Chapter 11
Polyphonic Orchestration: The Dialogical Nature of Creativity

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Abstract In this chapter, we aim to propose and develop a dialogical account of creativity. While creativity is often understood as a feature of a person or products, we offer a different account. We believe creativity is not a static "object" (personal trait or product feature) but rather the dynamic and evolving quality of the relationships we develop with others within a shared cultural environment (Glăveanu VP, The creative self: effect of beliefs, self-efficacy, mindset, and identity. Academic Press, Waltham, 2017). The chapter builds on an extensive ethnographic fieldwork of innovative idea development in organisational settings. Our focus is thus on the concrete case of creativity in multidisciplinary groups in order to illustrate and develop further the concept of Polyphonic Orchestration (see Ness IJ, Eur J Innov Manag 20:557–577, 2017). The empirical research we build on showed that when leaders are open to co-construction and dialogue in the groups, the chance of succeeding in building a creative culture improves considerably. This is in contrast to the way leadership is often viewed as a set of managing strategies, almost coming in from the "outside", to manage the creative processes. The concept of Polyphonic Orchestration portrays creativity at once, as an individual and social, personal and cultural process. This notion is central, we propose, to a dialogical account of creating as it brings forward the pre-condition of dialogue and points to the necessity of guiding the social exchanges that are at the heart of creativity.

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11.1 Introduction

The aim of this chapter is to propose and develop a dynamic, contextual, and per-haps most importantly dialogical account of creativity. This account stands in sharp contrast to the "standard" definition of creativity in terms of the originality and effectiveness of creative products (Runco and Jaeger 2012). While many creativity researchers would largely agree that creativity is a process rather than a feature of persons or products, the field itself is still oriented towards the psychometric mea-surement of individual abilities or product characteristics. Studying creativity as a process is methodologically difficult given the fact that processes involve action, movement, and change. The statistical apparatus we want to use in relation to cre-ativity is not well equipped to deal with change. In particular, it is oriented towards numerical values based upon static properties. We can therefore ask, what is the alternative?

In this chapter, we will build on dialogism as a concept to (re)capture the dynamic quality of creativity, understood not as an ability but as a process of being in the world and relating to it. According to this epistemological standpoint, creativity is not a "thing" but rather the evolving quality of our relationships with others, with objects, institutions and everything that makes up our cultural environment (Glăveanu 2014). Based on dialogism (Bakhtin 1986; Marková 2003), we postulate that such relationships are best described as dialogues. The notion of dialogue is interesting on many accounts, but most of all because it suggests a bidirectional exchange. In a dialogue, there is not only a speaker and a listener, or addressor and addressee, but an exchange between these two positions. More than this, speakers are, simultaneously, listeners (Mead 1934) and both positions build on and contrib-ute to a shared context of cultural signs and meanings.

Creativity as dialogue (see also Glăveanu 2017) is a first step towards the dynamic, relational, and contextual account we envision. Instead of a phenomenon grounded in person or product, we have one that necessarily involves two or more positions. Even when creators work in complete solitude, they are still in dialogue with themselves, with the ideas of others and with a wide array of material and institutional conditions that make their activity possible in the first place. Dialogues are not only relational and temporal; they are also open towards the future. Bakhtin (1986) pioneered the view that "true" dialogues are on-going because they incorpo-rate positions and views that are always in tension with each other. He contrasted this with the monologue in which one voice overpowers all others and effectively excludes the differences and tension that are the engine of creativity (see Glăveanu and Beghetto 2017). Monologism is, in this paradigm, is the very antithesis of cre-ativity as it would hinder free expressions and explorations of other perspectives in a conversation.

Bakhtin (1986, p. 132) argued that the monological word is often attached to power and thus to leaders (see also Dysthe 1997 and Ness 2017). For, Bakhtin there is a contradiction between dialogue and monologue, meaning the internally persua-sive word and the authority's word.

> …the internally persuasive word is half-our and half-someone else's. Its creativity and pro-
> ductiveness consist precisely in the fact that such a word awakens new and independent
> words that it organizes masses of our words from within, and does not remain in an isolated
> and static condition. (Bakhtin 1981, pp. 345–346).

If dialogue is a necessary condition of creativity, it is not always a sufficient one. To illustrate this point we can think about the concrete example of group creativity. There are many cognitive and social factors that interfere in and shape the relationships between people and their voices or perspectives (Paulus and Nijstad 2003). Unfortunately, diversity of points of view is a double-edged sword and the polyphony or multi-voicedness that characterises teamwork often leads to frustration or even dead-ends and non-consensus. This is due to the fact that the divergent nature of dialogues and polyphony in general requires a balancing factor represented by guidance and even convergence. In other words, the multiple voices or perspectives placed in relation to with each other in the creative process need some form of orchestration if they are to turn potential into achievement.

