Three Studies on Entrepreneurial Decision-Making: Insights on the Role of Motivational and Cognitive Factors

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“If you want to go fast, go alone.

If you want to go far, go together.”

(African proverb)

Table of Contents

List of Tables

List of Figures

List of Abbreviations

B	Unstandardized beta coefficient
cf.	Conferatur (compare)
CE	Corporate Entrepreneurship
CEO	Chief Executive Officer
e.g.	Exempli gratia (for example)
et al.	Et alia (and others)
i.e.	Id est (that is)
ID	Identification
IT	Information Technology
M	Million
Mturk	Amazon Mechanical Turk
N	Sample size
NME	Non-Managerial Employee
OLS	Ordinary least squares
p	Probability level
R&D	Research and development
R^2	R-squared
SD	Standard Deviation
SE	Standard Error
SST	Scrambled Sentence Task

CHAPTER 1 | New Perspectives on Entrepreneurial Decision-Making

1.1 Introduction

"You can do what you decide to do — but you cannot decide what you will decide to do."
(Sam Harris)

Entrepreneurship is defined as the discovery and exploitation of lucrative business opportunities within the individual-opportunity nexus (Shane & Venkataraman, 2000). Thereby, entrepreneurship is characterized by high uncertainty, complexity (McMullen & Shepherd, 2006), time pressure and emotional stress (Rauch, Fink, & Hatak, 2018), which is why entrepreneurs need to navigate extreme decision-making contexts in order to succeed (Shepherd, Williams, & Patzelt, 2015).

Thus, it is no surprise that entrepreneurs are regarded as heroic risk-takers that assemble resources in novel ways and, if successful, are able to achieve seemingly impossible endeavors (Drucker, 1985; Schumpeter, 1942; Wu & Knott, 2006). That is to say that entrepreneurs can transform entire industries as demonstrated by, for instance, Apple's Steve Jobs, Tesla Motor's Elon Musk, Airbnb's Brian Chesky or Grameen Bank's Muhammad Yunus who disrupted the respective mobile phone (Vuori & Huy, 2016), automobile (Stringham, Miller, & Clark, 2015), hotel (Felin & Zenger, 2017) and finance (Yunus, Moingeon, & Lehmann-Ortega, 2010) industries. Earlier well-known examples for entrepreneurs that revolutionized whole industries entail Johannes Gutenberg who invented the printing press (Eisenstein, 1980), Thomas Edison who successfully displaced the gas industry (Hargadon & Douglas, 2001), and Henry Ford who pioneered the assembly techniques for automobile mass production (Hounshell, 1984).

All these examples indicate that entrepreneurs have not only "profoundly impacted and indeed changed the way people live, work, consume, and interact with each other" (Demil, Lecocq, Ricart, & Zott, 2015: 2), but also point to entrepreneurship's potential for "creative destruction" which "revolutionizes the economic structure from within" (Schumpeter, 1942: 83). Thereby, entrepreneurship is especially important for the creation of jobs, economic

growth, and innovation (Van Praag & Versloot, 2007) which is why understanding entrepreneurship's cause, effect and success factors is crucial for economies (e.g., Acs & Mueller, 2008; Fritsch & Mueller, 2008), established businesses (e.g., Ireland, Covin, & Kuratko, 2009), and entrepreneurs as individual actors (e.g., Carolis & Patrick, 2006; Lee & Tsang, 2001; Rauch & Frese, 2007) alike. In particular, because it is entrepreneurs that launch *every* organization, understanding how these individuals explore, execute on, and manage opportunities throughout the entrepreneurial process represents a promising perspective to examine the outcomes of entrepreneurial activity.

The entrepreneurial process consists of three different phases: (1) the prelaunch phase in which entrepreneurs explore and evaluate business opportunities, (2) the launch or execution phase in which entrepreneurs acquire resources to nurture their new venture, and (3) the postlaunch phase in which entrepreneurs manage and grow their ventures (Baron, 2007; Frese & Gielnik, 2014). Particularly, in the early venture creation and growth phases, ventures greatly depend on entrepreneurs and are primarily influenced by entrepreneurs' decisions about discovering, assessing and executing on certain opportunities (Shane & Venkataraman, 2000). Given that entrepreneurs constantly need to make decisions under conditions of enormous uncertainty, a high degree of ambiguity, emotional stress, and risk (McMullen & Shepherd, 2006; Shepherd et al., 2015), it is of great interest to understand how these individuals navigate decision processes throughout their entrepreneurial endeavor.

Decision-making—defined as the "entire process of choosing a course of action" (Hastie, 2001: 657)—is a well-established field of research in economics, management and psychology that focuses especially on investigating individuals' decision processes under risk and uncertainty (e.g., Kahneman & Tversky, 1979). Because the entrepreneurial process is characterized by a high degree of uncertainty and risk, it is important to understand how entrepreneurs, i.e., the individuals that are at the genesis of any entrepreneurial activity,

navigate decision processes when launching, developing, and growing new ventures (Frese & Gielnik, 2014). Due to ventures' dependency on entrepreneurs' decision-making, the entrepreneurship literature considers the entrepreneurial process as highly personal and focuses on investigating how entrepreneurs' individual differences such as their biology (Bönte, Procher, & Urbig, 2016), experience (Gruber, Kim, & Brinckmann, 2015), or general personality characteristics (Rauch & Frese, 2007) influence the outcome of entrepreneurial activity. To further examine entrepreneurs' decision processes throughout the entrepreneurial process this dissertation applies a psychological perspective.

1.2 Research Objectives and Dissertation Outline

Although research on entrepreneurial decision-making gained popularity in recent years, the field is not yet as established as in management, psychology, sociology or political science literature and still offers promising research opportunities (Hastie, 2001; Shepherd et al., 2015). This dissertation aims to shed light on understudied aspects of entrepreneurial decision-making by taking a psychological perspective to investigate how (1) entrepreneurs' motivational and (2) cognitive factors influence their decision processes in different phases of the entrepreneurial process. We build our investigation on prior research findings which, for instance, suggest that entrepreneurs' motivational psychological factors have an effect on their efforts (Cardon, Wincent, Singh, & Drnovsek, 2009) and lead entrepreneurs to set more challenging goals (Baum & Locke, 2004), while particular cognitive psychological factors influence entrepreneurs' mental structures and how they perceive their environment (e.g., Gigerenzer & Gaissmaier, 2011; Kahneman, 2003).

We identified three research gaps related to the influence of entrepreneurs' motivational and cognitive psychological factors on their decision-making. To address the research gaps, we conducted three studies in distinct entrepreneurial decision-making contexts, whereby we

applied different theoretical perspectives: In our first study, we draw upon role identity theory as a motivational psychological factor to examine entrepreneurs' decision processes related to the delegation of key responsibilities to others. In study two, we investigate how behavioral priming as a cognitive factor may affect entrepreneurs' performance evaluation decisions of work performed by others. Finally, in study three we apply cognitive frame theory as another cognitive factor to explore how corporate entrepreneurs differ in assessing new venture ideas. These studies form the three main chapters of the dissertation and will be presented in the following.

Chapter 2 (study 1)— *Entrepreneurs' Role Identities and Their Delegation Behavior: Discovering the Phenomenon of De-Delegation*—empirically explores the relationship between entrepreneurs' inherent role identities and their decision-making in delegating key responsibilities to employees. Delegation, defined as a form of leadership that "involves the assignment of new responsibilities to subordinates and additional authority to carry them out" (Yukl, 2010: 149), is regarded as a prerequisite for venture growth as it allows entrepreneurs to decentralize their organization (Scott & Bruce, 1987), enables task coordination (Becker & Murphy, 1992) and increases decision speed (Baum & Wally, 2003).

Although delegation has been studied in the context of manager delegation in established organizations (Akinola, Martin, & Phillips, 2018; Leana, 1986, 1987; Schriesheim, Neider, & Scandura, 1998; Yukl & Fu, 1999), research on delegation in the entrepreneurial context remains scarce (for a notable exception see (Colombo & Grilli, 2013)). However, because entrepreneurs' initial delegation of business activities implies (1) the venture's first event of organizational change (Coad, Nielsen, & Timmermans, 2017), (2) an act of "letting go" and trusting someone else with the entrepreneurs' "baby" (Brettel, Engelen, & Voll, 2010; Cardon et al., 2009), and, (3) a change in entrepreneurs' individual roles within their ventures

(Mathias & Williams, 2018), it is crucial to understand how entrepreneurs navigate decision-making throughout the delegation process.

To address this research gap, in Chapter 2 we draw upon role identity theory in order to investigate the decision-making processes underlying entrepreneurs' delegation of roles. Specifically, we conducted a qualitative study in which we interviewed 13 entrepreneurs and analyzed our data following an abductive research approach. Throughout the abductive research process, we let us guide by the empirical phenomena and made three discoveries. First, we find that entrepreneurs engage in functional and dysfunctional de-delegation behaviors (i.e., entrepreneurs' reabsorption of previously delegated roles). Second, our evidence shows that entrepreneurs can have three different role identity types (i.e., visionary, growth, and implementer role identity) that influence which kind of roles they delegate to others. Finally, our analysis reveals that entrepreneurs' role identity structures (i.e., the type of role identities that are chronically salient to an entrepreneur) influence the propensity that entrepreneurs engage in dysfunctional de-delegation behavior. Based on these findings, we developed a plausible theory that explains the relationships between entrepreneurs' functional and dysfunctional de-delegation behaviors and their role identity structures. Our findings highlight entrepreneurs' role identity structures as a motivational psychological factor that can lead to contradictory decision-making throughout the delegation process and potentially obstructs venture growth.

Chapter 3 (study 2)—*How Thinking About Money Influences Performance Evaluation: The Moderating Effect of Resource Orientation*—empirically investigates whether money and prosociality priming influences entrepreneurs' performance evaluation of a task completed by others. In addition, we explore how entrepreneurs' resource orientation (i.e., their chronic preference for money or time) as a psychological factor moderates the respective prime's effectiveness on their performance evaluation. The study is embedded in a leader-subordinate

delegation context and draws upon research that found that leaders are more likely to delegate tasks when they evaluate others' work performance as high (Leana, 1987). In that sense, we argue that in case leaders have subjective and subconscious negative biases towards their subordinates' performance, the simple instruction "delegate more" does not lead to the desired behavioral impact (Pfeffer, Cialdini, Hanna, & Knopoff, 1998). As this dissertation investigates how entrepreneurs' psychology influences their decision-making, our research on behavioral primes in a leader-subordinate context represents valuable knowledge for the entrepreneurship literature as well.

To address our research question, we primarily draw upon extant money priming literature which provided evidence that money primes (i.e., cues that make the concept of money salient) lead to people's enhanced performance (e.g., Gasiorowska, Chaplin, Zaleskiewicz, Wygrab, & Vohs, 2016; Mogilner, 2010; Vohs, Mead, & Goode, 2006), while having negative effects on individuals' interpersonal behaviors (e.g., Molinsky, Grant, & Margolis, 2012; Vohs et al., 2006; Vohs, Mead, & Goode, 2008). In contrast, prosociality primes (i.e., an attitude or behavior that benefits others (Simpson & Willer, 2008)) are found to contradict the negative effects of money primes on interpersonal behaviors (Ferguson, 2008). Thus, we propose that in contrast to a neutral priming condition (i.e., a control prime that does not make a specific concept salient), leaders primed with money (i.e., leaders that think about money) evaluate the performance of a subordinate more negatively, while leaders primed with prosociality (i.e., leaders that think about prosociality) evaluate their subordinate's performance more positively. Furthermore, we propose that leaders' resource orientation towards money and time moderate the direct relationship between the respective money and prosociality primes. Herein, we draw upon research that found that people who chronically prioritize time over money show more prosocial behaviors, for instance, by working less and engaging more in social interactions (Mogilner, 2010; Whillans & Dunn, 2019). Following

these findings, we hypothesize that leaders' resource orientation towards money strengthens the effect of the money prime (and attenuates the effect of the prosociality prime), while leaders' resource orientation towards time attenuates the direct money priming effect (and strengthens the effect of the prosociality prime).

We tested our hypotheses by means of a classroom between-subjects experiment with a student sample (N=154). Although we did not find the hypothesized direct and moderating effects of money primes, prosociality primes, and leaders' resource orientation, our study conceptually contributes to the delegation and money priming literatures by theorizing how leaders' cognition can influence their performance evaluation of a task performed by others. In addition, our research adds to the current discussion in the money priming literature which is subject to inconsistent research findings.

Chapter 4 (study 3)—*How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship*—empirically explores how non-managerial employees' (NMEs') cognitive frames influence the idea elaboration process in the corporate entrepreneurship (CE) context. There exists a rich literature stream that investigates the importance of organizational structures and senior and middle managers' entrepreneurial behavior for the success of CE initiative (e.g., Covin & Slevin, 1991; Hornsby, Kuratko, Shepherd, & Bott, 2009; Kuratko, Ireland, Covin, & Hornsby, 2005). Thereby, prior research relies on the assumption that senior managers determine which new venture ideas are selected and pursued within the CE context, suggesting that NMEs play only a passive implementer role that exclusively follow senior managers' direction and decision-making throughout corporate new venture creation processes (e.g., Gibson, Birkinshaw, McDaniel Sumpter, & Ambos, 2019). However, there exists evidence that this simplified notion of NMEs' passive role in CE is not correct. With our work, we build on the few studies that indicate how NMEs may influence the outcome of CE initiatives through bottom-up processes (Floyd & Lane,

2000; Zimmermann, Raisch, & Cardinal, 2018) and shed light on NMEs' influential decision-making in corporate new venture idea selection and implementation.

To address the gap in the literature, we conducted an inductive qualitative study that is based on data from 35 semi-structured interviews with 33 NMEs from two different organizations. We take a cognitive frame perspective and find that individual NMEs apply contracted or expanded frames (i.e., particular mental templates used to interpret perceptual information) that serve as the inter-individual nexus in a creative teams' (i.e., groups of individuals that aim to develop something original that is useful (George, 2007; Gray, Knight, & Baer, 2020)) new venture idea elaboration processes. Moreover, our evidence shows that NMEs engage in interactive frame-related processes that lead to a convergence or divergence of their contracted or expanded frames. While frame convergence results in NMEs' shared understanding about the usefulness of particular new venture ideas, leading to the emergence of a dominant idea that can be championed to senior management, frame divergence results in NMEs' misalignment about the potential value of different venture ideas, leading to deferred decision-making and the failure of the CE initiative. Based on these findings, we developed a theoretical model that describes how the relationships between NMEs' cognitive frames unfold, and how these interrelationships influence NMEs' entrepreneurial behavior. Herein, we propose that the degree of frame resonance (i.e., the extent to which individuals' frames match or align) between NMEs' frames as well as NMEs' inter-individual intensity of interaction (i.e., the frequency and intensity to which NMEs are exposed to another's frames) influence whether NMEs' different contracted and expanded frames converge or diverge.

Table 1 represents an overview of the three studies, our research questions, theoretical perspectives, and the method and data used.

Table 1. Overview of Chapters

	Research Questions	Contribution	Theoretical Perspective	Core Constructs	Method	Sample
Chapter 2 Entrepreneurs' Role Identities and Their Delegation Behavior: Discovering the Phenomenon of De-Delegation	How do entrepreneurs' role identities influence their decisions about which key activities they delegate to their employees, and which activities they retain?	• Discovers and describes the empirical phenomenon of de-delegation • Extends existing knowledge by proposing three entrepreneur role identities that influence delegation behavior • Provides a plausible explanation about the mechanisms underlying entrepreneurs' contradictory delegation behavior	Role identity theory	Entrepreneur role identities Functional and dysfunctional de-delegation behavior	Abductive Qualitative	13 entrepreneurs
Chapter 3 How Thinking About Money Influences Performance Evaluation: The Moderating Effect of Resource Orientation	How do money and prosociality primes influence leaders' performance evaluation of other's work? How does leaders' resource orientation moderate this effect?	• Provides theory for the interrelationships between money primes, prosociality primes, and performance evaluation • Provides an interactionist perspective about individuals' resource orientation, and its effect on money and prosociality primes	Behavioral priming theory	Dependent variable: performance evaluation Independent variables: money, prosociality, and neutral primes Moderator: resource orientation	Experiment Regression Analysis	154 students
Chapter 4 How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship	Which cognitive frames do NMEs apply in the new venture idea elaboration process? Through which mechanisms do NMEs integrate or separate their diverging frames?	• Enriches CE literature by providing empirical evidence for NMEs' deliberate entrepreneurial behavior • Uncovers NMEs' cognitive frames as drivers in new venture idea elaboration, shedding light on the human side of CE • Provides a theoretical model about NMEs' frame-related interactions	Cognitive frame theory	Cognitive frames New venture idea elaboration Entrepreneurial behavior	Inductive Qualitative	33 non-managerial employees

Figure 1 provides an overview of the overall structure of this dissertation and lists the academic conferences where each study was presented. Chapter 1 entails the introduction that identifies the research gaps in entrepreneurial decision-making literature and describes how the three studies contribute to the field. Chapter 2, 3, and 4 represent the three studies that form the main body of the dissertation. Finally, Chapter 5 summarizes the empirical findings of the three studies, extracts implications for theory and practice, and proposes opportunities for future research

Figure 1. Structure of the Dissertation

	Chapter 1 Introduction Relevance of the research questions, research gaps, and research objectives		
	Chapter 2	***Chapter 3***	***Chapter 4***
Title	Entrepreneurs' Role Identities and Their Delegation Behavior: Discovering the Phenomenon of De-Delegation	How Thinking About Money Influences Performance Evaluation: The Moderating Effect of Resource Orientation	How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship
Type	Empirical - qualitative	Empirical - quantitative	Empirical - qualitative
Research Objective	Empirically investigate the role of entrepreneurs' role identity structures and its effect on their delegation behavior	Empirically investigate the effect of money and prosociality primes, and entrepreneurs' resource orientation on their performance evaluation of other's work	Empirically investigate which cognitive frames NMEs apply in CE contexts, and how NMEs' frame differences shape the new venture idea elaboration process
Presented at	• 8. Leuphana Conference on Entrepreneurship, Lüneburg, 18.-19.01.2018 • 2018 Academy of Management: From Start-up to Scale-up, Specialized Conference in Tel Aviv, Israel, 17.-19.12.2018		• G-Forum 2020, 24. Interdisziplinäre Jahreskonferenz (28.09.-02.10.2020 online) • 2022 Annual Meeting of the Academy of Management in Seattle, USA, 05.-09.08.2022 (accepted)
	Chapter 5 Conclusion Summary of the findings, theoretical and practical implications, and opportunities for future research		

CHAPTER 2 | Entrepreneurs' Role Identities and Their Delegation Behavior: Discovering the Phenomenon of De-Delegation[1]

Abstract

In the early stages of a new venture, most entrepreneurs have many different organizational roles. However, as their ventures grow and the organizational complexity increases, most entrepreneurs are not able to stay involved in all details of their venture's processes and need to decide which roles to delegate to others and which roles to retain for themselves. Because some entrepreneurs establish an identity associated with some of their roles (i.e., role identity), giving up these roles can be complicated. By means of an abductive qualitative study with 13 entrepreneurs, we explored how entrepreneurs' role identities influence delegation processes. We find that subsequent to delegating roles to others, entrepreneurs' role identity structures can lead to the dysfunctional reabsorption of specific roles (i.e., dysfunctional de-delegation). Based on our abductive research approach, we present a plausible theory that can inspire future to further examine the discovered phenomena.

[1] This chapter is co-authored by Katrin Burmeister-Lamp and Diemo Urbig. The chapter was presented at the 8. Leuphana Conference on Entrepreneurship (2018) and the Academy of Management Specialized Conference "From Start-up to Scale-up" (2018).

2.1 Introduction

During the early stages of a new venture, entrepreneurs take on different organizational roles that relate to activities such as exploring opportunities (Davidsson, 2015; Shane & Venkataraman, 2000), assembling financial, human and social capital (Cardon et al., 2009) or nourishing an entrepreneurial vision (Preller, Patzelt, & Breugst, 2020). Yet, as their ventures grow, entrepreneurs face increasing organizational complexity that can exceed their information-processing capacity (Colombo & Grilli, 2013; Simon, 1945), requiring them to delegate some of their roles to others. Thus, entrepreneurs need to decide on which roles they want to invest their own time, their "most valuable and scarcest resource of all" (Zachary, Gianiodis, Payne, & Markman, 2015: 1402), and which roles they aim to delegate to their employees. By delegating key responsibilities to selected employees and trusting someone else with their "baby" (Cardon et al., 2009), entrepreneurs decentralize decision-making (Baum & Wally, 2003; Colombo & Grilli, 2013), facilitate the specialization of labor (e.g., Colombo & Delmastro, 2004), make time to focus on developing product innovations (Grimpe, Murmann, & Sofka, 2019), and setup their ventures for further growth (Greiner, 1972). In contrast, entrepreneurs that fail to delegate roles obstruct organizational decision-making and limit their ventures' growth capacity (Brettel et al., 2010).

However, as some of entrepreneurs' roles do not only represent what they *do*, but also reflect who they *are*, giving up roles can be problematic (Mathias & Williams, 2018). This is because by ascribing self-referential meaning to some of their roles, entrepreneurs establish role identities that shape their behaviors (Murnieks & Mosakowski, 2007; Stryker, 1968; Stryker & Burke, 2000), and are therefore difficult to give up (Leavitt, Reynolds, Barnes, Schilpzand, & Hannah, 2012). While most prior studies were conducted under the assumption that entrepreneurs only possess a singular identity, such as a "founder *or* inventor *or* developer role identity" (Cardon et al., 2009), or a "Darwinian *or* communitarian *or* missionary" identity

(Fauchart & Gruber, 2011), some research also acknowledged that "entrepreneurs may have multiple identities" (Cardon et al., 2009: 517) that can be chronically salient (i.e., ready to be acted upon) (Mathias & Williams, 2014; Powell & Baker, 2014). As a consequence, entrepreneurs are not only required to make decisions that are congruent with a singular role identity but rather need to reconcile their various identity-related motivations (Ashforth, Harrison, & Corley, 2008). This means that as role identities drive individuals' behaviors, having multiple role identities can lead entrepreneurs to pursue conflicting goals and act in an incongruent manner (Powell & Baker, 2014). Consequently, in order to delegate roles to employees, entrepreneurs need to harmonize their different role identity-based inclinations that can motivate them to either retain or relinquish the roles they assume.

With their recent study, Mathias and Williams (2018) provide first knowledge about the role identity-related processes that influence how entrepreneurs manage their role set (i.e., the portfolio of different roles entrepreneurs assume) by deciding to give up, retain or adopt new roles. Specifically, the scholars investigate how entrepreneurs' generalized role identity—their broad-based role identity as "founders" (Hoang & Gimeno, 2010)—influence the set of roles they assume and found that entrepreneurs are more inclined to delegate roles when they perceive their entrepreneurial role identity as someone who 'gives up the hats'. While Mathias and Williams' (2018) work provides insights about the general approach entrepreneurs take to manage their role sets, we still have little knowledge about how the microlevel mechanisms underlying the relationships between entrepreneurs' congruent or incongruent role identities influence their delegation behavior. Furthermore, we lack a thorough understanding about how the content (i.e., the type of activities that encompass a role) of entrepreneurs' multiple role identities shapes their decisions to retain or delegate specific roles.

To shed light on the role identity processes that regulate entrepreneurs' delegation behavior, we followed an abductive research approach that was based on 13 interviews with

entrepreneurs. While we originally set out to investigate role identity processes *before* entrepreneurs delegated specific roles, as it is a common feature of abductive research, our evidence led us to change our research question to investigate role identity processes *after* entrepreneurs' delegation of roles. Our primary discovery is the phenomenon of entrepreneurs' de-delegation, defined as entrepreneurs' reabsorption of previously delegated operational roles that can be either functional (i.e., rational de-delegation that ensures the functioning of operational processes) or dysfunctional (i.e., irrational de-delegation that disrupts operational processes).

This discovery informed our subsequent investigation that resulted in two plausible explanations for entrepreneurs' dysfunctional de-delegation behavior. First, we found that entrepreneurs exhibited visionary, growth and/or implementer role identities. Our evidence suggests that each of these role identities influence entrepreneurs to delegate certain types of roles, resulting in a particular delegation pattern. Second, we find that entrepreneurs' role identity structures (i.e., the type of role identities that are chronically salient to an entrepreneur) can be either congruent or incongruent, leading to functional or dysfunctional de-delegation respectively. We contribute to the literature on entrepreneurs' delegation behavior and entrepreneur role identity structures and present a process model that describes the interplay between entrepreneurs' multiple role identities and their functional or dysfunctional de-delegation behavior.

2.2 Theoretical Background

2.2.1 Delegation and Organizational Design

As their ventures grow and become more complex, entrepreneurs need to delegate roles because they lack the required information processing capacity to remain involved in all organizational activities themselves (Colombo & Grilli, 2013; Robert Baum, Locke, & Smith,

2001; Simon, 1945). In the present study, we focus on entrepreneurs' delegation of roles that entail decision-making authority and responsibilities for specific sets of activities related to business functions such as operations, marketing, finance, or human resources. Through delegation, entrepreneurs are able to hand over simple and low-value-adding roles (e.g., operational) to others, enabling them to spend their own personal resources (i.e., their energy and time) on high-value-adding roles that require specialized knowledge (e.g., strategic management) (Colombo & Grilli, 2013; Garicano, 2000).

Following Mathias and Williams (2018), we define *roles* as social positions in the venture that comprise of a set of related activities (i.e., singular tasks) with different *contents* (e.g., operational or strategic tasks). Furthermore, we concentrate on entrepreneurs' delegation of roles to line workers and middle managers. While entrepreneurs' delegation of roles to line workers can be understood as the "single biggest growth event facing any growing firm" (Coad, Nielsen, & Timmermans, 2017: 25) and constitutes the implementation of a two-layer hierarchy (consisting of entrepreneurs and line workers), entrepreneurs' delegation of roles to middle managers forms the basis for further venture growth and represents the implementation of a three-layer organizational hierarchy (consisting of entrepreneurs, middle managers and line workers) (Colombo & Grilli, 2013).

