

**CONTEXTUALIZING THE FUNCTIONING OF ENTREPRENEURIAL ACTIVITY:
A MULTI-DIMENSIONAL PERSPECTIVE**

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CHAPTER 1 | SYNOPSIS

1.1. Introduction

The study of entrepreneurship is a dynamic and thriving field, which focuses on understanding the initiation, engagement, and performance of entrepreneurial activities within the overall context of wider environment in which entrepreneurial actors are embedded (Shepherd et al., 2018). Entrepreneurial actors must deal with a myriad of forces that arise from the context of their activities. The context, in which entrepreneurial actors operate, simultaneously offers entrepreneurial opportunities and imposes limitations on entrepreneurial activities and plays a central role in when, how, and why entrepreneurship happens and who becomes involved (Welter, 2011). Research emphasizes the important role of context in explaining entrepreneurial activities and their outcome (Bjørnskov & Foss, 2013; Foss et al., 2013; Sarasvathy & Venkataraman, 2011; Ucbasaran et al., 2001; Zahra et al., 2014). By studying the context on the intersections with entrepreneurial actors, entrepreneurship scholars unwrap the unique phenomenon of establishing and operating the ventures (Shepherd et al., 2018) that foster innovation (Duran et al., 2016) and may create social value (Hall et al., 2010).

New ventures are critical drivers of socioeconomic growth, but because of the novelty and uncertainty involved, only a minority of newly founded ventures succeed (McKelvie et al., 2011; Shepherd et al., 2000). Research shows that entrepreneurial actors play a significant role in developing new ventures and in their ability to overcome challenges (Blatt, 2009). Entrepreneurship research has emphasized the individual entrepreneur for many years (Baum et al., 2007). For instance, research has investigated how individual entrepreneurs make decisions concerning the exploitation of business opportunities (Choi & Shepherd, 2016), what determines the entrepreneur's self-efficacy (Kickul et al., 2009), or the influence of uncertainty on the individual's willingness to engage in entrepreneurial action (McKelvie et al., 2011). Rather than pursuing a venture solo, many entrepreneurs work with entrepreneurial teams (Carland & Carland, 2012; Klotz et al., 2014), which are defined as "two or more cofounders who pursue a new venture idea, are involved in its subsequent management, and share

ownership" (Lazar et al., 2020, p. 29). Likely because of the importance and distinct context of entrepreneurial teams in the ventures' emergence and operation, research on entrepreneurial teams is growing substantially (see Klotz et al., 2014; Knight et al., 2020; Lazar et al., 2020; Patzelt et al., 2020 for comprehensive reviews).

Entrepreneurial actors are worthy of study particularly in their initial phase, as starting a new venture is an entirely uncertain endeavor and entrepreneurial teams lack of formalized structures and absence of predefined roles (Sine et al., 2006). While factors like uncertainty and ambiguity exist throughout the dynamic process of venture emergence, they are usually most salient at the inception phase, which is characterized by the most "unknowns" (Blatt, 2009; Patzelt et al., 2020). This initial phase of the new venture is characterized by the absence of formal structures as entrepreneurial actors take their first steps on the entrepreneurial journey (Patzelt et al., 2020), which increase the influence of contextual factors on entrepreneurial actors and provide entrepreneurial opportunities and sets boundaries for their activities.

1.2. Research Gaps and Overarching Research Questions

Entrepreneurial actors are embedded in a larger context, which influences entrepreneurial activity. The contextual lens allows to develop a holistic understanding of entrepreneurship and entrepreneurial activities by considering lower and higher levels of analysis (Hackman, 2003). The nesting arrangement suggests that contextual factors affect the functioning of entrepreneurial teams, and the entrepreneurial team context and the demands place premiums on certain competencies of members and the distributions of such competencies throughout the team. The contextual view is not only multi-faceted, but it also cuts across levels of analysis, as aspects at one level of the phenomenon affect aspects at other levels. Thereby, outer levels (i.e., the context) influence inner levels (i.e., the entrepreneurial team and the entrepreneur) more so than the reverse (Mathieu et al., 2008), such that the influence of

contextual factors on nascent entrepreneurs and entrepreneurial teams are first topic of the dissertation.

Context refers to “circumstances, conditions, situations, or environments that are external to the respective phenomenon and enable or constrain it” (Welter, 2011, p. 167). The context include environmental uncertainty, hostility, and complexity, as well as national or global crises, industry characteristics, regulatory differences, and national culture, including religion (Elbanna et al., 2020). While all organizations grapple with uncertainty, it is compounded in the context of entrepreneurship and entrepreneurial activity (Gartner, 1990; Patzelt et al., 2020) as entrepreneurial actors in the venture inception phase are confronted with novelty in the form of new customers, products, technologies, and relationships both within entrepreneurial teams and its highly interdependent team members and various stakeholders. Since entrepreneurial thoughts and behaviors can vary depending on the situation and the environment (Shane & Venkataraman, 2000; Shook et al., 2003), the context can directly influence their behavior (Zahra et al., 2014). Comprehending the contextual aspects of entrepreneurial activities in the venture inception phase, with its dynamics and absence of structures, can raise awareness of entrepreneurs' demanding characteristics and behaviors and how they affect entrepreneurial teams.

