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Multi-disciplinary Perspectives on Entrepreneurship

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This handbook is the first attempt to discuss and advance entrepreneurship field from multi-disciplinary perspectives. The idea for the handbook has arisen out of questions we were interested in pursuing, namely what is going on in a range of other fields, such as neuroscience, technology, education, law, transmedia, philosophy, and theology, and how these fields may inform current, and, equally important, future developments of the entrepreneurship field. Classically, handbooks on entrepreneurship have adopted a traditional approach, namely taking stock of the entrepreneurship field and identifying ways to advance it based on the findings emerged from the review of the extant entrepreneurship literature. In such handbooks, classical questions entrepreneurship scholars pursue are what is going on in the entrepreneurship field, what are the gaps, and what future research directions could be identified.

This handbook is the first to collect original chapters on multiple perspectives employing the novel approach described earlier all aimed at discovering new, fresh inter-, cross-, and multi-disciplinary ideas, concepts, theories, and insights to advance the entrepreneurship field in the years to come. We have invited original contributions from the authors—academics, practitioners, policymakers—who are experts in their own fields, to provide state-of-the-art

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insights from their own disciplines and explore how these insights might help generate new theories and concepts, new questions for policy debates, as well as new areas for entrepreneurship research.

It is not, however, the purpose of the handbook to consider all possible perspectives that could inform and enhance entrepreneurship research domain. Rather, we consider the collection of original chapters in this handbook as a catalyst for an inter-, cross-, and multi-disciplinary dialogue between myriad of perspectives from humanities, social sciences, natural sciences, medical sciences, and technology and production sciences, and entrepreneurship.

Following the approach discussed earlier, we have structured the handbook in four major sections: Micro, Meso, Macro, and Meta, and received twenty-two original, state-of-the-art contributions from scholars worldwide. In the Micro section, there are four chapters on psychology, cognitive neuroscience, framing, and creativity perspectives on entrepreneurship. In Meso section, there are six chapters on business model, organizational, family, technology development, process, and exit perspectives on entrepreneurship. In Macro section, there are seven chapters on national system, business systems, education, international law, transmedia, migration, and ecosystems perspectives on entrepreneurship. In Meta section, there are five chapters on human systems, sociology of knowledge, ethics, theological and philosophical perspectives on entrepreneurship.

Micro-level

In their chapter 'Psychology Perspective on Entrepreneurship', Annemarie Østergaard, Susana C. Santos, and Sílvia Fernandes Costa suggest advancing entrepreneurship research through the lenses of well-being theories by focusing on studying the quality of life of entrepreneurs. These authors maintain that entrepreneurship is increasingly perceived as a lifestyle and underscore the importance of understanding how entrepreneurial activities influence and are influenced by the entrepreneurs' well-being. Building on the eudaimonic and hedonic dimensions of well-being, Østergaard et al. put forward a general framework to inspire future research and practice in entrepreneurship grounded on the psychological theory of well-being. According to Østergaard et al. integrating theories of well-being from psychology into entrepreneurship research is necessary to understand the impact of entrepreneurship on individuals' mental health, promote quality of life patterns, understand the motivations underlying entrepreneurial behavior, and further understanding

of how entrepreneurs change their environment, discover opportunities, and advance societies in innovative ways.

In 'Cognitive Neuroscience Perspective on Entrepreneurship', Jeanne S. Bentzen explores how cognitive neuroscience and cognitive neuropsychology can contribute to the development of the field of entrepreneurship and specifically the understanding of what influences an individual's propensity to become an entrepreneur. Bentzen builds on research in cognitive neuroscience on autobiographical memories, defined as memories of past events from one's own life, and their role in decision-making, as an interesting perspective with potential for developing the neuroentrepreneurship approach. She maintains that autobiographical memories are used not only to recall past events but also to imagine, simulate, and predict future events. Bentzen also discusses methodological challenges in studying autobiographical memories, and identifies interesting future research directions in memory-related areas in cognitive neuroscience, for example, in areas such as priming, procedural learning, and making of an entrepreneur.