In this chapter, we will focus on the concrete case of creativity in multidisciplinary groups in order to illustrate and develop further the concept of polyphonic orchestration (see also Ness 2017). This notion is central, we propose, to a dialogical account of creativity as it brings forward the pre-condition of dialogue and points to the necessity of guiding dialogues. We also continue the aural or musical analogies built on by Bakhtin who used polyphony – and heteroglossia – as key concepts in his work. To orchestrate means both to listen and act, to guide and be guided, to create harmonies by building on dissonance in an on-going cycle. This is traditionally the role of leaders within a group. But this is also what each one of us enacts in our daily life whenever we produce new and meaningful ideas, objects or projects. The orchestration of creativity is, at once, an individual and social, personal and cultural process. As follows, we will illustrate it within an organisational context and then reflect on its general principles. But before, let's revisit briefly the "voices" about creativity we are responding to here.

11.2   Creativity: From Individual Product to Social Process

The historical trajectory of creativity as a topic of research experienced a few "moments" of rupture and transformation. One of the most notable took place around the time of the Renaissance (at least in Western history), when men – sadly not necessarily women – replaced God as the only possible creator (see Weiner 2000). This Copernican move empowered creativity and innovation, even if in the case of the few rather than the many. A more recent shift, largely associated with mid-twentieth century psychology, saw a "democratisation" of creative potential and a growing belief that each and every person is creative in one way or another (Glăveanu 2010). For as liberating as this modern conception is, however, it still places the focus on isolated individuals and their achievements, particularly in stereotypically creative domains such as art, science or design. Measuring creativity by

considering products, the cornerstone of the first scientific studies in this area, has gradually been replaced by a concern for process (see Lubart 2001). It is only in recent years, however, that this concern for process has been used to challenge the traditionally static definition of creativity itself (see, for instance, Corazza 2016).

What this contemporary movement stresses is the fact that creative products and processes are dynamic and inter-related. Dialogism makes a powerful contribution to this new trend by effectively moving the debate away from products and processes altogether. Within a dialogical framework it does not make sense to separate the two but integrate them within a broader conception of positions, perspectives, dialogues, polyphony and, last but not least, the orchestration of creativity. Let us consider these concepts in turn.

For a long time the focus in creativity research has been on the creativity of the person and his or her intra-psychological attributes, mainly intelligence and personality (e.g., Barron and Harrington 1981). Paradoxically, by considering these psychological "elements" separately and in a static manner, these kind of investigations tend to lose sight not only of the concept of creativity, but of the person as well. People create as individual dynamic systems embedded within larger social, and equally dynamic systems. If we are to understand the contribution of personality, intelligence, motivation, or any other psychological function, to creativity, we need to respect the integrative, holistic nature of the agents doing the creating and the world that supports and responds to their actions. In other words, we need to understand the person not as an isolated, self-contained entity, but in a multiple and dynamic relationship with others, within society. The notion of position is essential in this regard. Individuals and positions are not identical: a person can occupy – and does occupy – multiple positions at the same time and, most importantly, move between them (Gillespie and Martin 2014). Positions can be defined in physical terms (e.g., where people stand in space), in social terms (e.g., depending on the social roles people adopt), and symbolic terms (e.g., depending on the meaning they give to the world from their standpoint). By exchanging positions – physical, social and symbolic – we become flexible in our relation to ourselves and the world and are able to act in a creative and dialogical manner.

What happens when we re-position ourselves? Effectively, we change our perspective. Perspectives can be defined, in a pragmatist way, as action orientations (Gillespie 2006) since they guide our thinking and our behaviour. Every position is associated with one or multiple perspectives. For example, two people who sit at different ends of the table have quite different perceptual perspectives of the table, the room, and each other. Students and teachers – two specific social and symbolic roles – develop and act based on different perspectives about the situation they find themselves in. The fact that the people in the first example and the teacher and students in the second one do talk to each other – engage in dialogue – and they have the potential, physically or imaginatively, to exchange positions, is crucial for bridging the gap between them, building common ground, and acting creatively (see Glăveanu 2015a).

These dialogical relationships are the bedrock of creativity. It is because we can communicate and exchange perspectives, through re-positioning, that we can reach new understandings and develop new forms of action and interaction. Dialogues are grounded in perspective taking. We need to be able to take the perspective of those we

are exchanging with for communication to continue and be successful. Equally, creative people build on their capacity to understand, both cognitively and emotionally, the perspective of other people or what it means to occupy different positions in the world. In Bakhtin's terms, they develop a polyphonic way of seeing the world, one filled by the voices of other people. In fact, there is a deep parallel between the notions of perspective and that of voice. Both are social, interactive, and enabled by culture. In this chapter, we will use them interchangeably, even though they come from different theoretical traditions (pragmatism and dialogism) and have their specificity.