Contextual factors can have long-lasting imprinting effects on entrepreneurial actors during the venture’s inception phase, as the context influence how nascent entrepreneurs and entrepreneurial teams develop characteristics (Shepherd et al., 2020). In particular, the initial type of ideation appears to have a persistent impact on nascent entrepreneurs (Hsu & Lim, 2014). Also contextual factors can directly impact the creation and performance of new ventures, as the context indicate which characteristics are necessary to cope with the environment. However, studies that included contextual factors from outside of the embedding entrepreneurial actors are rare (Mathieu et al., 2008) and there is more to learn about how entrepreneurial actors in the venture inception phase have to adapt to their environment. My

dissertation focuses on the contextual influence on nascent entrepreneurs and entrepreneurial teams, particularly in the venture inception phase, since the characteristics and behavioral patterns that are created in this critical phase usually remain even after the time has passed and environmental changes have taken place (Marquis & Tilcsik, 2013). To complement existing knowledge on contextual factors, the first overarching research question addresses how contextual factors, as represented by national culture, influences outcomes in entrepreneurial teams and how contextual factors, as represented by the context of a hackathon, influences the entrepreneur's decision to engage in entrepreneurial activities. Formally stated:

Research Question 1:

What influence do contextual factors have on entrepreneurial teams and nascent entrepreneurs?

The nesting arrangement of context and entrepreneurial teams suggests that contextual factors influence the type of process, such as leadership practices, task design that entrepreneurial teams will enact. At the same time, these team processes take place in the entrepreneurial team context, which premiums on certain competencies of the team members. Entrepreneurial teams strive to achieve a common goal that can be achieved only by combining their members' individual entrepreneurial actions (Harper, 2008). Entrepreneurial teams leverage their members' individual strengths (Jin et al., 2017) and collectively develop the opportunity over time through a social process (Dimov, 2007). Since entrepreneurial teams are primarily responsible for their new ventures' strategic decision-making, ongoing operations, and performance (Eisenhardt, 2013; Klotz et al., 2014), the team members' characteristics and the team's heterogeneity of the team are likely to influence the venture's outcomes (Carpenter et al., 2016; Jin et al., 2017). Entrepreneurship scholars recognize the role of team members' characteristics in entrepreneurial team processes in dynamic environments (Lazar et al., 2020), as most such scholarship focuses on understanding cognitive, behavioral, and affective

phenomena in addressing the challenges that are inherent in new ventures' often hostile environment (Baum & Locke, 2004; Molleman, 2005; Yang & Yang, 2022).

The few established norms and attributes of team members with respect to appropriate behavior in this context (Klotz et al., 2014) can affect the nature of team processes and enable or constrain interactions between team members (Mathieu et al., 2008). Comprehensive exchanges of information, recognition of diverse views, and openness to distinct perspectives are central to entrepreneurial teams' success (Knight et al., 2020), yet are not regulated by formal structures, roles, authority, and patterns of behavior, although these processes have a significant impact on the new venture. This makes the interaction between entrepreneurial team members to a weak social situation that requires particular behaviors and characteristics if it is to work effectively (Klotz et al., 2014). This entrepreneurial team context premiums on certain competencies of the team members. Even though virtue is the linchpin between the individual and the community (Newstead et al., 2018), the concept of virtue that could support entrepreneurial teams' interaction in dealing with this demanding environment of the venture inception phase remains largely unaddressed. Understanding virtue as a requirement of the entrepreneurial team context for the teams' processes can help to explain what makes some entrepreneurial teams more effective than others (Eisenhardt, 2013; Klotz et al., 2014; Lazar et al., 2020). The second research question addresses how virtue, as a contextual requirement, influences the processes that take place in entrepreneurial teams in a venture inception phase. Formally stated:

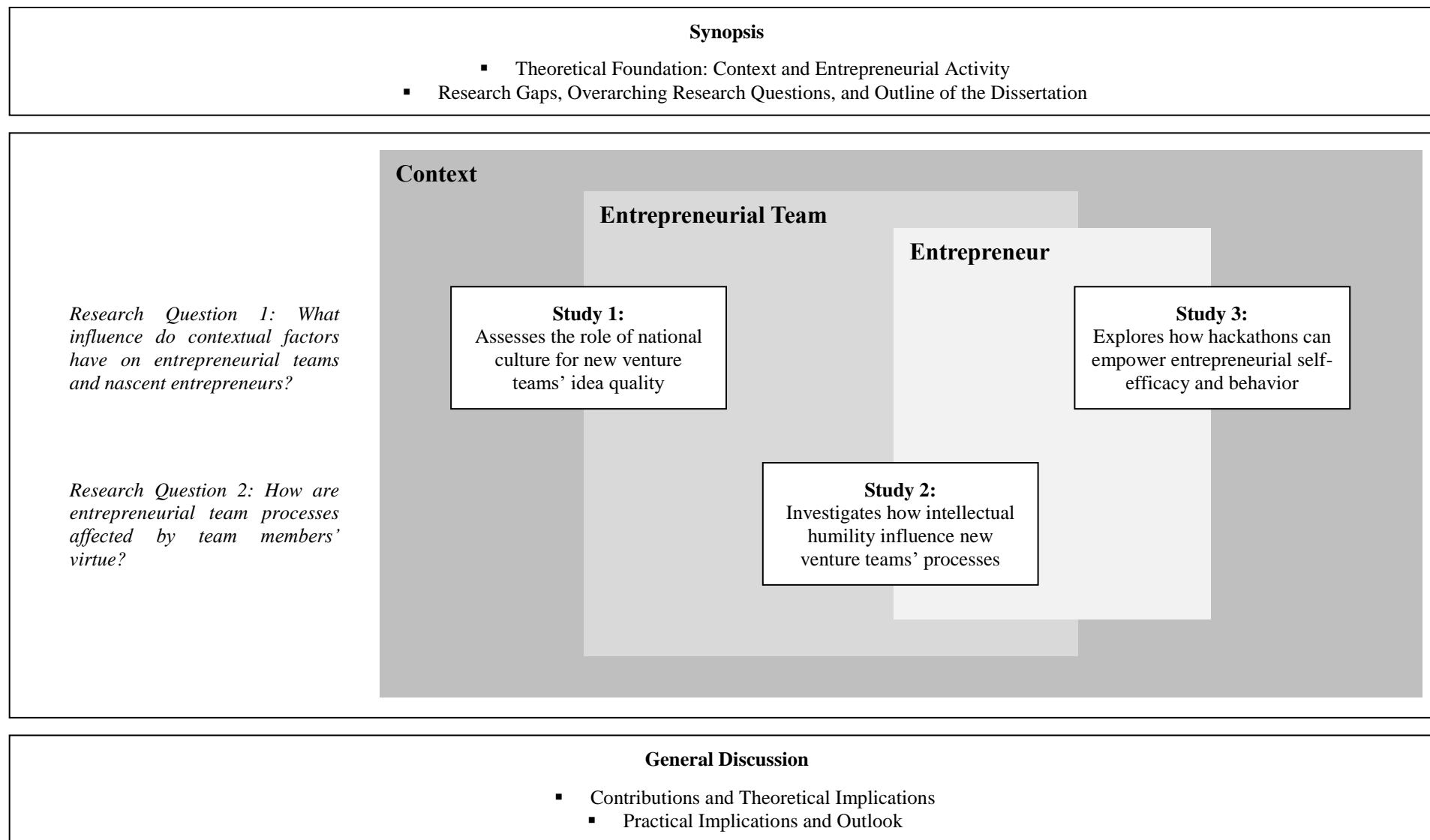
Research Question 2:

How are entrepreneurial team processes affected by team members' virtue?

1.3. Outline of the Dissertation and Research Aims and Contributions

This dissertation is comprised of three individual studies that complement one another in answering the two overarching research questions using the contextual lens to a more comprehensive understanding of entrepreneurial activity. Figure 1.1 depicts the outline of this dissertation and connects each study's research objective to the corresponding research question. The nested structure of the figure shows that the contextual factors influence entrepreneurial teams and that entrepreneurial teams consist of their team members. Since the outer levels influence inner levels, Study 1 contributes to addressing *Research Question 1* regarding the contextual factors, particularly national culture, that may influence entrepreneurial teams' outcomes. As Study 1 suggests that contextual factors influence entrepreneurial teams' outcomes by affecting the dynamics in entrepreneurial teams, Study 2 shifts the perspective to the entrepreneurial teams' context embedded in the environment of the venture inception phase to address *Research Question 2*. Study 2 contributes towards the aim of understanding how team processes are affected by team member characteristics by looking at virtue. Finally, Study 3 shifts the perspective to the nascent entrepreneur, who is also embedded in specific contexts and shows that contextual factors can affect the entrepreneurial self-efficacy (ESE) and behavior of the entrepreneur. Thus, Study 3 refers back to the influence of contextual factors, i.e., the outer level, on the entrepreneur, i.e., the inner level, and extends our knowledge of *Research Question 1*. In the following, each of the papers will be briefly elaborated by outlining the theoretical background, methodology used, and contributions generated. An overview of all three research papers is presented in Table 1.1.