In that sense, our research differentiates from organizational studies that primarily highlighted the delegation of urgent, unpredictable (Klein, Ziegert, Knight, & Xiao, 2006) and more simple, determinable daily tasks such as the settlement of insurance claims (Leana, 1986) or the design of a print advertisement (Pfeffer et al., 1998). Although the delegation of roles is a prerequisite for venture growth and allows entrepreneurs to allocate resources more efficiently (e.g., Colombo & Delmastro, 2004), research found that entrepreneurs can have difficulties with the delegation of some of their roles (e.g., Brettel, Engelen, & Voll, 2010).

More specifically, prior studies suggest that entrepreneurs' *role identities* influence their decision to retain or give up certain roles (e.g., Cardon et al., 2005; Mathias & Williams, 2018).

2.2.2 Entrepreneur Role Identities and Delegation

Role identities comprise individuals' self-referential meanings (Ashforth et al., 2008), defined as their internalized self-concepts that relate to the question "who am I?" (i.e., one's identity) (e.g., Murnieks & Mosakowski, 2007; Stryker & Burke, 2000). As entrepreneurs can internalize the meanings embedded in the roles they assume in their ventures, these roles become self-defining (Murnieks, Mosakowski, & Cardon, 2014) and carry expectations that inspire entrepreneurs' actions and behaviors (e.g., Murnieks & Mosakowski, 2007). Put simply, entrepreneurs establish their identities by enacting roles and engaging in activities that they consider as meaningful (Mathias & Williams, 2018). When first launching a venture, entrepreneurs embrace multiple roles as they "do it all", finding meaning in assuming roles related to various activities such as their ventures' marketing, operations, finance, and human resources functions (Cardon et al., 2005; Mathias & Williams, 2016) or dealing with more strategic activities, for instance, deciding whether they should pursue an opportunity or not (Scheaf, Loignon, Webb, Heggestad, & Wood, 2020). Accordingly, entrepreneurs can carry multiple role identities that require distinct behaviors (Mathias & Williams, 2014; Murnieks & Mosakowski, 2007; Rouse, 2016).

Prior literature takes two different, but not mutually exclusive approaches to study entrepreneurs' role identities (Mmbaga, Mathias, Williams, & Cardon, 2020). With the first approach, research examines entrepreneurs' specific role identities within the domain of entrepreneurship (Cardon et al., 2009; Drnovsek, Cardon, & Patel, 2016; Ho & Pollack, 2014). Herein, the investigation focuses on the domain-related content (i.e., type of activities) of entrepreneurs' roles within their ventures, highlighting the contents associated to role identities

such as an inventor (i.e., identification with opportunity recognition), founder (i.e., identification with venture creation) or developer (i.e., identification with venture growth) identity (Cardon et al., 2009), as well as an entrepreneur (i.e., identification with refining opportunities), investor (i.e., identification with resource allocation) or a manager (i.e., identification with business operations) role identity (Mathias & Williams, 2014).

With the second research approach, scholars illuminate entrepreneurs' generalized role identity as entrepreneurs and founders of a venture. By applying this theoretical lens, scholars focus on answering the question how entrepreneurs' broad-based identity as "business owners" (Demetry, 2017) or "founders" (Hoang & Gimeno, 2010) influence their behaviors (Drnovsek et al., 2016; Mmbaga et al., 2020). With other words, while research about entrepreneurs' domain-based role identities aims to uncover entrepreneurs' idiosyncratic behaviors related to their identification with specific contents of a role, the investigation of entrepreneurs' generalized role identity attempts to explain how entrepreneurs' overall identification with the entrepreneurial role shapes their behaviors. While both theoretical perspectives overlap to a certain extent, in this study we primarily focus on exploring how the domain-related content of entrepreneurs' role identities influence their delegation behavior.

As entrepreneurs' role identities do not only represent what they do, but also who they are, the difficulty to delegate a role depends on whether the role carries self-referential meaning for an entrepreneur (i.e., roles for which the entrepreneur established an identity). On the one hand, in case entrepreneurs do not identify with a particular role, delegating this role will be uncomplicated as it allows entrepreneurs to spend more time on activities that they consider as fulfilling (Cardon et al., 2005). On the other hand, in case entrepreneurs delegate a role that entails a set of activities they regard as meaningful for their work (i.e., that represent a part of who they are), delegating the role will create friction as the delegation represents a loss that can destabilize entrepreneurs' identities, resulting in a narrower role set that may make them

question who they actually are in their role as entrepreneurs (Ashforth, 2001; Rouse, 2016; Sveningsson & Alvesson, 2003). For this reason, we expect that entrepreneurs only delegate roles that do not carry self-referential meaning for them, i.e., roles for which they did not establish a role identity. In turn, this means that in case entrepreneurs aim to delegate a role to which they ascribe self-referential meaning about what it means to them to be an entrepreneur, they need to relinquish their identification with this role in order to be able to delegate it.

With their recent research, Mathias and Williams (2018) illuminate how entrepreneurs manage their role sets and found three role identity mechanisms that allow entrepreneurs to relinquish role identities and delegate roles to others: perceiving the entrepreneur as someone who 'gives up the hats,' discovering new role identities within the venture, and role identity imprinting. First, the scholars found that entrepreneurs who generally identify themselves as someone who 'gives up the hats' tend to delegate roles, while entrepreneurs who identify themselves as someone who 'wears all the hats' are more likely to reject delegation. Second, the study shows that entrepreneurs that discover new role identities (i.e., that discover new meaning) in their growing ventures tend to prefer to not be involved in daily operations and delegate roles that do not align with their new role identities. In contrast, entrepreneurs that fail to find new meaningful activities retain their initial work roles and do not delegate roles. Third, Mathias and Williams (2018) suggest that by imprinting others with their own role identities, entrepreneurs perceive that they can influence their organization through their employees, allowing them to delegate roles in order to allocate their own personal resources to other activities. Entrepreneurs that fail to perceive that they are able to imprint others with their role identities, in contrast, believe that they need to stay involved in all organizational issues and neglect the delegation of roles.

Although these findings provide valuable knowledge about entrepreneurs' delegation behavior in relation to their generalized entrepreneurial role identity (Mmbaga et al., 2020), we

still lack a thorough understanding about how the associated content of entrepreneurs' multiple role identities (e.g., inventor, founder, developer (Cardon et al., 2009)) can influence their decision to retain or give up certain roles. Furthermore, we have little knowledge about the relationships between entrepreneurs' multiple role identities and how the interplay between different role identities affects entrepreneurs' delegation behavior. In order to shed light on the practical role identity-related mechanisms that shape entrepreneurs' delegation behavior, we address the following primary research question: How does the content of entrepreneurs' role identities influence their decisions to retain or delegate specific roles? Furthermore, we ask: How does the interrelationship between entrepreneurs' multiple role identities (i.e., roles that consist of different contents) shape their delegation behavior?

Following our prior theorizing, at the outset of this study we assumed that entrepreneurs only delegate roles (i.e., what they do) when they do not derive a self-defining meaning from these roles (i.e., who they are), enabling them to entrust selected employees with the activities and responsibilities associated with the role (Mathias & Williams, 2018). Thus, the original purpose of our research was to explore the role identity related mechanisms *before* entrepreneurs delegate roles. However, as it is a common feature of abductive research, the essence of our question changed during the research process to one focused more on entrepreneurs' actions and behaviors *after* delegating roles that carried self-referential meaning for them. To our knowledge, the empirical phenomena that we have discovered in this study have not been reported by prior research.

2.3 Method

2.3.1 Sample

We conducted an abductive qualitative study and interviewed 13 entrepreneurs to provide us with insights about their role identities and delegation behavior. The main data

source for this research is our 13 semi-structured interviews that we conducted in 2017. While 12 of our informants were the founders, owners and managing directors of their organizations at the time of the interviews, one of our informants (EN2) assumed the head of business development role while also being the founder and owner of his company. All of our informants self-identified as entrepreneurs which aligns with the purpose of our research. We followed a theoretically-based purposeful sampling strategy whereby we defined variables that guided us in selecting the informants for our study, increasing the comparability between the data (Eisenhardt, 1989).

We collected data from ventures at different organizational lifecycle stages as this type of data is most likely to provide in-depth insights about the different phases of entrepreneurs' delegation of roles (Curtis, Gesler, Smith, & Washburn, 2000). Herein, we collected data from seven entrepreneurs that gained first experience with delegating roles to line workers and thereby established a two-level hierarchy. In addition, we collected data from six entrepreneurs that already established or were in the process of establishing a three-layer hierarchy by delegating roles to middle managers. This sampling strategy allowed us to gather rich insights about entrepreneurs' actions and behaviors regarding their first delegation experience towards line workers in the early venture stage, as well as their delegation behaviors towards middle managers in the context of a more established organizational setting at a later venture stage. In order to assure that our informants met our criteria, before conducting the interviews we reviewed public data such as company websites and online articles or had informal conversations with employees of the respective venture.

Additionally, we aimed to gather data from entrepreneurs with different backgrounds and, therefore, decided not to limit our sampling approach to one source, such as a specific accelerator or business incubator (e.g. Foo, Uy, & Baron, 2009; Gielnik, Spitzmuller, Schmitt, Klemann, & Frese, 2015). Instead, we recruited our informants from various sources through

the personal networks and professional affiliations of this study's authors. Although the exploratory character of this research enabled the interviewing author to investigate emergent issues during the interviews, we designed an interview protocol which contained questions that we structured into five different categories: general business information, entrepreneurs' daily routines, entrepreneurs' roles and identities, leadership and delegation, and organizational structure. The interviews averaged an hour and were recorded and subsequently transcribed verbatim (Gläser & Laudel, 2009).

Table 2. Overview of Informants

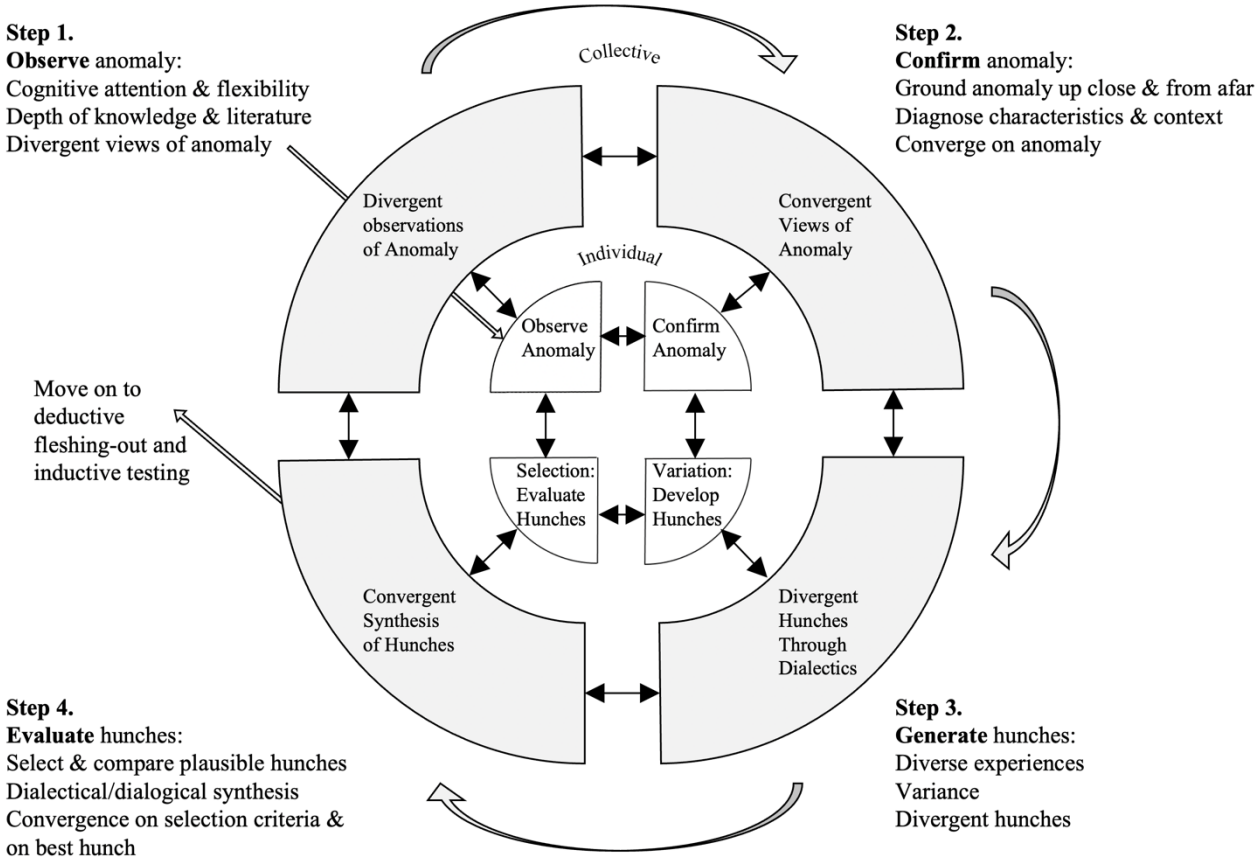
ID	Role Identities	De-Delegation Behavior	Hierarchical levels	Employees	Year founded	Age	Interview length
EN1	I / G	Functional	2	6	2016	28	69 min
EN2	G	-	3	130	2007	43	40 min
EN3	V / G	Functional	2	8	2015	30	45 min
EN4	V	Functional	2	7	2016	38	55 min
EN5	G	Functional	2	32	2013	50	45 min
EN6	I / G	Dysfunctional	3	13	2014	39	55 min
EN7	V	Functional	3	17	2015	31	63 min
EN8	I	Dysfunctional	2	6	2016	32	46 min
EN9	G	-	2	6	2016	25	46 min
EN10	V	-	3	15	2013	30	50 min
EN11	I / G	-	3	7	2017	29	55 min
EN12	I / G	Dysfunctional	2	15	2015	28	62 min
EN13	I / G	Dysfunctional	3	55	1995	43	95 min

2.3.2 Data Analysis

We followed an exploratory theory building research approach as it is a compelling way to investigate understudied empirical phenomena (Demetry, 2017; Glaser & Strauss, 1967). Thereby, as we encountered anomalies—unexpected phenomena that we could not explain with the existing literature—during our data analysis, our approach shifted towards exploratory abduction (Bamberger, 2018; Sætre & Van de Ven, 2021). Abduction allows researchers to generate plausible explanations about underexplored empirical phenomena and puzzling evidence, resulting in pre-theoretical, speculative assumptions that serve as a basis

for future investigations (Bamberger, 2018). With other words, abduction is "the act of proposing speculative—but plausible—conjectures about the nature of a phenomenon, and hence what kinds of evidence might increase the prospects of further insights into it" (Bamberger, 2018; Folger & Stein, 2017: 307).

Figure 2. The Steps of the Abductive Process (adapted from Sætre and Van de Ven (2021))



For our abductive research process, we followed Sætre and Van de Ven's (2021) four step approach by first observing the anomaly, next confirming the anomaly, then generating hunches for the occurrence of the anomaly and, finally, evaluating our hunches through comparison. Applied to our research context this means that as we first observed the anomaly that some of our informants reabsorbed roles that they previously delegated, and, as we confirmed the discovery of this anomaly for different cases, our data guided us to the literature on entrepreneur role identities that we reviewed in order to generate hunches that may cause the observed phenomenon. In the final step, we compared our hunches and selected role

identity salience as the most plausible explanation for entrepreneurs' reabsorption of previously delegated roles (i.e., dysfunctional de-delegation).

Our investigation began by simultaneously collecting and analyzing the data (Corbin & Strauss, 2008). Following the abductive research approach, with the use of the qualitative coding software MAXQDA we coded and extracted informant statements from all transcribed interviews without paying attention to pre-established theoretical codes (Glaser & Strauss, 1967). Instead, we started our analysis by open coding and aimed to create as many codes as possible from each informant perspective. For example, we created a code for "My purpose in this venture is…" to examine entrepreneurs' self-defined roles in their ventures. Seeking to understand entrepreneurs' seemingly contradictory delegation behavior, after completing open coding we focused on the abstract patterns of informant statements and iteratively categorized similar codes of each informant into more abstract categories (i.e., axial coding) such as "Entrepreneurs' motives to withdraw their delegation." Afterwards, for each category we compared the data across informants to discover patterns of ideas and issues that enabled us to identify relationships between the concepts (Gioia, Corley, & Hamilton, 2013).

We then reflected on our emerging understanding of the established codes and revisited the data to investigate whether the evidence matched or misaligned with our understanding. In case the data misaligned with our emergent codes, we decided to revise or drop the respective codes (Rockmann & Pratt, 2015). Finally, by travelling back and forth between our emerging understanding and established theory, we could identify new kinds of interactions between the codes which, in turn, guided us in generating plausible explanations for the discovered phenomenon (Demetry, 2017; Rockmann & Pratt, 2015).[2] In the following, we describe the

[2] Given that we had limited touch points with our informants and restrictions in data collection, similar to prior abductive research (e.g., Rockmann and Pratt (2015)), we were not able to employ a comprehensive grounded theory approach. Instead, we let us guide by the empirical phenomena that surfaced during our analysis and focused on presenting plausible explanations that we are going to discuss.

nature of the phenomenon of de-delegation as our first discovery that was the origin of our subsequent findings about the influence of entrepreneurs' role identities throughout the delegation process.

2.4 Findings

2.4.1 Discovering the Phenomenon of De-Delegation

In line with the existing literature, all of our informants delegated roles that accompanied predominantly operational activities and retained roles related to strategic management activities (Colombo & Grilli, 2013; Harris & Raviv, 2002). However, we found that after delegating operational roles, some entrepreneurs tended to reabsorb these roles to perform the related activities themselves again. We define this behavior as *de-delegation* and found that it could be either functional or dysfunctional. In the following, we describe two exemplary cases that illustrate the nature of entrepreneurs' functional and dysfunctional de-delegation behavior.

Table 3. Characteristics of De-Delegation Behaviors

Functional De-Delegation	Dysfunctional De-Delegation
• Triggered by external events, e.g., malfunctioning operational processes • Focus on venture survival • Improves venture performance	• Interrupts functioning operational processes (no external trigger evident) • Focus on entrepreneurs' inherent desire to perform certain activities • Impedes venture performance

Functional De-Delegation. With functional de-delegation, entrepreneurs intervened in previously delegated operational activities in order to correct malfunctioning operational processes that risk the survival of their ventures. For instance, EN4 as the founder-entrepreneur of a new venture used functional de-delegation of roles to assure that his venture's operational

processes were working properly. At the time of the interview, EN4's venture was one year old and consisted of a two-level hierarchical structure with seven employees in total.

When we asked EN4 to describe the organizational setup of his venture, he responded that it was *"absolute chaos"*. Intrigued by this statement, we sought for a detailed explanation about how this situation emerged:

> *"In the beginning we had the situation that we were almost all responsible for everything. Then we started to sound out a little bit of subject areas - to say: Okay, one person is now responsible for that, the other for that and so on. And then something happened that is uncool. Because in many individual areas, things went unbelievably wrong, which you sometimes didn't notice enough anymore."* (EN4)

EN4's explanation suggests that his initial delegation of operational roles resulted in malfunctioning business processes that were unnoticed for a period of time. This suggests that at this early stage, the new venture was missing formalized control mechanisms that could have informed the entrepreneur about the malfunctioning operations. When EN4 recognized that there were *"profound problems"* in operations, he de-delegated these activities and became the person in charge for all business activities again:

> *"And in case there breaks something loose, profound problems in a business segment, some part of this value chain, whatever. Then you do the following: you take everything for you again. Then you are far away from delegating and instead centralize everything in your person."* (EN4)

At the same time, EN4 emphasized his reluctance to de-delegate operational roles as follows:

> *"I am forced to do things that I am not good at. Now you could say that this would be a wonderful opportunity for further self-development. I see it differently, I see it profoundly differently, I have to say. Because I simply don't enjoy it either, I don't see any joy in it."* (EN4)

Our evidence shows that EN4's de-delegation was functional because without the entrepreneurs' intervention, line workers would have been unable to solve the issues themselves and risk the venture's survival. Furthermore, EN4's frustration about having to intervene in operational processes highlights that his de-delegation was caused by external events (i.e., operational malfunctioning) rather than by his intrinsic desire of being involved in operational activities again.

Dysfunctional De-Delegation. In contrast, we found that some informants tended to dysfunctionally de-delegate operational roles. With dysfunctional de-delegation, entrepreneurs irrationally reabsorbed previously delegated operational activities which led to an interruption of otherwise well-functioning processes. Accordingly, this behavior seemed to harm organizational performance and impeded further venture growth. EN13, the founder-entrepreneur and CEO of an established venture represents an example for an entrepreneur that engaged in dysfunctional de-delegation. Until 2012, EN13's venture showed steady growth in revenues and had 97 employees, however, internal organizational issues led to a decline in revenue and employees afterwards, resulting in 55 employees and about €15M in yearly revenues at the time of the interview.

EN13 started out by "doing it all" and performed a broad set of managerial and operational activities himself, even if that meant that he had to work regular nightshifts. According to EN13, his company grew steadily with his involvement in managerial and operational activities, whereby he established a formalized organizational structure by 2012. By this time, EN13 implemented a three-level hierarchy consisting of the executive

management, a middle management level with managers for each set of business activities related to operations, marketing, sales, procurement, human resources, accounting, IT and warehouse, and a bottom level with line workers in each of the departments. However, EN13 reported that in 2012 he de-delegated the entire middle management level, dismissing seven middle managers to reabsorb the accompanying operational activities of the respective business departments. As the reason for this de-delegation EN13 stated that the middle managers were incompetent and showed low performance that led to delays in delivery and animosities between executives and middle managers.

Although EN13's perspective might suggest that his de-delegation was functional, we found evidence for the dysfunctional nature of this de-delegation behavior.[3] In particular, EN13 reasoned that his former middle managers tried to exclude him from all operational decisions as they claimed that EN13 was lacking the necessary business know-how and was the *"evil and the cause"* of all organizational issues. In addition, EN13 had the strong belief that his competences were needed for most venture activities and reasoned that the industry his venture was operating in was exceptionally complex and, therefore, was convinced that others could not comprehend the industry's unique mechanisms:

> *"It is difficult to bring in competent people from outside who understand the mechanisms in our industry from the very beginning.* […] *Our purchasing manager comes from the technical trade* […] *but he doesn't really comprehend the complexity of our products* […] *Besides, he doesn't know the subtleties about the 160 suppliers that we currently have, and how some of them tick."* (EN13)

[3] In order to gather a more comprehensive perspective of the organizational issues at that time, we tried to interview the former middle-managers. Unfortunately, we were not able to identify and reach out to the respective informants.

Accordingly, EN13 disregarded that he could use delegation as a mean for efficient resource allocation and as a possibility to develop the competences of middle managers and line workers. Instead, EN13 described himself as an *"extraordinary"* management executive that has, despite his lack of a formal management education, successfully grown the venture by *"managing and controlling all business functions"* and as a *"jack of all trades"* that needed to take care of operational and strategic activities at the same time. It seemed that EN13 was convinced that he needed to be involved in all different organizational activities whereby he subtly questioned any established organizational structure and consequently confused middle managers and line workers by micromanaging their daily operational activities. As a result, while EN13 perceived his de-delegation as necessary, our findings indicate that his behavior was dysfunctional as the de-delegation decreased organizational efficiency.

2.4.2 Three Types of Role Identities

Fascinated by the empirical phenomenon of functional and dysfunctional de-delegation, we reviewed different literature streams to explore the motives for this behavior and found the theory on entrepreneurial role identities as a promising perspective to explain our findings (Mathias & Williams, 2018; Mmbaga et al., 2020). Based on our emergent understanding, we revisited our data and analyzed how entrepreneurs' various role identities influenced their delegation behavior. In particular, since people aim to harmonize their actions and behaviors with their identities, we understand entrepreneurs' delegation and dysfunctional de-delegation behavior as the extension of their inherent role identities.

First, we uncovered three different role identities that describe the nature of entrepreneurs' inherent inclinations about the type of activities they found fulfilling. Accordingly, these role identities influenced which roles entrepreneurs retained and which roles they delegated to others. Second, we found that entrepreneurs' role identity structures—

the type of role identities that are chronically salient to an entrepreneur—influenced their tendency to engage in the functional or dysfunctional de-delegation of roles. Our data shows that entrepreneurs with congruent role identity structures engaged in functional de-delegation, while entrepreneurs with incongruent role identity structures tended to dysfunctional de-delegation. In the following, we first describe entrepreneurs' visionary, growth, and implementer role identities, and subsequently present the chronical salience of entrepreneurs' congruent or incongruent role identities as a plausible explanation for their de-delegation behavior.

Table 4. Characteristics of Entrepreneur Role Identities

Visionary Role Identity	**Growth Role Identity**	**Implementer Role Identity**
• Find meaning in activities related to strategic management; delegate operational activities as soon as possible • Engage in **functional de-delegation**: triggered by external event (malfunctioning operations) ⇒ Consider delegation as a mean that enables them to spend their own time on activities that they find meaningful	• Find meaning in activities that allow their ventures to grow; create organizational structures through delegation • Engage in **functional de-delegation**: triggered by external event (malfunctioning operations) ⇒ Are indifferent about the activities that they aim to perform themselves or delegate to others	• Find meaning in executing operational activities; believe that their operational involvement is needed for their venture to succeed • Engage in **dysfunctional de-delegation**: no external event evident ⇒ Consider the delegation of (operational) roles as risky and prefer to stay involved in all key activities

Visionary Role Identity. Within a visionary role identity, entrepreneurs found meaning in pursuing activities that related to strategic management and developing the vision for their ventures. Accordingly, these entrepreneurs prioritized engaging in activities that required abstract thinking such as shaping the purpose of their venture, *"the why, the what and the how"* (EN4). Additionally, these entrepreneurs desired to perform activities such as conceptualizing strategies, presenting their venture in public, establishing partnerships, developing new sales channels, tapping into new customer segments and geographical markets,

or discovering opportunities that they could exploit in the future. Thus, entrepreneurs with a visionary role identity desired to deal with activities that initiated change but eschewed mundane activities that simply maintained the status quo of their venture.