In their chapter 'Framing Perspective on Entrepreneurship', Ade Mabogunje, Poul Kyvsgaard Hansen, and Pekka Berg introduce framing as the ability to capture a problem in a multi-disciplinary frame, enabling the involved people to explore and communicate the current state of a problem. Mabogunje et al. argue that verbal or visual expressions of the perception of a given problem or opportunity give rise to uncertainties that tend to persist. Their chapter is centered around a proposition that views the limitations of framing the problems and opportunities as a significant barrier when it comes to handling or dealing with uncertainties. As entrepreneurial processes imply ambiguity and complexity, they necessitate multiple framing processes both to explore and to communicate findings and dilemmas in a multi-disciplinary frame that does combine both linguistic and nonlinguistic elements. Mabogunje et al. suggest a number of enablers such as framing and reframing, improvisation and intuition, metaphors, and mixed medias aimed at enhancing the ability to express the deeper meaning behind specific words, symbols, or physical models.

The chapter 'Creativity Perspective on Entrepreneurship' by Chaoying Tang, Christian Byrge, and Jizhong Zhou discusses the role of creativity training for entrepreneurship education and matters of concern in integrating creativity training in entrepreneurship education. It defines creativity in terms of the ability and belief to produce and elaborate diversified and original ideas and identifies a number of creativity training perspectives to help entrepreneurship education gain a stronger focus on creative thinking skills and the

development hereof. Tang et al. view creativity as a key competency of entrepreneurship being closely related to the abilities to recognize commercial opportunities, generate new business models, and build the skills to act upon them. They suggest exploring the relation between creativity and entrepreneurship from the perspectives of goal and process, characteristics, competency, and entrepreneurial intention. To successfully integrate creativity into entrepreneurship education, program designers should pay attention to a number of issues and concerns, such as the advancement of domain-relevant skills, creativity-relevant skills, task motivation, domain-specific or domain general creativity training, and teaching and evaluation methods.

Meso-level

In their chapter 'Business Model Perspective on Entrepreneurship', Morten Lund and Christian Nielsen discuss the qualities of business model thinking and how this mind-set assists the entrepreneur in the process of creating a new venture across its various phases. Based on their empirical work with entrepreneurial processes, linking the process of configuring business models with business opportunities, Lund and Nielsen identified twelve business modeling variables and linked them to a start-up process to illustrate their relation to entrepreneurial processes. Lund and Nielsen present and discuss these variables, describing how they could be executed, as well as identify tools and processes that could be employed to execute these variables. These authors further propose a conceptual process model for the creation of original and useful business models through the basic concept of an entrepreneurial process. This process model consists of eight phases, depicting the necessary business modeling skills for each phase; it is a continuous circular process in which not all business modeling mechanisms are equally relevant at all stages of a start-up process.

In Organizational Perspective on Entrepreneurship, Pamela Nowell and Bram Timmermans set to investigate to what extent existing definitions of team-based entrepreneurship fit emergent, uncertain context of entrepreneurship and relate to the perception of actual entrepreneurial teams. These authors argue that relational characteristics such as rich and frequent interaction, interdependence, commitment, and shared social identity are crucial when conceptualizing, defining, and operationalizing 'the team' in the emergent, uncertain context of new venture creation. What 'the team' is, its conceptualization, boundaries, and definitional understanding, as well as whom we categorize as team members are examples of the questions that Nowell and Timmermans address in their chapter. Emergent findings demonstrate that

members who are not necessarily part of the core of founders and owners are often classified as team members, and in addition to entry and exit, team member mobility includes movement within the organization in terms of core, operational, and supportive tiers. The authors call for a more inclusive, dynamic, and relational understanding of the team within the context of entrepreneurship.

In their chapter 'Family Perspective on Entrepreneurship', Allan Discua Cruz and Rodrigo Basco delve into the family perspective on entrepreneurship, which gravitates around three different yet interconnected research fields: family, entrepreneurship, and family business. Cruz and Basco provide from a holistic perspective a nuanced understanding of the effect of the family on the entrepreneurial dynamics that lead to the creation of new firms and the development of existing firms. The authors highlight three schools of thought: entrepreneurship by families, embedded family entrepreneurship, and entrepreneurship across generations, which bring forward the complex interaction among family, entrepreneurship, and established family businesses. Cruz and Basco employ these schools of thought to explore and map current knowledge on the effect of family on entrepreneurship through three different levels: individual, group, and firm levels. By considering the inextricable connection of family and family business literature with entrepreneurship, the authors highlight previous and novel studies, interpret existing findings, and suggest a future research roadmap.