Figure 1.1: Dissertation Outline



1.3.1. Study 1: The Role of National Culture in Hackathon Teams' Capacity for Ideation

Study 1 (co-authored) addresses the role of the contextual factor of national culture in shaping teams' ideation outcomes. Using hackathons as context (Bertello et al., 2022; Lifshitz-Assaf et al., 2021), the study offers insights into the interplay of cultural values and team creativity (e.g., Miron-Spektor et al., 2015; Nouri et al., 2015; Yuan & Zhou, 2015). Hackathon teams are formed ad hoc, and team members' backgrounds and experiences may be diverse (Bertello et al., 2022). The lack of formal roles and commonalities makes team coordination and collaboration more difficult than would be likely in actual new venture teams (Lifshitz-Assaf et al., 2021), whose composition is often strongly characterized by homophily (Ruef et al., 2003). Lazar et al. (2020) point to the effect of the external environment in determining new ventures' outcomes and to the effect of the team's socio-cultural environment as contextual factors that receive limited attention. As culture implies shared understanding and sensemaking, national culture may fill the void in new ventures left by the absence of formal roles and shared norms for how to coordinate, collaborate, behave, and interact socially. We accessed real-world data from the unique research setting of an international team-based #EUvsVirus hackathon in which the teams commenced their projects on a level playing field. We tested our hypotheses on a sample of 284 monocultural hackathon teams from 37 countries.

Hackathon teams' socio-cultural environment reflects the uncertainty inherent in entrepreneurial activities. Such uncertainty triggers individuals to use their experiences and cultural assumptions to adjust their behavior to the environment (Johnson, 2007), as national culture has a strong imprinting effect, including on hackathon teams. By analyzing the relationship between national culture and hackathon teams' ideation outcomes, we contribute to the literature in supporting the notion that culture manifests in intra-team social dynamics (Knight et al., 2020; Lazar et al., 2020) and shapes outcomes that can lay the foundation for success or failure. The study extends prior research by showing that cultural values affect not

only individuals' entrepreneurial propensity (de Clercq et al., 2013) but also their actions in undertaking entrepreneurial activities.

1.3.2. Study 2: The Importance of Intellectual Humility in New Venture Teams

Study 2 (co-authored) analyzes virtue in new venture teams (NVTs) by looking at how intellectual humility (Krumrei-Mancuso & Rouse, 2016; Leary et al., 2017) affects NVTs' processes. Intellectual humility pertains to recognizing the possible fallibility of our views, to being open to revising our beliefs upon receipt of new evidence, and to accepting alternative ideas and viewpoints (Hoyle et al., 2016; Krumrei-Mancuso, 2016; Porter, Baldwin, et al., 2022). While the field of psychology recognizes the importance of intellectual humility (e.g., Barrett, 2016; Krumrei-Mancuso, 2016; Leary et al., 2017), its influence on entrepreneurship, especially on NVTs, is not yet addressed, although the conditions and environmental factors in which NVTs find themselves are particularly relevant to virtues like it. While research focuses on the effects of humility in leadership, as "humble leaders" have positive effects (Ou et al., 2014; Owens & Hekman, 2016; Owens et al., 2015), knowledge regarding virtue in the NVTs' inception phase is limited. We test our hypotheses by conducting two-day ideation workshop in which the students form teams to develop ideas for a new venture. The final dataset consisted of 40 teams.

Particularly during NVTs' inception phase, achieving a creative synthesis of diverse viewpoints (Harvey, 2014) requires openness to fresh perspectives, concepts, and insights from team members or experts and the flexibility to deviate from one's own stance and conviction when evidence dictates. However, the effect of intellectual humility on NVTs' dynamics remains relatively unaddressed, despite its importance in the effective interaction, exchange of information, and integration of distinct perspectives in NVTs that influence their performance (Amason et al., 2006; Fern et al., 2012; Toivonen et al., 2022). This study contributes to the exploration of NVTs' processes in the inception phase by offering a new perspective on

personal factors and demonstrating that the study of virtue is of value in extending our identifying the factors that influence team processes (Ensley et al., 2002; Klotz et al., 2014).

1.3.3. Study 3: A Conceptual Framework for Describing the Phenomenon of Hackathons for Entrepreneurial Behavior

Study 3 (single-authored) follows the object to conceptualize the novel context of hackathons for participants' behavioral change (Bandura, 1977) and the development of entrepreneurial self-efficacy (ESE) (McGee et al., 2009). Hackathons are a novel way to access ideas and solutions from crowds of participants and have gained prominence for stimulating innovation by assembling participants to tackle specific challenges within a limited time frame. While they aim to create new ventures that continue after the hackathon (Falk et al., 2022; Fayard et al., 2016; Lifshitz-Assaf et al., 2021), only a small number of projects survive beyond the hackathon (Nolte et al., 2020). The hackathon phenomenon creates a context that differs from previous research settings, which may affect the creation of ESE and thus changes in the entrepreneurial behavior of the participants. I draw on the social cognitive theory (Bandura, 1977) to construct a theoretical framework to show how hackathon characteristics (time pressure, competition-collaboration duality, lack of structure and guidance) influence entrepreneurial self-efficacy via mastery experiences, vicarious learning, social persuasion, and physiological states.