In contrast, within this role identity entrepreneurs experienced their involvement in operational activities as tedious, as EN4 pointed out:

> *"Daily business isn't where I get a lot of energy out of. I get energy when it comes to turning something upside down."* (EN4)

Thus, in order to align their daily activities with their role identity, these entrepreneurs delegated operational roles to line workers and middle managers, regarding them as experts in the respective area that were capable to perform the related activities better than the entrepreneurs themselves. Entrepreneurs with a visionary identity were also willing to follow the directions given by their employees in daily operations, so that they were not responsible for setting up operational processes or executing operational activities themselves. Consequently, these entrepreneurs experienced the delegation of operational roles as a mean that enabled them to invest their own time and energy on activities that provided them with meaning such as shaping their ventures' long-term strategy and exploring new business opportunities.

Growth Role Identity. When entrepreneurs had a growth role identity, they demonstrated a strong desire to grow their ventures by establishing organizational structures and delegating key responsibilities to their employees. For instance, one entrepreneur expressed his desire for growth as follows:

> *"I want to do great things, and that's why I'm so growth oriented. Because if at some point the company only has the status quo, then I could really say 'hire a manager, I'm going to Bali', I don't know, or build a new business*." (EN10)

These entrepreneurs followed a long-term vision and did *"not aim for a one million Euro exit after one to three years"* (EN7), but rather viewed their ventures as their *"once in a lifetime chance"* (EN5). Herein, entrepreneurs with a growth role identity assumed various roles that allowed them to perform the related activities themselves:

> *"Be it strategic development, growth, discussions with the big business partners, key accounts, I get also involved in operations, all this is wonderfully compatible."* (EN5)

Although some of these statements may suggest that these entrepreneurs did not want to give up operational roles and continue to do it all themselves, our evidence also shows that they understood the value of delegating roles, as EN10 metaphorically describes:

> *"I'm* […] *the blood that goes through the body, the heart that beats. But I have learned to delegate, to hand over responsibility."* (EN10)

In that sense, these entrepreneurs recognized that they could not remain involved in all activities themselves and, therefore, aimed to nurture their ventures by assembling the right people in order to reach their overarching goal of venture growth. Thereby, these entrepreneurs created organizational structures that permitted their employees to contribute in the most efficient manner to the venture's success. Entrepreneurs with a growth role identity demonstrated high trust towards their employees, empowering line workers and middle managers by delegating roles in order to allow them to reach their "*full creative potential*" (EN7). Furthermore, these entrepreneurs were convinced that transparency and a continuous flow of information between all hierarchical levels enabled employees to cross the boundaries of their functional position, as EN7 describes:

> *"I believe extremely strong that transparency is important, because only if people have a transparent overview of what is happening in the company they can think in a networked way."* (EN7)

Herein, engaging in discussions with middle managers allowed entrepreneurs with a growth role identity to evaluate whether their ventures had the capacity for further growth and, if not, could take organizational measures that they considered as useful to achieve venture growth.

Implementer Role Identity. With the third role identity, entrepreneurs found meaning in managing and executing activities related to operational processes. These entrepreneurs genuinely enjoyed performing operational activities and desired to align their daily activities as much as possible with this kind of tasks. Correspondingly, these entrepreneurs also wanted to actively participate in discussing operational topics, as EN11 explained:

> *"The daily business, I would dive into as far as I find time. Because it's fun for me and I like to be part of it. And I wouldn't go away without intervening and say: 'That's bullshit. Let's talk about that again.'"* (EN11)

Moreover, entrepreneurs with this role identity assumed that their competences and skills were needed in day-to-day business, which is why they exhibited a high degree of ownership for operational activities, as EN6 emphasized:

> *"And with the activities, there is basically no cherry picking here. Things have to be done, how they have to be done."* (EN6)

With an implementer role identity, entrepreneurs eschewed *"playing the boss"* (EN6), had a hands-on attitude, tended to work side-by-side with line workers and middle managers, and preferred to put ideas into practice by *"getting things done"* (EN6) themselves instead of only supervising line workers and middle managers.

Furthermore, when assuming this role identity, entrepreneurs exhibited a low degree of trust towards line workers and middle managers which led them to monitor employees closely to influence the work outcome. Specifically, entrepreneurs wanted to be continuously informed about the progress of operational activities to understand if there were any aspects that could be improved with their intervention. In that sense, these entrepreneurs were convinced that line workers and middle managers needed close supervision as they sometimes had the feeling that their employees *"prefer to perform activities that are unimportant and unnecessary"* (EN6). We further found that entrepreneurs with an implementer role identity not only had clear expectations which goals line workers and middle managers needed to achieve, but also how they should achieve these goals, leading entrepreneurs to micromanage employees. It is important to mention that these entrepreneurs also envisioned their future role in their venture to be closely connected to the execution of a set of operational *"front line"* activities, as EN1 claimed:

> *"Definitely sales will always be my topic. So, as an entrepreneur you have to be in sales. To be on the front line, also for the employees."* (EN1)

2.4.3 Role Identities and De-Delegation

By integrating our findings about entrepreneurs' de-delegation behavior and their role identities, we could identify patterns about the relationship between the two aspects. Thereby, we found that entrepreneurs with all three types of role identities used delegation as well as de-delegation as a mean to perform activities that gave them meaning and that aligned with their identity-based inclinations to allocate their own time and energy to specific kinds of tasks. Furthermore, our analysis indicates that entrepreneurs with visionary and growth role identities tended to functional de-delegation, whereas entrepreneurs with an implementer role identity had a higher propensity to dysfunctionally de-delegate roles.

First, entrepreneurs with a visionary role identity delegated operational roles as soon as possible in order to be able to pursue their inherent desire of spending most of their time and energy on strategic management and other activities that require conceptual thinking. That is to say that these entrepreneurs focused on their desire to relinquish operational roles that they did not find fulfilling. Our evidence, however, suggests that these entrepreneurs may tend to delegate roles prematurely as they overlooked to establish operational processes and structures before handing the respective roles over to line workers. In turn, these shortcomings led to a failure of operational activities as the line workers who assumed the associated operational roles were not able to perform the activities properly. Consequently, as the operational processes of their ventures began to deteriorate, these entrepreneurs *functionally de-delegated* operational roles, even though the de-delegation was against their identity-based inclinations and interests. Put simply, by functionally de-delegating operational roles, these entrepreneurs prioritized their venture's survival over their identity-based desire to exclusively deal with activities related to strategic management.

Second, entrepreneurs with a growth role identity aimed to assume roles in which they could best contribute to further venture growth. Thus, in contrast to entrepreneurs with a visionary role identity, these entrepreneurs did not exhibit a particular desire to perform certain activities themselves, but rather focused on the activities that enabled them to add the most value to their ventures and that were necessary to allow further venture growth. Thereby, entrepreneurs with a growth role identity put special emphasis on building organizational structures that allowed their employees to efficiently contribute to venture growth. To create these structures entrepreneurs initially remained engaged in various roles and the associated activities, and gradually handed over operational roles to selected employees. As soon as entrepreneurs found that the respective line workers or middle managers were able to successfully manage the responsibilities related to the delegated operational roles,

entrepreneurs transitioned to focusing on high value adding activities that brought them closer to their overarching goal of venture growth. During this nonlinear process, the entrepreneurs closely examined their venture's operational processes and estimated whether the organization is firmly set to support additional growth. Consequently, entrepreneurs with a growth role identity solely engaged in the *functional de-delegation* of roles in case of operational issues.

Third, we found that after *delegating* operational roles, entrepreneurs with an implementer role identity *dysfunctionally de-delegated* these roles because they considered the associated activities as meaningful for their own identity as an entrepreneur. Thus, entrepreneurs that exhibited an implementer role identity prioritized their desire to be involved in daily operational activities, to work side-by-side with line workers and to perform a broad range of operational activities themselves instead of exclusively managing employees and dealing with strategic management. However, by reabsorbing operational roles, these entrepreneurs interrupted otherwise functioning operational processes and impeded their venture's efficiency. Puzzled by this contradictory behavioral pattern of first *delegating* operational roles and afterwards *dysfunctionally de-delegating* these roles, we reviewed the existing literature and further analyzed our data to uncover the procedural mechanisms that can explain why entrepreneurs with an implementer identity decided to delegate operational roles that they found meaningful in the first place.

2.4.4 Process Model: Role Identity Structures and Delegation Behavior

To explain entrepreneurs' dysfunctional de-delegation behavior, we follow the literature on entrepreneurs' multiple role identities which suggests that entrepreneurs' overall behavior is influenced by "the set of identities that is chronically salient […] in her or his day-to-day work" (Powell & Baker, 2014: 1413). This means that when one of entrepreneurs' role identities is salient, it makes the knowledge structures associated with the role identity

accessible to the entrepreneur and ready to be acted upon (Mmbaga et al., 2020). This notion is strengthened by prior research on identity salience that found, for instance, that the salience of people's identities shape their beliefs about moral judgements (Leavitt et al., 2012) or influence individuals' consumption decisions (LeBoeuf, Shafir, & Bayuk, 2010).

Because entrepreneurs possess multiple role identities, the role identities that are salient to entrepreneurs at a given time influence their behavior to a higher degree than role identities that are not salient. This means. that, depending on which role identity is salient to entrepreneurs, relinquishing the roles associated with the respective identity can be difficult. Our evidence indicates that entrepreneurs' role identity structure—the set of role identities that are chronically salient to entrepreneurs—shaped the delegation process by influencing entrepreneurs' decision to retain, delegate or de-delegate operational roles. Thereby, entrepreneurs' role identity structures are primarily shaped by congruencies or incongruencies among their set of chronically salient role identities.

The entrepreneurs from our sample exhibited two different congruent or incongruent role identity structures, as shown in Figure 3: (1) chronically salient visionary and growth role identities, or (2) chronically salient implementer and growth role identities.[4] First, entrepreneurs with chronically salient visionary and growth role identities showed congruent delegation behavior by giving up roles that were not central to one of their role identities. This is because both role identities motivated entrepreneurs to delegate low value adding operational roles in order to engage in activities that they found more fulfilling such as strategic management and setting up organizational structures. These entrepreneurs were able to harmonize their desire to perform rather conceptual activities, while also following their motivation to further develop their growing venture. As a result, entrepreneurs with chronically

[4] We did not find evidence about entrepreneurs' chronically salient visionary and implementer role identities.

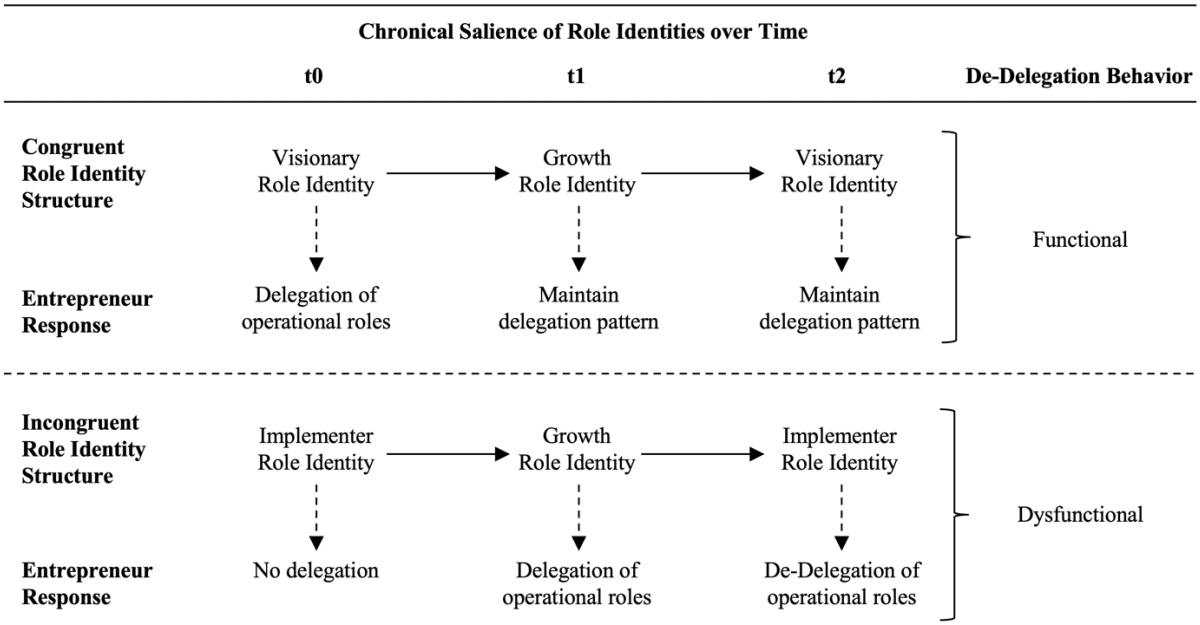
salient visionary and growth role identities functionally de-delegated operational roles solely in case their venture's survival was at risk (i.e., functional de-delegation).

Second, entrepreneurs that exhibited chronically salient implementer and growth role identities, in contrast, demonstrated an incongruent pattern of delegation that resulted in the dysfunctional de-delegation of operational roles. Particularly, while these entrepreneurs originally found meaning in performing operational activities themselves, the emerging salience of their growth role identity gave precedence to delegate operational roles to line workers and/or middle managers (see t1 in Figure 3). That is to say that with a more salient growth role identity, entrepreneurs' priorities shifted from focusing on their implementer role identity-related desire to perform operational activities themselves to focusing on their growth identity-based desire of establishing organizational structures and engaging in activities that supported further venture growth.

However, it seemed that after delegating operational roles, entrepreneurs' implementer identity became salient again, leading them to dysfunctionally de-delegate these roles (see t2 in Figure 3). A reason for this contradicting behavior might be that by delegating operational roles that they found meaningful, entrepreneurs' implementer role identity could have become salient again as they changed to a role of solely supervising employees that dealt with these operational activities. In turn, the recognition that someone else is now responsible for activities that they found meaningful destabilized entrepreneurs' role identities and left them questioning who they are as entrepreneurs. This notion suggests that before delegating the respective operational roles, entrepreneurs have been unaware of their own implementer role identity and only discovered how meaningful they found performing operational activities themselves when they delegated the respective roles. When their implementer role identity became salient again (see t2 in Figure 3), entrepreneurs aimed to align their daily activities with this role identity again which, ultimately, led to dysfunctional de-delegation of operational

roles. Consequently, the interplay between entrepreneurs' incongruent implementer and growth identities can lead to a cyclical sequence between delegating (driven by entrepreneurs' growth identity) and de-delegating (driven by entrepreneurs' implementer identity) operational roles.

Figure 3. Process Model of Role Identity Structures and Delegation Behavior



2.5 Discussion

The original purpose of this study was to explore role identity-related processes that precede entrepreneurs' delegation of roles. Particularly, we assumed that entrepreneurs only delegate roles that were not central to one of their role identities, allowing them to relinquish roles that they did not find meaningful. What we found, however, was that after delegating operational roles, some entrepreneurs dysfunctionally de-delegated these roles and thereby harmed organizational efficiency. In order to investigate this empirical phenomenon, we followed an abductive theory-building research approach to explore how the relationship between entrepreneurs' role identities influenced their delegation and de-delegation behaviors. Herein, our evidence shows that entrepreneurs exhibited visionary, growth and/or implementer

roles identities that each affected their decisions which roles to retain and which roles they delegated to line workers and middle managers.

While entrepreneurs with visionary and growth role identities engaged in functional de-delegation that protected their ventures' organizational processes from failure, entrepreneurs with an implementer role identity tended to dysfunctional de-delegation of operational roles, disrupting organizational structures and processes. Intrigued by this finding, we further analyzed our data and discovered that, contrary to our assumption that entrepreneurs exclusively delegate roles that they did not identify with, entrepreneurs with an implementer role identity delegated operational roles that were central to their implementer role identity. Particularly, we found that this contradictory behavior was influenced by entrepreneurs' inherent role identity structure, suggesting that dysfunctional de-delegation represents the manifestation of incongruencies between entrepreneurs' growth and implementer role identities that, depending on which of their identities was salient at a given time, led entrepreneurs to delegate and then de-delegate operational roles. Our discovery provides a plausible explanation for entrepreneurs' contradictory delegation behaviors and we hope that our process model will inspire future research to further investigate related empirical phenomena.

2.5.1 Implications for Entrepreneur Delegation and Role Identity Theory

Our findings provide several contributions to the literature on entrepreneur delegation and role identity. First, we advance the theory on the multiplicity of entrepreneurs' role identities (e.g., Mathias & Williams, 2014; Mmbaga et al., 2020; Oo, Allison, Sahaym, & Juasrikul, 2019) by highlighting the relationship between entrepreneurs' chronically salient role identities and its effect on delegation behavior. Particularly, we build on Mathias and Williams' (2018) findings about the effects of entrepreneurs' role identities on their decision to

add, subtract or retain organizational roles throughout the venture growth process. However, while the scholars focused their investigation on entrepreneurs' generalized role identity (Mathias & Williams, 2018; Mmbaga et al., 2020), with our discovery of entrepreneurs' visionary, growth and implementer role identities, we illuminate the influence of the content of entrepreneurs' multiple role identities on their delegation behavior. Accordingly, our findings provide more nuanced insights about how different role identity types lead to entrepreneurs' distinct delegation behavior.

Furthermore, our findings extend the research about the relationship between entrepreneurs' role identities and their delegation behavior by introducing an identity salience perspective, suggesting that the alternating salience between different role identities can lead to entrepreneurs' dysfunctional delegation behavior. Similar to Powell and Baker (2014) who found that entrepreneurs' congruent or incongruent role identity structures influence their strategic response to adversity, we reveal entrepreneurs' dysfunctional de-delegation behavior as the manifestation of incongruencies between their multiple role identities that each influence their motivations to retain, delegate or de-delegate operational roles. For future investigations, we encourage entrepreneurship scholars to take the perspective of entrepreneurs' multiple role identities as a potential explanation for entrepreneurs' contradicting or seemingly irrational behaviors during the entrepreneurial process. Herein, we hope that our study's nuanced insights about entrepreneurs' role identity structures will inspire future studies to further explore how the different contents of entrepreneurs' role identities can result in congruent or incongruent behaviors.

Second, our findings contribute to the literature on entrepreneur role transitions by providing microlevel insights about potential frictions that can prevent entrepreneurs from transitioning into new roles. Thereby, our research suggests that in order to delegate a specific set of roles, entrepreneurs need to first psychologically disengage from these roles because an

ongoing identification with delegated roles most likely leads to dysfunctional de-delegation. Thus, similar to entrepreneurs that exit their ventures, delegating roles that carry self-referential meaning may require entrepreneurs to psychologically cope with the "loss" of the delegated roles and prevent subsequent dysfunctional de-delegation (Rouse, 2016). Specifically, for the context of this study this means that, before delegating operational roles that are central to entrepreneurs' implementer role identity, entrepreneurs may be able to psychologically disengage from these operational roles so that they do not engage in dysfunctional de-delegation afterwards.

With her findings about different psychological disengagement paths of entrepreneurs exiting their ventures, Rouse (2016) provides valuable insights about identity-related processes that could also influence how entrepreneurs psychologically disengage from roles that they aim to delegate to others. In particular, Rouse (2016) suggests that entrepreneurs' work orientation, defined as their "internalized evaluations about what makes work worth doing" (Pratt, Pradies, & Lepisto, 2013: 175), determine what kind of identity is salient to entrepreneurs and, ultimately, shape how they disengage from their ventures. Herein, Rouse (2016) found that, depending on their respective work orientation, entrepreneurs either use a portfolio path and transition to a new organization while still being involved in their prior venture, or alternatively, follow a serial path that shows a temporal gap between entrepreneurs' engagement in different ventures (i.e., no temporal overlap between founding ventures). Similarly, there might exist parallel or consecutive identity-related disengagement paths that entrepreneurs use to transition between their existing and new role identities. Building on our own and prior research findings, we recommend future studies to further investigate the mechanisms underlying entrepreneurs' role identity transitions in relation to potential psychological disengagement paths from roles they identify with. We expect that such work

will provide valuable knowledge that can support entrepreneurs to successfully navigate their transitions into new roles and thereby prevent dysfunctional de-delegation behavior.

Third, our work sheds light on the different strategies entrepreneurs can engage in to manage the set of roles they assume as their ventures grow. Because entrepreneurs with an implementer role identity have difficulties with giving up operational roles and tend to engage in dysfunctional de-delegation, they need to make trade-offs between dealing with strategic and operational activities that are both necessary for venture growth. Therefore, an alternative approach for entrepreneurs with an implementer role identity is to delegate organizational roles that entail strategic management activities. Although it is rare that entrepreneurs delegate strategic management responsibilities to someone else, there exist exceptions such as the Yahoo! cofounders who strongly identified with product development activities and for that reason hired Tim Brady to support them in raising venture capital and Tim Koogle who was trusted with the CEO position (Cardon & Forster, 2017; Filo & Yang, 2008). With the delegation of activities that did not give them meaning, these entrepreneurs were able to put their time and effort into activities related to product development that reflected their role identities and passions.

However, as we have discovered in our study, it is important to consider that the chronical salience of entrepreneurs' respective role identities can lead to contradicting delegation decisions. Thus, in order to delegate roles that entail strategic management (e.g., to a newly hired CEO), entrepreneurs need to relinquish any role identity-related notion or belief that they are mainly responsible for strategic management activities themselves. Future research is needed to investigate not only how entrepreneurs could alter the set of roles they assume by giving up operational roles, but also explore the pathways when and how entrepreneurs give up roles that entail strategic management. More knowledge about the two different approaches that entrepreneurs can use to manage the set of roles they assume will

help them to find the right balance between fulfilling their individual needs by assuming roles they find meaningful and enabling venture growth by delegating key responsibilities to others.

2.5.2 Implications for the Delegation Literature

In contrast to prior research that primarily focused on analyzing features that precede leaders' delegation decisions (e.g., Akinola et al., 2018), our study contributes to the delegation literature by highlighting the processes subsequent to entrepreneurs' delegation of roles. Herein, our research links to Klein et al. (2006) who found that senior leaders engage in dynamic delegation, defined as leaders' "rapid and repeated delegation of the active leadership role to and withdrawal of the active leadership role from more junior leaders of the team in response to challenging task demands" (Klein et al., 2006: 598).

Accordingly, the concept of dynamic delegation reflects our finding about functional de-delegation that entrepreneurs use in response to operational challenges that cannot be independently solved by their employees and therefore risk their venture's survival. In a broader sense, entrepreneurs' functional de-delegation as well as leaders' dynamic delegation behaviors are triggered by external events such as challenging task demands that exceed employees' competencies and, in turn, risk the successful completion of the respective activities. Yet, our findings about dysfunctional de-delegation extend the existing delegation literature by illuminating entrepreneurs' idiosyncratic psychological features as a trigger for dysfunctional delegation behaviors. Therefore, we do not only provide insights about entrepreneurs' functional de-delegation that is prompted by external events (e.g., malfunctioning of operational processes), but also offer entrepreneurs' specific psychological features (i.e., entrepreneurs' role identity structure) as a plausible explanation for their dysfunctional de-delegation behavior.

Furthermore, in comparison to prior literature that conceptualizes delegation as a singular and definite decision which is immediately implemented by leaders (e.g., Leana, 1986; Yukl & Fu, 1999), with our research we extend the existing literature by conceptualizing entrepreneurs' delegation as a lengthy process that may take place over the course of several months. By applying a process perspective, future research could further decompose entrepreneurs' delegation and de-delegation behaviors in order to explore characteristics that influence each of the contradictory behaviors. Specifically, such research will shed further light on the mechanisms underlying a potential cyclical sequence between entrepreneurs' delegation and de-delegation, and provide us with a multi-faceted understanding about the overall delegation process. As a theoretical framework that spans a conceptual bridge between delegation and de-delegation, entrepreneurship scholars could draw upon psychology literature and analyze the processes that encompass entrepreneurs' intention to delegate a certain role and the actual implementation of that intention (e.g., Gollwitzer, 1999). Such studies could explain why entrepreneurs cannot let go of particular roles and fail to implement their intention to delegate by micromanaging their employees instead (e.g., Brettel et al., 2010). Investigating the interplay between entrepreneurs' psychological features and the procedural elements that encompass the delegation of roles presents a promising avenue for future research.

Another research opportunity lies in analyzing entrepreneurs' timing of delegation (Lévesque & Stephan, 2020), for instance, by examining how entrepreneurs vary in their approach of delegating roles reactively or anticipatively. Entrepreneurs who delegate reactively delegate roles as a response to the increased complexity of their ventures' processes which exceeds their information-processing capabilities (Colombo & Grilli, 2013; Leana, 1986; Yukl & Fu, 1999). As they find themselves unable to deal with the increased number of activities, entrepreneurs reactively delegate key responsibilities to others in order to reduce their own cognitive load and improve their venture's performance. In comparison, entrepreneurs who

delegate anticipatively may have internalized beliefs about the necessity of delegation for venture growth, expect higher workloads in the future or aim for slack resources in order to be able to respond to unpredictable events (Bourgeois, 1981; Lecuona & Reitzig, 2014). This means that entrepreneurs' reactive or anticipative delegation behavior is based on two distinct motives. While entrepreneurs who delegate reactively base their decision to delegate on the actual evidence of the increased complexity in their ventures' processes, entrepreneurs who delegate anticipatively base their decision to delegate on expectations for venture growth and their beliefs or intuitions. Additional studies are needed to explain entrepreneurs' decisions about timing the delegation of roles.

2.6 Limitations

As any research, our study is subject to several limitations. First, because we conducted our interviews at a single point in time, our data is limited to the retrospective insights provided by entrepreneurs about role identities and their effect on delegation behavior. We addressed this concern by gathering data from entrepreneurs that were in different stages of the entrepreneurial process and either established (or were in the process of establishing) a two-layer or three-layer hierarchy. Nevertheless, although this sampling strategy provides comprehensive insights about entrepreneurs' motives for their delegation and de-delegation at different venture stages, we did not track entrepreneurs' role identity-related delegation behavior over time and rely on their ability to recall past events, suggesting that a potential recall bias exists. By applying a longitudinal research design that follows individual entrepreneurs across various venture stages, future research can attenuate this limitation and provide a more differentiated understanding. In general, our study demonstrates the methodological shortcomings of much entrepreneurship research that will benefit from

longitudinal research designs which can shed further light on the entrepreneurial process and the microfoundations of venture growth (Wright & Stigliani, 2013).