The chapter 'Technology Development Perspective on Entrepreneurship' by Poul Kyvsgaard Hansen and Ole Madsen sets to understand the nature of technology development in an entrepreneurial project perspective as well as how technology development activities affect other essential activities in entrepreneurial projects. Arguing that the fundamental competency of entrepreneurs is their ability to understand, synthesize, and apply principles that govern the creation of new technologies that ultimately result in new products, Hansen and Madsen introduce technology development as an essential element in an entrepreneurial project perspective. The maturity and the state of performance of some technologies might provide a bottleneck in achieving an overall performance that can justify a realizable solution. However, as these authors maintain, technology in its purest sense is more often not the key to understand a breakthrough of a given entrepreneurial innovation: it is the breakthrough that also involves the meaning of the context wherein the technology plays a central role. This meaning is more likely to be identified and communicated when the technology is seen in the perspective of a value chain. Hansen and Madsen suggest that by seeing technology development in a value-chain perspective it is possible to monitor progress and to evaluate the effectiveness of undertaken entrepreneurial activities.

In their chapter 'Process Perspective on Entrepreneurship', Frank Gertsen, Astrid H. Lassen, Louise Møller Haase, and Suna L. Nielsen elaborate on renewing of businesses by means of entrepreneurial processes seen through the lenses of three discipline-areas: entrepreneurship, design, and innovation management. Gertsen et al. start with the proposition that the essential properties of development processes within the three areas of innovation, design, and entrepreneurship have converged during recent decades. Based on a review of the three areas, Gertsen et al. conclude that indeed the development of processes within the three areas has led to a seeming convergence in the understanding of processes. However, it appears that the development may have happened more or less independently; although some similarities between the three disciplines can be identified, figuratively, the development may have followed different roads leading to the same intersection. Gertsen et al. identify similarities and opportunities for cross-fertilizations and conclude that further comparing and contrasting may be beneficial to advance learning in all three fields.

In their chapter 'Exit Perspective on Entrepreneurship', Kristian Nielsen and Saras D. Sarasvathy, building on a general perspective on exit, including important concepts and ideas not specific to the entrepreneurship domain, develop a taxonomy of entrepreneurial exit and discuss when entrepreneurial exit can be characterized as a failure, whether from the viewpoint of the entrepreneurs, policymakers, or investors, outlining potential conflicts between the interests of the entrepreneur and society. In addition to pointing out interesting conflicts when viewed from these different perspectives, Nielsen and Sarasvathy argue that exit needs to be understood dynamically and develop a dynamic framework for studying entrepreneurial exit, highlighting ideas for future research on how entry into entrepreneurship, entrepreneurial experience, and the post-exit environment may interplay in those dynamics. Consequences for the post-exit career and life course are introduced with specific examples of promising avenues for future research on this new and important topic in entrepreneurship.

Macro-level

The chapter 'National System Perspective on Entrepreneurship' by Jesper Lindgaard Christensen takes stock of national system perspectives on entrepreneurship including both the original formulation and recent revitalizations of the concept, and discusses whether the National Systems of Entrepreneurship literature is developing in a fruitful manner. Although this literature estab-

lished metrics that potentially can bring research forward toward a holistic understanding of the entrepreneurship process, Christensen argues that there is still a need to develop the operationalization of the theoretical base for a better assessment of the relevant metrics for entrepreneurship measurement. He maintains that the functionalist approach to innovation system analyses is better suited to bridge the theoretical foundation and the relevant empirics. Christensen also suggests that more attention should be paid to the implications for empirical analyses due to the fact that entrepreneurship is a process and that solely focusing on the output metrics of entrepreneurship renders analyses that cannot capture the full picture. Implications for renewed theoretical understanding, entrepreneurship measurement, teaching, and policy are put forward.

In their chapter 'Business Systems Perspective on Entrepreneurship', Mohammad B. Rana and Matthew M. C. Allen focus on a relatively neglected research area: how business systems theory can help explain entrepreneurship. Specifically, Rana and Allen employ business systems theory to understand: why a particular business model is developed; why entrepreneurs tend to make a particular type of decision, in a particular way, for a particular context; why firms or new venture structures, strategies, and growth trajectory follow a particular path dependency in a particular institutional context; while complementarity and/or lack of complementarity present different types of opportunities, challenges, and growth patterns for new ventures or new industries in a society. The authors provide an overview of the business systems theory framework and then illustrate how it can help to explain entrepreneurial decision-making, motivation, venture/industry creation, rationales behind new business model/venture development, social entrepreneurship, diaspora entrepreneurship, and above all institutional entrepreneurship in national and comparative institutional contexts.