The last theoretical step is represented by orchestration. Positions, perspectives or voices do not exist in isolation from each other. On the contrary, they are defined precisely by their relational value; for instance, the separate roles of teacher and student would be unimaginable without the other. This relationship, however, changes over time. If it didn't, we would not have the possibility to re-position or take the perspective of others. Each one of these positions introduces us to a new sphere of experience that enriches our imagination (Zittoun and Gillespie 2015) and diversifies the resources of our creative action. But re-positioning and perspective taking are not taking place at random. They are coming out of a certain life course, they respond to the needs of the current situation, and they anticipate a certain future. In other words, they are orchestrated, in the here and now, by the web of actions and interactions the creative agent participates in.

Polyphonic orchestration is thus placed at the core of the creating, and is directing the processes taking place in what Ness called the "Room of Opportunity" (Ness and Søreide 2014). In this metaphorical room, multiple voices or perspectives co-exist and become articulated with each other. They are effectively orchestrated by the participants in the interaction or, in the case of solitary work, by the different positions internalised by the creative person. In what follows we will present the research that documented this process, led by the first author, and discuss her findings regarding collaborative creativity, multidisciplinarity, summed up in what she called Polyphonic Orchestration. After this, we will return to the dialogical approach to creativity and derive some general principles that underpin polyphonic orchestration and their theoretical and practical consequences. If we accept that creativity is dialogical then this has deep implications for how we understand, study and cultivate it. Dynamic, relational and contextual accounts of creating cannot operate within the same psychometric logic that dominated the field since its inception. A new science of creativity is to be (re)invented and, with it, a new methodological apparatus.

11.3 The Polyphonic Orchestration of Creativity in Multidisciplinary Groups

With the research questions "What characterizes creative knowledge processes in multidisciplinary groups working with developing innovative ideas, and how are these processes facilitated?" as a point of departure, the interest was in understanding more about how members of multidisciplinary groups develop new knowledge and ideas dialogically, and also how such processes are facilitated by leaders.

Consequently, she sought access to groups doing authentic innovation work in the hope that access to groups working with developing innovative ideas, would ensure rich and interesting data. Thus, the selection of research groups was a careful selection of possible organisations, using a combination of convenience and a purposive sample (Patton 2002).

Access to this particular field – groups working with innovation – turned out to be a challenge, however. Innovation is highly business sensitive due to strong competition in the market and thus organisations hesitate to let outsiders enter such groups in order to avoid the risk of leaked information. One of the groups was based at the heart of the Innovation Department in the International Oil and Gas Company, Statoil, another group worked with strategy in Statoil, and the last group was based in a Norwegian Research Institute. Thus, the research field was highly confidential. Still, after meetings and e-mail correspondence where the intentions of the project were presented with a project plan, trust was gained from the management in the organisations and access to three different groups. Then various confidentiality agreements were signed. We are not allowed to report the *content* of what was discussed and developed, as this was all confidential. In particular, this was important in the Statoil groups. Fortunately, the focus for the research was more on *how* these group members worked, collaborated, interacted and thus on creative dialogical *processes*.

All three groups had as mandate to develop innovative ideas. See Table 11.1 below, describing the groups.

Table 11.1 Groups that participated in research (in Ness 2016, pp. 39–40)

Group name	Formal group task/aim	Group composition
Strategy group	Strategy development	Core group: 3 male members from different parts of the organization with different experiences and competences, including legal and on/offshore logistics and engineering
Oil and gas company	Their aim was to develop a business case with cost-efficient solutions and with a competitive instinct	
		Group meetings were supplemented with 3–10 members with specific knowledge
Innovation group	Idea/innovation development	Core group: 5 males and 1 female researchers with different expertise and competences, including engineering, business, geophysics, cyber technology
Oil and gas company	Their aim was to develop radical ideas based on needs and challenges across the organization	
		In some meetings the group was supplemented with 3-7 members with specific knowledge
Research group	Their aim was to develop innovative research projects and write applications for external funding	3 males and 1 female researchers with different expertise and competences
Research institute		

After the three groups were identified, courses were undertaken in order to get an entrance card. This made it possible to come and go as one pleased and to follow the groups over a long period.