Second, even though our evidence suggests that there exists a relationship between entrepreneurs' role identities and their delegation behavior, we were not able to make a causal relationship between the constructs evident. Similar to the first limitation, we encourage future research to conduct longitudinal research in order to explore whether entrepreneurs' role identity structures truly influence their delegation behavior. Furthermore, we expect that the investigation of the interrelations between entrepreneurs' role identities, their delegation behavior, and actual venture growth might reveal how these mechanisms relate to one another over time.

Third, given the restrictions in data collection, we were not able to triangulate our data and relied on interviews with our informants as our primary data source. To increase the reliability of results and to gain a broader perspective about the relationship between entrepreneurs' delegation and de-delegation behaviors, we recommend future research to gather data from additional sources, such as interviews with line workers and middle managers as the assignees of the roles delegated by entrepreneurs.

2.7 Conclusion

Although prior literature emphasizes the importance of entrepreneur role identity and its influence on how entrepreneurs manage their role sets through delegation, we still lack theory about the microlevel processes that describe the relationships between entrepreneurs' multiple identities and their effect on delegation behavior. As we set out to investigate characteristics that precede entrepreneurs' delegation of roles, our abductive research approach led to unexpected discoveries about the influence of entrepreneurs' role identities after delegation. Thereby, our findings suggest that, in contrast to prior literature that conceptualizes delegation as an individual action taken by entrepreneurs, entrepreneurial delegation is a non-linear, iterative process that spans past the delegation itself and can be subject to incongruencies in entrepreneurs' role identity structure that may lead to dysfunctional behavior. Our contribution will, we hope, inspire entrepreneurship scholars to further explore how entrepreneurs navigate incongruencies in their role identities and which aspects ultimately cause them to engage in dysfunctional de-delegation behavior.

CHAPTER 3 | How Money Priming Influences Performance Evaluation: The Moderating Effect of Resource Orientation[5]

Abstract

We investigate whether money and prosociality priming influence leaders' performance evaluation of a task completed by others. We propose leaders' resource orientation (i.e., their chronic preference for money or time) as a psychological feature that moderates the respective prime's effectiveness on the outcome variable and tested our hypotheses with a classroom between-subjects experiment with undergraduate students (n=154). Although we do not find the hypothesized effects, we contribute to the literature by presenting a novel perspective on the relationship between money and prosociality priming, leaders' resource orientation, and their performance evaluation. We further discuss how our theory and the results of our analysis relate to the ongoing discussion about the mechanisms of behavioral priming research.

[5] This chapter is single authored by Mirko Brunk.

3.1 Introduction

Delegation—leaders' assignment of responsibilities and authority to subordinates—facilitates an efficient allocation of human resources that increases task coordination and specialization (Becker & Murphy, 1992; Colombo & Delmastro, 2004), accelerates decision speed (Baum & Wally, 2003), and enhances productivity and performance (Leana, 1987; Schriesheim et al., 1998). While delegation decreases leaders' information overload (Colombo & Grilli, 2013) and reduces the time and energy leaders have to invest to achieve their goals (Akinola et al., 2018), it provides an opportunity for subordinates to develop competences (Klein et al., 2006) and enhances job satisfaction (Leana, 1986; Schriesheim et al., 1998; Yukl & Fu, 1999). Research found that leaders delegate more authority to subordinates that they evaluate as capable, trustworthy and competent (Klein et al., 2006; Leana, 1987), suggesting that leaders' evaluation of their subordinates' performance influences whether they delegate responsibilities or not. In that sense, performance evaluation does not only serve as a "formal accountability mechanism […] that holds employees answerable for their work-related behavior" (Ferris, Munyon, Basik, & Buckley, 2008: 147), but also influences leaders' delegation behavior.

However, the intuitive notion that leaders delegate more authority to subordinates that show objectively high performance is not always the case. For instance, in prior research Leana (1986) found that leaders disregard their subordinates' objective competence data, raising the question which factors actually influence leaders' perceptions of their subordinates' performance. To answer this question, scholars approached the investigation of leaders' delegation behavior from a psychological perspective. Thereby, Pfeffer et al. (1998) discovered two psychological processes that may lead to leaders' biased perception of subordinates' work quality. First, the authors found that leaders evaluate work that was performed under the control of a supervisor more favorable than the same work performed without supervision. Second,

Pfeffer et al. (1998) found that leaders evaluate subordinates' work better the more self-involved they were in its creation. In a similar vein, recent research discovered that an economic mindset can influence leaders' evaluations of tasks performed by subordinates (Mueller, Melwani, Loewenstein, & Deal, 2018).

With this study, we investigate how additional psychological characteristics influence leaders' performance evaluation of a task performed by others that, in turn, shapes their delegation behavior. Specifically, as money and prosociality primes have been found to influence people's perceptions and behaviors, we examine how these primes shape leaders' performance evaluations. While money primes (i.e., thinking about money) are found to result in people's enhanced performance (e.g. Gasiorowska, Chaplin, Zaleskiewicz, Wygrab, & Vohs, 2016; Mogilner, 2010; Vohs, Mead, & Goode, 2006), it has negative effects on individuals' interpersonal behaviors (Molinsky et al., 2012; Vohs et al., 2006, 2008). In contrast, prosociality primes—an attitude or behavior that benefits others (Simpson & Willer, 2008)—are found to contradict the negative effects of money primes on interpersonal behaviors (Ferguson, 2008). Correspondingly, we propose that the activation of money and prosociality primes have contradictory effects on leaders' performance evaluation. More specifically, we suggest that, compared to leaders primed with neutral concepts, money and prosociality stimuli decrease and increase leaders' performance evaluation respectively.

Furthermore, we include leaders' chronic resource orientation towards money and time as a moderator, theorizing that their inclinations towards the two resources strengthen or attenuate the effects related of the money and prosociality primes. We build our reasoning on prior research suggesting that people's stable preferences towards money and time have contradictory effects on social behaviors (Mogilner, 2010). Although our experimental investigation did not result in the proposed direct and indirect effects of money primes, prosociality primes, and leaders' resource orientation, we contribute to the entrepreneurship

literature by providing a theory about the influence of behavioral priming on entrepreneurs' decision-making when delegating tasks. Furthermore, we contribute to the money priming literature by taking an interactionist approach that can inform future research to further investigate leaders' resource orientation as a contextual psychological factor that may strengthen or attenuate the effects of the money and prosocial primes.

3.2 Theory and Hypotheses

3.2.1 Money Priming

While traditional economic theory defines money as a "medium of exchange, a unit of account and a store of value" (Mishkin, 1992: 21), viewed through a psychological lens, money is conceptualized as a "tool" and a "drug" that enables individuals to achieve their goals independent from others and represents a source of strong motivations (Lea & Webley, 2006; Vohs et al., 2006). There exist different perspectives on the psychology of money such as money attitudes (e.g., Yamauchi & Templer, 1982), the behavioral implications of hourly payments (e.g., DeVoe & Pfeffer, 2007) or the investigation how subtle reminders of money (i.e., primes) influence human motivations and behaviors (e.g., Vohs et al., 2006). For our research question, we take the latter perspective and explore how money primes affect leaders' performance evaluation of subordinates' work outcomes. We build our reasoning on prior research that found that money-primed individuals show enhanced performance, behave more self-sufficiently (i.e., a preference to be free of dependency and dependents), eschew help and are disinterested in socializing with others (Mogilner, 2010; Vohs et al., 2006).

As an explanation for the behavioral outcomes of money priming, research suggests that subtle money-related stimuli activate a transactional mindset that leads individuals to consider what they will get out of social interactions and to prioritize their own needs at the expense of others (Vohs, 2015). More specifically, Vohs et al. (2008) propose that reminders

of money elicit a market-pricing orientation (Fiske, 1992) that describes a mental model in which individuals evaluate interpersonal relationships on the basis of rational cost-benefit analyses focusing on the benefits they will receive in return before engaging in a certain behavior. Kouchaki et al. (2013: 55) extend this view, suggesting that money primes elicit a business decision frame that implies a "cost–benefit analysis in which self-interest is pursued over others' interests." The notion of money-primed individuals' rational cost-benefit analysis is further strengthened by related research that shows that the effect of money-primed individuals' discouragement to cooperate with others can be reversed when the respective others are instrumental to one's specific goals (Teng, Chen, Poon, Zhang, & Jiang, 2016). Taken together, money priming research indicates that the presence of money in the modern commercial society activates particular mindsets that lead individuals to engage in self-serving behaviors rather than collaboration with others (Beus & Whitman, 2017). Drawing upon this research, we theorize how money-related stimuli influence leaders' evaluation of a task performed by others.

We propose that leaders who are nonconsciously reminded of money evaluate the performance of a subordinate's task worse compared to leaders that are primed with prosociality or neutral stimuli. We base our hypothesis on prior research findings suggesting that money priming has beneficial self-serving and performance-related outcomes, while negatively influencing people's behavior in interpersonal relationships. Particularly, prior studies found that money-primed people perform tasks faster under time pressure (Aarts et al., 2005), are more persistent in task completion (Gasiorowska et al., 2016), and perform better on objective measures (Vohs et al., 2006). In addition, individuals reminded of money report increased feelings of self-efficacy (Mukherjee, Manjaly, & Nargundkar, 2013) and indicate to feel stronger (Zhou, Vohs, & Baumeister, 2009). At the same time, people primed with money are unhelpful towards others, prefer less physical intimacy, tend to socialize less (Gasiorowska

et al., 2016; Mogilner, 2010; Vohs et al., 2006, 2008), and show less prosocial attitudes (Pfeffer & DeVoe, 2009). Studies that investigated the effects of money priming in organizational settings found that people reminded of money show less compassion towards coworkers (Molinsky et al., 2012), express less emotions in general (Jiang, Chen, & Wyer, 2014), and tend to display unethical intentions (e.g., intention to steal) and behaviors (e.g., lying to maximize individual benefits) (Kouchaki et al., 2013).

Taken together, these findings suggest that individuals that are reminded of money engage in behaviors that maximize their own outcomes at the expense of the interests of others. For the performance evaluation context of our study this knowledge has two implications. First, as money-primed individuals perform better themselves, we propose that leaders that are subtly reminded of money have higher performance-related expectations for a task completed by their subordinates. This suggests that the desirable performance-related outcomes of money-priming can be undesirable when leaders have unreasonable expectations for their subordinates' performance. Second, because money-primed individuals are found to show less interpersonal warmth and empathy—an emotional response to another's need or distress (Batson, 1990)—we predict that a money prime will initiate rational information processing mechanisms that supersede intuitive information processing mechanisms which are associated with the experience of prosocial emotions (Loewenstein & Small, 2007; Molinsky et al., 2012). Consequently, we expect that money-primed leaders display more transactional and rational behaviors and less empathy in their performance evaluation as they are less concerned with their subordinate's difficulty to perform a challenging task. Based on the above reasoning, we hypothesize the following:

> **Hypothesis 1.** Money priming decreases leaders' performance evaluation of a task completed by others.

3.2.2 Prosociality Priming

Contrary, we predict that leaders that are primed with prosociality will evaluate their subordinate's task-related performance more favorably compared to individuals who are exposed to money or neutral stimuli. In line with Molinsky et al. (2012: 36), we conceptualize the prosociality prime as an "antidote" to the money prime as it implicitly reminds individuals of interpersonal warmth, care, and social belonging (Baumeister & Leary, 1995; Reis, Collins, & Berscheid, 2000).

The driving mechanism that underlies the opposing effects of prosociality and money primes is the nonconscious activation of specific mindsets. In contrast to the transactional mindsets that are activated by money priming, studies show that prosociality primes activate relational mindsets in which individuals display a higher willingness to cooperate (Pillutla & Chen, 1999) and show empathetic behaviors as prosociality cues can enhance one's capabilities to process social information (Andersen & Chen, 2002; Gelfand, Major, Raver, Nishii, & O'Brien, 2006; Molinsky et al., 2012). Accordingly, the respective relational and transactional mindsets that are elicited by prosociality and money primes are at the opposite ends of the sociality-mode spectrum (Fiske, 1992; Vohs et al., 2008), suggesting that prosociality primes have an opposite effect on individuals' behaviors than money primes.

Considering these different mechanisms, we propose that prosociality primes prompt leaders to have empathy and more compassion towards others. Thus, when primed with prosociality, we expect leaders to evaluate other's performance more favorably by displaying goodwill and benevolence; both considered as socially desired behaviors. Moreover, with a more positive performance evaluation leaders decrease the risk of receiving negative social consequences such as interpersonal conflicts—instances that they aim to avoid considering the prosocial goal that is made salient within this prime (Tetlock, 1985). This notion is underpinned by Longenecker, Sims, and Gioia's (1987) finding that some leaders are willing to positively

manipulate performance ratings in order to ensure high cohesion and low conflict within a team (Ferris et al., 2008). Our reasoning is further supported by prior research findings suggesting that individuals primed with prosociality nonconsciously prioritize the importance of social connection (Ferguson, 2008), cooperation, and interpersonal friendliness (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001). Taken together, the above reasoning leads us to the following hypothesis:

> **Hypothesis 2.** A prosociality prime increases leaders' performance evaluation of a task completed by others.

3.2.3 Moderators in Money Priming

Although there exist numerous studies that show significant money priming effects, there are also inconsistent research findings suggesting that nonconscious reminders of money have different effects on people that exhibit distinct psychological features (e.g. Rohrer, Pashler, & Harris, 2015; Vohs, 2015). In order to shed further light on the mechanisms behind money priming and the significance of interindividual differences, scholars call for the exploration of factors that moderate the effect of money priming on different outcome variables (Lodder, Ong, Grasman, & Wicherts, 2019).

The need for this investigation is exemplified by Rohrer, Pashler, and Harris' (2015) failed attempt to replicate Caruso, Vohs, Baxter, and Waytz' (2013) finding about money-primed individuals' more positive attitudes towards free-market systems and social inequality. As a possible reason for the failed replication, Vohs (2015) argues that the two studies employed different samples. While Caruso et al. (2013) tested their hypotheses in three of their five experiments with samples consisting of University of Chicago students, Rohrer et al.'s (2015) replication study consisted of students from the University of California and participants from Amazon's Mechanical Turk (MTurk). Vohs (2015) suspects that because the University

of Chicago established a particular school of thought (the Chicago School of Economics) and is famous for its achievements in economics, it is possible that the student samples employed by Caruso and colleagues (2013) may exhibit positive associations towards money and the free market system—associations that are not shared by Rohrer et al.'s (2015) sample. Wheeler and Berger's (2007) study further supports the notion that identical primes can have different effects on individuals with distinct demographics and personality characteristics, concluding that it is important to consider personal prime-related cognitive associations. In a similar vein, it is noteworthy that research by Simpson and Willer (2008) indicates that individuals with prosocial attitudes are less responsive to the effects of money-related primes (Molinsky et al., 2012).

To extend our understanding about the cognitive mechanisms that lead to the different outcomes of money priming discovered in prior research, we propose that leaders' chronic resource orientation, defined as their natural preferences for the resources money and time, moderate the money and prosociality priming effects on their performance evaluation (Whillans, Weidman, & Dunn, 2016). Specifically, we theorize that leaders' idiosyncratic preferences for the resources money and time have a similar effect on performance evaluation as the aforementioned money and prosociality primes. While leaders' resource orientation towards money decreases their performance evaluation of other's work, leaders' resource orientation towards time increases their performance evaluation.

We base our hypotheses on extant literature suggesting that, although money and time are often considered to be the same—famously illustrated by Benjamin Franklin's maxim that "Time is money" (Mogilner, Whillans, & Norton, 2018)—people with different resource orientations show diverging behaviors. For instance, research found that people who chronically prioritize time over money invest more in social interactions and encourage social connection by interacting more about nonwork-related matters with coworkers (Whillans &

Dunn, 2019). This finding is further supported by related research on the effect of money and time primes. Herein, Mogilner (2010) found that time primes contrast the negative effects that money priming has on interpersonal behaviors, suggesting that, contrary to money primes that lead individuals to work more and to avoid socializing, time-primed individuals prefer to work less and engage more in social interactions (Mogilner, 2010). These findings further indicate that, as money is associated with rationality and time is associated with emotional satisfaction (Mogilner, 2010), the resource people mostly value and focus on will shape their daily social behaviors.

As a result, we expect that leaders that chronically prefer money over time will be more responsive to a money prime and subsequently show more distanced social behaviors that manifest in a more critical performance evaluation. Simultaneously, we predict that leaders that chronically value time more than money will be more receptive to the prosociality prime and, therefore, show more prosocial attitudes by evaluating the performance of their subordinate more positively. Furthermore, we propose that leaders differ in the degree to which they prefer money over time, time over money, or show no preference for neither of the two resources.

To further explain the differing strength of money and prosociality primes on leaders with distinct chronic resource orientations, we refer to the theory of knowledge accessibility (Higgins, 1996). In particular, we suggest that due to leaders' chronic resource orientation towards money and/or time, the constructs underlying these resource orientations—money or prosociality, respectively—were frequently activated in the past and are, therefore, chronically ready to be activated (i.e., chronically accessible) for the individual leader (e.g., Bargh & Thein, 1985). That is to say, leaders' resource orientation make the respective money or prosociality primes more accessible and strengthen or weaken their responses to the given stimuli (Liu & Aaker, 2008). This argument is further supported by prior studies that found that constructs

that are frequently activated lead to a chronic readiness to be activated by specific primes (Andersen & Chen, 2002; Higgins, 1996). In detail, we expect that the interactions between the money and prosocial primes, leaders' resource orientation and the evaluation of the task performed by others unfold as follows:

Hypothesis 3a. The effect of the mere exposure to money on leaders' performance evaluation is moderated by their resource orientation, such that when leaders prefer money to a higher degree than time, the negative effect of the mere exposure to money will be strengthened.

Hypothesis 3b. The effect of the mere exposure to money on leaders' performance evaluation is moderated by their resource orientation, such that when leaders prefer time to a higher degree than money, the negative effect of the mere exposure to money will be attenuated.

Hypothesis 4a. The effect of the mere exposure to prosociality on leaders' performance evaluation is moderated by their resource orientation, such that when leaders prefer money to a higher degree than time, the positive effect of the mere exposure to prosociality will be attenuated.

Hypothesis 4b. The effect of the mere exposure to prosociality on leaders' performance evaluation is moderated by their resource orientation, such that when leaders prefer time to a higher degree than money, the positive effect of the mere exposure to prosociality will be strengthened.

3.3 Method

3.3.1 Participants and Design

We tested our hypotheses with a randomized classroom experiment and collected data from 170 business and economics undergraduate students at a university in Germany. The participation in the study was voluntary and there were no incentives provided. As we intended to investigate how certain primes influence individuals' assessment of a specific task performed by another person, we aimed to conduct our experiment with participants that have a rather low risk for biases that may affect our investigation. For this reason, we follow prior research suggesting that, compared to samples consisting of experienced professionals, student samples are more appropriate for these kinds of behavioral experiments as they promise higher internal validity (Abbink & Rockenbach, 2006; Burmeister-Lamp, Lévesque, & Schade, 2012; Burns, 1985).

Data from 16 participants were excluded because either the participants did not perform the priming exercise, failed the attention check at the end of the study or missed to fill out the measures for the dependent variable. The 154 remaining participants were 46.1% female (n = 71) and averaged 20.58 years of age (SD = 1.66). 91.6% had a monthly disposable income of under €1,000, 5.8% had a monthly disposable income between €1,000, and €1,500 and 2.6% had a monthly disposable income over €1,500. 40.3% of the participants studied international business studies, 53.9% studied economics, and 5.8% were enrolled in sport economics.

3.3.2 Materials and Procedure

We informed the participants that their participation was voluntary and that they could opt to stop at any moment without negative consequences. Furthermore, we asked the participants to remain silent during the completion of the questionnaire and to not engage in

discussions in order to be able to concentrate on the exercise. With completion of the questionnaire, the respondents handed their questionnaires to the experimenter.

After filling out information about their demographics and indicating their resource orientation, participants completed one of three experimental conditions (money, prosociality or control) that they were randomly assigned to in a between-subjects design. We used the established mental priming technique Scrambled Sentence Task (SST) to activate the concepts of money and prosociality (Srull & Wyer, 1979). The SST required the participants to descramble groups of words and form grammatically correct sentences. Research has demonstrated that when these groups of words relate to a specific idea or concept—in our research these concepts relate to money or prosociality—the concept becomes more accessible and psychologically salient for participants without their conscious awareness (e.g. Bargh, Chen, & Burrows, 1996). Moreover, the nonconscious activation of the particular concept leads participants to think and behave in a manner that aligns with the primed idea (Bargh & Chartrand, 1999; Molinsky et al., 2012). For instance, in their first experiment Bargh, Chen, and Burrows (1996) showed that, compared to participants who descrambled sentences that contained neutral words, individuals who descrambled sentences that contained words related to rudeness interrupted others more frequently after the treatment. In addition, the authors found in their second experiment that participants who received an elderly stereotype prime through the SST walked more slowly than participants who received a neutral prime (Bargh et al., 1996). Similarly, in numerous prior money priming studies the SST has been shown to successfully activate the concept of money without the awareness of the participants (e.g., Caruso, Shapira, & Landy, 2017; Molinsky et al., 2012; Vohs, 2015; Vohs et al., 2006).

In contrast to most money priming research that asked participants to descramble 30 sentences, to decrease participant burden caused by a long manipulation exercise (e.g., Sharp & Frankel, 1983) and to account for the peculiarities of our classroom research setting, we

followed Molinsky and colleagues' (2012) approach from their third experiment and presented participants a shortened version of the SST, containing 15 sentences in total.[6] For the formulation of the sentences, we contacted the lead authors of the studies conducted by Molinsky and colleagues (2012) and Hansen, Kutzner, and Wänke (2012). Especially, the material provided by Hansen and colleagues (2012) matched with our research context because the authors successfully applied the SST using German sentences for a sample consisting of German participants.

Each of our sentences consisted of five words and participants were asked to descramble them by crossing out one word and to form complete and grammatically correct sentences. In the money condition, 12 of the sentences contained a word related to money (e.g., "are bills Switzerland British beautiful" unscrambled to read "British bills are beautiful"), while the other three sentences contained neutral words. Correspondingly, the prosociality condition consisted of 12 sentences that contained words related to prosociality (e.g., "are playing we community a" unscrambled to read "we are a community") and three sentences with neutral words. Following prior money priming research, we included in each of the conditions three sentences with neutral words to avoid participants' suspicions about the experimental treatment (e.g., Caruso et al., 2017; Vohs et al., 2006). In the neutral condition, all 15 sentences contained neutral words (e.g., "lives air in Anna Italy" unscrambled to read "Anna lives in Italy").

We randomly assigned the participants to descramble the money sentences (n = 52; 33.3%), the prosocial sentences (n = 47; 30.1%) or the control sentences (n = 57; 36.5%). After descrambling the sentences, the participants were presented with a scenario that asked them to imagine that they were working as a manager in a marketing company and that they delegated

[6] Aarts and colleagues (2005) represent another notable exception by applying the SST with only 10 sentences in their second study.

the design of a first draft of a print advertisement for a new wristwatch collection to a subordinate (Pfeffer et al., 1998). Subsequently, the participants were presented with the first draft of the print advertisement created by their fictive subordinate and were asked to evaluate their subordinate's task performance. For the task performed by the fictive subordinate, we used the final draft of the print advertisement applied in Pfeffer and colleagues' (1998: 315) experiment.

3.3.3 Measures

Resource Orientation Measure. To measure participants' resource orientation, we assessed each individual's natural preferences for money and time. Following Whillans et al. (2016), we presented participants with a short paragraph that outlined two types of people that are at the opposite spectrums of resource orientation: people that prioritize money over time and people that prioritize time over money. While Whillans et al. (2016) describe the two different kinds of people in the first person singular and matched the respective name and gender with those of the participants, we made the measure applicable to our research setting by generalizing the original wording of the short paragraph as follows:

> There are people that **value their money more than their time**. These people are willing to sacrifice their time to have more money. For example, they would rather work more hours and make more money, than work fewer hours and have more time.
>
> There are people that **value their time more than their money**. These people are willing to sacrifice their money to have more time. For example, they would rather work fewer hours and make less money, than work more hours and make more money.

By using "people" as a gender-neutral description for individuals with different resource orientations, we accounted for the effects of homophily which may influence individuals' proclivity to associate with others that show similar demographics (Brashears,

2008). In contrast to the original binary-format resource orientation measure in which participants indicate their chronical preference for either money or time (Whillans et al., 2016), we decided to implement a continuous measure of the construct, allowing us to capture the extent to which participants prioritize money or time. Accordingly, we measured participants' resource orientation towards money and time on a seven-point Likert scale ranging from 1 ("I do not resemble these people at all") to 7 ("I resemble these people totally"). As a result, we obtained two independent measures of participants' money and time orientations.

Evaluation of subordinate's work. We measured participant's evaluation of the draft of the advertisement with six items. On a seven-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree") participants rated the creativity and originality of the draft, its comprehensibility, its appeal to the target group, their subordinate's effort and their subordinate's "business sense" (Pfeffer et al., 1998). Additionally, we measured participants' overall evaluation of the advertisement on a seven-point Likert scale ranging from 1 ("poor") to 7 ("outstanding"). To test the validity of the applied scales, we conducted an exploratory factor analysis with direct oblimin rotation. Our use of the oblique rotation technique allows items to load on multiple factors, indicating their actual effect on all factors (Cardon & Kirk, 2015; Samiee & Chabowski, 2012). Due to low communality value (0.41) and a high cross loading with another factor (0.72 oblimin), we decided to remove the item of comprehensibility. All remaining items had factor loadings greater than 0.50 and are summarized in Appendix 2. With the five remaining items, we calculated an overall index that had a Cronbach's alpha of 0.83 which is considered reliable (Nunnally & Bernstein, 1994).

Control Variables. We included participants' subject of study and their monthly income to control for attitudes towards money that may impact the effectiveness of the money prime. In addition, we included participants' age and gender to control for potential differences in demographics that may influence the evaluation of the task.