Lifshitz-Assaf et al. (2021) already shows that teams must adapt their processes, such as their coordination, to succeed in hackathons. Hence, our knowledge regarding their effect on the individual level of hackathons and, thus, their impact on the entrepreneurial empowerment of the participants is limited. Nonetheless, investigating the link between the hackathon participants and entrepreneurial behavior is important since the crowd involvement and co-creation of innovative ideas (Kitsios & Kamariotou, 2018) during a hackathon can only be fruitful when hackathons also empower participants to engage in entrepreneurial action, also after the hackathon. Study 2 enhances our knowledge of the influence of contextual factors on

ESE (Cumberland et al., 2015; Hopp & Stephan, 2012; Schmutzler et al., 2018) by providing implications regarding the effectiveness of innovation formats on the development of ESE, taking a further step to understand how people can be empowered to create innovations (Lifshitz-Assaf et al., 2021).

Table 1.1: Overview of Studies included in the Dissertation

Title	Research Aim	Contributions	Theoretical Perspective(s)	Core Constructs	Method	Sample
Study 1: The Role of National Culture in Hackathon Teams' Capacity for Ideation	Examine the effects of national culture (hierarchy, intellectual autonomy, and mastery) on the quality of hackathon teams' ideas.	Position cultural values as contextual factors that influence hackathon teams' capacity to generate ideas. Culturally imprinted social dynamics affect hackathon teams' inception phase.	Hackathon Teams Socio-Cultural Environment	Cultural Value Orientations (from the Schwartz Value Survey) Idea Quality	Linear mixed-effects regression analysis	284 monocultural new venture teams from an international hackathon (#EuvsVirus)
Study 2: The Importance of Intellectual Humility in New Venture Teams	Investigate the impact of intellectual humility on new venture teams' processes in their inception phase.	Intellectual humility enables new venture teams to interact in a dynamic and uncertain environment. Intellectual humility enhances the social processes of sharing ideas, discussion, and negotiation in new venture teams, improving their abilities for creative synthesis.	New Venture Teams Processes Virtue	Intellectual Humility Distribution of Influence Interpersonal Conflict Information Elaboration	Structural equation model based on a maximum-likelihood estimation	40 teams with 129 students
Study 3: A Conceptual Framework for Describing the Phenomenon of Hackathons for Entrepreneurial Behavior	Explain how hackathons can empower participants to develop ESE and thus engage in entrepreneurial action.	Hackathon can empower participants to engage in entrepreneurial action by considering aspects of the unique context. Hackathons can empower entrepreneurial action by providing resources and addressing individual limitations.	Social-Cognitive Theory	Mastery Experiences, Vicarious Learning, Social Persuasion, Physiological States Entrepreneurial self-efficacy Entrepreneurial behavior	Conceptual framework	-

1.4. State of Publication

The three papers of this dissertation were initially conceived as standalone publication projects, so their progress toward publication varies. Since each paper has a distinct set of co-authors, I provide an account of how these individual projects have evolved, including submissions and conference presentations. A summarized overview of this data, accompanied by the authors' contribution percentages, can be found in Table 1.2.

1.4.1. Study 1: The Role of National Culture in Hackathon Teams' Capacity for Ideation

Previous versions of Study 1 were presented at the virtual *Babson Conference Entrepreneurship Research Conference 2021*. The manuscript was also presented at the *Academy of Management Annual Meeting 2023* in Boston (US) and subsequently published in the *Academy of Management Proceedings 2023*. Study 1 was selected as a "Best Paper," among only about 10 percent of the submissions. Study 1 was submitted to the *Journal of Business Venturing* but rejected after the Revise & Resubmit decision. That submission focused on examining the effects of hierarchical cultural values on new ventures' outcomes, particularly the quality of ideas (idea generation) and the speed of implementation (idea execution). In the review processes, the blind reviewers asked for further elaboration on the research context (i.e., hackathons) and its idiosyncrasies as they applied to NVTs. As the argumentation for the hypotheses was developed via the concepts of information-sharing and team coordination, we tested empirically only the direct effects of hierarchical cultural values on new venture outcomes. The reviewers asked about mediating mechanisms for information-sharing and team coordination, so we designed an additional study in the form of a real-world experiment to evaluate the mediating mechanisms in hackathons. However, the additional study raised concerns about the link between measured constructs and theories, leading to a rejection. After the rejection from the *Journal of Business Venturing*, we made a major revision to the manuscript to broaden the study's focus to national culture and consider hierarchical cultural

values, intellectual autonomy, and mastery. Therefore, the version of the paper in the dissertation is the third version. This version was submitted to *R&D Management Journal* and is currently under review. Study 1 was co-authored with Slawa Tomin, Benjamin P. Krebs, Bernhard A. Wach, and Rüdiger Kabst.