In order to understand what characterized creative knowledge processes leading to innovative ideas and how they were facilitated, the researcher investigated the social interactions, communication, and relational processes specific for the three workgroups. The focus was on *how* the group members negotiated and collaborated when they developed innovative ideas. As the development of new ideas, in a dialogical perspective, takes place *between* the group members rather than *within* each individual group member, it was applied concepts and ideas drawn from sociocultural theories, primarily the idea that knowledge emerges and develops through a process of co-construction and dialogue. This co-construction is assumed to take place in the context of an active and dynamic relationship between the social and the individual. Knowledge is viewed as socially co-constructed through interaction with the social, cultural or physical environment, and in the context of a process distributed in both time and space.

While acknowledging that there are also important individual differences between people that play a great part in group creativity, the focus in this project has been on the dialogical relations established between participants. This focus doesn't deny but actually brings to the fore individual differences (in perspective or knowledge, for instance), while considering them in a very different light: individual-level diversity comes out of multiple and dynamic social relations and forms of belonging. In this sense, dialogical relations both thrive on individual differences and result in individual differentiation, but the process through which this occurs is thoroughly social.

The project was qualitative in nature and exploratory in scope. An ethnographic research design was chosen as it was necessary to experience the social life of the groups studied over longer periods of time in situ.

In accordance with ethnographic designs (Denzin and Lincoln 2000; Fangen 2010; Gerson and Horowitz 2003; Krumsvik 2014), the following wide range of methods of data collection were also used as part of the fieldwork: formal observations of workshops and meetings; formal field notes of group meetings; formal semi-structured interviews with the leaders of the three groups; formal semi-structured interviews with core group members who also were experienced leaders of innovation and development processes in their organisations; and informal field conversations with group leaders and group members. The fieldwork lasted for a period of 18 months and this allowed the researcher to collect an extensive amount of data. All dialogue and group work was then recorded and transcribed.

The analyses were inductive. First, the empirical observations were analyzed. This resulted in an understanding of the collaborative processes that reflects what was seen and experienced in the groups. This understanding helped to narrow the focus and ask new questions. The questions were then explored in the analysis of focus group interviews and contributed to further understanding of the phenomenon, helped once more to narrow the focus and to ask questions that are more specific. These questions were finally explored in the analysis of individual leader
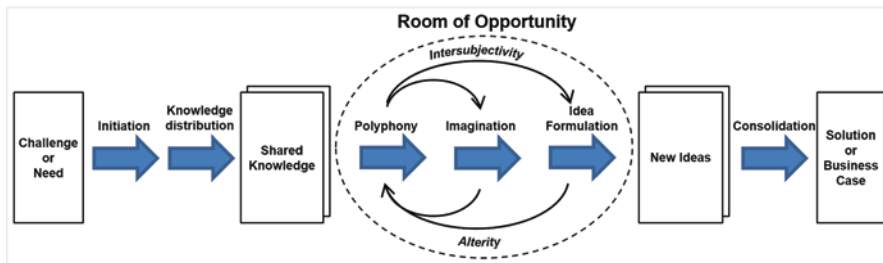
Fig. 11.1 Model, "The Room of Opportunity". (Ness and Søreide 2014, p. 557)

interviews. What came out of this sequential exploration was a deeper understanding of dialogical creativity, based on a triangulation of findings from both observations and interviews. In these analyses, the researcher interpreted the data and created meaning and categories that were not explicit in the text itself.

One of the main findings from this project was that group members developed their ideas by going through six phases (see also Ness and Søreide 2014) (Fig. 11.1).

The process started with some kind of challenge or need. Then the processes went through initiation and knowledge distribution when different group members were put together and shared knowledge on the task at hand. The process ended with a solution or business case after a consolidation of a concrete idea, in the two last phases, when the group members formulated and then consolidated their concrete ideas. When looking closer at the identified phases, it was concluded that group members learned from each other and built a knowledge platform during the first phases of the process, and this enabled the development of innovative ideas in the last phases. Group members came from different disciplines and thus had different fields of expertise. It was thus crucial that they could learn from each other in order to develop a shared knowledge. This helped them develop later on new ways of thinking and understanding, for instance, systems about which they already had some knowledge.

An example from the analyses is when Hannah, a member of the Innovation group, expressed her view on learning and the importance of bringing together people with different competences:

> Participation and enthusiasm is important – and building on each other's ideas and perspectives. When there are several people in the group with different competences, you get this dynamics which is so important. You are challenged by others. You learn to think in a new fashion when you hear how others talk about matters you thought you knew. (Ness and Søreide 2014, p. 553)

However, even though the diversity of perspectives among group members clearly could the engine for creativity, this diversity was also difficult to handle. Sometimes group members used very domain specific terminology and consequently they had problems understanding each other. Each group member brought with him or her their own set of knowledge, ideas and experiences and they struggled with communicating in a way that was constructive (i.e., trying to place this

knowledge in the context of other people's expertise). Often the discussions centred on what a term actually meant or what definition would be the "right" one to use. This is often the case in cross boundary work. (For more see Edwards 2011; Ness and Riese 2015) Still, despite these challenges, the groups managed to progress with their innovation work.