3.4 Results

3.4.1 Descriptive Statistics

The independently measured money and time resource orientations of the participants averaged 3.73 (SD = 1.42) and 4.24 (SD = 1.41) respectively, meaning that overall participants had a stronger preference for time than for money. In order to calculate the degree to which participants prefer money over time, time over money or are indifferent towards the two resources, we calculated a resource orientation ratio by dividing participants' money orientation scores by their time orientation scores. Participants' resource orientation ratio averaged 1.12 (SD = 0.86), reflecting our participants' inclination to prefer money to a higher degree over time than vice versa. The means and standard deviations for performance evaluation by condition are shown in Table 5.

Table 5. Means and Standard Deviations by Condition

Condition	**Performance Evaluation**
Money	2.69 (0.97)
Prosociality	2.90 (0.97)
Control	2.91 (0.95)

3.4.2 Hypotheses Testing

To test for our hypothesized main and interaction effects, we ran multiple hierarchical block-wise entry ordinary least squares (OLS) regressions with the control variables, the experimental variable (money, prosociality and neutral prime) and the interaction terms as predictors of participants' evaluation of the given print advertisement. Following Dawson (2014), we included the three experimental conditions into the regression by entering k-1

dummy variables—in our case, the money and prosociality prime conditions—making the neutral condition the reference category.

In the first step, we entered all control variables with performance evaluation as the outcome variable. In the second step, we added the main effects of the experimental variable and the resource orientation ratio. In the third step, the interaction terms, consisting of the experimental variable and resource orientation ratio were included by employing the PROCESS tool for SPSS developed by Hayes (2018) (model 1, default settings). As it is a continuous variable, we mean-centered the resource orientation ratio and left the dichotomous experimental variables of money and prosociality prime constant (Dawson, 2014). Table 6 displays the regression results for the effects of the control variables, experimental conditions, and the interaction term on participants' performance evaluation.

Table 6. Results of OLS Regression Analysis for Performance Evaluation

Variables	Model 1		Model 2		Model 3		Model 4	
	B	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Dependent Variable: Performance Evaluation								
Controls								
Age	-0.12*	0.05	-0.12*	0.05	-0.12*	0.05	-0.11*	0.05
Gender	0.27	0.17	0.27	0.17	0.25	0.16	0.26	0.17
International Business Studies	0.17	0.36	0.22	0.36	0.20	0.33	0.20	0.32
Business Administration	0.18	0.34	0.18	0.34	0.18	0.31	0.15	0.30
Income	0.13	0.17	0.22	0.18	0.28	0.15	0.25	0.16
Main Effects								
Resource Orientation Ratio			-0.13	0.10	-0.25	0.11	-0.07	0.13
Money Prime			-0.16	0.19	-0.17	0.19	-0.17	0.19
Prosocial Prime			-0.02	0.19	-0.03	0.19	-0.03	0.19
Interaction Effect								
Money Prime x Resource Orientation Ratio					0.39	0.25		
Prosocial Prime x Resource Orientation Ratio							-0.18	0.21
R^2		0.06		0.07		0.10		0.08
$\triangle R^2$				0.02		0.02		0.01

*p < 0.05; **p < 0.01; ***p < 0.001

In our first two hypotheses we suggested that money and prosociality priming decrease and increase participant's performance evaluation respectively. We did not find a significant regression equation for these two hypotheses $F(8, 145) = 1.45$, $p = 0.18$, with an R^2 of 0.07. Furthermore, contrary to our hypothesis, a money prime does not have a significant negative effect on participants' evaluation of the task performed by the subordinate ($b = -0.16$, $t(145) = -0.87$, $p = 0.38$), not finding support for hypothesis 1. In hypothesis 2, we suggested a positive effect of the prosociality prime on participants' performance evaluation. We did not find support for this hypothesis as we did not find a significant relationship between the two variables ($b = -0.02$, $t(145) = -0.12$, $p = 0.90$).

Hypotheses 3 and 4 proposed that participants' resource orientation moderates the effect of the priming condition on performance evaluation. We tested these hypotheses by including participants' resource orientation ratio in two different models. In hypothesis 3a we argued that the money prime will be more effective for people who value money to a higher degree than time, while we proposed in hypothesis 3b that the effect of the money prime will be attenuated for people that prioritize time over money. Although we found a significant regression model $F(9, 144) = 2.10$, $p = 0.03$, $R^2 = 0.10$, our analysis shows that the proposed interaction effect is not significant ($b = 0.39$, $t(144) = 1.58$, $p = 0.12$). In hypothesis 4a we proposed that the positive effect of the prosociality prime on performance evaluation will be attenuated when individuals prioritize money over time. Correspondingly, we theorized in hypothesis 4b that the positive effect of the prosociality prime on performance evaluation will be stronger for individuals that value time to a higher degree than money. However, our model shows that the prosociality prime and the participants' resource orientation ratio do not explain a significant proportion of variance in performance evaluation $F(9, 144) = 1.61$, $p = 0.12$, $R^2 = 0.08$, resulting in a non-significant interaction term for the proposed interaction effect (b = -

0.18, $t(144) = -0.87$, $p = 0.39$). Therefore, the results of our analysis do not support hypotheses 4a and 4b.

From our control variables, participants' age shows a significant negative effect on performance evaluation in all four Models (e.g., $b = -0.122$, $t(148) = -2.53$, $p = 0.01$ in model 1), suggesting that older participants evaluate the task performed by their subordinate lower than younger participants. An explanation for this finding could be that older participants have higher expectations for other's task performance. Herein, older participants may evaluate other's task performance more critically as they are themselves more experience and skilled, and therefore expect others to show higher performance.

3.4.3 Supplemental Analysis: Money and Time Preference as Moderators

We conducted a supplemental analysis to investigate whether a different methodological treatment of our resource orientation measure shows diverging effects from the main analysis. For this supplemental analysis, we followed Whillans and colleagues' (2016) original conceptualization of the resource orientation measure and formed two variables that capture participants' broad preferences for either money or time and thereby reflect the trade-offs between the two resources. Particularly, we categorized participants that indicated a higher score for money orientation than for time orientation to have a *money preference*, and participants' who indicated a higher time orientation to have a *time preference*. Following this categorization, 32.5% (N=50) participants preferred money, while 49.4% (N=76) had a preference for time (18.2%, N=28 participants had no preference for either money or time). Accordingly, we coded participants that indicated to have no preference for either money or time in a third category. Subsequently, we included the variables indicating participants'

money or time preference as moderators into the regression, making participants that did not indicate a clear preference for one of the two resources the reference category (Dawson, 2014).[7]

Table 7. Results of OLS Regression Analysis: Money and Time Preference as Moderators

	Model 1		**Model 2**		**Model 3**		**Model 4**	
Variables	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Dependent Variable: Performance Evaluation								
Controls								
Age	-0.12*	0.05	-0.12*	0.05	-0.13*	0.05	-0.12*	0.05
Gender	0.27	0.17	0.27	0.17	0.26	0.18	0.27	0.18
International Business Studies	0.17	0.36	0.19	0.36	0.16	0.34	0.16	0.34
Business Administration	0.18	0.34	0.17	0.35	0.17	0.32	0.15	0.32
Income	0.13	0.17	0.16	0.18	0.19	0.16	0.18	0.16
Main Effects								
Money Preference			-0.11	0.23	-0.16	0.31	-0.02	0.32
Time Preference			0.05	0.21	0.12	0.26	0.06	0.29
Money Prime			-0.15	0.19	-0.05	0.53	-0.16	0.20
Prosocial Prime			-0.02	0.19	-0.02	0.17	0.11	0.40
Interaction Effect								
Money Prime x Money Preference					0.10	0.63		
Money Prime x Time Preference					-0.26	0.56		
Prosocial Prime x Money Preference							-0.31	0.56
Prosocial Prime x Time Preference							-0.06	0.29
R^2		0.06		0.07		0.07		0.07
$\triangle R^2$				0.01		0.00		0.00

*p < 0.05; **p < 0.01; ***p < 0.001

We tested our hypotheses with four different models. Similar to our main analysis, we did not find a significant regression equation to test our first two hypotheses $F(9, 144) = 1.14$, $p = 0.33$, with an R^2 of 0.07. Additionally, the variables that indicated the experimental conditions of the money and prosociality prime show no significance and thus do not support hypothesis 1 ($b = -0.15$, $t(144) = -0.81$, $p = 0.42$) and hypothesis 2 ($b = -0.02$, $t(144) = -0.09$, $p = 0.92$). Moreover, we find no support for hypotheses 3a and 3b because our model does not

[7] For the supplemental analysis we used model 2 (default settings) from the PROCESS tool for SPSS (Hayes, 2018).

explain a significant proportion of the relationship between our independent variables and performance evaluation $F(11, 142) = 1.22$, $p = 0.28$, $R^2 = 0.07$ and results in a nonsignificant interaction effect between money prime and participants' money or time preference ($b = 0.10$, $t(142) = 0.15$, $p = 0.88$) (hypothesis 3a) and ($b = -0.26$, $t(142) = -0.47$, $p = 0.64$) (hypothesis 3b). Finally, we did not find a significant regression equation for our fourth model $F(11, 142) = 1.20$, $p = 0.29$, $R^2 = 0.07$ either. Thus, hypotheses 4a and 4b cannot be supported because the aforementioned moderators of participants' preference for money and time are nonsignificant ($b = -0.31$, $t(142) = -0.56$, $p = 0.57$) and ($b = -0.06$, $t(142) = -0.13$, $p = 0.90$).

In an additional supplemental analysis, we tested our hypotheses by including participants' continuous money and time orientation measures as two independent moderator variable into the regression analysis. Similar to the main analysis and the first supplemental analysis, we did not find a significant regression equation and no significant effects of the proposed direct and interaction effects, and, therefore, did not find support for our hypotheses. See Appendix 3 for the regression results of the second supplemental analysis.

3.5 Discussion

3.5.1 Implications for Delegation and Money Priming Research

The purpose of this study was to explore whether money primes affect leaders' evaluation of a task performed by a subordinate. More specifically, we proposed that, in comparison to prosociality and neutral primes, money-primed leaders evaluate their subordinate's task performance more negatively. In turn, we argued that leaders' negative perception of a task performed by others would discourage them from delegating responsibilities to a subordinate. Furthermore, we included leaders' resource orientation towards money and time as an intervening variable that could potentially explain the varying effectiveness of money and prosociality primes found in prior research. Contrary to our theory,

we found no significant direct effect of money and prosociality primes on leaders' performance evaluation of others' work. Moreover, our analysis does not show the expected interaction effect between the respective primes and leaders' resource orientation ratio that we used to measure the extent to which leaders prefer money over time or vice versa.

Although we did not find significant effects for the proposed hypotheses, our research contributes to the performance evaluation, delegation and money priming literatures in the following manner. First, our theory about the influence of money and prosociality primes on leaders' performance evaluation provides insights about potential mechanisms through which certain psychological factors can shape leaders' decision-making about the delegation of tasks. Specifically, we propose that if leaders put a strong focus on money (i.e., think a lot about money), and, in turn, evaluate their subordinate's performance lower, it is of no surprise that the simple instruction "delegate more" does not lead to the desired behavioral impact. In that sense, our study contributes to the literature by suggesting that leaders' cognition in the performance evaluation and delegation contexts can lead to inefficient resources allocation decisions because, even despite subordinates' objectively high performance, leaders may be unwilling to delegate tasks. Thereby, additional studies are needed to explain why leaders may be reluctant to delegate tasks, although their subordinates rank high on objective performance measures.

Second, we introduce leaders' resource orientation towards money and/or time as an additional psychological factor that moderates the effectiveness of money and prosociality primes on performance evaluation. Our theorizing is based on research indicating that people that value money more than time behave more rationally (Teng et al., 2016) and in accordance with a market-pricing mode (Fiske, 1992; Vohs et al., 2006), whereas people that value time more than money put a higher emphasis on emotional comfort (Mogilner, 2010) and communal values (Liu & Aaker, 2008). Herein, we do not only provide a theory about the direct effects

of money and prosociality priming, but also take into account how leaders' preferences for the resources money and time as more stable psychological factors may influence the effectiveness of money and prosociality primes on leaders' performance evaluations of other's work. Additional research is needed that explores how the interplay between specific environmental cues (e.g., money or prosociality primes) and leaders' stable psychological characteristics (e.g., resource orientation) influences their performance evaluation.

Third, our study contributes to the research on people's resource orientation by considering the degree to which individuals prefer one resource over the other (i.e., money over time or vice versa). Thereby, we enrich Whillans and colleagues' (2016) original binary-format application of the resource orientation measure. While Whillans and colleagues' (2016) were interested in determining people's general preferences related to money over time or vice versa, with the application of the resource orientation ratio as a continuous measure that captures the degree to which people prefer one resource over the other, we focused on assessing people's resource-specific preferences. We hope that our application of the resource orientation ratio will inspire future research to take different theoretical perspectives that will provide a more nuanced understanding about the underlying mechanisms of the resource orientation construct and its interplay with performance evaluation as a dependent variable.

3.5.2 Lack of Significant Results

The low variance in participants' performance evaluation ratings as our dependent variable suggests that our experimental treatment (i.e., money, prosociality, and neutral prime) did not have the desired priming effects, such that the respective concepts were not made salient for the participants of the experiment. Even though our study is subject to several limitations that we are going to discuss in the next section, the lack of significant findings of the hypothesized effects of money and prosociality primes points to the current discussions and

growing skepticism about social priming research in general (e.g., Pashler, Coburn, & Harris, 2012; Shanks et al., 2015), and money priming in particular (e.g., Rohrer et al., 2015; Rohrer, Pashler, & Harris, 2019).

The *replication crisis* (Stanley, Carter, & Doucouliagos, 2018) in the social priming field encompasses even the most prominent research, such as Doyen and colleagues' (2012) failed attempt to replicate Bargh et al.'s (1996) study results. Similarly, scholars were not able to replicate Vohs and colleagues' (2006) pioneering findings as well as other results from money priming research (Caruso et al., 2013; Rohrer et al., 2015, 2019; Vadillo, Hardwicke, & Shanks, 2016). In addition, questionable methodological research practices (John, Loewenstein, & Prelec, 2012) applied by money priming researchers damaged the field as well (Pashler, Rohrer, Abramson, Wolfson, & Harris, 2016). For instance, in their study Chatterjee, Rose, and Sinha (2013) reported extraordinary large money priming effects, suggesting that people who were exposed to concepts related to cash or credit cards were much less (after cash primes) or much more (after credit card primes) willing to help others. Impressed by the large effects reported in Chatterjee and colleagues' (2013) study, Pashler et al. (2016) investigated the data of the original study and discovered oddities which weakened the credibility of the research, and, ultimately, led to the study's retraction due to unexplained anomalies and coding errors.

Since these oddities occurred and research findings from money priming could not be replicated, scholars strive to shed light on the shortcomings in the literature. For instance, from their meta-analysis of money priming, Lodder et al. (2019) conclude that the field suffers from publication bias as small sample size studies present larger effects than large sample size studies and money priming effects from published studies are found to be larger than from unpublished studies. Furthermore, recent research focused on exploring the effects of different money priming techniques in order to gain a thorough understanding about the underlying

mechanisms and moderators of money priming (Caruso et al., 2017; Lodder et al., 2019; Schuler & Wänke, 2016). Moreover, with the use of functional magnetic resonance imagining, scholars could provide a deeper understanding about the neurophysiological mechanisms that are responsible for prime-to-behavior effects (Wang & Hamilton, 2013). By hypothesizing leaders' resource orientation as a potential moderator for the effects of money priming, we make a theoretical contribution to the ongoing discussions about money priming effect sizes, and the difficult replicability and reproducibility of prior research findings in the field.

3.6 Limitations and Future Research

As any research, our study is subject to several limitations. A key limitation is that the low variance in our dependent variable suggests that the SST as our priming technique seems to have failed to activate the concepts of money and prosociality. We decided to use the SST as it has been found to reliably activate the concept of money (e.g., Hansen et al., 2012; Jiang et al., 2014; Kouchaki et al., 2013; Schuler & Wänke, 2016; Vohs et al., 2006) and concepts related to prosociality (e.g., Bargh et al., 2001; Ferguson, 2008). However, while most money-priming research applied the SST in lab experiments[8] or in experiments using samples from MTurk (e.g., Capaldi & Zelenski, 2016), to our knowledge, there are no published money priming studies that used this technique with undergraduate students in a classroom experiment. Although we considered the peculiarities of this experimental setting by reminding the participants to remain silent and focused, it is possible that the participants have been distracted and unable to concentrate on survey completion, making it unlikely to activate the respective concepts.

[8] A notable exception is Hansen et al.'s (2012) first experiment in which money was primed in an university cafeteria.

In addition, contrary to most money priming studies that asked participants to unscramble 30 sentences in total where half contained money-related words (Srull & Wyer, 1979), we aimed to minimize participant burden and, therefore, presented participants with a shortened version of the SST which consisted of 15 sentences overall. To further address participants' possible distractions and lack of attention during survey completion, in our version of the manipulation exercise the priming conditions contained 12 sentences with prime-related words (money or prosociality) and three neutral words while the neutral condition contained 15 neutral words. Nevertheless, in contrast to Molinsky et al. (2012) and Aarts et al. (2005) who successfully used a shortened version of the SST to prime the concept of money, we could not find any significant effects in our analysis. Consequently, we argue that in order to successfully prime money with the SST in our research setting, the manipulation exercise needs to be adjusted.

We propose that future research could further increase the total amount of sentences and/or the ratio of the sentences that contain prime-related words. This approach is in line with Srull and Wyer's (1979) finding that the SST had the largest effect with 60 sentences that contained 80% (i.e., 48) prime-related sentences, followed by 30 sentences that also contained 80% (i.e., 24) sentences with prime-related words. Accordingly, we suggest that future studies account for the distinctiveness of experiments outside lab settings by providing participants with a more extensive version of the SST, such as 30 sentences of which 80% contain sentences with prime-related words (i.e., 24 prime-related and 6 neutral sentences) to increase participants' exposure to the concept of money. Yet, scholars should note that through more obtrusive priming, participants might suspect the purpose of the SST and develop distrust towards the experimental procedure.

As an alternative to the SST, future research could attempt to apply different money priming techniques that might be better suited for non-lab experiments, such as the *perceptual-*

estimation or *imagine-life* manipulations (Caruso et al., 2017: 1150). Still, it is important to note that Caruso and colleagues (2017) found that the mechanisms behind the effects of distinct money-primes on various dependent variables are inconsistent and need further investigation. Another shortcoming of our study is that we were not able to measure whether the manipulation exercise activated the respective concepts of money or prosociality because established stem-completion tasks cannot be easily translated and adapted for languages other than English. To test if the experimental treatment made the concept of money cognitively more accessible, future studies could include the money-activation measure, consisting of a stem-completion task that has been shown to be affected by the SST (Vohs et al., 2006, supplemental material).

It is also worth noting that the print advertisement that we used as the basis to measure our dependent variable performance evaluation may have confounded the effects of the experimental treatment. This is because the wristwatch context of the print advertisement could have functioned as a time prime that interfered with the experimental conditions. With other words, the material that we used to create the context to capture participants' performance evaluation measure may have operated as a prime that activated the concept of time, attenuating or strengthening the previous experimental treatment of the respective money and prosociality primes. To capture the performance outcome measure in a neutral manner, we advise future research to use material that does not include cues related to money, prosociality, or time.

Finally, as an appropriate alternative for data collection, we suggest using samples from MTurk to test our hypotheses. Hence, the platform is regarded as a convenient source for high quality psychometric data (Buhrmester, Kwang, & Gosling, 2011) with samples that, for example, represent the U.S population better than traditional student samples (Paolacci, Chandler, & Ipeirotis, 2010). Moreover, samples from MTurk have been successfully used in money-priming research (Capaldi & Zelenski, 2016; Caruso et al., 2013).

3.7 Conclusion

Although we do not find support for the hypothesized direct effects of money and prosociality primes on leaders' performance evaluation, we provide an inspiration for future research to further investigate leaders' cognition as they make decisions considering the delegation of tasks to their subordinates. Moreover, our theoretical contribution about leaders' resource orientation as a psychological feature that may moderate the effect of money and prosociality primes offers a promising avenue for future research to further investigate the interplay between environmental cues and leaders' more stable psychological characteristics.

CHAPTER 4 | How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship[9]

Abstract

Championing, experimenting, and re-adjusting new venture ideas are imperative for successful corporate entrepreneurship (CE). Although these activities are mostly performed by non-managerial employees (NMEs), prior research predominantly focuses on senior and middle managers' entrepreneurial behavior leaving a gap in understanding NMEs' role in CE. Drawing on cognitive frame theory, we seek to understand how NMEs' cognition shapes new venture idea elaboration in the corporate venture inception phase. By means of an inductive qualitative study with 33 informants from two organizations, our analysis reveals that NMEs' collaboration results in a convergence or divergence of their contracted and expanded frames that, in turn, determine whether a dominant new venture idea emerges and is championed to senior management.

[9] This chapter is co-authored by Slawa Tomin, Katrin Burmeister-Lamp, and Rüdiger Kabst. The chapter was presented at the 24. Interdisziplinäre Jahreskonferenz zu Entrepreneurship, Innovation und Mittelstand (G-Forum 2020) and is accepted for the Annual Meeting of the Academy of Management 2022.

4.1 Introduction

New venture ideas, defined as preliminary, mostly incomplete mental representations of a potential future venture, are a prerequisite for corporate innovation (Berg, 2016; Davidsson, 2015; Frederiks, Englis, Ehrenhard, & Groen, 2019; Vogel, 2017). In order to capture the value of new venture ideas and corresponding entrepreneurial opportunities, established firms engage in corporate entrepreneurship (CE) that allows creative worker teams—groups of individuals that aim to develop something original that is useful (George, 2007; Gray et al., 2020)—to pursue novel opportunities autonomously detached from established organizational structures (Sharma & Chrisman, 1999). So far, studies have primarily highlighted that CE and employees' associated entrepreneurial behavior is influenced by organizational-level factors such as management support or supportive organizational structures (e.g., Corbett, Covin, O'Connor, & Tucci, 2013; Hornsby et al., 2009; Hornsby, Kuratko, & Zahra, 2002). Contrary, prior research addressed the human-side of CE only vaguely by analyzing the role of individual-level characteristics for entrepreneurial behavior within CE (e.g., Biniari, 2012; Rigtering et al., 2019).

Entrepreneurial behavior can be found across all hierarchical levels in which individuals exhibit distinct responsibilities (Floyd & Lane, 2000; Ireland et al., 2009). Yet, CE research predominantly attributes successful CE initiatives to senior and middle managers' entrepreneurial behavior (e.g., Covin & Slevin, 1991; Hornsby et al., 2009; Kuratko, Ireland, Covin, & Hornsby, 2005) at the expense of illuminating lower-level employees' entrepreneurial behavior. Thereby, the role of non-managerial employees' (NME) is often stigmatized to a tactical and reactive implementer role that is seen as uninfluential and remains under-represented in research with few exceptions (e.g., Gibson et al., 2019; Zimmermann et al., 2018). NMEs include employees such as front-line managers and line workers that are responsible for concrete operational activities and shape the processes surrounding the

experimentation, adjustment and confirmation of products, thereby contributing to the exploration of potential innovations (Floyd & Lane, 2000; Gibson et al., 2019; Zimmermann et al., 2018). Therefore, in contrast to prior CE research that promotes a cascading top-down (e.g., Floyd & Lane, 2000; Hornsby et al., 2002; Kuratko et al., 2005) rather than a bottom-up approach (Burgelman, 1983), in this study we acknowledge NMEs' active role in CE processes and argue that their entrepreneurial behavior is at the genesis of new venture creation.

To explore characteristics that shape NMEs' entrepreneurial behavior, we draw upon cognitive frame theory (Goffmann, 1974) and investigate how NMEs interpret and perceive information from complex and uncertain environments encountered in the new venture idea elaboration process (i.e., the systematical evaluation, interpretation, and advancement of ideas (Perry-Smith & Mannucci, 2017)). As the new venture idea elaboration process does not take place in isolation and individuals' tend to apply distinct cognitive frames (e.g. Kaplan, 2008), NMEs within a creative team will likely differ in their perceptions and evaluation of a given set of ideas (Vogel, 2017). In this study, we seek to uncover the frame-related processes through which creative teams of NMEs achieve either a collective understanding or remain separated in their perspectives due to different interpretations about new venture ideas—mechanisms that remain mostly obscured in prior research as argued by Patzelt et al. (2020). Accordingly, analyzing the frame-related mechanisms underlying the inter-individual idea elaboration process is of primary interest to understand how and when dominant new venture ideas emerge from NMEs' collaboration that leads to entrepreneurial behavior and manifests in new venture creation.

To address our research objective, we conducted an inductive qualitative study with 35 semi-structured interviews and thereby seek to extend the CE and new venture creation literature in three ways. First, we are among the first to empirically show the importance of NMEs for new venture idea elaboration and selection (Perry-Smith & Mannucci, 2017) that

are precursors for the emergence of new (corporate) venture projects and venture creation. Particularly, complementary to the role of senior-and middle managers (e.g., Corbett et al., 2013; Hornsby et al., 2009, 2002), we contribute on the positive account and importance of NMEs within CE.

Second, we uncover the cognitive frames applied by NMEs in the new venture elaboration process, highlighting the role of individuals' cognitions in CE (e.g., Corbett & Hmieleski, 2007; Corbett, Neck, & DeTienne, 2007). We find that NMEs use distinct *contracted* (i.e., short-term perspective, technology-focused problem solving, and narrow perception of competition) or *expanded* (i.e., focus on customer needs, illumination of diverging business models, and broad perception of competition) frames to decompose the complexity of novel information related to venture operations. Thereby, we contribute towards understanding individual-level determinants (e.g., Rigtering et al., 2019) beyond the role of organizational factors that facilitate or impede employees' entrepreneurial behavior (Hornsby et al., 2009, 2002; Kuratko et al., 2005).

Third, we develop a theoretical model of frame-related interactions within the venture inception phase that result in frame convergence or frame divergence. We shed light on the importance of cognitive frames that function as the inter-individual nexus to integrate or disregard differences in individual judgments that can influence the success of corporate venture projects (e.g., Kaplan, 2008; Patzelt et al., 2020). Herein, we uncover NMEs' distinct bottom-up behavioral practices underlying the respective outcomes of frame *convergence* (i.e., recognition, expansion, bridging) or frame *divergence* (i.e., defense, confusion, bypassing).

