscures the complex social and institutional interactions that comprise literary creativity. Romanticism has often (and not always fairly) been held responsible for the creation of this psychological understanding of the creative process, one which derives in no small part from its related celebration of imagination. This focus is increasingly seen as a highly selective reading of Romantic aesthetics. The paradigm of the genius-author has dominated the

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historiography of the period from 1750 to 1830, but recent work has begun to pay much more attention to the social aspects of creativity, focusing on literary production through friendships, familial relationships, coteries, networks, and institutions.¹

This chapter is a collaboration between three authors who organised *Creative Communities, 1750–1830*, a research network funded by the UK's Arts and Humanities Research Council. Based in the School of English at the University of Leeds, in partnership with the University of Southampton and University College London, the network organised three workshops over a nine-month period in 2013–14 on the subjects of dissenting culture, metropolitan institutions, and regional and national networks (“Creative Communities, 1750–1830,” n. d.). It focused on historical case studies in the period, across a range of authors and institutions, and examined how connections between members of a community, and between different communities, might be said to engage in creativity. At the same time, it subjected its key terms of “community” and “creativity” to rigorous investigation. The project opened itself up to a liberal understanding of the term “community,” one which included kinship groups, religious affiliation, political identity, membership of institutions, and shared geographical habitation, and it accommodated a similar variety in its inclusion of different kinds of creative activity: letter writing, conversation, collective or shared authorship, and debate (published and unpublished). Similarly, its understanding of culture extended beyond the usual case studies of published texts and art works to include the processes which underpin them and also included—more radically—processes which might not lead at all to such products or outlets. In this sense, the understanding of culture extended to include process itself as a creative force. In line with the recent revisionist historiography of the period 1780–1830 noted above, part of the rationale of the project was to find evidence of communal and contextual creativity in a period previously deemed to be the primary source of the psychological model of creativity.

The aim of this chapter is to give an account of the main issues to emerge from the workshops, before focusing on three case studies based partly on individual research, but which engage in different ways with the ideas generated by the community of scholars who participated in the network. The three case studies which follow illustrate some of the key aspects of the project's engagement with creativity. In the first, David Higgins focuses on a relatively well-known example of shared creativity within the Shelley circle in

¹ See, for example, Carlson (2007), Fairer (2009), James (2008), Krawczyk (2009), Mee (2011), and Newlyn (2013).

1816, one which gave rise to a number of now famous texts including Mary Shelley's *Frankenstein*. Here, Higgins shifts our attention away from traditional notions of "influence" to the extraordinary environmental conditions which these authors shared in the summer of 1816 and sees this experience as an opportunity to understand the constellation of "creative energy" produced out of a communal concern for the fragility of human communities within a potentially hostile universe. Cassandra Ulph, in contrast, addresses the way in which space operates alongside sociability in the context of Hester Piozzi to offer a creative opportunity within a precariously defined social community. Her account of this coterie addresses one of the key concerns of the project: how such communities depend as much on exclusion as inclusion for their existence and how forms of social interaction such as conversation can be said to offer creative opportunity. John Whale's contribution takes the case of William Roscoe to draw attention to a form of creativity which might best be described as "civic"—one which depends upon an urban and international network in the regional centre of Liverpool in the late Georgian period. Whale's example is illustrative of a number of kinds of creativity engaged with by the project, ones which take account of the regional geography and identity and which depend upon organisational collaborations rather than the workings of individual genius.

The Creative Communities Workshops

In the workshop for the first of the three chosen topics of dissenting and evangelical communities, the group was focused not just on the nature of particular collaborative practices between authors, including those between Anna Letitia Barbauld and William Roscoe, and Barbauld and John Aikin, but also on the recoverable nature of these communities and the implications for our assumptions about what we conventionally count as creativity. Members of the group were concerned to identify how writers functioned in relation to each other. In this respect, Scott Krawczyk's talk deployed Stuart Curran's idea of writers in the dissenting community "creating a pressure from within" in order to examine literary exchanges, and suggested that only by reading such writers alongside each other could we gain a true sense of their creativity or indeed what we might think of as the extended meaning of their texts. Our received sense of how we attribute literary works to individual authors is also pressurised by the collaborative nature of some of these writings. The wider historiographical challenge here consists of recovering a set of practices and circumstances and being able to focus properly on the significance of these

exchanges rather than being primarily engaged with “the finished products”—the published texts of the individuals concerned. To this end, the attention of the group was often on how individuals came together to “create a circumstance,” which was felt to be more illuminating for an understanding of creativity than looking at isolated, individual texts. Similarly, it was suggested that the presence and evidence for creativity might more properly be said to reside in these processes taking place between individuals than in the written results of those processes.

If the processes and rituals involved in establishing a community were the main focus of the workshop on dissenting culture, then the implications of space or geography came to the fore in the other two. The second, on “Metropolitan Institutions,” focused its attention on the different ways in which creativity can be understood as a communal process, but especially when produced collectively through communities and institutions based in the city of London. Delegates explored the distinctive contribution the city made to the formation of creative communities in this period—its capacity to connect and offer through its unique geography an opportunity for communication, assembly, performance, and the circulation of knowledge. The geography of London led to a consideration of the proximity of labour to creative activity, its relationship to confinement and freedom, and its existence in a national and imperial context. The differentiation between creative London communities and the terms used to describe them—“coterie,” “society,” “sociability”—came under scrutiny. As with the dissenting and evangelical communities, familial and friendship groupings were a part of the London scene under examination. Attention also focused on the increasing professionalisation of writing and publishing practices in this period—activities which took place simultaneously with the increased codification of institutions. Alongside this, significant consideration was also given to the creative friction and conflict between individuals within the increasing stratification and regulation of institutions. This, in turn, led on to a discussion of the duration of institutions and communities and how we might evaluate their productivity or creativity: whether they are to be assessed solely by their capacity to produce literary publications or whether the life of the communities is itself creative.

In the third workshop on “Regional and National Networks,” the discussion focused on a variety of formations—theatre goers, the small aristocratic coterie, dialect poets, and the “virtual” epistolary communities—and a consideration of their functional and formal distinctiveness. In particular, this workshop examined the transient existence of touristic travel communities and compared these with the relative fixity offered, for example, by a city

institution or a country house. In this workshop, accessibility was also a significant feature of the discussion with extended reflection on the barriers placed between individuals and the availability of a creative community, particularly in the British regions or in rural communities. Questions of gender and class also underpinned these discussions, with debates on the extent to which women were overtly or covertly excluded from certain kinds of community and the degree to which labouring-class poets were limited in their reach and fame by their speech community or by their designation as dialect writers. In terms of the historical record, there was also a focus on the importance of the local archive—including parish archives—as a means of discerning otherwise invisible communities of families and friends. And in the context of regional networks consideration was given to a re-examination of Benedict Anderson's (1983) idea of an “imagined community” in relation to this more limited geography of identity.

Case Study: Byron, the Shelleys, and the “Year Without A Summer” (David Higgins)

The year 1816 is an important year in the history of English literature, due in large part to the summer months that Lord Byron, Mary Shelley, and Percy Bysshe Shelley spent together on the shore of Lake Geneva. During this brief period of intense creative endeavour, some of the most important texts of British Romanticism were conceived. Byron wrote Canto III of *Childe Harold's Pilgrimage* (1816), “Darkness” (1816), and *The Prisoner of Chillon* (1816), and began *Manfred* (1817). Mary Shelley began *Frankenstein* (1818) following the famous ghost story competition between the three authors and Byron's doctor, John William Polidori, and drafted much of the novel before returning to England in the autumn. And Percy Shelley wrote “Hymn to Intellectual Beauty” (1817) and “Mont Blanc” (1817). This last poem was first published at the end of the Shelleys' *History of a Six Weeks' Tour* (1817), a collaborative text that describes a journey that they had taken through Europe in 1814 and their impression of the area around Geneva in 1816. All of these works bear the imprint of each other, drawing as they do on similar locations, ideas, and imagery. While they and now often strongly associated with specific authors, they should be seen as the collaborative products of a literary group, rather than of individual genius.

These texts also bear the imprint of the environmental conditions of 1816, which saw unusually cold and wet weather in most parts of the world, and in Europe became known as the “Year Without A Summer.” The principal cause,

although this was not understood at the time, was the eruption of the Tambora volcano on the island of Sumbawa in Indonesia: probably the largest known eruption in history. The mountain began rumbling in 1812 and eventually erupted in April 1815, releasing huge amounts of smoke, ash, and magma. The explosions were heard over 2000 km away. The amount of sulphur released in the atmosphere affected global climate patterns, leading to a drop in global temperature in 1816 and 1817, extreme weather events, and unusually wet and foggy conditions. The immediate death toll from the explosion, the tidal wave, and local famine and disease is impossible to know, but one plausible estimate puts it at about 117,000 people across Sumbawa, Bali, and Lombok. If one understands Tambora as having a significant role in the harvest failures and food scarcities across the globe in the late 1810s, and perhaps even the typhus and cholera epidemics of the period, then its demographic and political effects were huge.

Cultural historians have recently described the cultural, political, and environmental effects of the Tambora eruption (Wood 2014). However, what has not been properly investigated is the extent to which Byron, Mary Shelley, and Percy Shelley were responding *as a creative community* to those effects. In particular, the unusually grim weather of the summer of 1816 heightened their apprehension of the sublime power of the Alpine landscape and led them to contemplate the catastrophic power of the natural world. Environmental catastrophes such as the Tambora eruption not only put pressure on actual communities; they often lead, as is apparent in these texts, to pressure on *the idea of community*.

In different ways, the 1816 writings of these three authors are concerned with the potential vulnerability and insignificance of human communities in the shadow of uncontrollable environmental forces. This concern was in keeping with changing understandings of geological history around the turn of the nineteenth century, as is apparent in this extract from the final letter (originally by Percy Shelley) of the *History of a Six Weeks' Tour*:

It is agreed by all, that the snow on the summit of Mont Blanc and the neighbouring mountains perpetually augments, and that ice, in the form of glaciers, subsists without melting in the valley of Chamouni during its transient and variable summer. If the snow which produces this glacier must augment, and the heat of the valley is no obstacle to the perpetual existence of such masses of ice as have already descended into it, the consequence is obvious; the glaciers must augment and will subsist, at least until they have overflowed this vale. I will not pursue Buffon's sublime but gloomy theory—that this globe which we inhabit will at some future period be changed into a mass of frost by the encroachments of the polar ice, and of that produced on the most elevated points of the earth. (pp. 161–2)

An earlier section of the letter emphasises the sublime power of this landscape on the receptive individual; its capacity to produce an “extatic wonder” (p. 152). Here, however, this power is not understood only in aesthetic terms, but also in relation to geological history and humanity’s future. Shelley is referring quite accurately to the argument of Buffon’s “Des époques de la nature” (1778) that the Earth was changing and steadily cooling over seven successive epochs and that eventually the planet would be unable to sustain life (Rudwick 2005, pp. 142–7). He considers it a “sublime” theory, one suspects, for several reasons: its intellectual ambition, its assumption of a vast timescale of geological change, its applicability as a model to planets across the universe, and the dark pleasure that one might take in imagining such huge future destruction from a position of present-day safety. To that extent, the implications of Buffon’s theory are still aestheticised, and the pleasure here is very much the pleasure of being contradicted. When Shelley himself contemplated the future climate in other texts, it tended to be in the utopian terms of an eternal spring or summer related to political progress, as can be seen in *Queen Mab* (1813) or *Prometheus Unbound* (1820). This more “gloomy” apprehension is the product of a particular place, a particular set of environmental conditions, and (as I will show) a particular creative community.

This glacial augmentation is imagined in more figurative ways a few pages later in the *History*, in the fourth section of “Mont Blanc.” Shelley describes the glaciers that “creep / Like snakes that watch their prey,” and the piling up of icy precipices by “Frost and Sun in scorn of mortal power,” forming a “city of death” (p. 180). He then shifts to a different metaphor, imagining the glacier as “a flood of ruin” rolling “its perpetual stream” and leaving even “vast pines” either “strewing / Its destined path” or standing “branchless and shattered” (p. 181). This destruction of the forest leads to a contemplation of the weakness of animals and humans in the face of this unstoppable process:

[...] The dwelling-place

Of insects, beasts, and birds, becomes its spoil;
 Their food and their retreat for ever gone,
 So much of life and joy is lost. The race
 Of man, flies far in dread; his work and dwelling
 Vanish, like smoke before the tempest’s stream,
 And their place is not known. (p. 181)

Since Jonathan Bate’s influential book, *The Song of the Earth*, ecological approaches to Romantic writing have often emphasised its concern with place and (following Heidegger) the capacity of poetry especially to create “a *revelation* of dwelling”: a strong sense of humanity’s connection to the nonhuman world (Bate 2000, p. 266). And yet Romantic texts are often equally

concerned with the difficulty or impossibility of dwelling within a strange or hostile environment. The destruction described by Shelley is not only physical, but epistemological: the glacier's huge power threatens humanity's sense of place.

Mary Shelley's *Frankenstein* is, of course, deeply concerned with the difficulties of finding one's place in the world. The novel's restless movements between different parts of Europe and the Arctic mimic the Creature's restless and ultimately fruitless search for a physical and epistemological location where he will be able to dwell unmolested. As in her husband's work, the locale around Mont Blanc provokes Mary Shelley to consider the fragility of human communities. After the trauma of William's murder and Justine's execution, the Frankenstein family seek recuperation in "an excursion into the valley of Chamounix" (p. 64). One morning, Victor awakes to depressingly bad weather—reminiscent of the "dreary night of November" (p. 35) when he brought the Creature to life—and he seeks solace in a lone trek to the summit of "the tremendous and ever-moving glacier" of Montanvert, for "the presence of another would destroy the solitary grandeur of the scene" (p. 66):

It is a scene terrifically desolate. In a thousand spots the traces of the winter avalanche may be perceived, where trees lie broken and strewed on the ground [...] The path, as you ascend higher, is intersected by ravines of snow, down which stones continually roll from above; one of them is particularly dangerous, as the slightest sound, such as even speaking in a loud voice, produces a concussion of air sufficient to draw destruction upon the head of the speaker. (p. 66)

Like other Alpine tourists of the period, Victor seeks an encounter with the sublime. But this version of the experience does not involve the safe contemplative distance that is often associated with the ability to aestheticise a potentially dangerous landscape. As befits Victor's risk-taking character, he emphasises the physical danger affecting the human observer and which is represented metonymically through the destruction of the trees. This image of the "strewing" of the pines by the glacier's power not only connects *Frankenstein* to "Mont Blanc" but also both texts to the *History of a Six Weeks' Tour*, which describes "the most vivid image of desolation that it is possible to conceive. [...] The pines of the forest, which bound it at one extremity, are over-thrown and shattered to a wide extent at its base" (pp. 159–60). Both prose accounts of the pines emphasise the scene's "desolation"; that is, its barrenness and its lack of inhabitants. "Desolate" derives from the Latin *desolatus*, meaning "left alone": this is a landscape in which human communities cannot flourish.

After ascending Montanvert, Victor walks across the glacier (“the sea of ice”) to the opposite mountain, so that he has a view of Montanvert and Mont Blanc behind it “in awful majesty” (p. 67). But the individual apotheosis potentially offered by the sublime—the swelling of the heart provoked by a “wonderful and stupendous scene”—is cut short by his sudden encounter with the Creature, their first since his creation (p. 67). Victor’s sublime solitude is interrupted by a painful reminder of the responsibilities that human beings have to each other. The Creature responds to Victor’s execrations with counter threats, but also with justifications, pointing out Victor’s failure in his duty to his creation, his natural benevolence, and his loneliness after being spurned by all the people whom he has encountered. Therefore, he states,

The desert mountains and dreary glaciers are my refuge. I have wandered here many days; the caves of ice, which I only do not fear, are a dwelling to me, and the only one which man does not grudge. These bleak skies I hail, for they are kinder to me than your fellow-beings. (pp. 68–9)

The inhospitable landscape, which for Victor is a site of what we would now call “extreme tourism,” is for the Creature the safest dwelling place that he can find. Cast out by his creator, and by the human communities to which his sensibility, if not his appearance, should connect him, the Creature has been forced to find a different sort of connection by dwelling with the nonhuman world. Despite his apparently “unnatural” beginnings, the Creature is therefore aligned here and at other points in the text as closer to a Rousseauvian “state of nature” than the human characters; the glacier’s destructive power connects to his power to destroy the human communities with which he comes into contact.

The problem of human dwelling in the face of extreme environmental conditions is also a key theme in Byron’s “Darkness.” The poem has a range of apocalyptic influences, from *The Bible*, to the weather of 1816, to the European sunspot panic of the same year, which led to the so-called Bologna prophecy about the imminent end of the world (Vail 1997). The poem itself begins in prophetic vein, with the ambiguously ironising statement that “I had a dream, which was not all a dream”:

The bright sun was extinguish’d, and the stars
 Did wander darkling in the eternal space,
 Rayless, and pathless, and the icy earth
 Swung blind and blackening in the moonless air. (p. 245)

This describes on a cosmic scale the future desolation that the Shelleys saw in the valley of Chamonix. In Byron’s poem, the Earth becomes unable to

sustain human life; as the words “rayless” and “pathless” suggest, the poem is defined by absence and loss. In the face of such overpowering environmental forces, humans inevitably become architects of their own destruction:

And the thrones,
 The palaces of crowned kings—the huts,
 The habitations of all things which dwell,
 Were burnt for beacons; cities were consumed
 [...]
 Forests were set on fire—but hour by hour
 They fell and faded—and the crackling trunks
 Extinguish'd with a crash—and all was black. (p. 245)

Once again, the fate of trees becomes a metonym for the fate of humanity, even if in this case the deforestation has an immediate human cause. And, as in “Mont Blanc” and *Frankenstein*, the poem becomes concerned with the impossibility of human dwelling in the face of environmental catastrophe. The burning of the “huts,” in particular, is echoed by the fire symbolism throughout *Frankenstein* and particularly the Creature’s burning of the De Lacey’s cottage when he eventually realises that it is not a place in which he will ever be able to dwell.

This case study has given a brief overview of the interaction of a creative literary community with unusual environmental conditions. It would be possible, and indeed desirable, to provide a much longer and more detailed analysis. However, the goal is not to track or even guess at every discussion and interaction amongst these three writers, and it is certainly not a matter of unpicking cause and effect or even arguing that one text “influenced” another. Rather, we can extrapolate from these texts of 1816 a creative energy that was generated by community rather than individual genius, and use that as a basis for analysing their shared concern with the fragility of human communities within a potentially hostile universe.