We discovered that creativity and idea development peaked in the three middle phases since it was in this part of the process the group member started to negotiate and challenge new ideas. This was done in a circular movement in which group members went back and forth between the different identified phases in the discussions. In these discussions, they explored different ideas and scenarios and in this way could stretch the limits for what was possible at the time.

Consequently, these phases could be seen as a separate "room" within the process, characterized by many voices that stated, confronted, and built on different views and perspectives. It was a polyphonic phase that, once more, stimulated both individual and collective imagination. Consequently, this was called the "Room of Opportunity" (Ness and Søreide 2014).

Developing innovative ideas was, to a large extent, was about bringing together different perspectives and letting group members dialogue with each other and co-construct ideas. An example is when Arne in the Statoil Innovation group emphasized the importance of different perspectives. He said:

> I think that multidisciplinary settings stimulate creativity. It's important to bring together individuals who work towards the same problem, but they see things from different perspectives. They will have different views on the problem, right? (Ness and Søreide 2014, p. 552)

He explained that he thought it was important to have diverse and multidisciplinary working groups when working with innovation, an impression shared by other participants.

However, innovative ideas were not reached automatically. The process of building a common knowledge platform for enabling innovative ideas required that the group members, from different disciplines, had the ability to recognize and acknowledge others' competence and resources in addition to their own special expertise. Thus, these findings revealed that it was not enough to bring together group members from different disciplines; they needed additional relational competence in order for the collaboration to succeed and for creativity and learning to occur (Ness and Riese 2015).

An example that showed how the leader of the Innovation group, emphasized the value of the relational climate and collaboration in the group, was when he talked about group dynamics and how important it was to have trust between group members. He said:

> We have different competences gathered in one place so to say, and there is a huge potential in tossing things back and forth between the different people. This synergy is really good, that we can say what is on our mind – and if someone disagrees, that is ok too. There must be trust in the group so that everybody participates. And also respect and understanding for each other's special competence is important, I think. (Ness and Riese 2015, p. 36)
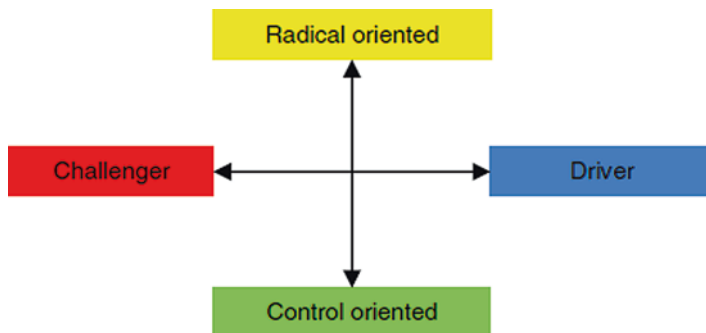
Fig. 11.2 Four roles in the relational dynamics in the groups

Furthermore, other findings in this research indicated the fact that effective leaders showed awareness of how imagination could be stimulated. Across all the three groups, the leaders sought a creative climate by forming groups that were characterized by both a diversity and polyphony in disciplinary perspectives, but also in the way group members related to each other. When looking closer at group dynamics, it was identified four complementary roles. These roles also could be organised along two axes in describing the interactions between members. The roles are: driver vs. challenger, and control oriented vs. radical oriented. The driver in the group would look for progression and moving forward with the discussions, while the challenger would often provide an opposite "force" and seeking further exploration or disagreeing so that progression stopped and the group spent more time discussing a matter. In this way there would be a push and pull dynamics between these two roles. Similar, the radical oriented role would push limits and go for wild and radical ideas out of the box and in which the sky is the limit with no reflections on limiting factors, while the control oriented role would have an opposite function and focus on costs and regulations which would limit and "weigh down" the more radical thinking. In this way, there was a dynamic between the four roles that influenced how creative the discussions were. These roles were dynamic and dialogically related, and they could be observed in the way members changed certain positions (perspectives or voices) during the discussions. Further, these roles seemed to have complementary functions in the relational space established within the group, and the leaders seemed to actively stimulate each one of them in order to create a dynamic that enabled creativity (Fig. 11.2).

The interaction between these four identified roles added a different "energy" to each group and moment within the process, and often provided tensions the groups could explore in a creative manner (Ness 2017).