4.2 Theoretical Background

4.2.1 Non-Managerial Employees as Enablers for Corporate Entrepreneurship

We adopt the notion by Sharma and Chrisman (1999) defining CE as a process in which individuals and/or groups of individuals engage in new venture creation within the pre-existing firm, promote renewal of core competencies and innovate through transformational activities. To successfully foster CE initiatives, organizations need to encourage and motivate key personnel to become entrepreneurially active through explicit entrepreneurial behaviors (e.g., Rigtering et al., 2019).

However, corporate entrepreneurial behavior varies across hierarchical levels, implying distinct aims and tasks at each level (Floyd & Lane, 2000; Kuratko et al., 2005). Particularly, senior managers provide the strategic direction, deploy resources, and empower subordinates to foster creative ideas, while middle managers oversee the revision of ideas and are instructed to nurture and advocate new venture ideas by means of facilitating experimentation (Bower, 1970; Floyd & Lane, 2000). Both, senior and middle managers are primarily excluded from the operative doing and rather nurture the entrepreneurial behavior of NMEs (Floyd & Lane, 2000; Kuratko et al., 2005), whereby senior as well as middle managers take the role as feedback-providers for the re-adjustment of creative ideas (e.g., Mueller et al., 2018). In contrary, NMEs are responsible for the explicit entrepreneurial doing, linking technical and operative abilities to product and venture demands, present novel insights to their peers, and ultimately champion ideas by exposing them to senior and middle managers (Floyd & Lane, 2000; Kuratko et al., 2005).

While the importance of corporate entrepreneurial behavior is indisputable, cognitive characteristics and skills are crucial for the regulation of individuals' behavior. Specifically, the evaluation and therewith the selection of new venture ideas that are championed to senior

management might be biased by individuals' unique perspectives and interpretations of novel information (Berg, 2016; Mueller et al., 2012) . Considering the collaborative nature of CE processes, this notion implies that individual NMEs are likely to evaluate the same venture idea differently which requires a group of NMEs to find a common understanding in order to select and successfully champion a dominant new venture idea (Patzelt et al., 2020; Vogel, 2017). In contrast, a lack of alignment in NMEs' judgement about what constitutes a potentially valuable and useful new venture idea most likely results in deferred decision-making and disconnected individual activities (Kaplan, 2008).

4.2.2 Cognitive Frames and New Venture Ideas

The important role of individuals‘ cognition in organizational contexts was already highlighted by March and Simon (1958) proposing that every individual possesses a unique set of knowledge, beliefs and assumptions that influence their decision-making and behavior. Challenged by environments characterized by novelty, complexity, and uncertainty that exceed humans' information processing capacity (Simon, 1962), individuals use their given set of knowledge and beliefs—their cognitive frames—to simplify sensemaking and "create order out of chaos" (Giorgi & Weber, 2015: 335).

Cognitive frames, described as "schemata of interpretation" (Goffmann, 1974: 21) or "lenses" (Raffaelli, Glynn, & Tushman, 2019) through which individuals non-consciously filter and decompose perceptual information from the environment, are mental templates (Miron-Spektor, Gino, & Argote, 2011) that function as "underlying structures of belief, perception, and appreciation" (Schön & Rein, 1994: 23). As corporate venturing activities imply a high degree of uncertainty and novelty, cognitive frames represent the foundation for NMEs to interpret the contextual information and organize the chaos they encounter into an order that enables them to generate ideas for problems that they find useful to solve (e.g.,

Leonardi, 2011). Specifically, the importance of corporate entrepreneurs' cognition has been conceptionally promoted by CE scholars (e.g., Corbett & Hmieleski, 2007), acknowledging that mental models are crucial to assess, judge and take sound decisions regarding opportunity evaluation and venture creation (Corbett & Hmieleski, 2007; Mitchell et al., 2002).

Especially the venture inception phase is characterized by high uncertainty and thereby permits individuals to exhibit diverging interpretations that may result in a variety of new venture ideas. The venture inception phase entails two major activities that relate to both, new venture idea generation and subsequent idea elaboration (Perry-Smith & Mannucci, 2017), processes that do not entail any pre-defined formal structures or venture establishment (Patzelt et al., 2020). Idea generation represents an independent process in which NMEs individually generate a venture idea (Perry-Smith & Mannucci, 2017), whereby NMEs are exclusively guided by their inherent cognitive frames to come up with ideas that they find worthy to pursue in the subsequent idea elaboration phase together with other employees.

The following *idea elaboration* entails an interactive process in which a group of NMEs systematically evaluate, interpret, advance and, finally, collectively select the dominant new venture ideas that should be championed to senior managers (Perry-Smith & Mannucci, 2017). In the idea elaboration phase, NMEs can enact two distinct roles, either as idea-owners or idea-evaluators. As idea-owners, NMEs expose their own ideas to their peers with the intention to gain legitimacy and gather support, while as idea-evaluators, NMEs evaluate the ideas presented by idea-owners (Perry-Smith & Mannucci, 2017). Depending on the roles assumed by the respective NMEs, the actors dynamically change between the mentioned roles. This dynamic process implies that, in case NMEs apply divergent cognitive frames, individuals' interpretation and evaluation of another's ideas might be different and complicate the new venture idea elaboration process (Vogel, 2017). In turn, to be able to identify a dominant new venture idea and champion it to senior managers, a group consisting of NMEs that apply

divergent frames is required to reach an agreement about the idea to be pursued. Thus, the actors need to establish a common frame-based understanding about the potential of the presented new venture ideas by acknowledging or integrating another's perspectives.

As a mechanism that may allow actors to integrate their diverging frames, scholars point to the construct of frame resonance. Frame resonance, described as the alignment between the frames applied by different actors, represents a mechanism that allows NMEs to integrate their diverging perspectives (Giorgi, 2017). The more individuals' frames resonate, i.e., the more individuals' frames match or align, the smaller is the gap between their interpretations and the more actors agree in their values, inclinations, or assumptions (Giorgi, 2017; Kaplan & Tripsas, 2008). This notion suggests that the resonance between the frames applied by the respective NMEs also shapes their interactions in the new venture elaboration process. Consequently, the more NMEs perceive environmental information through the same cognitive lens, the more they will be able to understand another's perspectives and integrate different viewpoints that can reshape their thinking.

Given the limited insights and theoretical precedent on the role of NMEs, their entrepreneurial behavior within CE, and the influence of NMEs' cognitive frames on the obscured process of new venture idea elaboration within creative teams, we employed a qualitative inductive study suited to address "how" questions (Eisenhardt, 1989). In particular, we intend to shed light on two related research questions. First, we aim to explore which frames NMEs apply in the new venture idea elaboration process. Second, we investigate how NMEs' frames shape the underlying processes of idea elaboration and, in turn, influence the outcome of these processes.

4.3 Method

With the conceptual bridge between new venture elaboration and cognitive frames, we followed an inductive research approach to examine explicitly 1) *how* frames influence new venture creation in the corporate context and 2) *how* actors exhibit certain context-specific behaviors in their interpersonal interactions within venture creation processes. Given the lack of understanding regarding the cognitive processes that may relate to NMEs' entrepreneurial behavior, an inductive qualitative research design allowed us to study processes that can explain how certain behaviors emerge and how outcomes are realized (Langley, 1999), which is in line with our objective of exploring nuanced processes that often remain obscured.

4.3.1 Research Setting and Sampling

For our research, we selected established organizations that recently began to expand their innovation endeavors beyond traditional R&D departments and engage in internal corporate venturing (i.e., develop and create new ventures from within a pre-existing firm), drawing upon novel innovation methods such as the lean startup (Ries, 2011; Shepherd & Gruber, 2020) and design thinking (Elsbach & Stigliani, 2018; Micheli, Wilner, Bhatti, Mura, & Beverland, 2019), while simultaneously managing their established operational routines and processes in major parts of the organization. As part of our sample, we chose departments and projects relying on work environments that adapted the aforementioned innovation methods as they promise to imply a variation of the frames applied by NMEs (Elsbach & Stigliani, 2018).

Internal corporate venturing addresses the contradictory demands of managing exploitation-oriented corporate environments and exploration-oriented entrepreneurial work environments simultaneously by temporally assigning NMEs to internal corporate venture teams that are spatially (or contextually) separated from the parent firm and operating autonomously (March, 1991; Raisch & Tushman, 2016). Thus, internal corporate venturing

represents a promising research setting as it allows us to observe frames that NMEs apply within CE as they are prompted to generate new knowledge and capture entrepreneurial opportunities. Moreover, we are able to examine how NMEs' frames shape the collaboration within creative teams during idea elaboration and we understand the interactions between NMEs in their roles as idea-owners and idea-evaluators.

Our sample consists of two internationally operating organizations, for reasons of anonymity we named them Alpha and Beta, both from high-tech manufacturing industries. Alpha is a family-owned company that manufactures hardware for private and commercial housing, predominantly offering products for the high-quality segment. Beta is a publicly traded multinational organization that is specialized in plant engineering and machinery. For the past years, both organizations increasingly focused their endeavors on extending their physical product portfolio by offering digital and data-based products and services.

Alpha. Alpha promoted internal corporate venturing activities by encouraging employees to innovate alongside their regular day-to-day work (e.g., Birkinshaw & Gibson, 2004). At Alpha we explored how the cross-functional collaboration between NMEs from a newly founded innovation unit for digital solutions, *FutureLike*, and NMEs from Alpha's operational business units developed. FutureLike was established with the purpose to discover and validate new venture ideas and, if found promising, implement the idea by forming an internal corporate venture with the aim of scaling up the production and rollout. At the time of our research FutureLike consisted of 50 employees embracing distinct backgrounds and competences, such as business, technology, and design. Employees within FutureLike foster innovation projects from a user-centered design perspective, applying methodologies that emerged from entrepreneurship practice such as lean startup and design thinking (e.g., Leatherbee & Katila, 2020; Micheli et al., 2019; Ries, 2011; Shepherd & Gruber, 2020). One

of the authors supported different creative teams from FutureLike with business coaching, helping to validate the potential of early-stage internal corporate venture projects.

Beta. Complementary, at Beta we investigated frame interactions in an organizationally separated internal corporate venture. The focal project *NextTech* originated from an innovation workshop that Beta conducted in cooperation with a university incubator. The workshop included seven multi-disciplinary teams with NMEs from various business units and university students with diverse educational backgrounds. Beta's senior managers selected NextTech as a promising project to foster a novel market opportunity and decided to fund the project by means of financial and human capital resources. At the outset, the project team was composed of five team members with diverse functional backgrounds such as business, marketing, and engineering. In order to enable the team to work autonomously from Beta's organizational structures and routines, NextTech was geographically re-located to the university incubator that accentuates the benefits of spatial structural separation (e.g., Raisch, Birkinshaw, Probst, & Tushman, 2009). NextTech worked independently from Beta's established organizational structures for 11 months, meanwhile receiving weekly methodological coaching related to the business model canvas, lean startup and design thinking methodologies (Elsbach & Stigliani, 2018; Leatherbee & Katila, 2020; Micheli et al., 2019; Osterwalder & Pigneur, 2010). After 11 months, NextTech was successfully reintegrated into the parent company's product portfolio and corporate structures. Complementary to the data that we gathered from the NextTech project, we additionally collected data of informants from Beta's operating business units.

4.3.2 Data Collection

We conducted 35 semi-structured interviews (19 at Alpha, 16 at Beta) with 33 informants that we collected from June 2018 to August 2020. In accordance with the CE context of our study, most informants have non-managerial roles with diverse professional

backgrounds and from various business units within the two organizations. During the interviews we aimed to gather insights about two primary subjects. First, we intended to uncover which frames actors apply. Second, we aimed to collect data about tensions arising between informants' own and others' understandings regarding new venture ideas and how they typically attempt to resolve misunderstandings about diverging interpretations.

Following recent conceptualizations of frames (e.g., Raffaelli et al., 2019), we formulated our interview questions by using the metaphor of *lenses* through which informants perceive new venture ideas (e.g., *"Which lens did you use to evaluate a specific innovation idea? Which lens did your manager use?"*). These kinds of questions led informants to recall certain behaviors and actions taken by themselves or other organizational actors and helped them to reflect on their own and others' interpretation and evaluation of new venture ideas. Thereby, we were able to make the abstract concept of frames more tangible and analyze in what kind of behaviors actors' frames may manifest. Furthermore, in order to gain deeper insights about frame interactions, we adapted the visual diagram developed by Bergami and Bagozzi (2000) as a discussion probe. Thereby, we showed informants a series of overlapping circles while asking how they perceived the overlap between their own and other stakeholders' (e.g., direct co-workers, co-workers from other business units, senior managers) perspectives. With this instrument, we were able to trigger meaningful conversations about the reasons why informants perceive the overlaps in a certain way. The interviews averaged 61 minutes, recording in total 2,153 minutes of conversation and subsequently transcribed verbatim.

4.3.3 Data Analysis

In the first step of our analysis, we explored the frames applied by informants and how these frames influence individuals' new venture idea evaluation. In the second step, we treated the interactions between NMEs with diverging frames as separate cases and put the findings

into our CE research context (Eisenhardt & Graebner, 2007). Before coding the data, we summarized the idiosyncrasies of our two research settings and reviewed informants' demographic data, tenure, and their respective position in the organization. This allowed us to reflect on the context of informants' statements and analyze our data accordingly.

Although we had a particular research interest, during the analytical process we aimed to retain an open mind, reflected on our own interpretations, and let us guide by the data (Suddaby, 2006). Thereby, we followed the established coding and analysis guidelines for inductive qualitative research (Miles & Huberman, 1994). We started our analysis by open coding and created as many codes as possible from each informant perspective (Strauss & Corbin, 1998). In this process, we inductively coded informant statements (i.e., their own words) into first order codes reflecting informants' interpretations about new venture ideas and their behaviors in the new venture elaboration process. Afterwards, we compared the first order codes across the informants to discover patterns of ideas and concepts that allowed us to group first order codes with similar meanings into more general categories, defined as second order codes. In that sense, the second order codes represent researchers' own understandings and explanations about situations and patterns that are occurring across the sample. Finally, we were able to identify relationships between the second order codes and aggregated from these patterns theoretical mechanisms that entailed NMEs' cognitive frames, their behavioral practices, and the frame-related outcomes of their interactions in the new venture idea elaboration process (Gioia et al., 2013).[10]

The data analysis process resulted in numerous concepts that we compared to one another as well as to the existing literature (Strauss & Corbin, 1998). We held regular meetings among the research team to reflect on our understanding of the emergent concepts and revisited

[10] The process of open coding and the creation of first order codes was conducted by one of the authors. The aggregation to second order codes was performed by the whole research team.

the data in order to investigate whether our findings are consistent across the sample or if there was too much overlap between the themes. In case the concepts were inconsistent or showed too much overlap, we decided to drop or merge the respective codes (Eisenhardt, 1989). In summary, through a highly-iterative process we derived different data structures that describe the relationships between the observed phenomena (first order informant concept), the abstraction from these data (second order themes) and, finally, the interrelationships between the concepts (aggregate dimension) (Gioia et al., 2013).

4.4 Results

4.4.1 Contracted and Expanded Cognitive Frames

Figure 4 illustrates NMEs' contracted and expanded cognitive frames that they apply alongside new venture idea elaboration.[11] Depending on the respective application of frames, NMEs differed in the evaluation of new venture ideas that they considered as promising and useful for further realization.

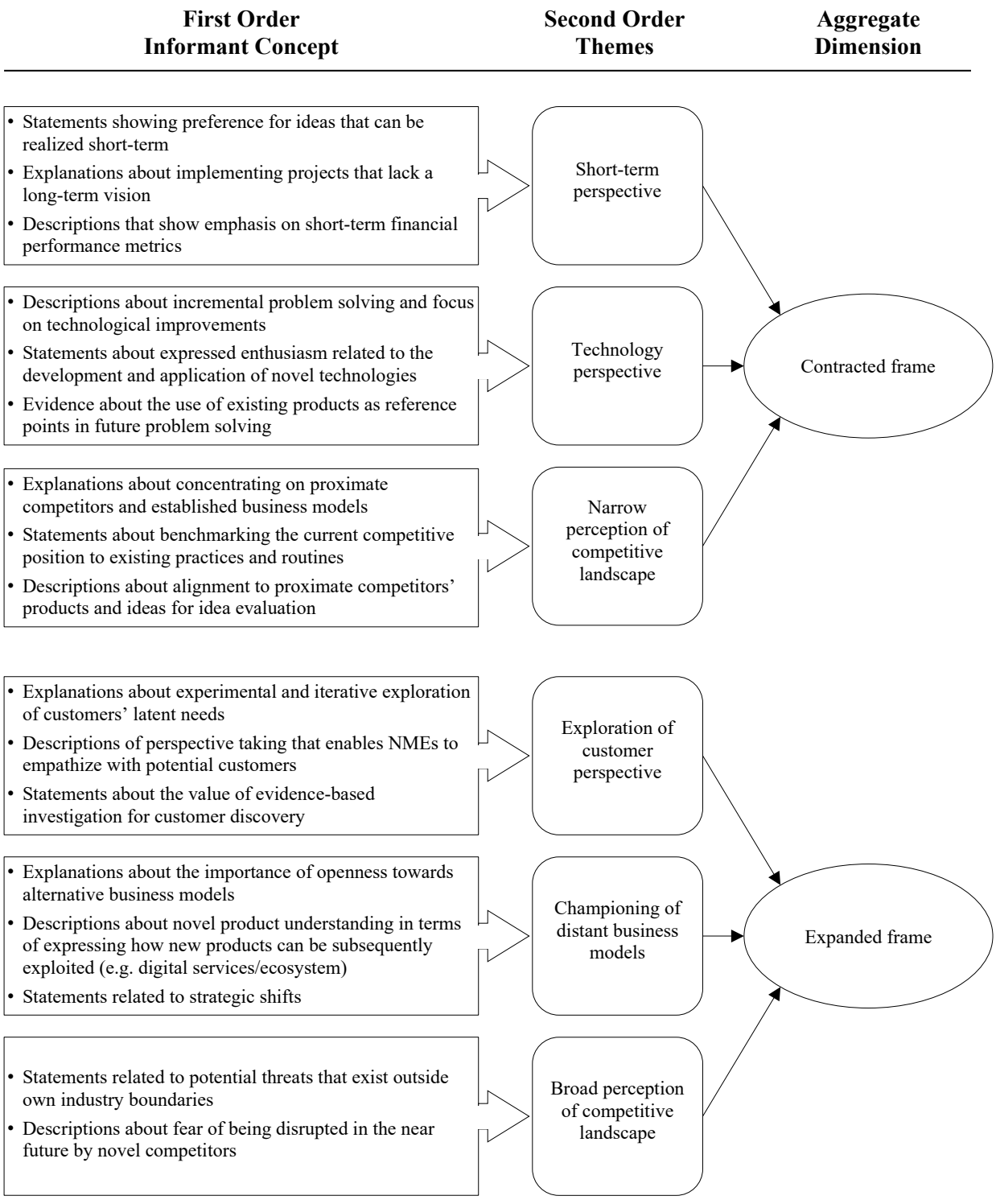
[11] For simplification, we conceptualize the frames applied by our informants into two different categories. It is important to note that individuals apply unique frames within the contracted-expanded frame spectrum that are influenced by additional innate tendencies. Yet, by abstracting from the real-world phenomena, we can capture individuals' idiosyncrasies in the frames and investigate how specific tendencies within contracted and expanded frames influence individuals' understanding and behavior.

Table 8. Sample Overview of Informants

ID	Age	Educational background	Business unit	Contracted frame	Expanded frame	Interview length
A1	56	Industrial Engineering	Innovation Management			72 min
A2	41	Mechanical Engineering	R&D Hardware		•	69 min
A3	40	Computer Science	IT			47 min
A4	52	Engineering	Innovation Management		•	59 min
A5	31	Engineering	Competitor Analysis	•		50 min
A6	49	Computer Science	Digital Products	•		39 min
A7	55	Business Administration	FutureLike			57 min
A8	46	Electrical Engineering	FutureLike	•		64 min
A9	38	Engineering	Innovation Management		•	56 min
A10	40	Engineering	FutureLike		•	64 min
A11	38	Engineering	FutureLike			38 min
A12	37	Engineering	FutureLike		•	59 min
A13	37	Mechanical Engineering	FutureLike		•	51 min
A14	37	Business Administration	FutureLike		•	35 min
A15	47	Industrial Design	FutureLike		•	47 min
A16	32	Business Administration	FutureLike		•	65 min
A17	30	Mechanical Engineering	FutureLike		•	53 min
A18	29	Industrial Design	FutureLike		•	79 min
A19	39	Business Administration	FutureLike		•	94 min
B1	42	Business Administration	Service Pricing	•		60 min
B2	44	Electrical Engineering	Automation and Controls	•		68 min
B3	33	Mechanical Engineering	Mechanical Development	•		64 min
B4*	44	Agricultural Science	NextTech		•	144 min
B5	49	Mechanical Engineering	Sales	•		53 min
B6	42	Business Administration	Product Management			64 min
B7	54	Industrial Engineering	Configuration Engineering	•		56 min
B8	40	Mechanical Engineering	Product Development			62 min
B9*	37	Computer Science	Digital Solutions		•	125 min
B10	56	Plastics Engineering	Product Management			74 min
B11	26	Business Administration	NextTech		•	74 min
B12	50	Mechanical Engineering	NextTech	•		62 min
B13	35	Mechanical Engineering	NextTech	•		86 min
B14	35	Mechatronics	NextTech			63 min

* Informants were interviewed on two different occasions. The first interview with B4 lasted 57 min and the second 87 min. The first interview with B9 lasted 70 min and the second 55 min.

Figure 4. Data Structure: Contracted and Expanded Frames



Contracted Frame. The first aggregate dimension describes NMEs' contracted frame to generate and evaluate new venture ideas. Our analysis shows that when applying this frame, NMEs prefer rather incremental than disruptive new venture ideas. The contracted frame is represented by the following three second order themes: short-term perspective, technology perspective, and the narrow perception of the competitive landscape as described in Figure 4 and Table 9.

Short-term perspective. Our informants' short-term perspective emphasizes that NMEs with contracted frames tended to ignore the long-term potential of disruptive new venture ideas favoring short-term results. In that sense, actors had a lowered tolerance for risk and, therefore, aimed for the implementation of feasible (proximate) technology concepts that entailed short-term financial returns, as B1 explained:

> *"So, the value for Beta in the context of a venture just has to be apparent from very early on.* [We need] *clear evidence of how it's going to be monetized."* (B1)

Following these preferences, NMEs assessed new venture ideas by referencing the problems to be solved to proven, established technologies and existing business models. Moreover, NMEs' short-term focus was reflected by their economic reasoning to evaluate ideas, leading them to follow seemingly rational decision-making that was grounded in the preference for a short-term return on investment.

Technology perspective. The next second order theme addresses informants' focus on existing products and technologies (i.e., technology perspective), suggesting the exploitation of existing organizational resources and competencies. Herein, NMEs found themselves rather exploiting distinct competences they possessed at that time (i.e., domain-specific knowledge) and preferred ideas related to well-known activities, predominantly neglecting complementary activities and the development of novel competencies. NMEs' focus on existing product

categories resulted in informants' concentration on incremental improvements that, for instance, provided enhanced efficiency and/or usability. This entails that NMEs tended to have a preconceived expectation for the characteristics of the new venture idea to be implemented and the accompanied problems that they considered as useful.

Narrow perception of competitive landscape. The last second order theme suggests that NMEs within a contracted frame tended to oversee the progression in business models and technologies from distant industries. We found that NMEs focused on their firms' adjacent competitors at the expense of widening the scope for new competitors from unrelated industries. This narrow perception led to the preference for new venture ideas that promoted NMEs' focus on what is, rather than what could be. Accordingly, informants defined close competitors as such that applied specific technologies in a similar way in other global regions, competing in their core business or adjacent markets:

> *"The very classic ones are the competitors of physical products. Especially those from the Asian region* […] *with good pricing take away the classic market shares in the device business."* (A10)

By exhibiting this narrow focus on competitors, NMEs continued within the boundaries of current technology applications and did not envision potential growth options in novel markets. They limited their evaluations of what defined a valuable new venture idea to the current organizational remit by means of applying contemporary industry practices and competitors' product strategy.

Table 9. Contracted Frame: Themes and Representative Informant Statements

Second Order Themes	Representative First Order Informant Statements
Short-term perspective	A9: Or you yourself believe in something, technological development, that you have to foster it. Then it will be initialized, but usually it is rarely product driven, because product management tends to have short-term goals of two or three months in mind. They do not have the breath and the vision for long-term projects, because they are only evaluated on short term figures. In the technical department, they currently try as hard as possible to pursue other things instead of, well, innovative projects are currently all being killed or have all been killed. B4: Exactly, it's always incremental, the numbers have to be right. I also have to justify myself somehow, every three months, and accordingly it is easier for me to justify myself if I do something that everyone understands than if I do something that no one understands, where they think it's a gimmick. B8: And that the innovation processes we have are too focused on the result. So as soon as I just want to try something, I have to say what I want to earn with it afterward. I think we have omitted the step in between. B9: Otherwise, of course, it's clear, isn't it? Everyone prefers the tangible at first. Quite understandably. And, needless to say, it's important to first implement the projects that can also be used in the short term. These long-term things are always a bit more challenging.
Technology perspective	A8: Yes, innovation for me is something similar to technology leadership […] innovation is just behind a tip of the nose ahead of the competitor. A13: It can be that new ideas arise simply through technology where one says, yes, there is something that could be applied in some area. That is when actually the problem is already known but being solved differently so far. Then it can suddenly be solved better. A17: Quite often, in product development you can see that the existing product is optimized, that you align yourself with it and say okay, we have the device. We need maybe three more features next, and this and that should still be done technically. B9: And the second main perspective is of course also the one where you simply see: Technology. No, of course, we have tons of engineers sitting here. And as soon as I'm allowed to play with technology, they're on fire right away. And generally, they always have a very strong focus on new technology trends and so on. B12: [...] if you mean employees from manufacturing, they naturally see innovation in the sense that they get an easier working life and can enhance some production processes. For me, from the technical side, innovations are rather things that bring our machines forward and improve them technically. And yes, those are the differences, the different approaches.
Narrow perception of competitive landscape	A16: Even if we generally take a look now, I think it is, unfortunately, the case that many Asian manufacturers are also getting better and better in their products, which means that what we were perhaps particularly strong in is becoming more and more of a hygiene factor, because every manufacturer actually manages to do that to some extent. And that of course challenges us even more to bring innovation into our devices. A18: So how does a functional business unit think? [gives examples about products and competitors] But up to now, it was actually the case that virtually every division looked for itself. What are the competing products on the market? What do they have built into their devices? What could we ultimately implement to improve our devices? B7: Well, we also deal intensively with competitors from low-wage countries, that's just what I'll call it. A comparison: we have to justify why machine XY from Germany has a customer advantage against a machine from a low-wage country. B9: But all in all, you can say that the established business divisions actually tend to look at the competitors that we had before, i.e., the mechanical engineering competitors that build machines themselves as part of their portfolio. B14: Firstly, [competitor from same industry] is a competitor that is on eye level with our company, because they are relatively comparable in terms of size and areas. Yes, that is a standard competitor. And then there is [different competitor from same industry], which is deliberately smaller and therefore, I think, faster, more innovative and more aggressive. I view the threat, or innovative power as greater with the second competitor than with the first.