Case Study: Hester Piozzi and Creative Contention (Cassandra Ulph)

My research during the *Creative Communities* project focused on an eighteenth-century novelist, Frances Burney, and her experience of growing up in a creative professional household. Burney’s father Charles was a renowned music teacher and musical historian—one of the very first musicologists—but had risen to that rank through the traditional musical career route of apprentice-

ship, underlining the prevailing assumption that musical performance was the product of (albeit skilled) mechanical labour rather than inherent genius, and the culture in which performers and teachers were seen as artisans rather than artists. In the context of emerging discourses of literary professionalism,² this background was key to Burney's own version of creative agency, in which she both laid claim to the professional value of her labour, and also invoked the specialist language of artistic taste to distinguish her community from the fashionable world of luxury consumption in which creative practice was treated as a tradable commodity. Burney sited this specialist professional expertise within her family network, embracing what I have termed "private professionalism" (Ulph 2015); in which a potentially exposing act of artistic creation could take place within a regulated and properly private community operating along lines of close-knit familial or domestic environments, maintaining professional standards of creative production alongside an appropriate and respectable feminine identity.

The questions that emerged from the Creative Communities network, about how particular spaces or buildings can foster creativity, led me to re-examine Burney's emphasis on the family home, both as a professional network and as the basis of a pseudo-ancestral claim to creative authority. One of the most striking questions to arise from the network was that of inclusion, and we quickly recognised that the formation of a community involves the definition of its limits. The next logical step, then, was to examine who was excluded, which communities Burney was defining herself against, and in particular what other models of female creative participation were available to an intellectual woman in the gendered artistic culture of the late-Georgian period. With this mind, my current research has turned to focus on Hester Thrale Piozzi. Piozzi was a key figure in eighteenth-century literary culture in her own right; like many, I first became aware of Piozzi as the hostess (as Hester Thrale) of the Streatham coterie, a group of luminaries with Samuel Johnson at the centre, and in particular, through her brief and intense friendship with Burney between 1778 and 1784. The difficulties of that friendship had been key to my understanding of Burney's conscious alignment of her creative identity with her father's household in St Martin's Street rather than the prominent and more obviously literary grouping at Streatham. The particular type of feminine creativity that Burney constructed—professional, domestic, and pseudo-private—was a different model from that which Piozzi

²For more on the transformation of literature to a gendered and 'gentlemanly' profession, see Siskin (1998), especially chapters 8 and 9; for female literary professionalism in particular, see Schellenberg (2005).

adopted, which was amateur, ephemeral, and depended on the presence of a sociable audience.

Piozzi's artistic reputation has been defined and, in many ways, undermined by her relationship with Samuel Johnson; a relationship that she describes as "founded on the truest Principles[,] Religion, Virtue and Community of Ideas." She writes that he "has fastened so many of his Notions so on my Mind [...] that I am not sure if they grew thereof originally or no" (Piozzi 1951, i. 445). This image is striking in its implication of passivity, in which Piozzi is the recipient of "Notions" "fastened" there by another; yet the metaphor of growth dissolves the distinction between the organic and the inorganic, between what "grew [...] originally" and what has been imposed. While this blending of ideas would initially seem to support Piozzi's characterisation of her relationship with Johnson as "community," the choice of "fastened" suggests the relationship as vertical rather than lateral: Johnson imposes, Piozzi accepts. In the face of this inherent contradiction, in which the posited community fails to function reciprocally, Piozzi comically reproaches herself as a "saucy soul" for having suggested a "Community of Ideas with Doctor Johnson" (Piozzi 1951, i. 445). By critiquing this model of exchange as being no exchange at all, Piozzi exposes the emptiness of the "community of ideas" of reciprocity, and thus its failure.

As the above suggests, the strategies available to Piozzi for participation in the creative life of her literary guests were strongly limited during her marriage to Henry Thrale. However, the role of hostess to the coterie did offer avenues for ephemeral creativity in the form of conversation. Piozzi's journal from this period, *Thraliana*, records the witty repartee and *bon mots* of her guests, her children and, more often than not, of herself. Modelled on the French style of memoir or "ana," Piozzi's chosen form is the anecdote; somewhere between history and fiction, *Thraliana* aims for a combination of style and substance that errs heavily on the side of style. Piozzi's approach to conversation seems to have been similar: contemporary memoirist Lætitia-Matilda Hawkins observed that "when reduced to fact, it was often observable, certainly to the credit of her invention but at the expense of her correctness, that the worth of a tale, or the wit of a repartee, was furnished by herself" (Hawkins 1824, i. 65 [n]). Piozzi's "invention" thus creatively reconstructed "repartee" or conversational exchange, furnishing it with wit or worth of her own making, for the benefit of a new audience. Her mode of creativity is characterised by, and contingent upon, the fluidity of the relationship between speaker and audience, in which the act of observation is translated into witticism and performance. Piozzi embraces the social and performative nature of oral literary culture: "bred among Artists," she writes to her daughter Hester Maria in 1784, "I

delight in their Talk & take an interest in their Disputes” (Piozzi 1989–2002, i. 88). In this sense, Piozzi claims a kind of connoisseurship through nurture, which equips her both to properly value, but also to engage in, such “disputes.” Writing in her *Thraliana* in 1781, she observes, “what an odd partiality I have for a rough Character! [...] There is no true Affection, no friendship in the sneakers & fawners” (Piozzi 1951, i. 470). For Piozzi, the friction of the “rough” is productive of “true affection” and “friendship,” thus domesticating the artistic “dispute” as a sociable, if potentially combative, process.

Piozzi’s combative version of sociability transplants from the lecture hall to the drawing room a model of knowledge production through conversation that Jon Mee (2011) has described as “like a spark struck out between two flints” (p. 38). Indeed, Piozzi’s model of creativity is inherently tied to just such collisions. In a parodic poem, in which she laments the absence of the (male) guests who have abandoned Streatham for parliament, Piozzi satirises herself as the “Streatham Muse,” who has the audacity “to flash when all her sparks are flown.”³ The play on the “spark” as something both generated by collision, but generative of itself, underscores the two-way relationship of Piozzi and her audience. As a fashionable hostess, her entertainment of company did not merely consist of providing a venue and inviting intellectually compatible guests: she promoted and engaged in intellectual performance, and was noted for her wit. Wit, however, bears a problematic relationship to eighteenth-century concepts of creativity. As a performative quality, wit was often associated with display, and with conversation rather than serious literature. In 1820, Piozzi wrote to her adopted son John Salusbury Piozzi Salusbury:

Oh never wish Wit to a Lady:—that is indeed Superfluous; and will draw nothing but Envy and Malice from 18 years old to 81. I will not however wish mine away. (Piozzi 1989–2002, vi. 387)

The “envy and malice” that Piozzi draws marks wit as an inherently equivocal and disputatious quality; although Piozzi claims it is “superfluous,” it is rarefied enough to be conspicuous, and this conspicuousness is strictly gendered. Piozzi’s defiant declaration that she will not “wish [her wit] away” is consonant with her tendency towards revision of, or resistance to, social commonplaces: the artist disputes, and in disputing, creates. As a creative performance, Piozzi’s wit might reasonably be compared with more recognisably “artistic”

³ “How bold the Streatham Muse has grown/to Flash when all her sparks are flown/Will nothing then abash her?” (Piozzi 1951, i. 375).

forms of entertainment, such as music, theatre, or literature, of the kind that might be produced or consumed in a late-Georgian drawing room.

One such instance of this kind of performance is recorded in a letter from Frances Burney to her sister Susan in 1780, in which she writes that “we had a very entertaining Evening, for Mrs. Montagu, Mrs. Thrale [i.e. Piozzi] & Lord Mulgrave talked all the Talk, & talked it so well no one else had a wish beyond hearing them” (Burney, iv. 58). In the habit of recording performances at her father’s musical parties, Burney here records another kind of performance, “talk,” which in this instance is used in both verb and noun form, as activity and as cultural object. The “talk” of Montagu, Piozzi and Mulgrave does not seem to invite participation from their audience, and so becomes spectacle rather than discourse. This division of “talking” and “hearing” demarcates the relative roles of participants in these conversational communities, dividing them into performers and audience. When “talk” itself constitutes entertainment, it positions the talker as entertainer or performer: conversation, then, becomes an object of cultural consumption. John Brewer (1997) argues that “with declining frequency, oratory and eloquence were also identified as ‘fine or elegant arts’” and that, broadly speaking, “culture was defined in terms of the response it evoked in its audience” (pp. 87–88). Although Brewer indicates that the culture of eloquence as “art” was in decline, conversation was an instance of a creative act that could take place within the domestic and private social realms: an opportunity, in the proscribed circumstances of her first marriage, for Piozzi to reach an audience without breaking rank. However, Piozzi would ultimately eschew this rather sanitised division of speakers and listeners, to place dialogue at the centre of her creative output. Piozzi’s later published works can be characterised as a series of interlocutions, revisiting and interrogating her earlier conversational mode through her oeuvre. Often based on her journals or “ana,” Piozzi makes a virtue of subjectivity, and an art of interpretation.

One example of this deployment of “ana” as a particular generic pose is evident in her *Anecdotes of Samuel Johnson LLD* (1786) in which Piozzi deliberately invokes the distinction of written and conversational genres and then proceeds to blur them. Of Johnson she writes that he was “a tremendous converser, and few people ventured to try their skill against an antagonist with whom contention was hopeless” (Piozzi 1786, p. 202). This creates an ironic scene in which Johnson inhibits conversational exchange by paradoxical reason of his superior ability, as “contention was hopeless” and thus conversation impossible. Through the mediation of the page, though, Johnson’s severity is rendered palatable:

I hope that the reason our hearts rebelled a little against his severity, was chiefly because it came from a living mouth.—Books were invented to take off the odium of immediate superiority, and soften the rigour of duties prescribed by the teachers and censors of human kind—setting at least those who are acknowledged wiser than ourselves at a distance. (Piozzi 1786, p. 87)

Piozzi's collection of Johnson collapses the concept of bibliographic space she has set up. Through recreating her conversational intimacy with Johnson in a printed form, she is able to "take off the odium of immediate superiority," but her authority depends on the proximity and exchange that books are designed to eschew, that is, her own sociable relationship with Johnson, which is the essence of productive "dispute," both combative and nurturing. Thus, Piozzi claims a generic space that both the printed word and that from "a living mouth" can inhabit; Piozzi's act of remembrance is therefore an act of listening reinscribed as an act of telling. Piozzi's approach to written anecdotes of lived encounters demonstrates a creative model of sociability that breaks down traditional distinctions between artist and audience.

Case Study: William Roscoe's Civic Creativity in Late Georgian Liverpool (John Whale)

William Roscoe (1753–1831) provides a wonderful opportunity for the study of civic creativity. His literary publications include works in a wide variety of literary genres: poetry, children's verse, political pamphlets and polemics, botanical treatises, and, perhaps most notably, his historical biographies, *Life of Lorenzo de' Medici* (1796) and *The Life and Pontificate of Leo the Tenth* (1805). He was also renowned as a collector of books, prints, and paintings. But his most important creative contribution—whether literary or extra-literary—might be said to be as a collaborator rather than as a single individual, and perhaps the most influential form his collaborations took was distinctly civic and often institutional. His most important role as an individual was perhaps to serve as a figure-head for various coteries and associations within his native city of Liverpool. He was involved in the establishment of the Athenaeum Club, the Literary and Philosophical Society, the Liverpool Library, the Liverpool Royal Institution, the Botanic Garden, and the Liverpool Society for Promoting Painting and Design. To some extent, this has meant that his prominence in the founding of some of these institutions is likely to have obscured the work of others, but it nevertheless provides us with a fascinating example of how a feted and respected civic dignitary could act as a symbolic

and sacramental figure-head for the establishment of cultural institutions within a major regional English city in the late Georgian period. While some of Roscoe's activities are now part of the cultural archaeology of his native city, others are quite visible as a legacy of his creativity and are to be found in a number of the collections and institutions of early twenty-first century Liverpool.

Roscoe's creativity is informed by a distinctly un-Romantic aesthetics, one infused by the more utilitarian side of the Scottish Enlightenment. In this regard Dugald Stewart (1753–1828) played a key role in popularising certain aspects of Scottish Enlightenment thinking largely through the influence of his *Outlines of Moral Philosophy* (1793) which went through numerous editions. Roscoe is particularly attracted by Stewart's depiction of a man of benevolence being able to combine pleasure with utility. This facility was blended with the spiritual morality of his own Unitarian, nonconformist faith. As a prominent Abolitionist in a city which significantly depended on the slave trade, Roscoe was frequently—sometimes violently—in conflict with the dominant economic imperative of eighteenth-century Liverpool.

Roscoe's endeavours in civic creativity are accompanied by a high degree of self-consciousness and a historically aware and developed sense of an urban aesthetic. If his philosophical support is Dugald Stewart, his historical example is to be found in the city republic of Florence under the leadership and patronage of the Medici family. In his account of the life of Lorenzo, Roscoe (1796) offers the idea of "permeation" as the basis of Florence's cultural flowering. It forms part of his extended enquiry into the relationship between—as well as the difference between—genius and talent. He is concerned throughout his career to analyse the social utility and the specialisation of talent and to find ways of developing talent and skills through supporting institutions. Even the "higher class of genius," according to him, is not to be found in single-ness of activity, but in "piercing through the various combinations and relations of surrounding circumstances." (Roscoe 1796, vol. 2, p. 241). This same multiple and permeating quality is also how he chooses to designate Michelangelo's creativity:

The genius of Michelangelo was a leaven which was to operate on an immense and heterogeneous mass, the salt intended to give a relish to insipidity itself; it was therefore active, penetrating, energetic, so not only effectually to resist the contagious effects of a depraved taste, but to communicate a portion of its spirit to all around. (Roscoe 1796, vol. 2, p. 209)

Even while clinging to a spiritual and suffusive account of the workings of genius in the case of a preeminent artist such as Michelangelo, Roscoe is eager

to describe the creative process in terms of its social force and efficacy rather than dwelling on its internal, psychological origin. While effecting a revolution in taste, the result of the artist's genius is here characterised by its communicative spirit in an image of social consumption.

In very similar terms to this, Washington Irving, in *The Sketch Book of Geoffrey Crayon, Gent* (1819–20), describes his first encounter with Roscoe in the midst of Liverpool. He is initially surprised to find a literary worthy ensconced in such a scene of bustling commerce “mingling among the busy sons of traffic,” but comes to recognise that “it is the very circumstances and situation in which he has been placed, that Mr Roscoe derives his highest claims to admiration.” In this context, it is that “his master spirit ... can give its own impress to surrounding objects.” (Irving 1978, p. 21). Irving's account is suffused with his sense of the special individual, but it at least broaches the possibility of a situational or contextually located aesthetics. Washington Irving's slightly tempered hero-worship cannot quite free itself from thinking of Roscoe as a separate, almost other-worldly identity, but he recognises in him a powerful example of the co-mingling of commerce and the arts which he sees as necessary to the emergent cities of his American homeland.

As I have argued elsewhere (Whale 2005), Roscoe seems to have recognised the need to secure a firmer foundation than that of the specially gifted individual—or presiding master spirit of genius—for his cultural enterprises. The lesson to be learned from the history of the Medici family in Florence for him is that absolute control by one individual is too flimsy and insecure to be able to guarantee the future legacy of the cultural achievement. With a rueful reflection, Roscoe notes that with the death of Lorenzo de' Medici “all that ... [he] and his ancestors had been able to accumulate in half a century, was dissipated or demolished in a day” (Roscoe 1796, vol. 2, p. 254). This is the spectre that haunts his own enterprise as a collector, patron, and organiser of the arts in late Georgian Liverpool. At least part of Roscoe's new sense of civic creativity, then, might be said to offer an antidote to the precarious nature of individualism to be found in the model of creativity associated with the isolated genius. When it came to the creative endeavour of a city, Roscoe was acutely aware—as in the case of the Liverpool Botanic Garden—of the difference between a private collection and a public institution. Finding the evidence of Roscoe's particular kind of creativity involves looking beyond the apparently clear-cut record of single-authored publications to investigate the more intangible life of coteries, assemblies and institutions, the spirit or genius of which is certainly more contextual, communal, permeable, and invisible than traditional accounts of literary creativity have led us to believe.

Conclusion

The above discussion has shown the potential diversity of approaches and topics relevant to analysing literary creativity as a communal process. However, a crucial point of consistency that emerged from the research network, and which is exemplified in this chapter's case studies, is that moving away from individual authorship to a much "thicker" investigation of the complexities of cultural production does *not* mean that the literary text itself is neglected. Rather, making this move entails a particular concern with how texts encode their own productive processes, and the communities that produced them, often in sophisticated and self-reflexive ways. Thus, the account of Michelangelo in Roscoe's *Life of Lorenzo de' Medici* reflects on the communicative properties of genius to suggest a parallel between Renaissance Florence and Romantic-period Liverpool; Piozzi's *Anecdotes of Samuel Johnson* simultaneously acknowledges and undercuts its subject's tendency to monologue through the "soften[ing]" medium of print; and Mary Shelley's *Frankenstein* draws on her Alpine collaboration with Percy while self-consciously offering an alternative to the anthropocentric sublime of "Mont Blanc" through focusing on the Creature's capacity to "dwell." An analysis of creative communities within the period 1750–1830 reveals a rich hinterland of shared interactions and processes which extend beyond and beneath the established domain of publication. One consequence of such revision is to see the literary text in a new light, one which is more appreciative of the complex terrain out of which it emerges and from which makes its discrete presence. Another is to comprehend the arbitrariness of a mode of analysis that simply takes as given its focus on individual works and authors. After all, it is often literary texts themselves that work the hardest to challenge their own designation as the fetishised products of genius.

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Tropes and Tools of Creativity: The Ontology of Image and Its Unpredictable Operations

Nicoletta Isar

“Ce n’est pas l’oiseau que je veux exprimer,
mais le don, l’envol, l’élan.”