We further observed that leaders seemed to orchestrate these roles in order to enable creativity in the groups and that this orchestration was about opening up for new ideas to occur by using a dialogical and open approach that was not too controlling. This way of orchestrating required the leaders to activate all the voices in the group and they achieved a creative climate by stimulating the different perspectives

and roles involved. An example is when the leader of the Research Institute group, Craig, said:

> When creating innovation, one needs to create certain group processes and a movement towards new ideas. This requires a mix of different persons, and they all need to have the courage to open up and contribute actively with their personality and intellectual powers. There must be an impulse, which ignites motion – it does not just happen. It must be triggered and followed. You can call it roles. The roles can ignite that motion towards innovative ideas. (Ness 2017, p. 571)

In summary, these findings highlight the ways in which group members in multidisciplinary teams developed ideas and co-constructed knowledge in a collaborative and dialogical manner. The findings also show that the different perspectives and dynamics in the groups, including between the four different roles, were encouraged by the leaders and resulted in tensions that stimulated the imagination. However, this tension needed a safe environment in the groups in order to be constructive (Ness and Riese 2015). An emotional and supportive climate in the groups seemed thus to influence the group members' ability to use their imagination as a collective. Positive relationships supported imagination and creativity. The leaders orchestrated the creative knowledge processes by using a dialogical and open approach and this relational leader practice can be defined as Polyphonic Orchestration (Ness 2017).

11.4   Dialogical Creativity

The study discussed before offers a rich illustration of the processes of polyphonic orchestration within multidisciplinary groups. This research context is both exceptional – in the sense of a particular organisation, bringing experts to work together – and extremely mundane – we oftentimes find ourselves in situations that require collaboration and the sharing of expertise. While it might be argued that dialogical creativity characterises teamwork in particular, we want to use the set of findings above to reflect on a much wider range of contexts. Indeed, if we move away from individualistic conceptions of creativity we soon come to realise that creative processes always bring together a plurality of positions, roles and perspectives; these blur any sharp distinction between "individual" and "group" creativity and make both intrinsically collaborative (see also Barron 1999). What we call here "polyphonic orchestration" or the dynamic organisation of different voices or perspectives within creative action is both a personal and social phenomenon. In essence, it testifies to the dialogical nature of the mind doing the creating and its interconnection with the minds of others.

In this discussion we want to highlight some distinctive features of polyphonic orchestration or what, in other words, defines dialogical creativity.

1. *The dynamic tension between similarity and difference*. For Bakhtin (1986), dialogues never end in "sameness" or identical views. On the contrary, dialogical

forms of relating to each other are meant to further our understanding, to produce new meanings while maintaining differences. Paradoxically though, we need to build common ground in order to conserve difference and help the emergence of novelty. This is part of the lesson of studying multidisciplinary groups. The "room of opportunity" (Ness and Søreide 2014) in which creativity and imagination flourish is set up when enough sharing takes place that people can take each other's perspective *while* maintaining their own points of view. The act of perspective taking, essential for creativity (Glăveanu 2015a, b), is interesting to examine in this regard. First of all, we never "take" the perspective of others but, rather, construct perspectives in dialogue or interaction with them (see also Glăveanu and de Saint Laurent in press). We thus understand – at a cognitive, affective or action level – the standpoint of other people without fully letting go of our own. This is not an image of the solipsistic mind, generating mental representations in isolation, neither is it a romanticised account in which the positions of self and other constantly merge through identification and empathy. We learn from Bakhtin, 1984, p. 110 that: "Truth is not born nor is it to be found inside the head of an individual person, it is born *between people* collectively searching for truth, in the process of their dialogical interaction". It is, in fact, the dialogue that relates the perspective of self and that of others that defines perspective taking and makes it so fertile for creativity. This dialogue produces new meanings by cultivating reflexivity or the possibility to see oneself and one's view as an other would (Mead 1934; de Saint-Laurent and Glăveanu 2016). Dialogical creativity is thus grounded in the productive tension between similarity and difference, closeness and distance, the perspective of self and those of others.

2. *The cooperation and movement between different roles.* The notion of role is interesting for dialogism as, in some ways, it corresponds to that of position. We can think of roles as positions that are defined in social terms. Indeed, a role can only be conceived in relation to other roles within a social arena. While many theories refer to roles as institutionally defined positions (e.g., Gillespie and Martin 2014), for instance, buyer and seller, doctor and patient, teacher and student, there is much more to this notion than established social categories. The research discussed in this chapter uses this notion in wider sense when identifying the interplay between challenger, driver, radical oriented and control oriented roles within multidisciplinary groups. In effect, these are positions within the group that make accessible a certain range of perspectives rather than others. For instance, challengers would probably foster critical perspectives while control oriented people would favour predictability. The interesting thing is that these roles or positions are not fixed. Indeed, one and the same person might play multiple roles in a group or change roles depending on context and moment within the life course. Importantly, these positions and their associated perspective become internalised and represent, in Bakhtin's terms, voices that contribute to the orchestration of creativity within as well as between people. What matters the most from a dialogical standpoint is not so much the number of roles, positions or voices but the movement between them. Being able to re-position one-