Expanded Frame. Our analysis reveals an expanded frame as the second aggregate dimension, suggesting that within this frame NMEs preferred new venture ideas based on the evidence that they gathered from customer interactions. The expanded frame constitutes of three second order themes described in Figure 4 and Table 10: exploration of customer perspective, championing of distant business models, and a broad perception of the competitive landscape.

Exploration of customer perspective. To explore customers' latent needs, our results show that informants followed an evidence-based approach. NMEs formulated testable hypotheses about customers' desires, built experiments to assess customer feedback early on, created minimum-viable-products, and learned from reflecting on empirical results. For instance, NMEs' focus on customer needs became apparent by their emphasis on "adding customer value" as their "key criteria" (A15) in idea assessment. Moreover, another informant stated that "innovation must always be very close to the customer" (B6) and that he aimed to take customers' perspective to recognize and understand corresponding needs. In addition, informants pointed out that explorative interactions with customers allowed them to investigate and adjust own interpretations early on, as A9 described:

> *"*[We] *talk to the people* [customers] *beforehand and, if possible, discuss the idea broadly so that we can identify and evaluate all the pain points directly from the start."* (A9)

Overall, taking customers' perspective enabled NMEs to reflect on their own preferences and disassociate from their implicit opinions and biased judgements about the usefulness of new venture ideas.

Championing of distant business models. Our data reveals that when applying an expanded frame, informants tended to prefer ideas that may require alternative business

models. This means that, instead of relying on their firm's past trajectory, NMEs prioritized customer-centric ideas—even if solving a particular customer problem would require the firm to adapt a new business model. For example, this became apparent as one of our informants highlighted his team's preference for nonincremental innovations:

> *"*[We] *prefer potentially big revolutionary ideas to slowly transform the company from a machine manufacturer to a service provider."* (B4)

Accordingly, B4 argued that Beta's core business of manufacturing machines could be extended by service offerings such as "pay-per-use models". Moreover, NMEs' preference for diverging business models manifested in their willingness to champion ideas that might cannibalize existing products. This, again, became evident as NMEs tended to favor ideas that may go beyond the current capabilities and knowledge present in their organizations.

Broad Perception of competitive landscape. Within an expanded frame, our informants did not consider their firms' current competitors as their primary competition, but rather construed companies that operated outside of their firms' core business as threatening:

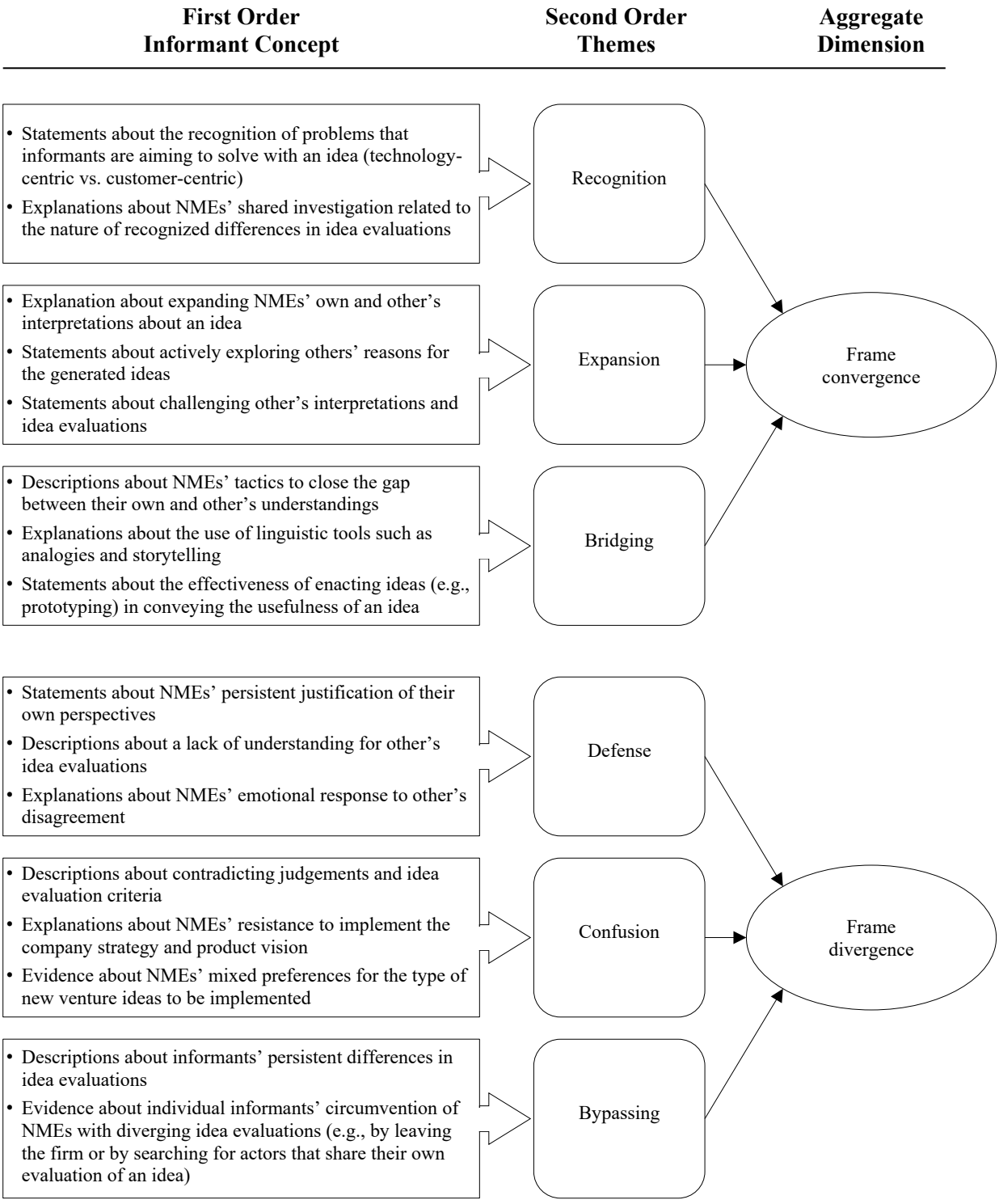
> "*Maybe tech companies could suddenly become competitors for us in the future. Or maybe it's some kind of service company that suddenly takes* [customer] *segments away from us that we previously occupied entirely, where we always have been sure that we were the innovation leader."* (A18)

This perception links to our informants' preference for ideas beyond the current organizational remit and that were implemented by external (unknown) competitors. Herein, we found that some informants were questioning, what kind of business their respective company should become in the future. For instance, A16 referred to Alpha's established and technology-centric business model as the *"old world"*, while describing customer-centric and future-oriented business models as the *"new world"*.

Table 10. Expanded Frame: Themes and Representative Informant Statements

Second Order Themes	Representative First Order Informant Statements
Exploration of customer perspective	A2: So very customer-centric. I always try to look at that, too. What do customers need? I think this has been greatly supported by all the recent design thinking initiatives here in the company. To look through the customer's lens quite a bit. And yes, now say: OK, the technology is important, but what is it the customer really needs and then develop the technology behind it. That's where I'm pushing innovation at the moment. A19: […] user-centricity, that is, absolute user-centricity and the will to meet users' needs with innovations. B6: For me, innovation must always be very close to the customer. That means it is important to recognize customer needs, understand customer needs, be able to solve customer needs and then implement them either in products or in processes. For me, that is the definition of innovation. B9: There's always this nice saying: Whoever understands the customers' problem best is most likely to have the best solution. And that is what we are trying to do. So, technology and everything else, even the business case is actually the second step, but I first have to have a problem, a real problem and understand that and then I can also provide a good solution. B11: But I hope from the customer perspective that I simply try to empathize with the customer situation. And then, based on customer interviews, on facts, on research, in other words, based on studies, try to develop innovations […] Exactly, so if the idea is not based on a customer problem, the first step should be to ask the customers.
Championing of distant business models	A12: I believe that many innovations in the future will have to take place in the area of software, value-added services, and associated areas. I don't think that the majority of the company has perceived it that way so far. But that's the direction we have to take. A14: If we now find that the customer behavior changes tomorrow, then we should be the ones to test and try out any new services or something similar at that point. B1: I think we have a huge opportunity, if we were to organize new plants, services, together with the digitalization topic properly. In other words, if we offer services instead of selling machines. I think the pieces of the puzzle are all on the table, but there's just no one to put the structure together and make an offering out of it. That's a tremendous opportunity. B4: And the danger lies in the fact that we currently live from the production of high-quality machines that last for decades, but in the meantime the competition is also able to produce high-quality machines. And that's where the gap is shrinking, and you have to make up for it with services and additional benefits. And that's where models like leasing, pay-per-use, etc. come into play.
Broad perception of competitive landscape	A11: The environment of the threats we are looking at here [at FutureLike] is larger than the environment of the threats perceived at Alpha. So, we don't think in a classic way that the threat comes from [competitor], but we think that threats may also originate from Amazon. A13: So, with my after-sales glasses on, I would say quite clearly that the claim of preserving the touchpoint with the customer is a huge challenge. In my view, there is simply a threat that Alpha will slip somewhere into the second or third tier and the customer's first point of contact will no longer be with Alpha. A14: I just see a danger in the fact that new competitors outside the industry can disrupt our business and companies like Amazon or Google also have an indirect influence on our business and our success, because they simply set processes and standards, be it in online shopping, in ordering processes and things like that. Where we might not be able to catch up so quickly. B2: Yes, I see a threat in the fact that at some point we will only become machine suppliers. This means that others will get a better grip on this topic of digitization and will be able to say, "Well, I'll just control one of these machines, that's all it is. And all this intelligence behind it: evaluating and processing of data and information, artificial intelligence, and all the other things [are done by the competitor]. B4: I don't see any machine manufacturers as competition, but rather that service providers, who mostly come from the tech sector, are the main competition for us and not the machine suppliers themselves. Because since we all do roughly the same thing, all of us would find our market niche. That's not the thing. But these service providers manage to drive us away from the first contact with the customer to the second contact.

Figure 5. Data Structure: Frame Convergence and Frame Divergence



4.4.2 Frame Interactions: Frame Convergence and Frame Divergence

Armed with the knowledge about the frame typologies, we analyzed our data about the interactions between NMEs during the idea elaboration phase. We found that NMEs' frame-related interactions led to either *frame convergence* or *frame divergence* that entailed different outcomes for new venture idea selection and the subsequent championing to senior managers as seen in Figure 5. First, frame convergence is the result of an interactive process through which NMEs integrated their diverging frames into a collective frame that the team members used to develop, evaluate, and select a new venture idea. Thus, convergence led to a shared understanding and alignment within a creative team of NMEs regarding a dominant new venture idea that they subsequently championed to senior managers for resource allocation. Second, frame divergence was the outcome of a persistent incongruence among NMEs' evaluation of certain new venture ideas. This means that NMEs' divergent contracted and/or expanded frames entailed a misalignment in individuals' interpretations that led to deferred decision-making and separated efforts. Our data suggests that this separation can result in NMEs leaving their organization, corroborating the severance of frame divergence.

Frame Convergence. Our data structure consists of NMEs' frame convergence as the aggregate dimension and three second order themes that describe the accompanying frame-related practices: recognition, expansion, and bridging (cf., Figure 5, and Table 11). Through these three mechanisms, NMEs synthesized their different perspectives into a new emergent collective frame that was used by all individuals to interpret a particular new venture idea. Thus, instead of arguing about the superficial features of an idea, NMEs discovered and investigated their diverging perspectives as the true nature of their differences in idea elaboration. This allowed the actors to further elaborate on the ideas collectively and identify a dominant new venture idea. In that sense, frame convergence manifested in NMEs'

integration of their originally distinct contracted and expanded frames into an "innovative perspective" (B14) that was used for idea evaluation and selection:

> *"First there is the technical-only perspective. Then there is the* […] *customer-focused perspective.* […] *And then for me it's actually the innovative perspective, because that's customer and technology together. Because that's where the innovation comes from."* (B14)

> *"Otherwise, we would have discussed it* [...] *and discussed it again and discussed it again. At the end of the day, it took a little longer for everyone to understand the other person's point of view. And then we just searched for solutions together."* (B13)

Recognition. The recognition of other's frames allowed NMEs to appreciate the value of undiscovered perspectives which facilitated frame convergence among team members. Through close collaboration, NMEs were exposed to other's reasoning for their idea evaluation, prompting each individual to adjust his or her own interpretations. Because of the mutual exploration and discussion about distinct perspectives, idea-owners as well as idea-evaluators within the team uncovered potentially obscured criteria that each team member applied. For instance, NMEs within a contracted frame focused predominantly on an idea's technical feasibility, whereas NMEs within an expanded frame tended to highlight customer attractiveness of an idea. These different perspectives permitted NMEs to incorporate distinct views that they found useful:

> *"I actually thought it was quite good to have a variety of perspectives. Then you can think about it, perceive it, examine it, and then use the optimum for yourself."* (A17)

Our findings corroborated that by means of a mutual reflection on the underlying reasons for the mentioned differences, NMEs were able to recognize the different perspectives they took for idea interpretation as the true nature for their disagreement.

Expansion. NMEs' expansion of their frames enabled the creative team to achieve a congruent understanding about another's reasoning used during the evaluation of new venture ideas. By means of frame expansion NMEs were subtly reminded of their limited perceptions, which is why these practices can be understood as an instrument that actors used to empathize with other's understandings and, additionally, prompted them to reflect on their own interpretations. We found that when expanding their frames, NMEs were increasingly receptive towards other perspectives, actively sought to understand differences in perceptions, and were willing to adopt elements for their own mental interpretations. Although the process of integrating others' perspectives appeared to be arduous and involved intense discussions and interactions, frame expansion promised to be beneficial:

> *"However, in the beginning, I thought '*[B11]*, are you actually crazy?' I often had that thought. Dealing with that? I'm not really interested in that. But from another point of view, it makes sense to do so."* (B14)

In addition, we found that NMEs also aimed to expand other's perceptions by posing thought-provoking questions that were seemingly unrelated to the other idea-owner's original idea and led them to interpret information differently. Our data revealed that well-timed and intriguing questions could redirect NMEs' attention to aspects that they have not considered before:

> *"*[…] *they* [other NMEs of the creative team] *simply had a stupid question that wasn't stupid at all. In fact, not stupid at all but justified. That also helps us on the technical side. Because we may have not considered that at all."* (B12)

Bridging. With frame bridging, idea-owners were able to shape the frames applied by idea-evaluators and, thereby, could diminish the gap between their own and other's interpretations and evaluation of new venture ideas. Our findings show that, in order to bridge frames, NMEs combined linguistic tools with idea enactment which made specific environmental cues more salient to others, resulting in an alignment between their own and other's evaluation of a new venture idea. Linguistic tools allowed idea-owners to communicate an idea in a manner that resonated with the frames of idea-evaluators (i.e., use linguistic tools to convey and package information). For instance, idea-owners used analogies to redirect other's attention and make certain aspects from other companies' business models more salient:

> *"Hey, there is Apple, they have an ecosystem, they do it here and there. There is an Amazon, they have also an ecosystem. And that is where mostly all* [other team members] *can follow, because it is relatively clear for themselves, because that is what they also use themselves somehow."* (A17)

Additionally, our evidence shows that idea-owners engaged in idea enactment by drawing on animated, visual, or physical resources (e.g., digital or physical models, sketches, mockups, or simulations) that made abstract ideas more tangible for idea-evaluators to better envision the potential value of the respective idea. We observed that especially within a contracted frame idea-evaluators were more receptive to new venture ideas when presented in the form of material prototypes, as A5 explains:

> *"*[…] *if you only have a purely written down idea, that's like Chinese whispers. Everyone interprets what is written down differently, you know, so it is always better if you can really show something, have a prototype in your hand and make it clear to people: here is basically the idea, this is how it works, give it a try yourself."* (A5)

Table 11. Frame Convergence: Themes and Representative Informant Statements

Second Order Themes	Representative First Order Informant Statements
Recognition	A9: I do have to convince the other people of it. The thing is, I can only convince someone whose point of view I have taken into account, shown understanding for and have personally understood, followed by continually trying to make them understand my position. Yet it all depends on the stage of engagement and where you pick someone up. A18: [...] one obviously tends to follow a tech-driven approach to solving a problem, in which one says, oh yes, we now somehow have a camera. Now we have to use it some way since the customers must benefit from it. On the one side, that's obviously the wrong approach. But on the other side, it's also a justifiable approach. A19: It's going to be something I have never heard of because a creative person is coming to me. What I mean is, I'll put on my open-minded, risk-conscious glasses, exactly. Maybe it's just that, being able to change one's glasses in certain situations. Everybody has multiple glasses and the ability to swiftly switch between different perspectives in the right situations. B13: Yeah, definitely different perspectives. That was good. It showed us new ways of looking at things [...] I would say, it gave us perspectives that you don't work with every day. Usually, one only takes their perspective. And through the external impulses, you have the opportunity to then again either accept it, or you don't accept it. B14: Somehow the typical technician [...] looks at the technically cool things and from the other group [members from the team], there was rather the perspective 'does the customer really need that?'
Expansion	B9: And that's when mixed perspectives slightly appear, in which the user more dominantly becomes the focus and it rather becomes all about solving problems, yet the problems being the ones the user has mentioned to us and not the problems, which we have solely defined ourselves. And that's when there is a slight change in mindset. B11: With my boss I could just discuss and talk about things extremely well. And he just asked me for my opinion and vice versa. And then we developed an opinion together, so to speak. But I think he was (...) so first of all, he was just open and just asked others (...) for opinions. And I think also anyway in terms of our mindset, the personality, it was just extremely similar. B12: […] they simply had a stupid question that wasn't stupid at all, in fact not stupid at all but justified, then that also helps us on the technical side. Because we may have not considered that at all. B13: Technically first of all. Well, I aim to bring the technology forward. And then, of course, in the second step, which is also very important, that the commercial aspect is considered. Because what's the point if I use space technology, but no one wants to pay me for it? That's where I've done something wrong. B14: However, in the beginning, I thought "B11, are you actually crazy?" I often had that thought. Dealing with that? I'm not really interested in that. But from another point of view, it makes sense to do so. […] So both sides approached each other a bit. Yes, as I said, B13 has also opened up a bit to change. One notices that quite strongly.
Bridging	A5: Because we also experience that all the time, when one basically just has an idea which is solely written down, it turns into a game of Chinese Whispers. Everyone interprets what is written differently, so it's always better if you have something proper to show, present a prototype and make the people understand: this is the basic idea, this how it works, try it out. A15: Because what I have learnt over the years is that if you do something novel, then you have to kind of get it to a point so that everyone understands it. Just having an idea isn't enough. You need to develop it so far, that everyone can see and preferably hold it, thinking: Ahh, so that's what it is. Well and in that case it usually isn't the problem any longer." A17: In the beginning I was always thinking of it in a very large way and compared it to unicorns or to those startups, which were big already. That's when I noticed that people can't fathom how little it has to do with the core knowledge of their business, causing me to reduce all of this to narrow comparisons with competitors [...] That's when I realized I need to reduce a little after all, and then clearly compare with something, which is definite and not extreme. B11: Maybe simply present it in a simpler fashion, present it differently, use comparisons. Maybe also analogies to other startups where it is working […] So that well when I just told you, do you know [example] you could comprehend it immediately. You had a certain thought pattern, a certain construct in front of your eyes, without me having to explain it excessively. It just makes it so much easier and reduces the amount of explanation needed.

Frame Divergence. Frame divergence represents the outcome of NMEs' continuous different understandings about the value of the corresponding venture ideas that thereby widened the gap between NMEs that applied contracted and expanded frames. These differences were revealed in actors' distinct viewpoints about the characteristics that a useful and novel new venture idea should exhibit. For instance, one informant recalled a discussion that he had with a coworker:

> A9: *"*[…] *the ecosystems that are emerging in the outside world* [beyond the firm's core business] *are attracting and binding more and more customers,* […] *because people are virtually only buying things that fit into their ecosystem. And if we don't fit into this ecosystem, we won't get bought. That is a disruption."*
>
> Coworker: *"But this is not a technology disruption."*
>
> A9: *"Yes, but this is an ecosystem disruption."*
>
> Coworker: *"What is an ecosystem?"*

The following three second order dimensions describe the patterns of the processes underlying frame divergence: defense, confusion, and bypassing (cf., Figure 5, and Table 12), illustrating how NMEs' frame differences can lead to a wider gap between perceptions.

Defense. The first second order dimension represents NMEs' defense of their beliefs about the usefulness of specific new venture ideas. When engaging in this practice, idea-owners as well as idea-evaluators demonstrated a lack of understanding for other's opinions and simultaneously justified their own perspectives. Our data suggests that this behavior was predominantly shown by NMEs that applied a contracted frame and linked to their persistent skepticism towards unconventional ideas. In line with their skepticism, one informant reported that some NMEs defended their own idea evaluations by posing narrow-minded questions

about technical details and question the feasibility that brought the actual discussion about unconventional new venture ideas to an impasse:

> *"I mean, what I find outside of FutureLike is a: 'Yes, but ...' It's always this 'It's a very nice idea, but... there are some things that have to be considered, and does it actually work?' That's typical, especially the newer an idea is, the more often it's like that."* (A13)

Another expression of NMEs' frame defense was their fearful attitude towards new venture ideas that implied uncertain future trajectories during the development of products or services. Especially, new venture ideas that may have led to disruptive innovations that could significantly change the strategy related to existing products or services seemed to pose a threat to NMEs applying a contracted frame, as B4 explained:

> *"*[By some NMEs] *innovation is essentially viewed as improvement of our machines. But things such as new services, new business models are not so readily accepted and are usually seen as very disruptive. That even scares people."* (B4)

Our data suggests that, when defending their beliefs about an idea, NMEs were reluctant to any information or opinions that contradicted their own point of view. Rather, as they were confronted with diverging perspectives, these NMEs appeared to reinforce their own beliefs and did not acknowledge that their own interpretations and knowledge may be limited or restricted.

Confusion. A second pattern, confusion, manifested in NMEs talking past each other. Our findings indicate that a team of NMEs including individuals that drew on contracted and expanded frames encountered difficulties to find the same language. It became apparent that idea-owners in such teams were not able to package their ideas sufficiently to clarify their

reasoning behind their preferences for certain ideas. More severely, instead of mutually discovering the incongruence in idea evaluations, the efforts of NMEs derailed towards limited and superficial discussions related to product features, leading to a divided understanding of the new venture idea that reinforced the separation in frames which ultimately resulted in disregard and inertia.

Furthermore, NMEs' confusion about other's idea evaluations led them to take independent decisions that aligned with their own frames, even if it was at the expense of following the existing product strategy, as one informant explained:

> *"*[...] *for them* [other NMEs] *it's just like: Digitization is a gimmick. For them it's just nonsense, it's just a bit of fooling around up there.* [...] *we don't even manage to equip all our devices with Wi-Fi, even though there is an executive decision, some are now ignoring it. Yes, according to the motto: 'I don't see the additional value.'"* (A9)

Accordingly, the variety of beliefs and understandings among NMEs and the associated actions implemented by NMEs on the operational level left actors puzzled and idle as they lacked a clear direction. It seems that, depending on the applied frames, NMEs had contradictory goals that could not be aligned. The gap between the NMEs' different perceptions was too broad and prevented the creative team from selecting a promising idea to mobilize resources and champion the ideas to senior managers.

Bypassing. The last second order dimension reflects bypassing as a mechanism that contributed to a greater frame divergence. In case actors experienced a consistent misalignment in their frame-based understandings and idea evaluations, we found that some NMEs started to bypass organizational structures. This bypassing entailed idea-owners' attempt to search inside or outside of their organization for sponsors that shared similar perceptions regarding a set of

ideas. For their internal search, idea-owners reached out to their formal and informal organizational networks with the aim of finding actors that matched their idea evaluations. Specifically, as idea-owners presented their new venture ideas to a variety of organizational actors (i.e., mostly senior managers) and found others that resonated with a certain idea, they deepened the relationship to these actors, mobilized support, and intended to bypass organizational boundaries. Another reason to internally bypass other's frames represented idea-owner's attempt to strategically exclude actors that contradicted the idea-owner's idea evaluation. Exemplarily, one informant stated that he deliberately excluded actors that applied contracted frames and focused too much on the technical implementation:

> *"That's why I like it when it comes to innovations to not have the technician or the implementer there and that you don't think about the implementation, but simply decide what you want to solve, what would be a good idea, and then start looking for a solution to it. But technicians often have considerable difficulty with this."* (A6)

Complementary to internal search, we found one case in which an informant (A19) bypassed persistent frame differences by searching frame resonance outside of his organization. In this way, the NME was able to overcome organizational boundaries by finding sponsors that allocated resources for the venture idea. Our analysis corroborated that as soon as our informant encountered frame resonance with sponsors from another organization, the informant left his firm in order to champion the venture idea in the competing firm resulting in the emergence of a new internal corporate venture.