(Brancusi)

When Guy Davenport said that the archaic is one of the great inventions of the twentieth century, he was right. He was right in so far as the invention of the archaic implies that we never ceased to be archaic, just as we have never been modern. “What is most modern in our time,” writes Davenport, “frequently turns out to be the most archaic. The sculpture of Brancusi belongs to the art of the Cyclades in the ninth century B.C.” (Davenport 1997, 21). In its encounter with the other or the primitive (the lost distant self), Modernity gained its freedom from the cultic. We just could not give up the curiosity “to look at,” instead of to surrender to, the mystery. “It has been the fixity of the boundary between the aesthetic and the sacred in modernity which has produced our apparently neutral and universal terms, ‘art’ and ‘culture’—terms which somehow cross the gap between the historic and the ahistoric” (Lock 1994, 409). Has this scenery opened a new path to creativity? What is creativity and how

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could we tackle it? As Lévi-Strauss has so eloquently shown in his book, *Savage Mind*, “When we make the mistake of thinking that the Savage is governed solely by organic or economic needs, we forget that he levels the same reproach at us, and that to him his own desire for knowledge seems more balanced than ours” (Lévi-Strauss 1966, 2). This misunderstanding of the mythical mind, of what was in fact the true ingredient of primitivism in Modernism, and its meaning for human creativity, seems to have persisted after Lévi-Strauss has published his book. The critique addressed by Hal Foster in his article “The ‘Primitive’ Unconscious of Modern Art” on the occasion of Museum of Modern Art (MoMA New York) exhibition-cum-book *Primitivism in 20th Century Art: Affinity of the Tribal and the Modern*¹ (September 27, 1984–January 15, 1985) is revealing:

The modern objects on view, most of which are preoccupied by a primitivist form and/or “look,” alone represented the way the primitive is thought. Which is to say that the modern/tribal encounter was mapped in mostly positivist terms (the surfaces of influence, the forms of affinity) – in terms of morphological coincidence, not conceptual displacement. (The “transgressivity” of the encounter was largely disregarded, perhaps because it cannot be so readily seen.) In this way, the show abstracted and separated the modern and the tribal into two sets of objects that could then only be “affined.” Thus reduced to form, it is no wonder they came to reflect one another in the glass of the vitrines, and one is tempted to ask, cynically enough, after such a double abstraction, such a double tropism toward modern (en)light(enment), what is left but “affinity”? What part of this hypothesis-turned-show was discovery (of transcultural forms, innate structures, and the like) and what part (modernist) invention? (Foster 1985, 47–48)

As Varnedoe argues in the preface of the exhibition book, the show was built on the premise that “modernist primitivism depends on the autonomous force of objects” and it could be revealed “in purely visual terms, simply by the juxtaposition of knowingly selected works of art” (Rubin 1984, x). In spite of the fact that the concept of the show demolished the racist model of an evolutionist Primitivism, it only replaced it with other insufficient and misleading concepts, such as “affinity” (in terms of *homo artifex*) and the empty universal, “human creativity wherever found” (Rubin 1984, x). The show, said Foster, “confirmed the colonial extraction of the tribal work (in the guise of

¹ The exhibition was curated by William Rubin, Director of the Department of Painting and Sculpture, in collaboration with Kirk Varnedoe of the Institute of Fine Arts, and was considered as “the first exhibition to juxtapose tribal and modern objects in the light of informed art history.”

its redemption as art) and rehearsed its artistic appropriation into tradition.² No counterdiscourse was posed: the imperialist precondition of primitivism was suppressed, and ‘primitivism’, a metonym of imperialism, served as its disavowal” (Foster 1985, 47).

Hal Foster’s pertinent critique and Lévi-Strauss’s research on creativity and the creative process perceived through the mechanism of myths have been inspirational for this chapter. My goal is the search for the understanding of the mythopoetic³ roots of creativity in Modernism and beyond, focusing on the artistic expressions of Brancusi’s work and his Avant-garde contemporary artists. An important issue of the chapter will be to seize not only the mechanism of the creative process but also to define the place of the artist and its status in this cultural constellation. Key will be Lévi-Strauss’s thesis that the work of art exists at the junction between an individual act of creation and collectively transmitted schemas that are part of culture (Wiseman 2007, 179). “Whether one knows it or not, one never walks alone along the path of creativity,” claims Lévi-Strauss (1982, 148). As he argues, consciously or unconsciously the artist is always transmuting the work or influence of others who have come before. In his *Mythologiques*, Lévi-Strauss develops the thesis on the transformational logic as the foundation of the process of creation. His reflections on the creative process, the observations concerning the analogies between mythical thought on the theoretical, and “*bricolage*” on the practical plane will be tested in the analysis, as well as the view that the “artistic creation lies mid-way between science and these two forms of activity.” The mythopoetic feature of *bricolage* should hold an important lesson for our search to define a key dimension of creativity. One question will be however mandatory in this analysis: does creativity dwell in the peculiarity of its object, of the creative subject, of its approach, or of all the elements engaged in the creative process? The answer to this question and many others will be formulated throughout the four parts of this chapter: *Savage Mind – The Mythopoetic Roots of Creativity*; *Creativity Process in Brancusi’s Work: Primitivism without a sense of loss*; *Play and Creativity*; *Creativity as Event: Chance, Play of Hazard*, and the disposition of play and chance. Along Lévi-Strauss, various theorists of the image, and of the anthropology of image, like Aby Warburg, and Hans

² “We owe to the voyagers, colonials, and ethnologists the arrival of these objects in the West. But we owe primarily to the convictions of the pioneer modern artists their promotion from the rank of curiosities and artifacts to that of major art, indeed to the status of art at all” (Rubin 1984, 7).

³ Pertaining to human creativity that uses in the process of creation a similar mode of understanding as in the making of a myth, from Greek *mytho-* and *poiein* “to make, create.”

Belting, will help us elucidate problematics of creation and imagination, connected with creativity.

Savage Mind: The Mythopoetic Roots of Creativity and Its Influence on Modernism

In one of his seminal studies on anthropology and modernism, Francesco Pellizzi made some interesting remarks concerning not only anthropology in general but also the anthropology of art. Modern anthropology developed as a self-conscious discipline synchronously with psychoanalysis, where psychoanalysis is but one of the aspects of anthropology focusing on “the alien within,” “the *I* as a stranger within ourselves” (Pellizzi 2005, 28). An “obscure turn” towards the alien animates and characterizes the original drive of modern anthropology (Pellizzi 2005, 28). The importance of anthropology for art cannot be stressed enough. As Foster writes, the particular prestige of anthropology in contemporary art⁴ derives from the fact that anthropology is not just second to psychoanalysis as a science of alterity but also from its self-critical and interdisciplinary character. Starting from the premise that the study of creativity is intimately linked to the history of the art object, especially to anthropology, the science of *anthropos*, it goes without saying that anthropogony (the creation of man) must have been the first outcome of creativity in its history. As Pellizzi speculates, the human body is perhaps the first artefact that is not just a tool, but the expression of embodied creativity. The archaic decorated body is not only a tool but also an image, in its life, as aesthetic image, and beyond life a powerful object, “the paradigm of the art object” (Pellizzi 2005, 8). In his *Bildsanthropologie* (An Anthropology of Image), consisting of three elements (body, medium, image), Belting advocates a similar thesis specifically showing how the *Todesbild* (*the Death image*) stands at the very foundation of image (Belting 2001, 29). Belting perceives in the category of the Death images, exemplified by the tomb effigy, the memorial portrait, or the death mask, the beginning of image itself, in which the dead person exchanges his body for an image. Thus, image holds a place for the absent body among the living. Death is the prime creative agent of the image. I have already discussed in a separate article, *The Wrath of Image* (Isar 2013), from the perspective of the evolution of *technè* (craft and skill), how the creative

⁴Especially the contemporary artist’s interest in anthropological matters, and his encounter with cult object from tribal cultures. (Foster 1996, 171–204).

process moved from the first human adventure *prometheia*⁵ into more recent *anthropogonies*.⁶ This should hold a crucial lesson for human creativity as well. The current revolutions in genetic engineering and cybernetics reflect persuasively the latest achievements performed by *homo technicus*, raising intense philosophical questions about the very meaning of life, putting forth also an extraordinary potential of creativity. However, I am not going to take up again this aspect of human creativity and invention. I can only trust that man may be able to keep in balance the two facets of *technè*, the good (*hesthlòn*) and the evil (*kakón*) (*Antigone*, 366)—“extreme danger” and “saving power.”

Inescapably, we move into the globalization of aesthetic taste and practice, into “ecumenical networks of collective expansion, expression, and perception” (Pellizzi 2005, 34). Yet, the Other still fascinates, still hunts us. We never lost the archaic in ourselves. The otherness of the primitive, the primitive itself, is but the vision of the imperialist gaze, which follows the “noble” track of progress, from the archaic to the modern, from the other to us. The encounter with the primitive was the encounter with our lost self we could not accept. The discovery of the alien was the rediscovery of ourselves: a mirror turned back to us. For—deep down—we constantly face the ocean of the unknown, death, and the terror of our own fears. But also the thirst for play, the daring to confront the fate of our condition: *deinon*.⁷ *Tò deinón*, this mythical term, contains the essence of *anthropos*, the awesome and duplicitous power of humans derived from *technè*. *Technè*⁸ makes humans awesome (*deinón*), unhomely (*unheimisch*), and *unheimlich* (uncanny) (Heidegger 1996, 69 and 71), following the principle of existence in Greek mythical world in the sense that technical grandeur makes humans part of the terror of nature. The human order acquired through *technè* (human craft and skill) and *poiesis* (activity of making), imposed by necessity over nature’s order and the gods’ justice, eventually faces violent destruction in a mythical universe.

Pointing to “a possible art of anthropology” that would both enclose and surpass the exactness of science and “creativity’s ruthless plundering” advocated by Pablo Picasso and Morton Feldman, Francesco Pellizzi warned us

⁵ A trilogy of plays about Prometheus written by Aeschylus, and a festival to honour him for his acts for the benefit of humanity. He was credited with the creation of humans and bringing them civilization through the theft of fire from Olympus.

⁶ The study of human origins; the creation of man.

⁷ In his *Introduction to Metaphysics*, Heidegger translates *deinón* as violence, the awesome or the terrible, and the *unheimlich*. In Sophocles’ ode, human being is poetized as *tò deinótaton*, which is rendered by Hölderlin’s translation *das Unheimlichste*, the most uncanny. Heidegger makes some clarifying remarks concerning the word ‘*tò deinón*’ in his reading of Hölderlin’s Hymn ‘The Ister’ (Stiegler 1998, 192).

⁸ Greek *technè* is ‘art, skill, regular method of making a thing’ (H.G. Liddell & R. Scott. (1968). *A Greek–English Lexicon*. Oxford: Clarendon Press).

once again to see “the root-instance of aesthetic globalization that we call Primitivism as an *essential* rather than episodic constituent of our art historical consciousness” (Pellizzi 2005, 9). This we cannot escape, he argues, except “at the price of misapprehension, and impoverishment, regarding what we look at, and how.” As Roger Sansi has shown in his book *Art, Anthropology and the Gift*, “creativity in most post-Duchampian art is closer to Levi-Strauss’s *bricolage* than to Ingold’s notion of ‘conrescence’” (Sansi 2015, 127).⁹ In line with Sansi’s observation, I will try to explore how creativity was at work in those effervescent years of turmoil and inspiration of Avant-garde at the beginning of the twentieth century. One cannot however start an analysis on creativity and reflect upon the status of the object while remaining unaware of those Modernist premises that affect our relation to any contemporary and even ancient artefact. Our awareness and our historical relation to art objects has been forever determined by the aesthetic and conceptual leap that took place at the start of the Modernist movement. According to Pellizzi, the object is anything but an instrument, *organon*, it is a fragment and a function. The *objectuality* of the object is not something given, once and for all, fixed and unchangeable, but it evolves in human history. The object is constantly transformed, so that form is just a moment in a continuum of transformations. But this moment means everything since it is the condensation of the being of all transformations. There are thus objects and forms eminently fluid and changing, concludes Pellizzi, walking in the footsteps of his master. Fluidity and transformativity are intrinsic to *every* object. In his *Mythologiques*, Levi-Strauss develops the thesis of the creative process understood as a process of constant transformations of the object, which he derives from his analysis of myths. This understanding of the creative process echoes the way myths have been handed down, transmuted, and reinvented (Wiseman 2007, 179). His structuralist view of myths requires a neutralization of time and history in order to preserve the internal originality of the structure, because a new structure always comes about by a rupture with its past. The absence of an origin or *arché* of the mythical discourse implies thus an altered sense of history. In Derrida’s interpretation, ethnographic *bricolage* assumes its mythopoetic function, making the philosophical requirement of the centre appear as mythological, that is to say, as a historical illusion (Derrida 1978, 287).¹⁰ Lévi-Strauss’s view of the myth exposed in his *Mythologiques*, whereupon “there is never any original, every myth is by its very nature a translation, and derives

⁹ Conrescence regards the continuous process of life of forms, rather than punctual events.

¹⁰ Lévi-Strauss’s “mythologicals,” as Derrida has shown, is a critical search for a new status of the discourse in which is abandoned all reference to a *center*, to a *subject*, to a privileged *reference*, to an origin, or to an absolute *arché*. Here the ethnographic *bricolage* deliberately assumes its mythopoetic function.

from another myth belonging to a neighbouring, but foreign, community” (Lévi-Strauss 1981, 644; 1971, 576), pertains to art as well (Wiseman 2007, 180). Creativity involved in the artistic process seems to put under brackets the modern notion of originality, of the singular:

The originality of each style ... does not preclude borrowings: it stems from the conscious or unconscious wish to declare itself different, to choose from among all the possibilities some that the art of neighbouring peoples has rejected. ... When he claims to be solitary, the artist lulls himself in a perhaps fruitful illusion, but the privilege he grants himself is not real. When he thinks he is expressing himself spontaneously, creating an original work, he is answering other past or present, actual or potential, creators. Whether one knows it or not, one never walks alone along the path of creativity. (Lévi-Strauss 1982, 144 and 148)

“One never walks alone along the path of creativity,” says Levi-Strauss and, on that matter, he meets the French Surrealist artist Marcel Duchamp, the father of Modernism, whose relation with Primitivism was known. I will first look briefly into his artistic principles, and delve more afterwards into the work of Brancusi, a close friend of Duchamp, whose figure remains emblematic for Modern Primitivism as well as his own mythopoetic work. In a lecture given at the Convention of the American Federation of Arts in Houston, Texas, in April 1957, suggestively entitled *The Creative Act*, Duchamp presents the two poles of the creation of art: the artist on the one hand, and on the other the spectator, engaged in a specific relation in the creative act:

To all appearances, the artist acts like a mediumistic being who, from the labyrinth beyond time and space, seeks his way out to a clearing.

If we give the attributes of a medium to the artist, we must then deny him the state of consciousness on the esthetic plane about what he is doing or why he is doing it. All his decisions in the artistic execution of the work rest with pure intuition and cannot be translated into a self-analysis, spoken or written, or even thought out.¹¹

In Duchamp’s words, “The creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act” (Lebel 1959, 77–78). The artist is unaware of what and why is doing, says, Duchamp, he only plays the role of a mediumistic, and

¹¹ Marcel Duchamp’s paper entitled “The Creative Act,” addressed in 1 April 1957 at the Convention of the American Federation of Arts in Houston, Texas. The full transcript of the paper is found in Lebel R. (1959). *Marcel Duchamp*. New York: Grove Press, 77–78.

he plays together with the spectator, that is, the future posterity. Thus, the spectator brings his share in the work adding up throughout time its share to the work. “Ce sont les regardeurs qui font les tableaux” (The beholder makes the painting) (Lebel 1959, 77–78). What’s happening in the process, explains Duchamp, is a kind of “transference from the artist to the spectator in the form of an aesthetic osmosis” (Lebel 1959, 77–78). The work of art is thus an osmosis between these two poles, it is a meeting place, a place of dialogue and communication. The work of art, says Lévi-Strauss, exists at the meeting point between an individual act of creation and collectively transmitted schemas that are part of culture (Wiseman 2007, 179). The process of artistic creation is a transformational process, unconscious and collective. It is about communication, either with the *model* or with the *materials* or with the future *user* (Lévi-Strauss 1966, 18). This dialogue with the materials and the tools, the means of execution, is called by Lévi-Strauss “*bricolage*” (Lévi-Strauss 1966, 19). The fluidity of the work of art and its openness as described by Duchamp shares, at least in that which concerns its conception, the same mechanism of *bricolage* and the mythopoetic transformations described by Lévi-Strauss. We could perhaps say that Duchamp’s view of the creative act is mythopoetic. The agonistic character of Duchamp’s work makes it a mythopoetic play in which the object of his game are the paraphernalia of his mechanisms. Duchamp plays the game with a potential spectator (friend or enemy), “a game that is both cruel and amusant” (Cabanne 1971, 40, apud Steefel Jr. 1984, 75 and note 34). Of the readymade, Duchamp would have said that “it is a work of art without an artist to make it” (Wiseman 2007, 150). About the work of art as a complex and “open-ended” game and the creativity involved in the process, I will write in a special chapter devoted to *Creativity as Event: Chance, Play of Hazard*. I would like to move further into the analysis of Brancusi’s work—my case study on creativity. Although Brancusi is representative for the spirit of Modernism, due to the mythopoetic character of his work, it becomes paradigmatic for that which concerns creativity at large.

Creativity Process in Brancusi’s Work: Primitivism Without a Sense of Loss

The same creative logic present in Amerindian mythology could be found in other remote aesthetic creations produced far away under different conditions, says Lévi-Strauss. As I hope to demonstrate here, the creative logic that guided the peasant from the native land of Brancusi might be recognized in his own mythopoetic activity. Brancusi, who was revered as the father of Modernism,

remained throughout his entire life the same peasant from the remote village Hobita in the south countryside of Romania who arrived on foot to the cosmopolitan European capital Paris. Typical of the divergence of approaches to Brancusi is the issue of his indebtedness to African art. Therefore, some things need to be put in place. For Western viewers and critics, Brancusi has always been a contemporary of Picasso, and contemporary in nothing so much, perhaps, as in their radical response to primitive art. In her book survey of Constantin Brancusi, Sanda Miller makes the point that Brancusi's opening to African art occurred in 1907, the same year in which Picasso painted "Les demoiselles d'Avignon" (Miller 1995, 89–90). For Romanian critics, however, Brancusi's inspiration must be local, autochthonous, purified of those influences which make the Avant-garde not only international but "ruthlessly cosmopolitan." Miller has the capacity of seeing both from outside and inside the Romanian tradition. Thus, for Miller, the international climate "could have acted as a catalyst," which "would have triggered a revival of interest in his (Brancusi) own cultural background," a past which she finds "entirely compatible with the Parisian avant-garde climate" (Miller 1995, 94). The African masks might have triggered off the memory of masks (known as Turca, Brezaia, Capra), which Brancusi would have seen in his childhood. Thus, the oppositional pair African/Romanian, so offensive to Romanian critics, is resolved in terms of analogy, the African leading Brancusi into an exploration of the primitive within his own culture.