1.4.2. Study 2: The Importance of Intellectual Humility in New Venture Teams

Study 2 was presented at the *G-Forum 2023* of the FGF that took place in Dresden (Germany). The manuscript is currently under review for presentation at the *Babson Conference Entrepreneurship Research Conference 2024* in Munich (Germany). The team of authors is currently revising the paper in preparation for submission to the *Journal of Business Venturing*. Study 3 was co-authored with Slawa Tomin and Rüdiger Kabst.

1.4.3. Study 3: A Conceptual Framework for Describing the Phenomenon of Hackathons for Entrepreneurial Behavior

Study 3 was presented at the *Academy of Management Annual Meeting 2023* in Boston (US) and was subsequently published in the *Academy of Management Proceedings 2023*. The manuscript was also presented at the *G-Forum 2022* of the FGF in Dresden (Germany) and at the *G-Forum 2023* in Darmstadt (Germany). I am currently revising the paper and expect to submit it to *R&D Management Journal*. Study 2 is a single-authored paper.

Table 1.2: Summary of the Publication Progress

Chapter No.	Study Title	Current State	Prior Submissions	Conferences	Share of Contributions (in %)
Chapter 2	The Role of National Culture in Hackathon Teams' Capacity for Ideation	Under Review at <i>R&D Management Journal</i> Earlier version published in <i>Academy of Management Proceedings 2023</i>	<i>Journal of Business Venturing</i> (rejected after Revise and Resubmit) <i>Journal of Small Business Economics</i> (Rejected)	Babson College Entrepreneurship Research Conference, 2021, virtual version Annual Meeting of the Academy of Management, 2023, Boston, US Best Papers acceptance (acceptance rate approximately 10%)	Marieke Funck (40) Benjamin P. Krebs (30) Slawa Tomin (15) Bernhard A. Wach (10) Rüdiger Kabst (5)
Chapter 3	The Importance of Intellectual Humility in New Venture Teams	In preparation for submission to <i>Journal of Business Venturing</i>	-	Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2023, Darmstadt, Germany Submitted to Babson College Entrepreneurship Research Conference, 2024, Munich, Germany	Marieke Funck (80) Slawa Tomin (15) Rüdiger Kabst (5)
Chapter 4	A Conceptual Framework for Describing the Phenomenon of Hackathons for Entrepreneurial Behavior	Published in <i>Academy of Management Proceedings 2023</i> In preparation for submission to <i>R&D Management Journal</i>	-	Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2022, Dresden, Germany Annual Meeting of the Academy of Management, 2023, Boston, US Annual interdisciplinary conference Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2023, Darmstadt, Germany	Marieke Funck (100)

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**CHAPTER 2 | THE ROLE OF NATIONAL CULTURE IN HACKATHON
TEAMS' CAPACITY FOR IDEATION**

Chapter 2:

The Role of National Culture in Hackathon Teams' Capacity for Ideation

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**CHAPTER 3 | THE IMPORTANCE OF INTELLECTUAL HUMILITY IN
NEW VENTURE TEAMS**

Chapter 3

The Importance of Intellectual Humility in New Venture Teams

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**CHAPTER 4 | A CONCEPTUAL FRAMEWORK FOR DESCRIBING
THE PHENOMENON OF HACKATHONS FOR ENTREPRENEURIAL
BEHAVIOR**

Chapter 4

A Conceptual Framework for Describing the Phenomenon of Hackathons for Entrepreneurial Behavior

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CHAPTER 5 | GENERAL DISCUSSION

5.1. Contribution and Theoretical Implications

My overall goal in this dissertation is to apply the contextualization as a critical lens for a deeper understanding of how and why entrepreneurial activities happens. Given the multiplicity of settings in which entrepreneurship takes place, contextualization in entrepreneurship research can challenge some often-hidden assumptions by showing how entrepreneurial actors both shape and are shaped by the context. To do so, I investigated how the outer level, the context, influences entrepreneurial activities of entrepreneurial teams and entrepreneurs. It became apparent that the context also influences the processes of entrepreneurial teams, so that a comprehensive insight into the factors that influence the dynamics in entrepreneurial teams was also necessary. Since the entrepreneurial team context is characterized by the team members, I focused on the virtues of the team members, as these are particularly required by the environment. In particular, the results of this dissertation's studies show that behavior and cooperation are not easy to manage by the context in which an entrepreneurial team or entrepreneur is embedded and requires adjustments. The results show that the awareness of contextual factors and their resulting requirements are relevant to the success of both entrepreneurs and entrepreneurial teams. The main findings of the dissertation are summarized below.