self, adopt new roles and thus understand those who "speak" from their position, is crucial for both collaboration and creativity. It allows enough flexibility to be able to notice new meanings and possibilities for action. It also contributes to the balance mentioned above between sameness and difference, attachment to a certain role and openness to others, including radically different ones. In many ways, the process of "divergent thinking", often mentioned in relation to creativity (Baer 2014), is being reconceptualised by dialogism as the capacity to exchange positions and perspectives in relation to a topic or situation.

3. *Polyphonic orchestration is not a given but a collaborative achievement.* Another important lesson derived from the study presented here is that successful group work has specific antecedents. Among them, openness, curiosity and respect for each other's perspectives stand out as particularly important (see Ness and Riese 2015). These allow group members to develop mutual trust, which is essential for the development of creativity and, more generally, the development of a healthy and well-functioning self (Winnicott 1971). An atmosphere of trust enables the exploration, experimentation and playfulness specific for creative action, both individual and collective. In fact, the three conditions identified by Ness in her study are important pillars for dialogical creativity. Openness implies the recognition of the fact that other positions exist and their perspectives can and should be explored. Curiosity underpins the motivation to start this exploration process, to get to know more about others and their views (and, through reflexivity understand better oneself and one's own views in this process). Finally, respect is crucial for going beyond the simple recognition of other voices or perspectives. It effectively legitimises them and considers them implicitly valuable for the task at hand. Processes of polyphonic orchestration build on each one of these conditions which, for as basic as they might sound, are often difficult to achieve in practice. There are multiple barriers – personal, interpersonal and cultural – preventing us from recognising other's points of view and engaging with their perspective (see Glăveanu and Beghetto 2017). And these barriers become apparent not only in situations of group work but also when we are creating in solitude. What makes certain perspectives not come to mind? What makes us easily dismiss others? The dialogical approach to creativity expands the role of openness, curiosity and respect from external to internal interactions and dialogues. In the end, what is being orchestrated within creativity is a polyphony of voices and points of view. If you are not able to identify these voices as valuable, there is little chance of learning from them or creating with their help.

4. *Effective leadership and facilitation is essential for the polyphonic orchestration of creativity.* Leadership is a topic that receives more and more attention in relation to creativity (Carmeli et al. 2013). And yet, very often, it is treated as a separate phenomenon or set of processes that comes in, from the "outside", to shape or guide creative processes. Based on the findings of the study discussed here we can see how leadership is much more ubiquitous than this. According to Dysthe (1997, p. 85), a leader who acknowledges a dialogical perspective, an understanding of the importance of the internally persuasive word and the asymmetry

in the relation between a leader and a co-worker, will have greater chance of succeeding in building a creative culture. The groups under investigation had formal leaders but the successful leaders among them were those who knew how to adapt their leadership style to the dynamic of the group and the different stages of the creative process (Ness 2017). In other words, effective leadership involved the capacity to take multiple positions or adopt different roles in order to contribute to the overall orchestration of the process. The notion of orchestration itself is revealing in this regard. Orchestras need conductors but the conducts are not standing apart from the music. They are active listeners and capable of adapting and guiding the process from the inside. The same applies to dialogic creativity: its dialogues and tensions need facilitation and guidance. We would argue in fact that successful creators are those who understand their own processes and have internalised good leadership models to help manage them. Of course, what constituted good or effective leadership and facilitation is highly contextual and will depend on the team, the task, and stage in the process. When working alone, leadership is not absent but reflected in the way in which different perspectives are managed by the person. In both cases, the task of leadership is to cultivate the diversification of perspectives and their meaningful integration (Glăveanu and Gillespie 2015). Like a masterful director, leaders who aim for creative or innovative outputs need to cultivate the openness, curiosity and respect mentioned above. They should be mindful of the different roles and positions present in the group or situation and allow them to develop and interact with each other. Last but not least, leadership is not the opposite of polyphony for as long as they are not aiming to close the debate and make everyone reach the same conclusion. Itself, the task of leading or facilitating is a polyphonic one, drawing its strength from multiplicity rather than sameness and uniformity.

The four characteristics of dialogical creativity presented above nuance our understanding of polyphonic orchestration and can be used to guide its practical application. Taken together, these features challenge many of our usual assumptions about creativity and, more broadly, about our existence as agentic, social beings. Creativity is not grounded only in difference and novelty. It does not simply emerge when multiple voices or perspectives are available. And it is not separate from leadership and facilitation. The notion of polyphonic orchestration paints a different picture of this process, bringing together its multiple and oftentimes antagonistic facets. Creativity is, at once, individual and social, shared and different, common and unique, constrained and free.