Further influences of such friends as Marcel Duchamp, Erik Satie, and Brancusi's fellow expatriate Tristan Tzara might have had a similar impact. Modigliani's portraits, like Picasso's work, might have been somewhat less shockingly exotic to Brancusi, Miller assumes, because of their resemblance to the primitive portraiture of icons in Romanian churches (Miller 1995, 123, 138). The dialectic between the primitive and the Avant-garde, familiar as it is in accounts of modern art, must be paradigmatic of any approach to Brancusi.

Miller's first chapter, "The Beginnings: Romania," offers an anthropological survey remarkably rich in materials about folk customs and artistic practices, which illustrates very well Levi-Strauss's substance and technique of *bricolage*. The tradition of wood carving is explained and absorbed into the understanding of the work of Brancusi, which was, at large, the source of his creativity and originality. The various motifs and ornamental devices, consecrated in the Brancusian vocabulary (e.g., the gate, the truncated pyramid, the solar rosette), are traced forward from Neolithic times, through the para-classical antiquity of the Dacians, up to Byzantine Christianity and the peasant culture of the Romanian village in the mid-nineteenth century.

The concept of seriality in Brancusi's sculpture forms an important argument for this analysis, because it is so clearly indebted to the ornamental, and to folk culture's production of repetition through tessellation (a technique used to create decorative motifs since ancient times in different materials) and various forms of stencilling. Speaking about Brancusi's serial of thinking, as indicated in successive numbers attached to a single title (e.g., *The Cup*, *The Column*, *the Bird*, *the Kiss*), Miller is keen to distinguish Brancusi from the serial conceptions of Minimalism. She insists that Brancusi's work, unlike Minimalism, is never modular in conception. While Minimalism art is explicitly devoid of content, Brancusi's work is, according to Miller, endowed with superimposed layers of meaning; thus, its iconography may be opaque, but it must not be altogether denied. In making her argument, however, Miller is defensive in admitting that Brancusi has been a major influence on Minimalism. Yet we must insist that repetition is always problematic in Brancusi and elsewhere, and problematic precisely at the level of content. The status of the second kiss, it may be supposed, modular¹² rather than oscular.¹³

The use of the term "serial" falls under suspicion most notably when trying to make a division of all Brancusi's works into two categories—unique and thematic (Miller 1995, 113). There are some subjects which Brancusi treats only once, others to which he returns, and these, in returning, become "motifs." This is not only too simple, it is highly misleading. It ignores Brancusi's resistance to the idea of representativeness in light of which the term "thematic" is quite inappropriate. To approach Brancusi's work from a thematic perspective is to read the work as a narrative, and to accept the titles as having mimetic value—these titles troublesome to almost all artists, trapped between the need to identify and the refusal of discursive explanation. What artist has not said with Brancusi: "...the title does not mean anything" (Miller 1995, 151)? We must at any rate distinguish between the title as representative and the title as allusive, that is, in Brancusi's case, alluding to that aspect of folk culture in which such motifs are to be found.

The title points to the antitype, not to that of which the sculpture is a representation. To ignore this is to reduce Brancusi to the level of narrative and mimesis. Instead we should read Brancusi in a typological manner, seeing each work as a type, but understanding that of which the work is a type, not as something "real" or non-representational, but solely in terms of similarity. Typological reading destroys the hierarchical arrangement of original

¹² Modular is a term used particularly in relation to minimalism, referring to a work of art with constituent parts that can be moved, separated and recombined (cf. Tate Glossary definition for "modular").

¹³ Oscular is pertaining to the mouth or kissing, used here as a word play with modular.

and copy, real and representational, and opens us instead to the sense that a Brancusi work might be a peasant artefact, just as a peasant artefact might be a Brancusi. Such typological allusiveness “humbles” or lowers the work of art, which no longer claims the transcendental privileges of the aesthetic; to speak here of *kenosis*¹⁴ would be entirely congruent with Brancusi’s radical reevaluation of the status of the plinth.

It is, then, not the title, nor the character of its representation, but the singularity of each motif echoed through a specific plastic device or vocabulary—the singular ontological status or *raison d’être* of the object of art—which most interested Brancusi. No object can claim uniqueness insofar as it resembles another; moreover, no motif can be unique because a “motif” exists solely by virtue of allusion. Thus, we should attend to the question of the twoness¹⁵ of the object, from a plastic point of view, rather than its seriality; in doing so we reject narrative in favour of typology.

On various occasions, the twoness is manifested by the shadow or the reflection which the object casts on the surface of its own display—an effect which appears to be deliberately contrived by Brancusi in the process of casting or carving. The overpolished surface of the object serves the exact purpose of reproducing the object on the surface of the support, or on the plane in which it is displayed. Resisting the principle of narrativity, the twoness of the object (substance—shadow/image—reflection) becomes significant in each element of the equation: each of them receives its own interchangeable significance, like the plinths themselves. The solidity of the base is paradoxically doubled and doubted by shadow, reflection, mirror, or even, as in “Leda,” by a plinth that resembles the water on which the swan is swimming, and in which the swan is reflected. Both Mallarmé and Lewis Carroll had already played on the reflection of the swan: is it the swan above or below the surface? And if below, within the looking glass, what an interesting croquet mallet it would make.

The typical Brancusi work appears to have been explicitly conceived in relation to its own plinth or foil—that which “sets it off”—so that, extending itself beyond its limits, vanishing into the surface or coming backwards from its own reflection, the image is always dynamic and indeterminate, interchangeable with the image of that image. A certain transparency, of both the object and its support, permits them to change places, so that the object might exist in order to be an image of the plinth. (We might imagine

¹⁴In Christian theology, *kenosis* (Greek: *kénōsis*, lit. emptiness) relates to the “self-emptying” and humbling of Christ in the gesture of taking the flesh of a human being. Here the word is used metaphorically to emphasize Brancusi’s radical vision upon sculpture by attributing a great importance to the plinth—a marginal aspect in sculpture before him.

¹⁵The quality of the object of being two, in itself, and as a reflection or a shadow.

a painting existing for the sake of and by virtue of its frame.) The object may thus be seen twice, “in itself” and through the glass-like partition of its own surface, as if “direct vision” were always under suspicion of obliquity and reflection. Here one might usefully explore the connections with Kandinski’s theories of art. That Brancusi was preoccupied with reflection can be seen also in works such as “Woman Looking in a Mirror” and the polished bronze “Princess X,” inverted reflexively in her navel-gazing self, or, in the photograph of Leda, from Sanda Miller.

The idea of twoness, in echo and reflection, with a possible equivalent in the idea of “bilocation” which Brancusi believed himself to possess: “Moi aussi je suis dédoublé” (I am also split) (Miller 1995, 230), has certain consequences on the relation between works which do not share the same title. We may consider the example of two of Brancusi’s most celebrated sculptures, “The Wisdom of the Earth” and “The Kiss.” Cristian-Robert Velescu relates the two sculptures to Plato’s *Symposium* and explains them as the two parts of the androgynous being. “The Wisdom” is thus the feminine “counterpart” of “The Kiss.” In his elliptical, riddling way of speaking, Brancusi himself sustains the idea that the one object is to be seen in a relation of complementarity with the other object: “‘The Wisdom’ is ‘The Kiss’ and the other way around” (Velescu 1993, 40).

Brancusi’s attitude to the material used in the process of sculpture is congruent with his artistic conception. Miller makes the important observation that Brancusi abandoned the clay modelling of his academic training in order to cast his bronzes from marble forms. Where clay is modelled, marble must be carved; modelling is a process of aggregation and construction, carving one of subtraction and reduction. In exploring the primitive, Brancusi rejected the skill of modelling, and chose carving as the primordial technique of shape-making. The difference is conceptual: modelling must begin with a concept, while carving can arrive at a form that had never been a concept. It is unpredictable, and revealing. (Picasso’s sculptures using handlebars and other *objets trouvés* or found objects are the modelling exception to this rule, describing art created from objects that are not normally considered art.) Brancusi’s exemplary work of carving is “The Kiss,” a block whose “stone-ness” makes its form quite impossible as a concept prior to or independent of its embodiment. The contrast with Rodin’s “Kiss” is clear, for Rodin’s marble represents what is not marble; modelling is motivated by a pictorial, illusory aim, to make matter resemble something not itself, usually human flesh. Brancusi humorously dismissed the work of academic sculptors as *beefsteak*, worthy of display only in a butcher’s shop.

For Brancusi, the making of a sculpture would remain always a process of elimination, of revealing the form by subtraction. The form is already contained in the marble, wood, or stone, and is to be carved, extracted, and freed from the mass. While any addition signifies narrativity—the concept becomes explicit through successive details and fragments—the extraction of the form from the material involves no assembly, and therefore leaves no narrative trace of its coming into being. The task of carving, as we know from Michelangelo’s sonnets, is to get to the form by removing that which conceals it. “Ce n’est pas l’oiseau que je veux exprimer mais le don, l’envol, l’élan” (This is not the bird I want to express, but the gift, soaring, momentum.), Brancusi is reported to have said to Claire Gilles Guilbert (1957, 7. apud Brezianu 1976, 232). To have “expressed” or “squeezed out” not the particular from that might correspond to a preceding concept, but to express the gift, the movement, the energy by which form can be distinguished and separated from mass, from indeterminacy. Elsewhere, Brancusi affirms: “This is not a goldfish ... or a carp, it is a form that is present in everything that moves through the water. Yes, even a submarine. It is what is essential in shape of movement not a particular bird or a particular fish but what it is to be bird-like or fish-like” (Miller 1995, 157). Birds and fish, precisely, not because of any interest in birds or fish, but because birds and fish, in their movement through air and water, are types of forms contained by, yet free within matter.

If modelling requires an original concept, carving reaches a final form. We might set the Latin “concept” against the Greek “idea”—whose root *eidos* means “what is seen.” No idea without things, pronounced Brancusi’s contemporary, William Carlos Williams. Tristan Tzara, with some reference to Brancusi, is cited: “Every sculpture is born of the conditions of its material”: There are no preconceived ideas. The idea comes while working (Miller 1995, 186).

Play and Creativity

Yet such musings on the profundity of Brancusi tend to solemnity, even from a Dadist, and in so doing they have the effect of detaching Brancusi from his closest associates, the Dadaists. Miller’s signal contribution to Brancusi scholarship is to be located in her insistence on keeping Brancusi within that most playful context. The most experimental years of Brancusi’s career were in the period 1914–17; as with so much of what was best and most characteristic of Dadaism, the aim was transitory, so the extant evidence is thin. Among the most interesting of these experiments was the setting up of groups of

sculptures in various permutations—“The Little French Girl,” “Vue d’atelier,” “Adam and Cup,” “Eve”—each arrangement being constituted by a photograph, of which only the photograph remains.

Exemplary of Dadaism, in that which has been known as one of its most creative moments and playful artistic expressions, are Brancusi’s statues of Socrates (1922), whose base is formed of an inverted cup, and of Plato, his minuscule disciple. Brancusi said of his Socrates, who has a hole where his face might have been: “Il a ses yeux dans ses oreilles, ses oreilles dans ses yeux” (He has his eyes in his ears, his ears in his eyes) (Miller 1995, 186). This vision, which somehow reminds of Marcel Duchamp’s photograph by Victor Obasz made in 1953, is a perfect articulation and congruence between the eyesight which views the image and the sense of hearing which understands language. Philosophers obviously can’t tell what they see from what they hear, just as they confuse images and texts, sculptures and labels, and turn the visible *eidos* into a mere concept. Far wiser are the deaf-mutes, and the blind, for whom Brancusi created a special “Sculpture for a blind man,” made up to exist beyond the look and to transform the spectator into a “toucher” and a “groper”: this show imposed almost offensive demands on its sighted visitors, through the frisson of intimate touching, a language of pure tactility which the sighted would feel as improper contact. Sight allows for distance; blindness knows only proximity. A sculptor such as Brancusi could appreciate the value of blindness, the value of tactility that the sighted must experience as above all erotic, transgressive of proper distance.

The complex at Targu Jiu in Romania is the climax of Brancusi’s art: a complex of three major elements: The Column of the Infinite, The Gate of the Kiss, The Table of Silence. There is the tendency among scholars that instead of seeing this vast project as the culmination of Brancusi’s work and of his logic, to be reductive. As Duchamp had long since made very clear, any object named as a work of art can be regarded as absolutely anything except as that object itself: the aesthetic destroys the law of identity. It is a fact insufficiently considered that of all Brancusi’s friends, none was closer than Duchamp (to Duchamp almost exclusively is due Brancusi’s success in his American years). That the visitor does walk through “The Gate” and sit down on “A Stool” should be as shocking as the possibility of using Duchamp’s most famous work of art for the purpose for which it was once intended.

The complex at Targu Jiu is the climatic paradox of Brancusi’s art: a work which occupies real space, which not only represents nothing but also has the effect of framing the spectator. “A Stool” is a sculpture, unless it is merely a stool, in which case it becomes a plinth, and the one who sits down a statue.

Brancusi's Primitivism is refreshingly different from that of, say, William Morris in the humorous implications of its own nostalgia. If every utensil were a work of art, every user would be the representative or type of the user. If a stool is not a stool, a sitter is (also) a sitter, one portrayed.

Primitivism without a sense of loss: "I give you pure joy!" (a reported utterance of Brancusi) is Miller's well-chosen epigraph for her book. And pure joy, a state of completion and fulfilment, is to be associated with the dominant colour of white, with which Brancusi chose to surround himself. His studio was his final sculpture—the necessary complement and double of Targu-Jiu—as a peasant chooses to dwell and rest within the work of his hands. For the last fifteen years of his life, Brancusi was content to make almost nothing (Miller 1995, 231). The whiteness of the studio was matched by the whiteness of the sculptors' clothes, and even the colour of his long monastic beard: and all that whiteness was augmented and doubled by the whiteness of the dust.

In the Orthodox Christian tradition, within which Brancusi was content to remain, as in the Oriental mysticism of his favourite Milarepa, whiteness has a value different from that which it has in Western Christianity. In Western culture, whiteness is a non-sign, *carte blanche*, the adequate representation of absence and negation, the symbol of purity and virginity. In the East (to make a crude contrast) whiteness is rather a sign of fullness, as it is the colour which contains all colours, and the colour of the *Parousia*. We might note that Brancusi shares that tradition with the other great exponent of pleromatic (from Greek *plérôma*, meaning "fullness") whiteness in modern art, Malevich.

Sculpture, insofar as marble is its medium, is typically white, and we should appreciate how Brancusi's whiteness is radically different from that of the marble of the classical sculptural tradition. The whiteness of Greek sculpture (its polychromatics having been as just exposed) was celebrated by Winckelmann in terms of purity, cleanness, virtue. We might call Winckelmann's taste that of a concessive iconoclast, better to appreciate Brancusi's commitment to visible "ideas" and to icons. For Brancusi, whiteness is never pure, but is always the whiteness of white matter and white dust. The mystical colour of *Parousia*, of Apotheosis, of the uncreated light in the iconography of the Transfiguration, whiteness contains all colours, and transforms all. This is how one must understand Brancusi's almost casual (or almost joyful) remark in his old age, a sublimely detached, sublimely witty revision of Napoléon's "Après moi, le deluge." "Et d'ailleurs, à quoi bon ce travail? Tout va disparaître, il y aura un nouveau deluge" (After me, the deluge. And besides, what's the point with this job? Everything will vanish, there will be a new deluge) (Miller 1995, 230).

Creativity as Event: Chance, Play of Hazard

“À quoi bon cela?” (What’s the point with this?) wonders Brancusi, with a kind of merry innocence. His question, half humorous, half reflective of the peasant attitude in the perspective of the deluge, evokes the rhetorical question of another contemporary, Mallarmé, with whom Brancusi shares a lot. “À quoi sert cela?” (What’s its use? or What is it for?), wonders Mallarmé in his *La Musique et les lettres*, and he answers: “À un jeu” (A game). The connection between Brancusi’s *deluge* (deluge) and Mallarmé’s *jeu* (play) is more than apparent. But it is self-evident only on a poetical ground. It is in the poem that we discover the logic of the *nauffrage* (shipwreck) as a poetic event and a charming *supercherie* (deception). The witty dimension of Brancusi’s image finds a playful poetic extension in Mallarmé’s poem to which I finally turn. Mallarmé’s *Un coup de dès* is a poem as well as a vision, a cosmology, as well as ontology, since the ontology is the dice throw, according to Deleuze, which reflects back a whole tradition from Heraclitus. It is the *chaosmos*¹⁶ from which the cosmos emerges. “The dices are thrown against the sky, with all the force of displacement of the aleatory point, with their imperative points like lightning, forming ideal problem-constellations in the sky” (Deleuze 1994, 248). But the constellation does not really “take place” in the poem. It does not take place more than it could take place in a diluvian space like the *chôra*,¹⁷ leaving its trace in the visible as a playful withdrawal/advance of scattered words. In this errant motion, like in the ancient winnowing fan, the ancient *liknon*, the dice throw provides the possibility of many constellations (which are and are not) on the abysmal playful ground of Mallarmé’s language. Image and text is staged as *chaosmos*. Time and again this choral staging shines forth as a brief fulguration of the throw. The circumstances surrounding the dice thrown, “from the depths of a shipwreck,” are unpredictable. As Bonnie J. Isaac argues, “One can play the game with all seriousness, but the “final

¹⁶In his book *Difference and Repetition*, the French philosopher Gilles Deleuze puts forth the view of the world as *chaosmos* (a term borrowed from Joyce), the endless flow of difference prior to any systematic organization (cosmos) in which we leave. Ontology is the dice throw, the *chaosmos* from which the cosmos emerges.

¹⁷According to Plato’s *Timaeus*, *chôra* is the third kind of form (along with being and becoming) in the process of creation of the universe (Plato *Timaeus*, 1929, 52b). She is the space for all things that are generated (*genesis*). Yet *chôra* is not operative as an image of something, she is the paradigmatic *espacement* (space-in-between) for the operation of the fleeting, visible images. She grants an abode for an *experience* of difference in the *imagination*.

move” never takes place, or rather is displaced by “un tour de trop”¹⁸ (an extra turn) or “de trope” (of trope, as a literary trope, a rhetorical device) by a constant movement of textuality itself” (Isaac 1981, 838). “À quoi sert cela?” Mallarmé asks in the same above-cited passage: of what use is the potential for transcendence? “À un jeu,” he answers. It is all a hoax, all a game (Pearson 2004, 23).