Chapter 2 addressed *Research Question 1* regarding the implications of contextual factors on entrepreneurial teams. Our findings support the notion that national culture, a contextual factor (Elbanna et al., 2020) shapes the entrepreneurial outcomes that can lay the foundation for success or failure. *Chapter 2* analyzed the role of cultural values related to hierarchy, intellectual autonomy, and mastery (Schwartz, 2004) in shaping the quality of hackathon teams' ideas, which can determine the outcome of the venture inception phase. Drawing on Schwartz' (Schwartz, 2006), theory of cultural value orientations, the paper shows that environmental contextual factors like national culture can explain variations in hackathon teams' effectiveness in crafting ideas. Hackathon teams are formed ad hoc and lack social

institutions for coordination and collaboration; we show that national cultures fill this void. The data from the #EUvsVirus hackathon allowed us to explore the creation of new ventures before they were established to avoid oversampling of successful new ventures (survivors) (Patzelt et al., 2020). We found that hierarchy is negatively related, mastery is positively related, and intellectual autonomy is not related to idea quality.

The results in *Chapter 2* demonstrate the influence of contextual factors that shape hackathon teams' ability to generate ideas for new ventures, extending the literature on culture's influence on teams' creativity (e.g., Miron-Spektor et al., 2015; Nouri et al., 2015; Yuan & Zhou, 2015) including ideation in time-limited creative contexts where teams form ad hoc. Lazar et al. (2020) indicate that entrepreneurial teams' external environment plays a significant role in influencing their new ventures' outcomes. While research on these outcomes predominantly adopts an inward-facing perspective, focusing on entrepreneurial teams' central tendencies and diversity (Jin et al., 2017), research that adopts an outward-facing perspective is concerned primarily with particular settings and social networks, and only to a limited extent with entrepreneurial teams' socio-cultural environment (Knight et al., 2020; Lazar et al., 2020). Our findings indicate that culturally imprinted social dynamics in hackathon teams' inception phase affect opportunities for the development of new ventures. Thus, the national culture can adversely affect new venture's future through imprinting effects (Marquis & Tilcsik, 2013). At best, starting their entrepreneurial journey with a high-quality idea can help entrepreneurial teams save time and money (Frederiks et al., 2019); at worst, success or failure in these respects determines whether hackathon teams will persist or dissolve.

The findings in *Chapter 2* indicate that the socio-cultural environment has major implications for entrepreneurial team processes, like culturally imprinted social dynamics influence entrepreneurial teams in their collaboration and information processing. Therefore, in *Chapter 3*, we investigated entrepreneurial teams and how their team processes are affected by team members. Thus, *Chapter 3* addresses *Research Question 2*, highlighting that the NVT

processes are affected by virtues that enable entrepreneurial teams to interact in their environment. We explore intellectual humility and NVTs' dynamics by showing that intellectual humility plays a pivotal role in shaping entrepreneurial teams' dynamics. The findings in *Chapter 3* show that intellectual humility promotes a more equal distribution of influence among team members, minimizes interpersonal conflicts, and maximizes the elaboration of information. Clearly, this virtue is important when it comes to performing necessary tasks in a complex and uncertain environment. Our covering the role of virtue in NVTs' dynamics expands perspectives of the often-overlooked virtue of intellectual humility by demonstrating its positive influence on NVTs. While extreme self-confidence, arrogance, and assertiveness are still prevalent in public discourse and in studies on entrepreneurship (Hayward et al., 2006; Kraft et al., 2022), our research underscores the substantial, yet underdeveloped, role of intellectual humility in explaining NVTs' success or failure.

The ability to accept that one's knowledge and cognitive abilities are limited and imperfect can allow people to flourish through tolerance of others' ideas, collaboration, and civil discourse (Krumrei-Mancuso, 2016). Therefore, we position intellectual humility as an important factor in team dynamics that should be explored. We contribute to the literature by addressing intellectual humility's effect on NVTs and introducing a mechanism that enables NVTs to use diverse perspectives and types of expertise to identify novel ideas (Amason et al., 2006; Ensley & Pearce, 2001; Ensley et al., 2002). We add to the body of research on team creativity (Harvey, 2014; Miron-Spektor et al., 2011), as this study demonstrates how intellectual humility in NVTs enhances the social processes of sharing, discussing, and negotiating ideas, opinions, and perspectives and reducing stubborn adherence to particular opinions and beliefs, which improves their abilities for creative synthesis (Harvey, 2014). In addition, in identifying intellectual humility's empirical effects on teams' behavior and responses, thus underscoring its relevance to teams that face dynamic and demanding environments, this study offers a new empirical perspective on intellectual humility, as most

studies currently take a theoretical view (e.g., Gregg & Mahadevan, 2014; Porter, Elnakouri, et al., 2022). Although management research pays little attention to virtues that promote communication, cooperation, and coordination—one exception is Cooper et al. (2023)—the study in *Chapter 3* takes the first steps and opens the door for further research into the influence of virtue in NVTs.