What would be the implications of a dialogical theory of creativity for education? Acknowledging and utilizing different perspectives in course activities are important if universities aim to educate autonomous thinkers, endowed with an awareness of different ways of conceiving a topic and abilities of thinking creatively. According to Biesta (2013), education works in three overlapping domains: qualification, socialization, and subjectification. Through education we become qualified to do certain things, we become socialized into a culture of certain ways of thinking and acting, and we (can) become autonomous subjects of moral judge-

ment, responsibility and action. Depending on context, different domains may be more or less in the foreground. However, in light of the developments and massification of higher education over the last decades (Guri-Rosenblit et al. 2007; Hornsby and Osman 2014), it seems particularly important that university programs aim to facilitate course activities that provides growth in all three domains. In order to do this, a dialogical practice is crucial because if we look to Higher Education, we find that the number of students enrolling in this sector has increased drastically. In the case of Norway, for instance, the number of students enrolled at Universities has gone from 6.983 students in 1997 to 82.193 in 2017 (NSD 2018). As a result, student groups have become more diverse, encompassing young people with different cultural and socio-economic backgrounds (Biggs and Tang 2011). These changes have contributed to transforming universities from elite institutions to institutions concerned with mass education, and put more strain on the way the institutions teach because "more diverse groups of students need better pedagogical facilitation" (Michelsen and Aamodt 2007, p. 14, translated from Norwegian). However, this diversity is not simply a challenge that needs to be overcome, but also an opportunity to promote dialogues between a wide range of perspectives (Ness and Egelandsdal forthcoming). Polyphonic Orchestration is a tool to help teachers in how to utilize such diversity by creating situations where the students can engage with each other and the material, and thus support the students' development into a field of study. Our dialogical account of creativity bridges the individual and the social and points to the necessity of scaffolding the social exchanges that are at the heart of creativity.

11.5 Concluding Thoughts

In this chapter, we have developed a dialogical account of creativity that contrasts the "standard" definition of creativity in terms of the originality and effectiveness of creative products (Runco and Jaeger 2012). This view goes beyond static understandings of creativity that define it in terms of personal traits or characteristics of products and focuses our attention on the dialogical nature of creating with and for others, within a socio-material and cultural context. The dialogical view of creativity is not meant to replace existing approaches to creativity, even when they are mainly individual-based (e.g., cognitive or motivational theories), but give this kind of work a social and cultural basis (see Glăveanu 2015b). This is because, in fact, dialogism does not deny the individual; on the contrary, it gives it gives the person a priviledged place as the source of difference and differentiation in the social field. But the dialogical ontology is markedly different than that of traditional, positivist science (Marková 2003) in that it considers individual uniqueness as ultimately social in its origin, expression, and consequences. Adopting such an epistemology does not deny previous work in the psychology of creativity but can enrich existing conclusions and lead to new insights, as we hope to have demonstrated here.

The chapter has built on an extensive ethnographic fieldwork of innovative idea development in organisational settings in order to highlight the process characteristics of polyphonic orchestration, its outcomes, facilitators and obstacles. A particular focus was placed on the role of leaders and facilitators within the group and the way they fostered dialogical relations between members and cultivated a sense of openness and possibility specific for creative work. Some distinctive features of polyphonic orchestration and what defines dialogical creativity have been discussed.

First, *the dynamic tension between similarity and difference* shows how dialogical forms of relating to each other are meant to further our understanding, to produce new meanings while maintaining differences. Further, *the cooperation and movement between different roles* is also central, and in dialogism the notion of role is interesting in how it corresponds to that of position and how we change perspectives in a continuous movement. We also highlighted that *Polyphonic Orchestration is not a given but a collaborative achievement.* Successful group work has some conditions and some of these are openness, curiosity and respect for each other's perspectives (see Ness and Riese 2015). These allow group members to develop mutual trust, which is essential for the development of creativity. Finally, we also drew attention to how *effective leadership and facilitation is essential for the polyphonic orchestration of creativity.* Leadership it is often seen as a set of processes that comes in, from the "outside", to shape creative processes. The reality is, however, that leadership for creativity is more ubiquitous than this. When leaders open up for a co-construction and dialogue in their work groups, they will improve the chance of building a culture of innovation and creativity.

The concept of Polyphonic Orchestration portrays creativity as a dynamic process meant to articulate, at once, self and other, sameness and difference, the real and the imagined, with transformative consequences for creators, culture, and society.

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