Yet these apparently innocent questions (“À quoi sert cela?”/À quoi bon cela?”), which bother both Brancusi and Mallarmé, seem to have deep philosophical roots. Heidegger asks himself too the same question around the *Geschick*¹⁹ of being: “Why does it play, the great child of the world play (*Weltspiel*) Heraclitus brought into view in the *aion*?” The answer has been provided by Heidegger in the most clear manner: “The ‘because’ withers away (*versinken*) in the play. The play is without ‘why’. It plays since it plays.” (Heidegger 1991, 112 – 113). And as a reverberation, one hears again Mallarmé’s answer to his own question, “À quoi sert cela?” to which he answers un-reluctantly: “À un jeu.” Yet in the vertigo of the poetic play “RIEN ... N’AURA EU LIEU ... QUE LE LIEU...” (NOTHING ... WILL HAVE TAKEN PLACE ... THAT THE PLACE). But the *chôra* space, the place of Alba, a blank space that is “our origin,” the “matrix” (Serres 1995, 44), and the diluvian end to which all returns: the dust and dusk of Brancusi’s studio; the space of creation and destruction, of generation and deluge.

Conclusion

In asking the question *what creativity is*, we started to inquire into the creative act in one of its most enduring manifestations as mythopoetic activity, as described by anthropologist Lévi-Strauss. Through Brancusi’s work, a mythopoetic universe has been revealed. As it came out, creativity is about making, and shaping, discarding the form, by which the work comes to being (*creare/facere*) as in the mythopoetic *bricolage*. Yet

¹⁸This is discussed by Jacques Derrida in his *Dissemination*, whereas “the dissemination of the whites produces a tropological structure that circulates infinitely around itself through the incessant supplement of an extra turn: there is more metaphor, more metonymy” (Derrida 1982, 258).

¹⁹The word *Geschick* used by Heidegger means “fate, destiny” as well as “skill” in German. Heidegger derives the term from Heraclitus’ account of the *aion* (time) as a child at play, and assimilates it to the “*Geschick* of being”: “The *Geschick* of being, a child that plays, shifting the pawns: the royalty of a child—that means, the *arkhé*, that which governs by instituting grounds, the being of beings. The *Geschick* of being: a child that plays.” This echoes Heraclitus’s *Fragment 52*: “Time (*Aion*) is a child playing draughts, the kingly power is a child’s.”

creativity is about something more, something beyond the materiality of the object and the hands of the artist. In his memorable words, adopted as the epigraph of my article, “Ce n’est pas l’oiseau que je veux exprimer mais le don, l’envol, l’élan” (This is not the bird I want to express, but the gift, soaring, momentum) Brancusi makes a touching confession about his artistic credo which is emblematic for mythopoetic creativity in general. This shows the creative desire and ardour of the artist to go beyond the causality of the representation towards a point to which all returns, a place of return. What Brancusi truly wants is “to express the *gift*, the movement, the energy; the form that is present in everything that moves through the water. Yes, even a submarine. It is what is essential in shape of movement not a particular bird or a particular fish but what it is to be bird-like or fish-like” (Adlow 1927, 38). It is why we could perhaps say that the mythical and the modern mind are akin to each other, the same power of creativity structures their minds forever, no matter how many times the throw of dice will be performed. The mythopoetic act of creativity is an event and a revelation, a collective or an authorless work. It is a play (a noun and a verb), but also a kind of space, *espacement*, exemplarily illustrated by Mallarmé language/poem. Mallarmé’s choral work is a throw of dice, thus a *gift*²⁰ (Latin *datum* = gift; *dare* = to give) as well as a blow of words, which makes things reverberate (*reverberare*, from the Latin root *verber*). Thus, it is a “re-verberation.” The poem is a language, as well as an image, a language of difference able to preserve the integrity of image. But what is remarkable about this playful reverberation is that there is a way of acoustically playing along with the poem. Just as Nietzsche thought once of *The Birth of Tragedy* that it should be sung, Pierre Boulez thought too that Mallarmé’s throw of dice could be acoustically transposed. He converted it into a sonorous blow, for in order to have sound one must have throws, blows, impingements of the air (Aristotle). The choral dimension of this momentum is evoked in the strokes (throws) on Boulez’s piano-chord. What was finally revealed was the archaic string instrument—*chôra plokannon*—the philosopher’s sieve with its golden strings on which he (the philosopher/Timaeus) weaved once the myth of creation.

²⁰ The word for a *die*—a cube, like the gaming piece—comes from the proto-Indo-European zero-grade root *do*, through the Latin *datum*, “that which is given.” *datum* is the Latin verb *dare* means both “to give” and “to play.” The English language received the word “die” in this sense through the Old French *dé*, “a playing piece.” Marcel Duchamp’s posthumous work (a twenty-year secret) *Étant donnés* from Philadelphia Museum of Art, whose direct antecedent is to be found in Mallarmé’s *Un coup de dés* is a readymade, a playing piece: a curious puzzle, a perplexing intellectual and aesthetic enigma, an involvement with chance and fun.

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Macro, Meso, and Micro Creativity: The Role of Cultural Carriers

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In the film *The Third Man* (1947), the complicated and dark character Harry Lime puts his finger on part of the mystery of *creativity*: the ability to ‘think outside the box’ and generate valuable novel ideas, methods, interpretations, and ways of problem solving generally. Creativity does not always arise out of conditions of peace, tranquility, and affluence. The extraordinary creativity of the Renaissance took place in the context of the violent conflicts that engulfed the Italian city states. In more recent times, the creativity involving Irish artists such as William Butler Yeats, James Joyce, and the Irish National Theater emerged in the context of violence of early twentieth-century Irish society. The computer innovations of Alan Turing took place during World War II. The relationship between creativity and freedom is also complex. For example, in nineteenth century England women were deprived of important

Harry Lime : Don't be so gloomy. After all it's not that awful. Like the fella says, in Italy for 30 years under the Borgias they had warfare, terror, murder, and bloodshed, but they produced Michelangelo, Leonardo da Vinci, and the Renaissance. In Switzerland they had brotherly love—they had 500 years of democracy and peace, and what did that produce? The cuckoo clock. So long Holly. <http://www.imdb.com/title/tt0041959/quotes>

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political, educational, and economic rights—yet this era produced arguably the finest female novelists to ever write in English (Jane Austen, Charlotte and Emily Bronte, and George Elliot). Great art, drama, and literature have been produced in the context of repressive political systems, as in the case of nineteenth-century Russian novels produced by the Tolstoy, Dostoyevsky, and others. A key factor during these eras was support for the products of creativity from powerful elites, who helped shape the dominant ideology and value system in society. Perhaps because of the enormous complexity of creativity in the context of the larger society, psychologists have in general tackled this topic by focusing on the ‘creative individual’ rather than taking into consideration the society in which the creative individual lives. We believe it is essential to adopt a broader perspective.

This chapter explores creativity by examining two main issues, before proposing a new way to consider the links between different levels of creativity. Our first focus is on the distinction between processes at three levels: macro, involving large-scale societal transformations; meso, involving the organizational and small group level; and micro, involving the intra-personal level. The second issue explored is the puzzle of how influence is achieved across the macro, meso, and micro levels. We assume that influence is bi-directional, both top-down from macro to meso and micro, and bottom-up from micro to meso and macro. But irrespective of the source and direction, the puzzle is: how does this influence come about?

A major innovation we propose is that creative processes at macro, meso, and micro levels are nurtured and connected by *creativity carriers*, which are specialized forms of ‘cultural carriers’—means through which values and normative systems are propagated (Moghaddam 2002). Examples of cultural carriers are the American flag and the Islamic veil, which from one perspective are both ‘just pieces of cloth.’ However, these pieces of cloth ‘carry’ values that are enormously important in American and Islamic cultures respectively. We propose that by giving importance to certain values propagated through cultural carriers, societies influence creativity at meso and micro levels. Examples of creativity carriers are the Internet and the computer, both of which have been used to create and propagate new ideas and ways of doing things.

We argue that processes at macro, meso, and micro levels are involved, to some degree, in all creativity, even when the unit generating creativity is *primarily* macro, meso, or micro. Until recently, most creativity research has focused on micro-level creativity and cognitive processes within individuals (see readings in Kaufman and Sternberg 2010). Some attention has lately been given to meso-level creativity (e.g., Nijstad et al. 2006), and to work groups and organizations, such as Apple and Microsoft, as ‘creative units.’

A great deal of attention has been given to how such units are influenced by particular leaders like as Steve Jobs and Bill Gates. However, far less attention has been given to the influence of societal processes, such societal values associated with the entrepreneurial spirit in the USA (for an exception, see Leung and Lo 2014).

There are at least two major kinds of macro-level creativity. First, ‘creativity carriers’ involve features of societies that enhance creativity at meso and micro levels. This results in waves and surges in creativity such as Elizabethan theater, renaissance art, nineteenth-century English novels, twentieth-century American films, and twenty-first-century computing software in California. Second, ‘movement creativity’ involves large-scale innovations that transform the normative system and bring about major changes, as has happened through the women’s liberation movement and the Black Power movement, as well as through major revolutions.

Our discussion of creativity gives importance to the dynamic nature of creative processes. We argue that activities at macro, meso, and micro levels are interdependent. This dynamism means that when creative force is not aligned at all three levels, its impact is muted. For example, Gregor Mendel (1822–1884) was an isolated researcher who discovered in the late nineteenth century that inheritance takes place through the transmittance of discrete units, genes, rather than the ‘blending’ of different characteristics of the parents in the offspring. However, Mendel did not work in a group, so at the meso level there were no others to continue and spread the news of his findings when he died. Nor was the larger scientific community and society—the macro level—thinking along the lines of his discoveries. As a consequence, it was only in the early twentieth century that the rest of the world caught up, and that Mendel’s discoveries found a wider audience.

Micro Creativity

The idea of a lone creative genius is nothing new: it is so ingrained into our cultural consciousness that research on group creativity has only (relatively) recently started picking up steam. Moreover, the relationship between the individual, group, and the larger society has received scant attention. We argue that ‘surges’ and ‘waves’ of creativity, such as the creativity in computer technologies in twenty-first-century America and the creativity in Elizabethan theater in England, are achieved when individual, group, and societal-level creative processes are linked by creativity carriers. Such links have not been a focus on psychological research, because the focus of discussion has almost exclusively been individual creativity, the micro level.

A main reason for this focus on the micro level of creativity is the narrative of the lone genius, the long-held idea that innovation and creativity flows through an individual vessel. In the classical tradition, the Greeks and Romans thought of creativity as a divine energy that was channeled through artists, often poets, who went on to author great works. This is why Greek and Roman epic poetry begins with an invocation to the Muses on behalf of a singular, humble creator. Virgil's *Aeneid* is an excellent example of this: the poem opens '*Arma virumque cano*,' 'I sing of arms and a man,' regardless of the fact that Virgil is actually just codifying a folk tale passed down for generations. He then calls on the muse to help *him* recount Juno's anger and all that followed. To the ancient (and modern) imagination, he is a human conduit of divine creative energy, chosen specially by the gods. Homer before him was seen the same way—so was Socrates. The books of the New Testament share a similar origin story: the four Gospels are seen as written by four divinely inspired individuals, in isolation rather than as a group. Through the ages, divine influence began dropping out of this narrative, but the focus on individual literary genius remains. Dante, though he begins the *Divine Comedy* with an invocation that mirrors Virgil's, was seen less as a conduit and more as a creator in his own right. By the time we arrive at literary greats like Hemingway and Salinger, the myth of the isolated genius is well intact sans divinity. In all these cases, the creative leaps and bounds are seen as the product of individuals rather than of their culture or their immediate surroundings. Virgil *was* amazing and is timeless, but the *Aeneid* is more Rome's creation than his.

The archetype of the lone genius has moved through the sciences as well. We use Mendel as an example of what happens when new ideas, through no fault of the creator's, do not come to fruition because of a lack of creative receptivity at the meso and macro levels. Newton and Leibniz are two other enormously important academics—again, true geniuses in their own right—whose developments were seen as the result of their own individual work. (We're all familiar with the twist, here. Their story provides support to our assertion: if these two truly did work independently, which is fairly agreed upon, how did they both come to invent calculus if their community had not so perfectly set the stage for it?) Philosophy has its examples, as well: Descartes begins his most famous work with a narrator who has shut himself away from the world, full of external stimuli that do nothing but confuse and hinder his talent. This narrative has been repeated to us through every discipline. When psychologists began to seriously examine creativity, and with American individualism making them only too receptive to the do-it-yourself lone wolf creators, it is no small wonder that they focused on the individual to the exclusion of creative groups and societies.

If our cultural history so often points to individuals as the most foundational sources of creativity, what reason is there to question the narrative? Change is often spearheaded by one remarkable person, and it seems only natural that they be recognized for their accomplishments. In this paper, we are not seeking to minimize the contributions of individuals, but to reexamine the idea that creative change happens *only* from the bottom-up, like an organism that spreads and reproduces outward. Rather, we point to the fact that humans have continually worked in groups to achieve our current place in the biological pecking order. Virtually no one shuts herself in her room with a notebook and candle and successfully creates change beyond her front door. Modern writers, for instance, may go out into the wilderness to ‘live deliberately’—before returning to their offices to have their diaries proofread by their editors. Workshop settings are now seen as crucial for poets, playwrights, biographers, and memoirists, and are a seminal part of the education process for creative writing. Group work is not limited to writing, and group input and feedback are now rightly seen as imperative exercises for anyone in the arts, both to give and receive feedback as well as to generate ideas that can be taken back to the individual drawing table. The lone genius has an important part in the creative process, but she is not the only part, and we do not think she is the most foundational. Individual luminaries only pave the way for amazing creative leaps and bounds as part of a greater whole.

Creativity research is still relatively young to psychology and was not brought to wide attention until the well-known 1950 address by J.P. Guilford to the American Psychological Association (discussed in Simonton 2000). The little research that has emerged since then focuses on the individual in part because micro creativity is easier to observe and study than creativity in groups. In some sense, a group is an intangible thing—you can ask a group what the *group* thinks (and get an answer!), but that will tend to come through the voice of individuals who then have the chance to his their own spin on the verdict. Even research that *does* look at group or cultural creativity tends to do so through this lens of the individual. Much research on group creativity is purposed toward increasing it by increasing the creative effectiveness of its individual members. Social loafing solutions often focus on personal accountability, for instance, rather than group structure. Some exceptions are the research on how diversity and group incentives relate to creativity (e.g., Eckel and Grossman 2005; McLeod et al. 1996).

After Guilford’s 1950 address, psychologists particularly explored intra-personal properties of creativity. Guilford himself focused on the measurement and development of creativity on the individual level, enjoining other scientists to help him pursue the line further (1967). Social creativity did

not take the spotlight, though he recognized its potential in studying group work. Research on creativity in education came closer to a more meso (but not macro)-level view: for instance, several essays in Gowan's 1967 anthology examine the effect teachers can have on their students' creative potential. Effects were measured by the individual development of each child, though, rather than by the classroom's joint ability to problem-solve or create.

A large and more modern body of research exists on the link between individual characteristics and creativity. The cultural fascination with genius personalities sparked much curiosity about whether the introverted/misunderstood-artist personality somehow contributed to creative excellence, or if it was the other way around, with great talent weighing on individuals to shape them into the lonely genius trope. Psychologists studied artists themselves (Dreverdahl and Cattell 1958) as well as many traits that could impact a person's creativity. This research led to interesting findings, such as the case of gifted children who had lost a parent, showing that certain parent-child relationships *do* produce more creative children (Albert 1971); and that, despite the stereotype, madness is a hindrance rather than a help to creativity (Rothenberg 1990). The relationship between intelligence and creativity received a lot of attention from the 1950s (Getzels and Jackson 1962; Schubert 1973; Barron and Harrington 1981; Sternberg and O'Hara 1999; Nusbaum and Silvia 2011), whereas that between sexual orientation and creativity received less attention (Ellis 1959; Demb 1992).

Thus, the individualistic, reductionist tendencies of traditional psychology have pervaded creativity studies. In the next section, we turn to meso creativity, which is vitally important but has received less attention.

Meso Creativity

Humans spend most of their lives in small groups: from the family, to a school classroom, to friendship group, to work group, and so on. Despite the centrality of small groups in human life, creativity in groups was not adequately studied until recently,¹ and the now-extant research on groups and creativity is usually ambivalent and sometimes highly negative toward the idea of group creativity. To support our overarching theory—that the three levels of creativity interact deeply and are all crucial to a creative act—it will help to show that work in groups is worthwhile, despite its complications.

¹Even in 2001, after the brainstorming boom, Kurtzberg and Amabile shared our complaint (2000–2001).

The discussion of the pitfalls of group creativity began early in the twentieth century and stretched to an explosion of research in the '70s and '80s. Many of these studies aimed to debunk the idea that two heads (or three, or three dozen) will always be better than one. Several main problems with group creativity have received very wide attention, an example being social loafing. The concept was introduced by French engineer Maximilien Ringelmann in 1913, who observed a group of people pulling a rope. Ringelmann noted that the individuals would pull harder when they worked alone than when they worked as a group. The sum of the whole, rather than being greater than the sum of the parts through mutual encouragement and camaraderie, as many would have thought, was *less* than the sum of the parts. The observation was taken back up in the mid-1970s, termed 'social loafing', and has been written about continuously since (Simms and Nichols 2014). As the phenomenon was further explored by greater evidence, the focus turned not to proving the existence of social loafing but toward research on what causes it and how to mitigate it.

We therefore have a well-established literature on why social loafing occurs: interest level, morale, group dynamics, stress, perception of other group members' competence, leadership, and comfort level all contribute. One meta-analysis of social loafing studies observes the following: 'Social loafing appears to be moderate in magnitude and generalizable across tasks and subject populations. The integrated model of individual effort on collective tasks suggests that social loafing occurs because individuals expect their effort to be less likely to lead to valued outcomes when working collectively than when working coactively' (Karau and Williams 1993, p. 700). (The same researchers found that social loafing *decreases* when group participants see each other as incompetent.)