In his chapter 'Education Policy Perspective on Entrepreneurship', John E. Reilly, based on a brief review of some of the many EU and European Higher Education Area policy statements relating to higher education, highlights the growing emphasis on entrepreneurship education and the increasing volume of the call to develop entrepreneurial competences for all graduates: first, second, and third cycles. According to Reilly, it is difficult to avoid being somewhat cynical about this. While the tone and phrasing of the Bologna communications is measured and calm, there is a sense that ministers and their advisers are desperate to find a solution to their current economic and consequent political and social woes and in doing so are losing sight of both the limits to what higher educational institutions may be able to achieve without increased resources and more fundamentally the imperative to ensure a

higher level of achievement in core subject and generic competences, without which entrepreneurism education would be hollow and have an 'emperor's clothes' quality. Reilly explores these issues and challenges in this chapter.

The chapter 'International Law Perspective on Entrepreneurship' by Alex Fomcenco and Sebastiano Garufi points out that entrepreneurship, as a concept, is not dealt with in international law. Fomcenco and Garufi note that traditionally the law is presumed to be closely connected to an identified territory where a state has the supreme right to exercise its jurisdiction. On the contrary, states often work together toward the achievement of common goals or, alternatively, cooperate toward the achievement of different goals but where those goals are achievable by means of collaboration. International entrepreneurs find themselves at the crossroad of these jurisdictions and are challenged by (sometimes) conflicting sets of rules. In this chapter, the authors center entrepreneurship in the context of international law, while simultaneously call upon further research of the issues raised here, potentially leading to the identification of feasible legislative solutions to the myriad of issues that entrepreneurs and investors with international activities are facing.

The chapter 'Transmedia Perspective on Entrepreneurship' by Nikhilesh Dholakia, Ian Reyes, and Finola Kerrigan introduces the transmedia perspective on entrepreneurship. Transmedia worlds have been disrupting the media since the 1990s. Dholakia et al.'s chapter positions this disruption within wider discussions of media fragmentation, increasing audience activity and new storytelling modalities within organizations. In outlining the origins of transmedia businesses, the authors draw parallels between transmedia businesses and entrepreneurship. They connect the development of transmedia worlds to wider discussions of entrepreneurship in the film and media industries, in which technological developments constantly influence practice. Dholakia et al. draw on socioeconomic and cultural theories to present an analysis of how transmedia growth would impact entrepreneurship, innovation, creative economies, and the trajectories of established media firms and brand owners. The authors offer transmedia worlds as possible antidotes to declining rates of entrepreneurship in the US, through highlighting the characteristics and possibilities of transmedia worlds.

In their chapter 'Migration Perspective on Entrepreneurship', Maria Elo and Per Servais view migration as a form of globalization that influences new venture creation, internationalization, and the overall economic/entrepreneurial landscape. These global flows of people shift human capital, entrepreneurial ideas, and activities across places, but little is known about the interconnectedness of migratory and entrepreneurial dynamics. Elo and Servais argue that theoretical lenses, such as migration theories, epidemic

dynamics, gravity laws, and bandwagon effects, among other explanatory models, have not really diffused into explaining entrepreneurship. Herein, the authors broaden the view and address migration dynamics, implanting entrepreneurs into new and between contexts, and discuss the types of entrepreneurs and businesses 'in dispersion'. Elo and Servais advance the understanding of the intertwined nature of these two dynamics and contribute to the analytical clarity of the terminology by employing the idea of topology.

The chapter 'Ecosystems Perspective on Entrepreneurship' by Petri Ahokangas, Håkan Boter, and Marika Iivari aims to address larger contextual and interaction-based issues in framing, developing, and supporting entrepreneurial activity and processes. With strong roots in ecology, innovation, sociology, strategy, and regional/cluster research, the entrepreneurial ecosystem literature has provided new, fresh insight into entrepreneurship research. In this context, Ahokangas et al. provide an overview and critical discussion on key issues of research on entrepreneurial ecosystems, their characteristics and definitions. The authors pursue a number of questions, for example, how entrepreneurial ecosystems differ from other contextual concepts such as networks and clusters; what is required to create, foster, support, and orchestrate entrepreneurial resource base, potential, activity, start-ups/spin-offs, and entire entrepreneurial ecosystems in practice; how entrepreneurial ecosystems evolve; and what is the future of entrepreneurial ecosystems.