Chapter 2 takes a closer look at hackathon teams, where the cultural context provides structure and shared norms to guide coordination and collaboration in hackathon teams. Since *Chapter 2* and *Chapter 3* indicate that entrepreneurial teams are influenced by their team members who are nested in their context in *Chapter 4*, I take a closer look at the imprinting effect of contextual factors on the behavior of entrepreneurs (Shepherd et al., 2020). Thus, *Chapter 4* adds to *Research Question 1* by highlighting the influence of environmental context factors on individual-level behavior, by looking at the influence of hackathons' context on nascent entrepreneurs and examines the context's impact on ESE and its importance when organizers or managers design innovation formats like hackathons. The findings suggest how individuals can be empowered to generate innovative ideas (Lifshitz-Assaf et al., 2021).

Drawing on social cognitive theory (Bandura, 1997; Drnovšek et al., 2010), I analyze how hackathons influence the development of ESE along the four main ways in which individuals' experiences can influence their self-efficacy (Bandura, 1997). The findings in *Chapter 4* demonstrate that, although they have the purpose of encouraging an entrepreneurial spirit (Yuan & Gasco-Hernandez, 2021), hackathons do not extensively target improving participants' ESE, so they only provide less tools to empower participants to implement their projects (Nolte et al., 2020). Entrepreneurial behavior can be stimulated by experiences and positive perceptions from the participants, but if hackathons are to have a lasting effect, their organizers must take into account the unique contextual factors that affect them and modify the design parameters in a way that empowers the participants to engage in entrepreneurial activities. Innovation formats like hackathons can mitigate some of these limitations by

providing resources and educating their participants in entrepreneurial processes. By demonstrating the impact of hackathons on nascent entrepreneurs and the development of ESE, I show the relevance of contextual factors in shaping entrepreneurial behavior. *Chapter 4* helps to clarify how the contextual factors affect the different mechanisms of the ESE development and what kind of support can alleviate some individual limitations and address their perceptions about the difficulties involved in entrepreneurial activities. Exploring innovation formats like hackathons through the lens of individuals can lead to in-depth, qualitative contributions that can be used for further analyses of how individuals can be supported to develop ESE at both the system and individual levels.

5.2. Practical Implications and Outlook

This dissertation's findings have practical implications and provide opportunities for future research. The findings in *Chapter 2* indicate that culturally imprinted social dynamics in NVTs' inception phase generate unequal opportunities for the development of new ventures because of participants' existing knowledge and communication skills, so hackathon organizers should establish kick-off events to arm participants with the requisite knowledge and use mentors to assist teams in applying adaptive coordination. These support systems could help hackathon teams to develop high-quality submissions that are more effective when they become NVTs, increasing their long-term chances of survival. Furthermore, mentors could encourage team members' focus away from their individual goals toward the group's goals when elaborating on the team's pool of ideas. Future research that generates in-depth information about the social dynamics of NVTs could help to explain further how context influences hackathons teams in their collaboration and information processing, resulting in new mechanisms (Lifshitz-Assaf et al., 2021). Our theory and the results of the study call for future research to investigate the social dynamics that emanate from socio-cultural environmental

factors in the team and their impact on outcome variables like ideation, prototyping, and long-term survival in time-constrained contexts.

Chapter 3 stresses that particular virtues receive attention in team cooperation, so, in addition to its theoretical contributions, this study has practical implications for team design and development. When putting entrepreneurial teams together, attention must be paid to virtue. Especially in the initial venture inception phase, we show that virtue influence collaboration. Absent virtue, NVTs can introduce discussion rules for dealing with ideas. Future research can build on our findings by integrating the concept of intellectual humility into NVT research. For example, investigating how virtues affects NVTs in the development stage (Patzelt et al., 2020), where ideas are established, as such the exchange of ideas and openness to fresh perspectives is no longer that relevant. How the distribution of intellectual humility on NVTs (Meagher et al., 2015) influences their creativity processes is also a promising avenue for future research.

The insights gained in *Chapter 4* can provide valuable insights for future researchers, practitioners, and policymakers to help them stimulate awareness of hackathons' ability to facilitate economic growth among the general population. Hackathon organizers can use these insights to elevate the innovative boost that comes out of hackathons. Future research can engage in regular interviews with participants to gain insights into their experiences and a deeper understanding of how the hackathon context can influence a long-lasting behavioral change (Nolte et al., 2020). Future research could also build on this study by investigating how extrinsic motivation (Mack & Landau, 2015) affects the pathways to the development of ESE. *Chapter 4* shows that hackathons teams differ from traditional innovation teams, so future research could explore their influence on the development of ESE and entrepreneurial behavior at the individual level.

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