Several explanatory models for social loafing have been put forward for the purpose of identifying and correcting inefficiency in group work. Karau and Williams (1993) list factors such as evaluation potential, dispensability of effort, matching of effort, and self attention that appear in many social loafing models as explanations for unproductive behavior. Many of the models they discuss isolate one of these factors as the main cause of social loafing, excluding others. In addition, most imply that the individual is the locus of creativity. They propose ways to boost the *individual's* creative potential as a way of adding to the productivity of the group. This is not an invalid way to affect group creativity, of course—for instance, Tziner and Eden (2006) show that a high-achieving member of a group can have a noticeably positive effect on group performance, and that effect is greater if the group consists of other high achievers. Though these measures can be helpful, we think that an

understanding of small groups as creativity generators themselves will enrich solutions to social loafing (and other such phenomena). The optimization of group work should focus on the group's total output, rather than the sum of individual contributions. As we will see later, well-established and highly successful groups like Apple or Ideo tend to focus on improving group creativity from a structural perspective: from the top down rather than the bottom up.

There is also some evidence that social loafing can be a net positive. Bluhm (2009) explores the idea that social loafing is an adaptive quality to lessen individual stress. If a group of social loafers produces completely satisfactory results when working less hard than they would individually, the group as a whole benefits: individuals can come together to solve a complex problem with relatively little stress, helping to prevent burnout when the group breaks up and the members go back to individual tasks. The group task may go *as* well at it would have were there not social loafing, but the tasks done by individuals will receive greater effort, thus producing more creativity overall.

The ways in which groups work together have also come under scrutiny, particularly the now ubiquitous practice of brainstorming. One can brainstorm alone, but the technique is more commonly done in a small group, where the group identifies a problem to be solved and works together to identify possible solutions. A seminal 1958 paper identifies four core rules that define the process:

1. Criticism is ruled out. Adverse judgment of ideas must be withheld until later.
2. 'Free-wheeling' is welcomed. The wilder the idea, the better; it is easier to tame down than to think up.
3. Quantity is wanted. The greater the number of ideas, the more the likelihood of winners.
4. Combination and improvement are sought. In addition to contributing ideas of their own, participants should suggest how ideas of others can be turned into *better* ideas; or how two or more ideas can be joined not still another idea. (Taylor et al. 1958, pp. 24–25)

In theory, by collectively throwing ideas together, the group will be more productive and more original than a person coming up with solutions alone. Listening to the ideas of others is supposed to spark ideas throughout the group so that elements can be combined in new and interesting ways.² Criticism is supposed to be withheld so that members feel as free as possible to

²In theory, brainstorming is a compacted, artificial form of creative Darwinism. Rather than pitting only one person's ideas together, a group can set that many more ideas up against each other. More competi-

say whatever comes to mind—no idea is too wild for a brainstorming session, and a ridiculous idea might very well cause another member to come up with something more practical. Paulus (2000) argues that the diversity of a group can expose its members to a multitude of unfamiliar viewpoints, allowing them to make new associations and connections. This group-wide, interpersonal stimulation of associations facilitates lateral thinking that bridges fields and, supposedly, spawns innovation.

By the time researchers began testing the efficacy of brainstorming, it had already been adopted across a wide variety of industries. To examine whether brainstorming was as productive as it seemed, Taylor et al. (1958) conducted a study where discussion groups of four men were compared against individuals, and against nominal groups of these individuals who did not actually interact. He found that the groups, far from producing more creative ideas than the nominal groupings of individuals, did more poorly than the individuals. They hypothesized that the deficit could be due to a fear of criticism (either unvoiced or voiced, if the group is breaking Taylor et al.'s rules) to some variation of what we know as groupthink. The study has some glaring limitations: the uniformly small group sizes; the uniformity of the sample (all groups were composed of men); the limited set of problems the group was asked to discuss; and, most notably, groups were only given 12 minutes to discuss each problem, which hardly facilitates an involved discussion. A review of many similar studies comes to similar conclusions—given that the groups examined were small, the problems given to them were simplistic, and the only function of creativity measured was the generation of raw ideas (Lamm and Trommsdorff 1973).

Nonetheless, productivity loss is a well-documented effect of brainstorming. By the 1980s, researchers began examining productivity loss more closely to determine its causes. Taylor was right that brainstorming sessions were less useful when the members feared criticism, and others have found that external pressure can squash a brainstorming session as well (Amabile 1998). Diehl and Stroebe's 1987 study examines a few more problems with brainstorming, namely free riding, when some group members contribute less energy because they expect others to pick up the slack; and production blocking, the fact that members must wait their turn share their ideas in a group. In theory, a group of ten would only produce one idea in the time it would take for them to produce ten distinct ideas, were they working individually. Diehl and Stroebe's studies concluded that production blocking constituted most of the

tion means that the end product will ultimately be better and stronger. Simonton touches the relationship between cultural factors and individual creativity through a Darwinistic lens in his 1999 paper (317).

production loss in brainstorming groups. The solution seems obvious: give groups more time to work through their ideas. If group work really does produce better and more original ideas than individual work, the extra time spent should be worth it. Other researchers have found that anonymous electronic brainstorming improves the process considerably (Cooper et al. 1998). Not only does electronic brainstorming mitigate production blocking by removing the spoken aspect, it makes it easier both to mask the participants' identities and hold them accountable. (Anonymity has been shown to help prevent self-censorship in brainstorming, and personal accountability helps mitigate social loafing.)

But do brainstorming groups actually produce *better* ideas than the same group of individuals? As of Diehl and Stroebe's (1987) study, the jury was out on whether the quality of brainstormed ideas was higher. More recent studies have not been much more optimistic (Rietzschel et al. 2006). Why keep trying, then? And do groups and companies persist in brainstorming just because they are misinformed? It's always possible that the general public is mistaken—it's happened before—but yet prevalence of brainstorming as a tactic for creativity remains. Some, like Paulus, are believers in the potential of meso-level creativity; his 2004 paper describes opportunities for improving creativity in groups and creative benefits that only come from working in teams.

If there is an overarching theme of group work literature regarding the optimization of team creativity, it is this: the most creative and productive groups control for group work pitfalls by carefully and deliberately structuring group discussion. It is somewhat paradoxical to think that imposing a rigid and unchanging structure over a wide variety of groups allows for *more* creativity—however, we see this often paralleled in the arts, where creators can be most productive when left to their almost ritualistic habits, and most prolific when restraints are imposed on them. To take a broader perspective, this is one of the more interesting ways that the levels of creativity interact. As much as it can be stifled by an oppressive culture, mid-level creativity can also blossom under a certain level of adversity. While one cannot artificially impose certain cultural conditions on a society in order to make it more creative, perhaps the most effective creative groups are able to do that for themselves.

For explanation, we may want to turn to the industries that are dependent on creativity to stay relevant. Some models of industrial innovation not only use creative teams and brainstorming processes to survive: they thrive off of these sessions.³ In looking for positive role models of excellent group

³Bennis and Biederman examined 'Great Groups' like Apple and the scientists behind the Human Genome Project in their 1997 book *Organizing Genius: The Secret of Creative Collaboration*.

creativity, psychologists often stumble over a firm called IDEO. Famous for their ‘human-centered’ focus, the company is a (very lucrative) legend in the world of design and is contracted by a wide number of industries for problem-solving help. Part of their success lies in their practice of hiring exemplary people; they claim the lion’s share, though, is due to their method. The company guards itself carefully against the common pitfalls of group work by leaning on what amounts to a formula for innovation. The ways their focus groups interact discourage groupthink and social loafing while creating an environment of creative safety and freedom.

The company is open about their process and has shared much of their method with the public. They have published many of their tips for generating ideas and facilitating discussion, including a document called the Human-Centered Design Toolkit. The toolkit focuses on using design to empower developing countries and problem-solve with the help of the local community, but it has other applications as well, and it gives us a good glance into the company’s philosophy. In this toolkit, you see that their choices streamline the creative process and minimize distraction so that the focus is on innovation. A leading passage early in the text illustrates this:

The challenges you face are very complex and are likely to have been explored by predecessors. You will have a higher likelihood of success at solving such complex, difficult, and already-examined problems by intentionally assembling the right team of people. This team will work best if it consists of a core group of 3–8 individuals, one of whom is the facilitator. By mixing different disciplinary and educational backgrounds, you will have a better chance of coming up with unexpected solutions when these people approach problems from different points of view. (Ideo Human-Centered Design Toolkit, 2nd edition, P. X)

We learn several things in this paragraph. First, they value diversity. This can pose its own challenges—in a group with mixed educational backgrounds, a blue-collar worker unused to research may feel intimidated by someone else in the room with a PhD and therefore contribute less than her potential. It will fall to the structure of the group, and the participants’ commitment, to remedy this. Second, we see that IDEO means to encourage vastly different lines of thinking, again a difficult task. A group of individuals with different focuses and areas of expertise can easily devolve into a roomful of people talking past each other, another outcome that must be avoided. Last, Ideo encourages a facilitator. A too-strict leader may encourage groupthink as individual members suppress the urge to rock the boat and deviate too far from the leader’s opinion. A leader who is not respected by the group, though,

will lose the ability to keep the discussion on track and enforce a beneficial structure, among other benefits a good leader can provide to a creative group (Reiter-Palmon and Illies 2004).

There are counterpoints to Paulus, IDEO, and other optimists about group work. Pirola-Merlo and Mann (2004) take a deflationary stance toward group creativity, claiming that ‘failure to account for aggregation across time as well as across individuals can result in misleading empirical results, and can result in the erroneous conclusion that team climate influences team creativity directly rather than indirectly via individuals’ (p. X). Their study supports the proposal that teams, as such, have no creative generative power—the $n + 1$ factor we assume makes two heads to be better than one. If true, this could pose challenges for our three-tiered model of creativity; however, our model would not be invalidated. It could be the case that the meso level of creativity serves more as a gatekeeper than an amplifier, allowing talented individuals to reach a larger audience and keeping the relatively mediocre ideas at bay.

The link between meso creativity and the micro and macro levels, we argue, are carriers that are particularly effective at the group level. These carriers work to enhance group culture and guide individual members to higher creativity performance. For example, consider the title ‘impressionists’ adopted by the avant-garde French artists, including Cézanne, Degas, Monet, Renoir, Pissarro, and Sisley, after their highly controversial exhibition of 1874. This title came from a satirical and highly critical article written about the exhibition. But the rebellious stand of the impressionists (who had declared they would not participate in the traditional *Salon de Paris* art show put on by the French *Académie*) included adopting the ‘label’ of ‘impressionists’ given to them by their mocking critics. The title ‘impressionists’ came to serve as a powerful carrier, helping to define them, and propagating their ideas. Groups develop a wider variety of names, behavioral styles, norms, traditions, and habits, that can serve as creativity carriers, connecting the group both to the individual members and to the wider society.

Macro Creativity

In this part of the discussion, we explore the meaning of macro creativity, arguing that it is often the most crucial level of creativity. Our argument might seem counterintuitive, since Western cultural tradition tells us that the source of creativity is the individual. This tradition has bled into creativity research. For instance: the major tests of creativity, such as the Torrance Tests of Creative Thinking (TTCT), measure individual performance (this is akin

to IQ tests such as the Stanford–Binet that test the intelligence of individuals). These tests are necessary and important, but their prevalence assumes that the individual level of creativity is the only level that matters—we do not, for example, have any well-established metrics to measure the creative potential of a group or society. Florida (2007, 2014) has written provocatively about the role of what he calls the ‘creative class’ in national and global economies, and some of his discussions (such as on ‘creative class centers’ and a ‘super-creative core’ in the creative class) do touch on collective processes. Through the ‘3Ts’ of economic development, Technology, Tolerance, and Talent, he explores the context in which the creative class gathers and thrives. However, he neglects the social psychological collective processes that enable creativity to thrive.

There are also possible misconceptions concerning group creativity, which calls to mind the (negative) phenomena of ‘collective thinking’ and ‘group mind.’ It seems impossible that a collective could think, or that a group could have a mind. The difficulty comes not because groups are *not* creative, but because it does not make sense to expect groups to ‘think’ as though they were individuals. Instead of supposing that a culture comes together as a larger version of a single mind, we see macro-level creativity as a certain directional force influenced by social factors—which in turn acts on smaller groups, and on individuals.⁴

There is already some published discussion of the relationship between culture and creativity, typically focusing on explicit, formal processes. For example, in summing up research on creativity and culture in greater China, Leung and Lo (2014) argue that, ‘...the development of creative industries in Greater China follows three major models: (1) the minimal role of the Hong Kong government regarding creative potential explored and realized by both individuals and groups; (2) partnerships between the government, groups, individuals, and the market in the case of Taiwan; and (3) the dominant role of the state in the People’s Republic of China (PRC), where the creativity of groups and individuals has to conform with the principles of economic modernization, social harmony, and political correctness’ (p. 369). There is no doubt that government intervention in the ‘creative industries’ is quite direct in the PRC as opposed to a nation like Taiwan, constituting a legislative and explicit cultural influence on individual creativity. However, the *informal, implicit* influence of the government on creative industries is quite considerable in all societies. For example, ‘political correctness’—which reflects values made dominant by government agencies and political elites—

⁴C.f. Vygotsky 1978.

has a very strong influence even in the USA and other Western societies. This is evident in the widespread influence of ‘politically correct’ multiculturalism and relativism, strongly endorsed in a top-down manner in the education system (Moghaddam 2012).

Woodman’s work provides an interactionist perspective on creativity. He posits, like we do, that creativity is the combination of factors at several different individual and group levels, and gives a model for organizational creativity: ‘The gestalt of creative output (new products, services, ideas, procedures, and processes) for [an] entire system stems from the complex mosaic of individual, group, and organizational characteristics and behaviors occurring within the salient situational influences (both creativity constraining and enhancing) existing at each level of social organization’ (Woodman et al. 1993, p. 296). These influences combine on the individual *and* small group levels and are influenced by organizational attitudes, policy, and leadership to produce aggregate organizational creativity. Beyond this, the concept of creativity carriers can also provide some more concrete explanation of the interaction between levels of creativity.

Creativity Carriers

In each era, the normative system of society encourages (and pushes) creativity in certain direction (see Simonton 2004, on creativity and *zeitgeist*). Directional shifts become particularly apparent in times of revolution, when revolutionaries forcibly change the directions of creativity. This change is most clearly apparent in the arts and humanities—take the turn away from ‘frivolous’ Rococo style toward neoclassicism after the French Revolution—but it also takes place in scientific research. For example, in the Soviet Union, Stalin shunned the advanced genetics pioneered by Nikolai Vavilov (1887–1943) and other legitimate scientists, forcing researchers to invest time and effort in bogus ‘indigenous’ breeding ideas (see Moghaddam 2013, pp. 173–177). In Iran after the 1979 revolution, Khomeini’s followers attacked and emptied the universities, preventing ‘Western style’ research and encouraging so-called ‘Islamic research.’ These political disruptions provide clear evidence of how macro-level shifts in a society can change the direction of creativity, particularly through severe punishments against those who attempt to be creative in ways unacceptable to the new regime.

The same top-down processes are apparent in the USA and other Western societies, often driven by market forces rather than direct government intervention. For example, consider the role of the computer as cultural carrier. In

the era of the ‘computer revolution,’ it is almost inevitable that young people invest their creative energies in the realm of computing. Mark Zuckerberg and his collaborators launched Facebook in 2004, and within a decade the social networking service became a California-based company with a market value of over \$200 billion. Twitter, Snapchat, Yik Yak, and numerous other novel social networking platforms have been launched, and millions of young people from around the world dream of joining the new Californian ‘gold rush’ riding on computer technologies. In other historical eras, these young people would have been developing their creative talents in other domains, such as writing sonnets, or finding ways to breed faster and stronger horses, or identifying shorter routes to travel across newly discovered oceans and continents. But in the twenty-first century, it is the computer that gives direction to creativity for many young people. Their dreams, imaginations, and aspirations are moved and shaped by computer as cultural carrier.

Collective Movement Creativity

Certain, cultural, social, and political movements involve collective creativity that is both top-down and bottom-up in influence. There is top-down influence in fashion when leading fashion magazines such as *Vogue* ‘set a trend’ by celebrating certain styles and colors of clothing. For example, here is a tip from *Vogue* about new designers to follow: ‘It’s a big year for Erdem Moralioglu. He is the reigning British Womenswear Designer of the Year, a trophy won after he showed his swoon-inducing Victoriana-hothouse spring collection—a thing of verdant beauty based on a fantasy about an intrepid lady explorer and illustrator of exotic flora’ (*Vogue* 2015, p. 418). Morelioglu will see quite a bit of imitation as consumers flock to his style. But the influence of *Vogue* is not deterministic, because by the time the designs and colors propagated by *Vogue* and other ‘top’ sources filter to the masses, they have been altered along the way by those who wear them. Fashion for and by the masses involves creativity by the many, often in ways not predicted by the ‘top’ sources. Examples like this are interesting because a few elite individuals are making creative decisions that effect change in the community at large, whereas our previous examples move from one member of the community up through the elites to then trickle back down. (See our previous example of Mendel.) Large-scale creative change or innovation does not always follow the pattern of one obscure genius, to influential friends, to mass adoption, and societal revolution: it can also be a new idea from one elite member of society that filters down to the masses.

Movements such as Black Power and women's liberation also involve this bi-directional creativity, though they originate from a position without power rather than from the powerful. In large-scale social movements, macro-level changes in attitude and opinion trickle down (or up) to the people in power, thus changing policy and cultural norms on the way. The voices of individuals play an important role in such movements, but the 'creativity of the crowd' is vital, with recent electronic technologies, 'E-swarmling,' and other Internet-based communication giving a voice to those who may not have otherwise had one. These are the instances where two (thousand, hundred thousand) heads are better than one, and where the 'mob' can be a source of great innovation. Crowd wisdom and creativity is a focus of 'swarm intelligence' research, which proposes that collective human life results in solutions that individuals alone could not have created (Krause et al. 2009). Diversity of background, ability, and especially opinion can be useful, as empirical research has shown how novel ideas arise from collective decision-making processes when critical debate, rather than 'getting along,' is given priority in groups (Nemeth and Ormiston 2007). Group decision making by animals also takes place and can have superior results (Conradt and Roper 2007). For example, Seeley (2010) studied how honeybees make collective decisions to overcome sometimes life-and-death challenges through 'novel' solutions (novel in the sense that the bees are in a new environment and having to deal with unknown topographies and hazards).

Conclusion

Our focus has been on the narrative of creativity as originating from the individual alone is not as well-founded as psychological literature and Western tradition may lead us to believe. Creativity is multi-layered. Small groups and also societies can be creative, each in different ways, in addition to 'traditional' individual creatives. More important than isolating any one source of creativity is acknowledging the role of all three levels, in communication with one another, in a particular creative process and creative movement as a whole. An individual's good idea seldom (if ever) has any impact without being discussed and improved upon by a group; and individuals isolated from creative and intellectual stimulation—both of which are provided by groups—seldom have world-changing ideas. As Barron (1999) argued, all creativity is collaboration.