Meta-level

In his chapter 'Human Systems Perspective on Entrepreneurship', Barrett W. Horne drawing upon the multifaceted lens of organizational development theory and practice examines the relationship between the human system and the entrepreneur of which they are a part. Horne pays particular attention to the implications of human systems as complex adaptive systems. He argues that the ultimate success of an entrepreneur is tied to their ability to work effectively and productively with, and within, complex adaptive human systems. Precisely because human systems are complex, there are no recipes or formulae that can ensure desired outcomes. But, as Horne maintains organizational development theory provides insights and practical tools for constructively and wisely navigating complex human systems. The author explores some of the tools and insights with respect to their relevance and value for entrepreneurs and the advancement of the entrepreneurship field.

In his chapter 'Sociology of Knowledge Perspective on Entrepreneurship', Romeo V. Turcan aims to address one of the enduring questions in sociology

of knowledge: how is it possible that subjective meanings become objective facticities? Turcan adopts this question to understand the entrepreneurship phenomenon, and, more specifically, to understand how new business or venture ideas and new sectors or industries (as subjective meanings) are legitimated and institutionalized (become socially established as reality). He builds on Berger and Luckmann's Treatise in the Sociology of Knowledge and suggests an alternative order objectivation of meaning to understand the entrepreneurship phenomenon. Specifically, Turcan suggests considering legitimation as a first-order objectivation of meaning, whereas institutionalization constitutes a second-order objectivation of meaning when researching entrepreneurship. For this purpose, Turcan introduces the legitimation typology to frame the discussion around the process of creation, legitimation, and institutionalization of newness. He concludes the chapter by proposing a grand theory of legitimation.

In 'Ethics Perspective on Entrepreneurship', Ann Starbæk Bager, Marita Svane, and Kenneth Mølbjerg Jørgensen, based upon the writings of Arendt, Butler, and Bakhtin, propose a conceptual framework for understanding ethics in relation to entrepreneurship. The concepts of precarity, action, answerability, and space of appearance are used to conceptualize challenges and, possibilities, as well as to problematize current neoliberal discourses concerning entrepreneurship. The governing condition of entrepreneurship is identified as precarity, which is described as a situation of insecurity, uncertainty, and exposure to exclusion from doing business. Bager et al. suggest that the entrepreneurial ethics framework the authors propose is useful in two ways. First, it seeks to provide some signposts within which the question of entrepreneurial ethics can be located. Second, it is an alternative way of viewing ethics from the dominant neoliberal ethos; this is an ethics of answerability, action, and pluralism. Through their framework, the authors put the spotlight on what an ethical act is in terms of how it connects to the world but also the space of ethics and what that means in relation to making entrepreneurial ethics more likely.

In their chapter 'Theological Perspective on Entrepreneurship', Kristin Falck Saghaug and George Pattison unfold a theological understanding of the moment as revelatory in order to provide a richer understanding of the entrepreneur as a human being who, in seizing an opportunity, creates something new, as he or she balances between ethical and economic demands in pursuit of meaning. In this innovation process, former moments of passion (in the sense of suffering in the entrepreneur's life) seem to influence the current process with passion as love. In their theoretical analysis, Saghaug and Pattison include a philosophical/theological perspective from one of the most influen-

tial theologians in the last century, the German-American philosophical theologian Paul Tillich, as well as his sources of inspiration: Heidegger and Kierkegaard. The authors further contribute with what the above theological perspective could imply for future ways of addressing entrepreneurship by acknowledging the moment as the center from which the very understanding and innovation of value begins.

The chapter 'Philosophical Perspective on Entrepreneurship' by Michael Fast discusses, from a phenomenological perspective, some thoughts on how we can understand the entrepreneur as being and how s/he is situated in his/her everyday life. The focus on Being means to understand the process of the entrepreneurs defining of and acting in his or her Lifeworld. According to Fast, what is involved in the being and how the entrepreneur is situated, is seen in the experiences of the entrepreneur and his/her project. The author further maintains that this is a discussion of consciousness, and the dialectical process in thinking and acting in everyday life. What seems as important issues in the being is the dialectics of everyday life, and to understand the movements in experiences of the entrepreneur and his project. Fast concludes by suggesting employing contradictions as part of everyday life to understand the movement of entrepreneur project and eventually the entrepreneur him or herself.