We are not simply (and uselessly) saying that ideas spread because groups adopt them. We cannot evaluate how many ideas were stifled by unreceptive,

poorly trained, or malicious groups of people, and thus never made it out of an individual's imagination. Conversely, it would be impossible to determine the number of ideas that started as fairly good, but were made excellent once they were taken up by a group; or, how many individuals had their best ideas after being inspired by associations sparked by group work. Historical evidence indicates that these numbers would be significant, were we able to measure them. Likewise, it is seldom the case that creative ideas emerge solely from an individual, or solely from a group, without significant input from one another and from the cultural environment. As such, it makes little sense to focus so granularly on studying just *one* tier of creativity. We look forward to seeing more research on the integration of the three tiers—on the effect of oppressive government regimes on personal creativity, or on innovation in countries at war, or more research into how the traits of individuals impact the creative success of the groups to which they belong.

Concluding Comment

To sum up, as Nijstad (2009) has outlined in his excellent book on *Group Performance*, there are conditions in which groups are more creative than individuals working alone. This is what we would expect from an evolutionary perspective, with humans having evolved to be functional in small groups over millions of years. Small groups, such as family and friends, serve to socialize individuals in relation to the creativity carriers of their cultures. For example, family interactions in the twenty-first-century middle-class context have the computer and the Internet at the center.

Creativity carriers in the twenty-first century, such as the computer and the Internet, point to how the young are most likely to channel their creative energies. It could be argued that such creativity carriers are 'individualistic' and involve individuals working in isolation, demonstrating different degrees of creativity. This would endorse the 'bowling alone' thesis (Putnam 2001), arguing that there is a decline in social capital associated with increasing individualism and weakened traditional group life and communities. However, our alternative interpretation is that the creativity carriers of the twenty-first century are resulting in new electronic communities, crossing traditional borders such as nation states.

Central to our analysis are two striking features of creativity: first, that creativity varies considerably across time and culture, including in the level of creativity; second, that creativity can take place through processes that are at macro, meso, and micro levels. We have proposed that creativity carriers link

these three levels, as well as provide links across culture and time. Creativity carriers do not fit neatly into the analytic framework of any one discipline; a multi-disciplinary approach is needed to better explore and understand them. For example, a research study on creativity in the computer industry could involve personality psychologists who examine the dispositional characteristics of highly creative individuals, social researchers who explore the characteristics of group creativity in the computer industry, as well as anthropologists, sociologists, economists, and others who research the role of the larger society in creative developments in the computer industry. Historians, political scientists, and others will be needed to contextualize the place of such objects in history; philosophers and cultural psychologists will be needed to dissect their symbolism; and neuroscientists and others would explore the interaction of newly created computer technologies and software with our cognitive and neural processes. A collaborative approach will be the best way forward to keep expanding the once-narrow view of creativity and gain a better and more dynamic understanding of the creative process.

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The Creativity of Culture and the Culture of Creativity Research: The Promise of Integrative Transdisciplinarity

Alfonso Montuori and Gabrielle Donnelly

Introduction

In an increasingly complex, networked, and rapidly changing world, creativity has taken a central role (Dortier 2015; Runco 2004). There is enormous interest in creativity in education, business, technology research, and emerging fields such as social innovation and design. Coupled with a proliferation of popular as well as academic discourses of creativity, this situation presents researchers with complex, multidimensional challenges that cannot be addressed exclusively from the perspective of one discipline. This new global context requires a transdisciplinary exploration of creativity, particularly since the articulation, expression, and practice of creativity appear to be in flux in society as well as in academia. The networked society, generational differences, and the focus on business innovation have turned attention to collaborative, distributed forms of creativity that have only recently begun to be studied systematically.

How is a complex and important phenomenon like creativity to be approached under these conditions? Traditionally, research has followed a *paradigm of simplification* along with a strategy of specialization and

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differentiation, leading to the creation of new disciplines and subdisciplines, such as the psychology of creativity. The psychology of creativity has generated vital and all-too-often ignored research, but in the process it has, like all new disciplines and subdisciplines, decontextualized its subject and operated as relatively closed systems (Hennessey 2015). The challenge now is to continue with specialized research and to also reconnect the many strands of research on creativity (in sociology, philosophy, cultural studies, feminism, etc.) that are often working in isolation. The complexity of creativity in changing times, researched across a plurality of often non-communicating disciplines, requires the development of new kinds of scholars, transdisciplinary researchers whose task is to focus on the creative integration of existing research.

We begin by outlining some of the global changes of our times, and the parallel changes in the expression of creativity, explore some of the connections between creativity research and complexity theory and then articulate some of the characteristics and challenges of Integrative Transdisciplinarity.

The Centrality of Creativity in a Postnormal Era

Global society is in a transitional time, a “postnormal” era: we live in an *interregnum* between one dying world, variously known as modernity or the Industrial Age, and an emerging age whose outlines are not yet clear. Ours is an era marked by chaos, contradictions, and complexity (Sardar 2010, 2015).

A postnormal world struggles with the challenges of postmodernity and the postmodern condition, but with the added complexity of the recent emergence of a more networked and even more unstable world. All that was once “solid,” from jobs to gender roles to economic and political institutions, has become “liquid” and ever-changing (Bauman 2005, 2007). The world is becoming increasingly Heraclitean, requiring creativity to adapt to constant change (Bauman 2007; Montuori 2011). The postnormal confusion and the failure of some of the central tenets and institutions of modernity make creativity central for the development of new alternatives and the creation of new worlds.

In the first decade of the twenty-first century, creativity and innovation are viewed as central for the “new” economy, for leadership, for education, and indeed for creating and re-creating one’s life in a rapidly changing world (Bauman 2008; Elliott 2013; Marshall and Kinser 2012; Robinson 2001). Futurists consider creativity essential for what they perceive as the transition from the end of modernity to a new era (Ogilvy 2002). Florida (p. 6) wrote that “creativity has become the most prized commodity in our economy”

(Florida 2002), and Microsoft's Bill Gates has promoted Creative Capitalism as the solution for the world's problems (Gates 2008).

The new "creative" economy is marked by innovation, and particularly "game-changing," "disruptive" innovation. Schumpeterian "creative destruction" of the old is championed by "creative entrepreneurs" (Christensen 2013), although the long-term implications of this process are far from clear, and most likely very mixed. The call for "sustainability" in business and life addresses the damaging effects of the industrial age, and while the disruptive innovation of postnormal times seems to be clearing away some of the industrial debris, there often appear to be few criteria beyond an unbridled lust for lucrative commercial innovation.

A whole new socioeconomic category has allegedly emerged, a post-materialist "*creative class*," consisting of individuals of a certain economic standing for whom creative expression in the workplace and in life is essential (Florida 2002; Inglehart 1997). The focus on innovation in industry has led to broader, more contextual and multileveled approaches to creativity research that take an expanded view of the creative process and its actors because of the larger organizational process of moving from idea generation to bringing products to market (Catmull 2008; Purser and Montuori 1999; Woodman et al. 1993).

An Emerging Creative Culture of Interconnectedness

"Radical connectivity" (Mele 2013) is the result of a digital revolution that is changing the world (Zagalo and Branco 2015). "Digital natives" (born after 1980) have grown up in world that is interconnected and networked in ways that were inconceivable for their parents (Castells 2009). They have also grown up with the critique of the great man and the lone genius, what Glăveanu calls the He-paradigm (Glăveanu 2010). Digital natives have grown up in a post-Watergate, post-Mao era when leaders and presidents are rarely idolized, and there is much less emphasis on "stars" than in previous generations (Brown 2014; Taylor 2014). It is perhaps no surprise that their attitudes about creativity and innovation are also different. Digital natives lean strongly toward what Glăveanu calls the We-paradigm, more social, relational, and systemic, reflecting the new generation's experience of interconnectedness.

Some social theorists and demographers are proposing that the Western world as a whole is experiencing a generational shift from "I" to "We" (Greenberg and Weber 2008; Leadbeter 2009; Strauss and Howe 2009;

Williams and Drew 2012). If baby boomers were focused on “I,” the Me generation, as Tom Wolfe named them (Wolfe 1976), obsessed with themselves, with their “potential,” their identity, and their specialness, then the “Millennials” are the “We” generation: more relational, more oriented toward the public good, moving through life in “tribes” rather than as lone individuals. Nevertheless, demonstrating appropriate postnormal contradiction, the millennial generation has also been described as “Generation Me,” or narcissistic and self-absorbed (Twenge 2006). This may be the result of the limitations of traditional categorizations of culture and self-society relations. This complexity is not limited to the West. In traditionally collectivist China, younger generations seem to be more individualistically oriented, and creating their own peculiar amalgam of identities (Cameron et al. 2013),

What seems clear is that the “who” and “where” of creativity seem to be shifting from an exclusive focus on the lone genius in the arts and sciences, to a more distributed view. In the recent popular as well as academic discourse, there appears to be an interesting relationship between individual “everyone, everyday, everywhere” creativity (Montuori and Donnelly 2013b; Richards 2007b), and collaborative, distributed creativity (Glăveanu 2014a), between Glăveanu’s I- and We-paradigms of creativity (Glăveanu 2010). Younger generations see creativity as a much more everyday (personal, mundane, rather than “eminent”), collaborative process (Gardner and Davis 2013; Montuori and Donnelly 2013b; Pachucki et al. 2010). Creativity is no longer exclusively viewed as occurring in the arts and sciences. New developments such as social innovation (Mulgan 2006) focus on the application of creativity to social issues. The outcomes and benefits are intended for society as a whole rather than purely for individuals (Phills et al. 2008). The emergence of “design” as an academic discipline points to an increasing marriage of aesthetics and innovation (Heskett 2005). Popular books focus on the application of creativity to “creating one’s life,” and other more “everyday” topics (Richards 2007a, b; Runco and Richards 1997).

New collaborative technologies are changing the discourse and practices of creativity and innovation, with dramatic consequences (Gauntlett 2011; Kozinets et al. 2008). In the new “participatory culture” of the arts and entertainment (Jenkins 2009), the traditional top-down model, from “active” artist to “passive” audience, has been replaced by feedback loops of interaction and participation. Fans are actively engaged through the use of new media. One way to illustrate the shift from the top-down culture to the participatory culture and illustrate the both and nature of the new relationship between “self and social,” is through a comparison between two culturally and generationally iconic events, Woodstock and Burning Man. At Woodstock,

the audience came to listen to the artists, the musical stars. At Burning Man, the participants *are* the stars, contributing to the event in a creative way individually, through their appearance, through “everyday” activities that take the form of individual performance art, and the way they collaborate in the creation of the unique structures and features of their “camps” (Jones 2011). If the music of the Woodstock era was often punctuated by classic guitar solos displaying individual virtuosity, the music of the Burning Man era replaces the guitar solo with sing-along chants.

The Complexity of Creativity Research

The complexification of the who, how, and where of creativity is accompanied by a burgeoning research on creativity and innovation. Creativity is explicitly addressed in many disciplines, most notably in psychology and sociology. Important discussions of creativity are also found in theology (Fox 2004; Kaufman 2004), philosophy (Casey 2000; Kearney 1988), marketing (Hemetsberger and Reinhardt 2008), organizational theory and management (George 2007; Von Hippel 2005), anthropology (Bateson 2001), education (Plucker et al. 2004; Robinson 2001), physics (Bohm 2004; Peat and Bohm 1987), and futures studies (Lombardo 2006a, b; Ogilvy 2002) to name only a few disciplines and some representative thinkers and reviews of the field. It is common in these works to find few if any references to creativity research conducted in other disciplines.

This proliferation of discourses, research agendas, methodological perspectives, theoretical frameworks, and disciplinary foci is both fascinating and overwhelming. Faced with the pluralities of approaches, terminologies, ways of defining and framing creativity, and an ever-expanding research literature in sometimes quite unexpected quarters, it is no surprise that researchers have generally attempted to eliminate this complexity by simply not addressing every discourse of creativity. They have done this by making their definition of creativity limited to the aspects they wish to address, and excluding dimensions they consider epiphenomenal. With few exceptions, this has meant excluding research from other disciplines, even if directly related.

This process of elimination reflects the larger *paradigm of simplification* of academic inquiry (Morin 2008a). Traditional ways of organizing knowledge and engaging in inquiry have been based on analytic, reductive approaches stressing the importance of simplification. These approaches have become institutionalized in the disciplinary organization of universities. There is a parallel between the organization of *thinking* (analysis, disjunction, reduction,

and simplification) and the organization of *institutions* of learning along disciplinary lines. This organization reflects a process of ever-greater simplification, specialization, differentiation, separation, and the isolation (disjunction) of disciplines, subdisciplines, researchers, and their research projects (Morin 2008c; Zerubavel 1995). In the case of creativity, the overarching paradigm of simplification has meant taking a “huge and amorphous” (p. 33) topic of study (Gardner 1993), and breaking it down into simpler parts that can be studied and defined (Morin 2007, 2008b; Pietrobon et al. 2010).

The paradigm of simplification has its roots and first major expression in the work of Descartes (Descartes 1954), who summarized it this way:

If we are to understand a problem perfectly, we must free it from any superfluous conceptions, reduce it to the simplest terms, and by process of enumeration, split it up into the smallest possible parts. (p. 179)

The traditional scientific method and the process of analysis focus on simplicity. Social scientists, seeing the success of physics, applied this approach to their own disciplines, inheriting the principles of *reduction* and *disjunction* (Morin 2014). In his critique of reductionism, physicist Albert-Laszlo Barabasi (p. 6) wrote that:

Reductionism was the driving force behind much of the twentieth century’s scientific research. To comprehend nature, it tells us, we must first decipher its components. The assumption is that once we understand the parts, it will be easy to grasp the whole. Divide and conquer; the devil is in the details. Therefore for decades we have been forced to see the world through its constituents. We have been trained to study atoms and superstrings to understand the universe; molecules to comprehend life; individual genes to understand complex human behavior; prophets to see the origins of fads and religions. (...) Now we are as close to knowing everything there know about the pieces. But we are as far as we have ever been to understanding nature as a whole. (Barabasi 2003)

Morin shares the critique of the limitations of reductionism (Morin 2014):

Traditional reductionism claims that we are all individuals, in society and in ecosystems. In this perspective, we are merely units inside these systems, and we are not the connections. In contrast complexity tries to understand the type of connections that are present. (p. 17)

Context and (transdisciplinary) connections have historically not been studied because of the principle of disjunction—*either A or B*, but not the *relationship*

between A *and* B. In the process of disciplinary differentiation that occurs with specialization, this has led to separation and lack of communication (Hennessey 2015).

Reductionism focuses exclusively on the parts. Holism only sees the whole, disregarding the parts. In creativity research, we see this in the ongoing debate between “the lone genius and the zeitgeist,” between psychologists and sociologists, atomists and holists (Glăveanu 2014b; Montuori and Purser 1995, 1996, 1999; Simonton 1999).

As the planet becomes more and more interconnected and interdependent—*Linked*, or *Connected*, to mention but two popular scientific works on the topic (Barabasi 2003; Christakis and Fowler 2009)—there is a greater awareness of the importance of connectedness and the limitations of the reductionist approach. There is a need to develop new forms of scholarship and practice (Montuori and Donnelly 2013a; Morin 2008c; Taylor 2003), as well as new ways of accounting for creativity and the larger, more contextual process of innovation. Good ideas are not enough in industry or social innovation: they need to be applied. This leads to a broader view of the creative process that typically spans several disciplinary domains and highlights the limitations of an approach limited to one discipline.

Complexity science is an umbrella term for an approach that engages knowledge across disciplines. It incorporates a number of developments in twentieth-century science, primarily Information Theory, Cybernetics, General System Theory (GST), and Dynamical Systems (or Chaos) Theory (Morin 2008a; Peat 2002). Complexity theory has focused on the study of complex adaptive systems (CAS), characterized by self-organization, emergence, interdependence, interconnectedness, and uncertainty. These are system features that cannot be explained by simplification in a strictly reductionist way precisely because it eliminates interconnectedness, interdependence, and in Morin’s epistemological approach, the role of the inquirer. The phenomena of self-organization and emergence, central to CAS, refer to the processes through which higher-level order emerges bottom-up from the interactions of agents, rather than top-down. These processes have been studied in such diverse subjects as ant colonies, brains, and social movements (Borgo 2006; Montuori 2003). They are of considerable significance to creativity research in an age of networks and distributed, collaborative creativity.

Drawing on one of its precursors, Bertalanffy’s GST (Von Bertalanffy 1976), complexity theory focuses on viewing living systems as open systems interacting with the world rather than atomistically, as closed systems. The open system’s interactions with the environment make it less stable and engaged in an ongoing process of change, alternating periods of equilibrium and

disequilibrium unlike closed systems, which show no variation. Bertalanffy was critical of the way traditional scientific inquiry studied all systems as if they were closed, a heritage from the atomistic approach of the Newtonian/Cartesian worldview (Capra 1996). Because the open systems view requires an understanding of system and environment, as well as the multiple relationships, Bertalanffy envisioned GST as a *transdisciplinary* project, a way to foster communication and integration *across* disciplines and subdisciplines. This would be achieved through the use of “general” systems concepts and the articulation of isomorphisms or similarities in form. Today these might be referred to as self-similar or fractal dimensions (Capra 1996; Morin 2008b; Von Bertalanffy 1976). The concept of feedback, borrowed from cybernetics, was introduced to address a dimension of process, and going beyond linear causality to *mutual* causality, or how systems mutually influence each other through interactions (Maruyama 1963). Complexity highlights the importance of mutually constructive processes. Individuals create society that creates individuals. Individuals are in society, which in turn is in individuals (Morin 2008b). Starting with this assumption, it goes beyond either/or approaches that privilege *either self or society*, to study the always changing and contextual interactions and constructions of *some* individuals and society (Ogilvy 1977).

Drawing explicitly from systems, complexity, and gestalt approaches, Barron (1995) developed the idea of an ecology of creativity, which he first articulated in an article entitled *Towards an Ecology of Consciousness* (Barron 1972). The ecological approach viewed creativity in the largest possible context. Barron argued, for instance that “psychogenesis is best understood in the context of cosmogenesis” (p. 30). Barron’s highly original vision was grounded in the psychology of creativity but it also situates this research in a larger evolutionary and philosophical context which requires a transdisciplinary approach.

For Barron, the context of creativity was vast (Barron 1969):

(T)he problem of psychic creation is a special case of the problem of novelty in all of nature. By what process do new forms come into being? The specification of the conditions under which novelty appears in human psychical functioning is the task to which the psychology of creativity addresses itself. In doing so, it links itself to the general scientific enterprise of describing the evolution of forms in the natural world. (p. 9)

His approach focused on the phenomenon of emergence, viewing creativity as the result of a conjunction of social and psychological processes. Barron drew

on the social and the natural sciences, studying interactions and processes identifying significant self-similarity or fractal characteristics in systems at all levels (Barron 1979, 1995).

For Barron, the systems approach did not involve the primacy of the social or an attribution theory, although it should be noted that the eminent creatives he studied at IPAR were selected as creative by their peers, who were clearly the “gatekeepers” in this context. Barron’s approach did not involve reducing creativity to *either* the individual *or* the social, but rather understanding how creativity emerged as a result of the *conjunction* of different factors. In his view, creativity is a universal phenomenon with fractal features across systems, from genes to individuals to entire ecologies, and the ecology of creativity studies how these dimensions interact in the process of emergence. His ecological vision resonates with the integrative vision of scholars in a broad range of disciplines, and specifically the natural sciences, who see the universe and nature as larger creative processes (Bergson 1975; Davies 1989; Kauffman 1995; Kaufman 2004; Pope 2005).

Barron’s work can be read as a study of the human characteristics of creative systems, and the complex characteristics of human creativity at a variety of levels that include the individual and the sociopolitical (Montuori 1992, 1996; Montuori et al. 2003). Barron’s approach was a precursor to transdisciplinarity. He sought to bring together the various systems within systems that make up the ecology of creativity, connecting the different fields of study to gain a better understanding of the different aspects of the ecology.

Several threads running through Barron’s work show significant parallels to themes in complexity theory, most notably in his studies on the relationship between complexity and simplicity as personality dimensions (Barron 1953a), on the need order and disorder as motives for creativity (Barron 1963), and the articulation of ego-strength as flexibility and adaptability for self-re-creation (Barron 1953b). His critique of homeostatic models of human functioning and his stress on the potentially generative role of disequilibrium and disorder mediated by his concept of ego-strength (Barron 1968), preceded the work on far-from-equilibrium systems in Chaos Theory (Montuori et al. 2003). The concept of antifragile systems (Taleb 2012), which thrive on disorder, is given a human face by Barron’s psychological articulation. Barron argued for the continuing dialectic between order and disorder, complexity and simplicity in creative systems. He viewed creativity, the creative person, and the creative process as paradoxical phenomena, in the sense that they contain seemingly opposite characteristics that go against established belief. Significantly, Casti’s key text on complexity is subtitled “explaining a paradoxical world through the science of surprise” (Casti 1994) precisely because of the paradoxical and

seemingly self-contradictory nature of complex systems. The essential tension between order and disorder and equilibrium and disequilibrium in individuals (and more broadly in creative systems) meant that creativity emerges *on the edge of chaos*, which is also suggestive in terms of the vexing relationship between “creativity and madness.”

In his discussion of complexity theory, Kauffman (Kauffman 1995) echoes Barron’s psychological findings regarding order and disorder and generalizes them to all complex systems, writing that “Networks near the edge of chaos—the compromise between order and surprise—appear best able to coordinate complex activities, and best able to evolve as well” (p. 26). Seeming to take a leaf out of the creativity research playbook, Kauffman argued that complex systems “have learned to balance divergence and convergence, so that they’re poised between chaos and order” (p. 335).

Barron’s transdisciplinary work provides important pointers for connecting creativity research to the larger study of creativity in nature, as well as society, through the lens of complexity. It points to the intimate connection between the phenomena of complexity and creativity, and the way creativity research can inform the application of complexity theory to human beings. An exploration of the traits of creative individuals offers significant pointers for the cultivation of creative social settings. Creative social systems promote independence of judgment, tolerance of ambiguity, preference for complexity, and androgyny foster creativity. Authoritarian social systems promote (or more likely enforce) conformity, intolerance of ambiguity, and polarized, stereotypical gender roles (Montuori 2005b). There is weaving and re-weaving to be done with existing creativity research and other research approaches and findings, and their application at a variety of levels and in a range of contexts.

After a brief overview of complexity and creativity, we now turn to transdisciplinarity, which raises important possibilities for the study of creativity across disciplines and levels of study.

Transdisciplinarity: Potentials and Possibilities

Transdisciplinarity has emerged over the last few decades as an attempt to address disciplinary fragmentation. It presents an alternative to the paradigm of simplification, reduction, and disjunction, taking on the challenge of complexity and proposing to connect and contextualize knowledge. Transdisciplinarity does not reject disciplinary knowledge, methods, and agendas (Nicolescu 2008b). It argues instead for the importance of *also* bringing together knowledge that is often dispersed in highly specialized fields and

their journals. It seeks to address the fact that with this hyper-specialization, there are fewer attempts to address the larger questions facing humanity.

Transdisciplinary scholarship is already being developed across the globe and applied in undergraduate as well as doctoral studies (McGregor and Volckmann 2011; Montuori 2010). Not surprisingly, several different approaches have already been articulated (Augsburg 2014). Transdisciplinarity does not aim to produce totalizing “theories of everything,” definitive theoretical frameworks that incorporate all and everything. Its goals are to propose generative frameworks that can integrate new perspectives and raise different questions. It also tackles problems that have historically not been addressed because they are blind spots in disciplinary discourse, living in between disciplinary perspectives, or are simply considered too large to be addressed by hyper-specialized researchers.

For our purposes, we will draw broadly on what we are calling Integrative Transdisciplinarity (Montuori 2014). Integrative Transdisciplinarity draws primarily on the work of epistemologists of complexity Edgar Morin, Mauro Ceruti, and Gregory Bateson (Bateson 2002; Ceruti 2015; Morin 2008a). It has emerged from a critique of the foundational principles of reduction and disjunction in the paradigm of simplification. While recognizing the successes of reductionism and simplification, the concern is addressing the “complex” or woven-together nature of the world, its networked, contextual, interconnected dimension that was previously not addressed. Transdisciplinarity involves an epistemological exploration of that which has been disconnected and decontextualized in the paradigm of simplification and integrating the diverse strands of inquiry that can be found within and across disciplines for purposes of both theoretical and practical engagement. Integrative Transdisciplinarity aims to develop scholars who engage in creative integration to tackle complex problems in ways that are not limited to one specific discipline.

Integrative Transdisciplinarity recognizes that the world is not organized along disciplinary lines. Fostering creativity in education, for instance, can draw extensively on research in the psychology of creativity. But the valuable findings in this discipline are of limited use if they are not also contextualized in the broader realities of bureaucratic institutions, teacher training, educational goals, and the many ways in which creativity has historically not been valued and indeed actively suppressed in educational institutions (Montuori and Donnelly 2013a; Robinson 2001).

Transdisciplinarity is *inquiry-driven*: it focuses on specific issues and then draws on pertinent knowledge across disciplines as a way to address the complexity of lived experience and the challenges of creating change in systems (Montuori 2005a). Historically scholars have often not been aware of the

complexities of practice and application. Conversely, practitioners have often not been informed by, or been able to assess, the vast realm of rich theoretical and empirical research. Transdisciplinarity seeks to span the historical split between theory and practice. It aims to foster the development of scholar-practitioners who both understand the complexities of the systems they study and the actual practices of creating change. Transdisciplinary scholars engage with ideas that are often only hinted at in disciplinary discourse. Their role is almost inevitably a collaborative one, engaging in dialogue with different perspectives and scholars from different disciplines.

Two key transdisciplinary questions emerge in light of the current creativity of culture and the culture of creativity research. The first explores the creativity of creativity research.

** How is knowledge about creativity constructed? What are the historical, disciplinary, and cultural matrices that inform our understanding of creativity in the plurality of different disciplinary and subdisciplinary discourses and research programs, and by the researchers themselves?*

The *construction* and *connection* of knowledge, both intradisciplinary and transdisciplinary, are vital issues in academia today (Ceruti 2015; Taylor 2009). Morin's complexity lies at the root of transdisciplinarity as we present it here. It is rather an epistemology of complexity or *general complexity* (Morin 2007), focusing not only on *what* we know but *how* we know, and how we create knowledge. In this sense, it is different from the mostly quantitative approach to complexity of the Santa Fe Institute, which Morin refers to as *restricted complexity*. The epistemology of complexity addresses *observing* systems as well as *observed* systems (Von Foerster 1983), the kind of complexity we find in the process of the observer/inquirer's observation and construction of knowledge. This involves a reflection on the process through which researchers construct their topic and moves the discussion to the meta-level, from observed systems (the definition of creativity) to observing systems (the moves and distinctions of researchers as they articulate their topic, and the criteria for doing so).

This reflexive process leads to such questions as how individual researchers and various theoretical perspectives *construct* their understanding of their subject. *It means casting a light on the creative process of the researchers themselves and how they create their understanding of their subject*, through their own idiosyncratic theoretical, methodological, and thematic choices and decisions, including what Holton calls the researcher's *themata* or recurring ideas (Holton 1988). It means exploring their underlying philosophical assumptions, as well assessing their preference for complexity or simplicity.

It also means studying the *cultures of research*: how disciplines construct their subjects historically, how they create order and what they consider disorder, and how disciplines interact and compete with each other and deal with new theoretical developments and empirical findings. Casting the net wider, transdisciplinarity invites us to trace the historical trajectory of the psychology of creativity in the USA, originating as it does in the study of genius, with all its implications, and the way these origins are informed by social-historical factors like individualism, Romanticism, and the dominance of the “great man” theory (Montuori and Purser 1999; Pope 2005).

As an example of the disciplinary construction of creativity, and the articulation of what is and is not epiphenomenal, Weisberg has proposed a new definition of creativity that focuses only on originality, eliminating the second part of the standard definition of creativity (original *and valuable*) (Weisberg 2015). Weisberg writes that “for psychologist to regain control over the study of creativity” (p. 119), the way to address the challenge of sociocultural approaches and sociological labeling theory (creativity is who and/or what people say is creative) is to construct a new “parsimonious” approach to creativity research that focuses exclusively on novelty. Runco (2015) agrees and believes this involves focusing on what is *necessary* for creativity, rather than what is *unnecessary*, or “mere influences” (epiphenomenal). These unnecessary “mere influences,” he states, include personality, attitude, culture, development, and motivation. The theory of *parsimonious creativity* focuses on an actual mechanism and extricates correlates (i.e., mere influences and possible, but not guaranteed results). Also, it is nicely scientific in its emphasis on *parsimony*. This is in direct contrast to a social definition—and any definition that includes unnecessary influences or unnecessary effects (pp. 25–26).

This definition of creativity is a proposal *within* the specific discipline of the psychology of creativity. It is an attempt to differentiate the discipline and create order, through a quite radical process of elimination, from the encroachment of more sociological approaches, which represent disorder. The proposal raises a host of issues, starting, of course, with the definition of creativity as originality, how one can establish what is epiphenomenal, what is meant by “guaranteed results,” and perhaps most relevant to our discussion, whether the articulation, proposal, and acceptance or rejection of a definition is itself a “social” process. A transdisciplinary approach does not reject Weisberg and Runco’s choice of a parsimonious definition. It takes a diametrically opposite view that includes what they have explicitly left out. Indeed, the specialized focus Weisberg and Runco propose provides a good reason for the *complementary*, transdisciplinary approach that looks at creativity in a relational, systemic, and contextual approach.

Because transdisciplinarity is inquiry-based, it draws on the experience of persons (often practitioners) seeking answers for emerging questions. As a result, it often focuses on areas that have not received sufficient attention. The main paradigms used by researchers may not account for specific phenomena that are nevertheless experienced by laypeople (Montuori and Fahim 2004). It was Montuori's experience as a professional musician and his realization that the relational aspects were not addressed in the research that led him to study the social dimensions of creativity (Montuori and Purser 1995). Creativity in the performing arts, such as musical groups, has received far less attention than creative individuals such as writers and composers (working in *relative* isolation) because of the individual-focused disciplinary paradigms historically used in the study of creativity, as has the topic of creative social settings. The experience of the Millennial generation, with their complex interweaving of I-We paradigms, warrants multidimensional approaches that take into account their social, cultural, and economic context. An understanding of the process of innovation requires a "wide angle lens" that addresses everything from the individual to the economic environment, with specific emphasis on the historically overlooked process of group creativity. Transdisciplinary researchers therefore immerse themselves in the social world, exploring new phenomena and manifestations of creativity, rather than privileging the laboratory. In Nicolescu's terms, this is the study of creativity in vivo as well as in vitro (Nicolescu 2008a).

** How can the work being done in often non-communicating disciplines and subdisciplines be connected and integrated to enrich the discourse and develop a more complex picture of creativity? How can the connections shed light on phenomena that have historically received less attention by the dominant discourse, and ones that have been extensively researched but mostly from within one discipline, or in a plurality of non-communicating disciplines?*

The study of gender and women is a significant example of fertile ground for transdisciplinary research on the relationship between creativity and culture (Dolling and Hark 2000), and is worth mentioning here. It raises important questions about identity, about what is and is not considered epiphenomenal, and what should and should not be considered necessary and unnecessary to understand creativity (Battersby 1989; Citron 1993). Helson (1990) wrote that:

We think the understanding of creativity in women requires attention to the social world, to individual differences in motivation and early object relations, and to changes in society and the individual over time. In fact, we believe that the study of creativity in general needs all of these directions of attention. (p. 57)

This proposal clearly involves a more complex perspective on creativity, one that cannot be addressed by a single discipline it needs to take into account the interactions between individuals and social systems, the way society shapes us and sometimes determines what is and is not possible for us, and generally address multiple dimensions. It argues that the creativity of women (and the historical absence of women from lists of eminent creatives until recently) cannot be fully understood without reference to the social world, to changes in society and the individual over time. Over the years, essentialist approaches have all too often dismissed women as less creative, and “authoritatively” stated so, while not taking into account such very basic issues as the fact that women were simply not allowed to participate in domains where creativity was recognized (Eisler and Montuori 2007).

The social world cannot be dismissed as unnecessary influences with unnecessary effects for those who were not allowed to participate in domains where creativity was recognized. Are these issues epiphenomenal to the study of women’s creativity? Or is it perhaps that the psychology of creativity should focus, as Runco and Weisberg propose, on specific novelty generation mechanisms and leave the social factors that inhibit creativity or lead it to express itself in non-eminent, everyday, ways to other disciplines and approaches, leaving the integrative, contextual work to transdisciplinary? Transdisciplinary research complements disciplinary approaches by looking at the varied and complex social, political, cultural, and historical contexts as well as psychological factors that have played a role in shaping not only the creativity of women, but also how we understand the larger phenomenon of creativity given the omission of the social experience of women (Montuori and Purser 1995, 1996). Assuming that women, as feminist scholars have argued, have historically not had access to the domains in which creativity is recognized and still face uphill battles in areas like engineering, an argument has been made that it is not the case that women have simply not been creative during all this time but that the creativity of women has expressed itself in other aspects of life, areas that until recently have not received scholarly attention. Glăveanu’s work on the craft of egg decoration is an example of how research can benefit by exploring different cultural contexts, practices that are not generally viewed as being in the domain where creative activity is engaged, in order to offer us new perspectives on the creative process (Glăveanu 2014a). Interestingly, the exploration of actual practices of women points to a more contextual creativity that is concerned with creating environments that foster creativity (Eisler and Montuori 2007).

The new cultural developments outlined at the beginning of this article are arguably leading us to a different, networked society, where the traditional categories of

modernity that have shaped the popular understanding of creativity begin to fail. We see this in the rise of participatory culture, where the top-down, artist-audience paradigm replaced by more interactive approaches. We see it in the emergence of a new categories such as “pro-am,” amateurs who work at professional standards (Leadbeater and Miller 2004), and “prosumers,” consumers who are also producers of media (Toffler 1980). The so-called democratization of creativity, from the lone genius to “everyone, everywhere, everyday” creativity, has enormous social implications, by no means all positive, according to critics. Perhaps most significant is the destabilization of the traditional categories of individualism and collectivism, and male and female (Hymowitz 2011; Montuori and Conti 1993; Ogilvy 1992; Rosin 2012). Creativity is now viewed as highly desirable in many industries. It is a central aspect of a high quality of life for a certain percentage of the population: Brooks coined the term “Bobos” to describe a new privileged class he refers to as bourgeois bohemians (Brooks 2001). The sociological phenomenon of “self-creation” or “reinvention,” where one’s life is viewed as a creative process and indeed a work of art (Bauman 2008; Elliott 2013; McCracken 2008), offers extremely fertile ground for research, at the intersection of creativity, culture, and identity. How is the term creativity used in these contexts? How is it being popularly defined? When asked about creativity, members of the baby boomer generation always named lone genius “eminent creatives.” The millennial generation more often than not refers to friends, acquaintances, and collaborative projects. What are the implications of this change, and many of the other changes we are seeing in the discourse and practices of creativity?

We believe the phenomenon of creativity in today’s society should not be researched exclusively in a disciplinary perspective, whether sociology, business, or psychology. The specialized disciplinary agenda of Weisberg and Runco sidesteps these cultural developments. Along with the specialized disciplinary research, integrative, transdisciplinary work is needed to study the way creativity is being explored, articulated, experienced, and expressed in new social contexts. The cultural complexity of our “postnormal” times requires integrative transdisciplinary scholars who draw on pertinent knowledge from a plurality of relevant disciplines to provide a rich picture of these emerging phenomena.

Conclusion

Creativity has become a vital and much-discussed topic in the postnormal world. The historical focus on individual creativity is being complemented by a new interest in collaborative creativity, in business, culture, and academia.

New questions are arising about such topics as creativity in relationships and groups, and creative networks. New approaches and definitions are being articulated, sometimes conflicting and contradictory. The new popularity of creativity also raises questions about the possible trivialization and instrumentalization of creativity and the way creativity is channeled (Keen 2008). These broader questions and the challenges of postnormal times escape disciplinary boundaries and require the development of new kinds of scholar-practitioners schooled in the practice of integrative transdisciplinarity.

Disciplinary research has unquestionably generated invaluable research, but it is limited by disciplinary processes that stress differentiation and specialization. Integrative Transdisciplinarity offers ways to integrate research from multiple disciplines and also to find ways of bringing it to bear on the pressing problems of social change and human betterment. The integration and application of disciplinary research require scholars who are skilled at bringing together this largely fragmented knowledge, in specific contexts, while also questioning the larger theoretical frames from which disciplinary knowledge emerges. Their specialization is not disciplinary but focused on specific issues, contexts, and practices.

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