Table 12. Frame Divergence: Themes and Representative Informant Statements

Second Order Themes	Representative First Order Informant Statements
Defense	A5: "What you always hear is 'It won't work anyway', 'Who wants that?', 'Does that benefit us at all?' or, to put it another way, 'What's the point?', which is more or less the same thing. And what you also hear is 'What is it supposed to cost?' So cost is a very, very, very big issue, and that's what you hear most often. Yes, exactly. What you also hear, unfortunately, in some cases, is 'It's not going to work anyway.' A15: That it is risky. First, 75 reasons are given why there are problems or why there could be problems and why it might not work and why you have to be careful with it and then 75 times it is said that we have had something like that before. Or something else. A18: I understand too well that tech-driven product implementations are also important. But I would say that if you're advancing matters from a customer perspective, then you shouldn't consider the technical solution in the first place and leave it out of the equation. B4: In general, the people at Beta are still very convinced that, as a long-standing, globally respected machine manufacturer, they produce very good machines. And innovation is essentially viewed as improvement of our machines, but things such as new services, new business models are not so readily accepted and are usually seen as very disruptive. That even scares people. B14: [When asked about working with B13] But initially, he [B13] was all about not attacking anyone and not being attacked by others. He is good at what he does. He does that with perfection. Better to give 120% for his field than only 100%. But he did not want to be attacked by others, so to speak.
Confusion	A9: We have to make a big change from a hardware manufacturer to a software manufacturer. And we are a long way away from that. We have people who think that if they make a new button on a device, it's an innovation. And that's a disaster, but that's the way we are. We couldn't change anything about that. A18: And these are often, I'd say, use cases, which are not at all regarded, because, again, the people here do not take the customer perspective somehow. They look for a product improvement, for products, that we cared about for years [...] So all these links [between different products] are simply not thought about, these ecosystems. A19: Then one coworker said, 'I don't understand this.' He couldn't do anything with it. He doesn't understand it. It's okay, because it's not a service. He's in tech and that's different. B11: And I think with the Beta management it's mixed. I think they have different perspectives, both the financial perspective and the customer perspective, as well as the technology perspective. B14: That is reflected everywhere here in the company. Many of the people in our company who work here in the daily business have this conservative perspective, and so far, I see myself as rather innovative. And that's where it frequently comes to different perceptions in some areas.
Bypassing	A6: That's why I like it when it comes to innovations to not have the technician or the implementer there and that you don't think about the implementation, but simply decide what you want to solve, what would be a good idea, and then start looking for a solution to it. But technicians often have considerable difficulty with this. A18: "Until the topic was presented and the management then said, 'Cool thing, when can I buy it?' And suddenly, the management committee suddenly made resources available because the management was excited about a topic. That was a moment when we realized that you first have to present a topic to the management before you can somehow get a commitment that you can now work on it with a few colleagues or that more resources will be made available. That was an "aha" moment on the one hand, and on the other hand, it was kind of sad because you've worked for half a year just towards a deadline. B11: Well, I guess our head of construction had a technical perspective and thought that technically is was quite cool. And then yes, do it. And he still had this idea and that idea, just from a technical perspective. I believe that this also partly encouraged the technology team [particular members from the NextTech team] to continue. B11:I hope I can just get this out here, but when B13 held, what felt like a monologue for two hours, that sucked. (laughs) Interviewer: Was that ultimately also a reason for you changing jobs? B11: Yes, definitely.

4.4.3 A Model of Non-Managerial Employees' New Venture Idea Selection

We further seek to elaborate on the procedural mechanisms underlying a creative team's frame convergence or frame divergence. Herein, we propose *frame resonance* and *intensity of interaction* as two distinct mechanisms that further explain NMEs' frame convergence or frame divergence. First, a high degree of frame resonance at the beginning of the inter-individual collaboration suggests that NMEs already pay attention to similar aspects from their environment and are complementary in their interpretations about the environmental information.

NMEs' frame resonance implies that the actors tend to align their new venture idea evaluations and that they can understand each other's reasoning behind their evaluation decisions. In contrast, we observed that the more NMEs' frames are initially apart on the contracted-expanded frame spectrum (i.e., at the beginning of the collaboration), the more difficult it is to form a common basis for the subsequent idea development:

> *"And he* [other NME] *had a crystal-clear vision. For example, he went into this initial workshop with an idea that he wanted to implement that had nothing to do with an innovative process and simply would have been an evolutionary step."* (B4)

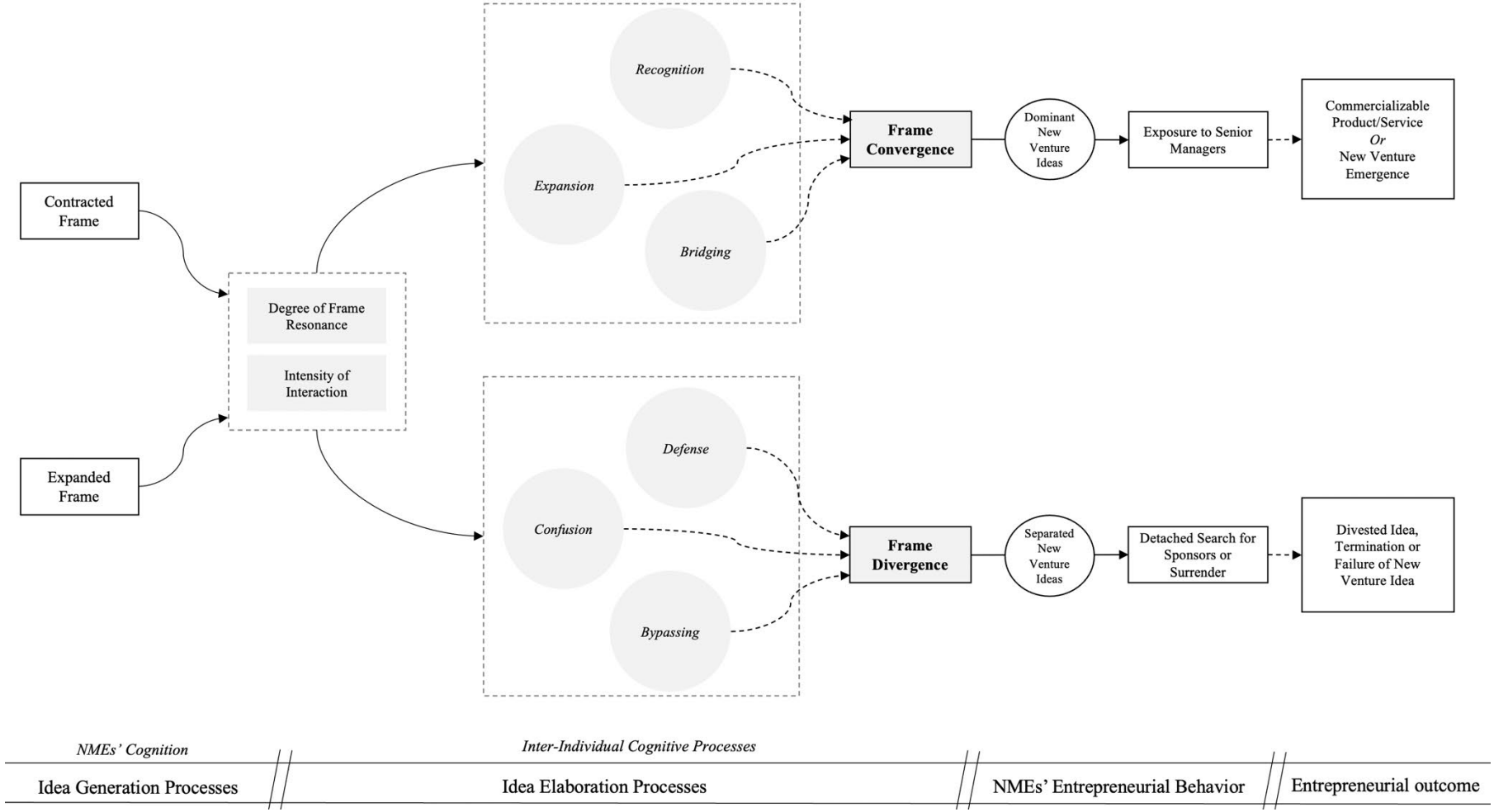
This example illustrates how a low resonance between NMEs' frames impedes the NMEs from engaging in an explorative process of discovering another's perspective. Instead, a lack of frame resonance at the outset of a CE project seems to fixate the actors in their contradictory points of view, leading to ongoing frame divergence.

Second, intensity of interaction in collaboration might precede distinct outcomes. High intensity interactions indicate that individual NMEs are more frequently exposed to another's frames whereby they have more opportunities to recognize the reasoning behind other's

interpretations and evaluations which then may set frame convergence in motion. Our results corroborated this assumption by showing that close and frequent intra-team collaboration facilitated NMEs' frame convergence process during the NextTech (Beta) venture project. Although the NMEs applied distinct contracted and expanded frames at the inception of the project, they were able to integrate their perspectives into a new emergent and collective understanding over time. In contrary, we found that the collaboration between NMEs at Alpha's functional business units and FutureLike mostly seemed to result in frame divergence. A possible explanation might be derived from the NMEs' low intensity of interactions that did not allow them to observe and investigate another's reasoning, assumptions, and beliefs. A lack of a shared context and environment pinpoints towards potential information asymmetries that promote the emergence of frame divergence.

Our inductive data analysis results in the staged model shown in Figure 6. We found that NMEs draw on two distinct frames (i.e., contracted or expanded frame) for their sensemaking during the idea elaboration process. Herein, NMEs exposed their preferred new venture ideas to others and, at the same time, evaluate another's ideas based on unique criteria that they derived from their contracted or expanded frames. Influenced by the degree of frame resonance between NMEs' frames and the intensity of interaction in their collaboration, the NMEs engaged in the processes that emerged in frame convergence or frame divergence. Frame convergence, transmitting via processes of recognition, expansion, and bridging, resulted in NMEs' alignment about their interpretation and evaluation of the presented new venture ideas. The corresponding idea was then be championed to senior managers in order to allocate more resources. An alternative outcome of NMEs' frame-based interactions during new venture idea elaboration was frame divergence, emerging through the processes related to defense, confusion, and bypassing, that ultimately broadened the gap between NMEs' different perspectives and idea evaluations.

Figure 6. Cognitive Frame Mechanisms Underlying Idea Elaboration



The process of frame convergence and frame divergence resulted in different entrepreneurial behaviors of NMEs. While frame convergence implied NMEs' collective initiative of championing a dominant new venture idea to senior managers, frame divergence entailed single NMEs' search for frame resonance with senior managers from other organizational departments or outside of the organization.

4.5 Discussion

Research recently suggested that actors' collective development of novel products is at the core of innovation activities, arguing that in order to assess the most promising creative and useful idea, team members are required to integrate diverse perspectives and expertise for their joint evaluation (e.g., Gray et al., 2020; Harvey & Kou, 2013). In the present study, we propose a model about the interaction of multiple actors' cognitive frames during the venture inception phase (i.e., idea elaboration) to explain the bottom-up processes that precede the emergence of a dominant new (corporate) venture idea. We seek to investigate collaborative entrepreneurial behavior of NMEs, shedding light on the obscured role of cognitive frames for the successful realization of explorative venturing projects in established organizations.

Following an inductive research approach, our study suggests that the cognitive frames applied by NMEs (i.e., contracted and expanded frames) represent the underlying foundation for idea elaboration processes that determine individuals' interpretation and evaluation of new venture ideas and, consequently, influence how the collaboration between NMEs unfolds. We find that a creative team's collective idea elaboration is an iterative process that can either result in frame convergence (i.e., a mutual, integrated understanding about the potential value of particular new venture ideas), leading to the team's unified championing of an idea; or frame divergence (i.e., persisting disagreement about the potential value of particular new venture ideas) leading to deferred decision-making and the separation of a creative team. Finally, we

observe the mechanisms of distinct frame-related behavior patterns that favor either frame convergence (i.e., recognition, expansion, and opening) or frame divergence (i.e., defense, confusion, and bypassing). These findings have important implications for the literatures on corporate entrepreneurship, new venture creation, and creativity processes.

4.5.1 Cognitive Frames in Corporate Entrepreneurship

Previous literature on corporate entrepreneurship identified structural organizational factors, such as management support, work discretion, rewards, time availability or other organizational boundaries as central antecedents of CE (e.g., Hornsby et al., 2009, 2002; Kuratko et al., 2005). In addition to organizational factors, academic interest predominantly manifests around entrepreneurial activities of senior and middle managers (Dess et al., 2003; Hornsby et al., 2009; Ireland et al., 2009), attributing successful corporate entrepreneurship initiatives mostly to a cascading top-down (Floyd & Lane, 2000; Hornsby et al., 2009, 2002) rather than a bottom-up approach (Burgelman, 1983). Thus, the human-side of corporate entrepreneurship has received less attention, especially studies investigating lower-level managers' and line workers' entrepreneurial behavior remain underrepresented, which is brought to attention by numerous research calls (e.g., Corbett et al., 2013; Phan et al., 2009; Rigtering et al., 2019).

While existing research on individual-level CE provides valuable knowledge about the importance of individual cognition for the recognition of opportunities (e.g., Plambeck, 2012), about cognitive models that determine how corporate entrepreneurs assess opportunities (Corbett & Hmieleski, 2007), and about emotional embeddedness that regulates activity (e.g., Biniari, 2012), our study reveals the importance of cognitive frames for the interactive idea elaboration process in CE that is precursive to venture emergence. Complementary to Corbett et al. (2007) who proposed the relationship between role schemas (i.e., cognitive structures of

how employee's knowledge is organized about a set of behaviors) and event schemas (i.e., mental road maps that described appropriate sequences of events in well-known situations), we discovered contracted and expanded frames as additional factors that explain a team's interactive assessment of new venture ideas. The interactions between actors' cognitive frames determine if corporate venture teams find congruence among team members and champion their ideas or remain separated in their interpretations that might lead to failure and autonomous championing by circumventing organizational structures.

Particularly, Corbett et al. (2007) acknowledged the importance of cognitive scripts (i.e., mental models) derived from inherent individual knowledge that are applied by corporate entrepreneurs to assess, judge, and take sound decisions. While the authors have exclusively investigated the role for project terminations, our study contributes to the literature by emphasizing the role of cognitive frames for project continuation *and* termination. We argue that cognitive frames might be as important as structural impediments (i.e., management support, work discretion, etc.), especially during the inception phase where the premature and informal venture team engages in elaboration processes in order to find a dominant idea that the team members mutually consider as worthwhile to pursue further (e.g., Patzelt et al., 2020). As NMEs can remain blind to promising entrepreneurial opportunities due to their applied frames, potential breakthrough projects might remain unrecognized or rejected prematurely.

4.5.2 New Venture Inception Phase and Team Cognition

Recently, scholars promoted the idiosyncrasy of the ambiguous and unstructured venture inception phase, in which individuals are collecting, soliciting, processing and implementing feedback from early customers, experts, and team members (e.g., Grimes, 2018; Patzelt et al., 2020) and work on important activities such as opportunity recognition and evaluation (Patzelt et al., 2020). Particularly, the underlying cognitive and affective processes

during these activities that relate to complex social interactions among team members are of major interest (Patzelt et al., 2020; Vogel, 2017). While cognitive mechanisms have been investigated for activities related to opportunity recognition (e.g., Gruber, 2012, 2013, Plambeck, 2012), further understanding regarding idea elaboration is needed to understand how team members connect apparently unconnected ideas to a collective, new, and broader picture.

In this study, we contribute on the phase of idea elaboration (e.g., Perry-Smith et al., 2017) addressing Patzelt and colleagues' (2020) call to investigate the evaluation of opportunities among early-stage teams. Particularly, we assess how a group of individuals moves from individual towards collective judgments related to new venture ideas. While we corroborate the importance of cognitive frames in reaching the positive account of frame convergence, we also find negative consequences related to frame divergence that ultimately led to unconventional NME behavior in terms of failure of new venture ideas. Specifically, our study reveals that NMEs engage in frame-related behavioral practices that are complement to the interaction moves suggested by Harrison and Rouse (2015). Frame-related practices are utilized to influence team members or other stakeholders within the organizations in their processing of information and interpretation of new venture ideas. Herein, we argue for a higher probability of frame convergence and related championing of venture ideas (i.e., as a type of entrepreneurial behavior), once NMEs engage in frame-related behavioral practices such as recognition, expansion, and bridging, whereas practices such as defense, confusion, and bypassing lead to frame divergence. Armed with this knowledge, we contribute to the importance of cognitive frames during the venture inception phase, a bias that may hamper breakthrough inventions in CE activities.

4.5.3 The Influence of Cognitive Frames on Creativity Processes

Finally, we contribute to the literature on interactive creative processes (e.g., Grimes, 2018; Harrison & Rouse, 2015; Harvey, 2014) by positioning actors' cognitive frames as a determinant that influence whether actors integrate or reject other's perspectives in the phase of creative collaboration. Especially, our findings have implications for the processes of creative synthesis (Elsbach, 2020; Harvey, 2014) and creative revision (Grimes, 2018; Harrison & Rouse, 2015).

While creative synthesis focuses on idea development processes and suggests that actors integrate their individual perspectives and interpretations into a shared understanding that may result in breakthrough prototypes (Harvey, 2014), creative revision is conceptualized as a bi-lateral feedback interaction between idea-owners and idea-evaluators in which the individual actors shape another's understandings about specific creative ideas (Harrison & Rouse, 2015). We extend the knowledge about the processes of creative synthesis and creative revision by introducing actors' cognitive frames as the nexus between both processes, ultimately, shedding light on the mechanisms that influence how actors shape another's understandings. To that end, we give explanations on how and why creative processes unfold drawing upon NMEs' frames and thereby strengthen the role of individuals' cognitive frames in creative collaboration.

4.5.4 Practical Implications

Our study suggests additional implications for practitioners. We argue that frame-based interactions embedded in the venture inception phase need to be considered to establish successful corporate entrepreneurial activities. By means of practitioner-oriented methodologies such as lean startup or design thinking that have recently gained increasing attention in academia (e.g., Leatherbee & Katila, 2020; Micheli et al., 2019; Shepherd &

Gruber, 2020), organizations can alleviate the threat of frame-based biases by teaching employees to take entrepreneurial decisions systematically as proposed by Camuffo and colleagues (2020). Even though internal corporate venturing can break temporal frame inflexibility of organizational members (Raffaelli et al., 2019), more initiatives are needed to investigate substantial long-term effects beyond the distinct groups of individuals or the venture team. Moreover, to overcome the fragility of frame convergence due to low intensity interactions, there is a need for additional investigation related to the involvement of senior managers into the idea elaboration process (i.e., through regular feedback loops) in order to develop a shared understanding about the problems being solved and to initiate the creative convergence at an early stage. Nonetheless, we caution that regular involvement of decision-makers should not come at the expense of autonomy in venture operations and needs to be cautiously evaluated.

4.6 Limitations and Future Research

Although our work contributes to understanding the role of cognitive frames within CE, our study comes with the following shortcomings. First, our data is restricted to informants' retrospective insights that may be prone to recall bias. To mitigate this limitation, we captured data from informants that experienced several corporate projects, including the processes related to new venture idea elaboration. Although we believe that this sampling approach provides robust insights, we did not observe NMEs in a longitudinal setting. Yet, this opens up avenues for future research to conduct longitudinal process studies (Langley, 1999) that allow a comprehensive analysis about the procedural mechanisms of the frame-based interactions within new venture idea elaboration on a more detailed level.

Second, as we primarily rely on interviews as our main source of data, we were not able to triangulate our findings. To curb this concern, we gathered data from a high number of

informants, conducted interviews with extended lengths and applied discussion probes to provoke meaningful conversations. Still, we advise researchers to include additional data such as onsite observations, documents (e.g., presentation slides) or written communications (e.g., e-mails) between the NMEs. It would also be beneficial to gather data about different corporate venturing projects that allow to investigate NMEs' frame interactions through multiple cases (Eisenhardt, 1989; Zimmermann et al., 2018).

Third, our findings may be limited in generalizability as we draw on two organizational contexts related to internal corporate venturing. An avenue for future research is to investigate the suggested relationships between NMEs' cognitive frames and their frame-based interactions during idea elaboration in additional organizational contexts to account for potential differences in organizational cultures or structural organizational factors.

4.7 Conclusion

Corporate innovation requires both, structural and cognitive flexibility to foster entrepreneurial activities in novel markets that are new to the parent firms. Cognitive frames play a crucial role in idea elaboration that should pursue a collective understanding among all individuals involved and facilitate the emergence of a dominant new venture idea. The central message of our study is that we need to cautiously consider the influence of distinct cognitive frames and mitigate potentially detrimental frame-related practices that might promote entrepreneurial failure or circumvention of organizational structures. Once the NMEs find resonance in their frame-based new venture idea elaboration, breakthrough projects can be realized by exploring new entrepreneurial opportunities and capturing the value for the parent firm. However, if NMEs are too far apart in their interpretations about the value of a new venture idea, turnover of key personnel might be the outcome.

CHAPTER 5 | Concluding Remarks

5.1 Key Findings from Three Research Projects

This dissertation contributes to central issues in the entrepreneurial decision-making literature that, despite the gained popularity of entrepreneurial decision-making research in recent years, still offers promising research opportunities (e.g., Shepherd et al., 2015). Thereby, in this dissertation we identified important research gaps that extend our understanding about the influence of entrepreneurs' psychology on their decision-making in different organizational contexts. Overall, this dissertation illuminates how obscured and subtle motivational and cognitive factors influence entrepreneurs in their decision-making during venture growth and opportunity assessment. Moreover, the findings of this dissertation show that by applying a psychological perspective to study entrepreneurs' decision-making during the entrepreneurial process, academic entrepreneurship research can discover novel and sometimes unexpected empirical phenomena that extend and challenge our existing knowledge. Particularly, our work provides three key findings that we will summarize in the following.

First, *Chapter 2* shows that entrepreneurs' role identity structures play an important role in the resource allocation process during venture growth. Specifically, we highlight entrepreneurs' role identity as a strong source of motivation that shapes entrepreneurs' preferences for activities that they aim to either delegate to others or retain for themselves. Our findings suggest that delegating roles to employees is a non-linear and iterative process that requires entrepreneurs to continuously reflect on their decision-making throughout the delegation process. Thereby, our discovery about the relationship between entrepreneurs' role identity structures and their dysfunctional de-delegation behavior sheds light on the challenges that entrepreneurs face as they are required to simultaneously build organizational structures and pursue their personal motivations.

Second, *Chapter 3* investigates how the omnipresence of the resource money in entrepreneurs' daily routines can affect their decision-making in the delegation process. In

particular, the chapter explores how money cues influence entrepreneurs' decision processes when delegating tasks to subordinates, integrating research from money and prosociality priming, individuals' resource orientation, and performance evaluation. Although the analysis does not result in the hypothesized effects, our research contributes to the delegation literature by theorizing how cognitive factors may shape entrepreneurs' performance evaluation of other's work and influence entrepreneurs' delegation behavior. Furthermore, by proposing individuals' resource orientation as an intervening variable that moderates the relationship between money priming and performance evaluation, we contribute to the current discussion in the money priming literature. Thus, in addition to the motivational psychological factors analyzed in *Chapter 2*, *Chapter 3* offers entrepreneurs' cognition as an additional potential explanation for their sometimes seemingly irrational delegation behavior.

Third, *Chapter 4* suggests that NMEs' cognitive frames play an important role in the new venture idea elaboration process and further challenges the established notion proposing that NMEs are passive actors that are solely guided by senior managers' direction throughout CE initiatives. Our analysis reveals how NMEs' inherent cognitive frames serve as the inter-individual nexus through which a creative team establishes a shared or contradictory understanding about different new venture ideas. Thereby, our findings show that the convergence of NMEs' frames leads to the emergence of a dominant new venture idea that is championed to senior managers, while the divergence of NMEs' frames results in a team's deferred decision-making and the failure of CE initiatives. Finally, our theoretical model highlights how NMEs' cognitive frames can lead to individuals' alternative perceptions about new venture ideas that shape NMEs' entrepreneurial behavior and, ultimately, influence the outcome of CE new venture creation processes.

5.2 Theoretical Implications and Opportunities for Future Research

This dissertation opened with the narrative of entrepreneurs as heroic individuals that are able to exploit business opportunities in unprecedented manners, revolutionize industries, and achieve extraordinary success (Schumpeter, 1942). Thus, it is no surprise that a major part of prior entrepreneurship research focuses on uncovering factors that distinguish entrepreneurs from other individuals such as managers in established organizations. Herein, extant entrepreneurship literature suggests that psychology variables, personality traits and demographic factors differentiate entrepreneurs from other groups of people (e.g., Baron, 1998; Groves, Vance, & Choi, 2011; Langowitz & Minniti, 2007; Rauch & Frese, 2007).

However, as entrepreneurs are also heterogeneous in their personal attributes, more nuanced theory is needed to uncover factors in which individual entrepreneurs distinguish from one another and how these factors influence the outcome of entrepreneurial activity (Shepherd et al., 2015). To address the gaps in the literature, in three studies we investigated how entrepreneurs' motivational and cognitive psychological factors influence their decision-making in the new venture growth phase and the opportunity assessment phase of the entrepreneurial process. More precisely, the application of the role identity, behavioral priming and cognitive frame theories in different entrepreneurial contexts resulted in two high-level theoretical contributions for the entrepreneurial delegation (related to new venture growth) and new venture idea elaboration (related to opportunity assessment) literatures that provide promising opportunities for future research.

First, this dissertation adds to the entrepreneurial delegation literature by conceptualizing delegation as a process that is influenced by entrepreneurs' motivational and cognitive psychological factors. Although prior research highlights delegation as an important and essential leadership behavior (e.g., Yukl & Fu, 1999), the existing entrepreneurship literature provides surprisingly little theory about the overall delegation process and

entrepreneurs' decision-making throughout this process. The lack of theory about delegation in the entrepreneurship literature is especially surprising as delegation allows entrepreneurs to decentralize decision-making (Baum & Wally, 2003), results in a more effective allocation of resources (Colombo & Delmastro, 2004), and is considered to be a prerequisite for venture growth (Greiner, 1972). Furthermore, prior research acknowledges that, due to their emotional attachment to their ventures, entrepreneurs' delegation differs from managers' delegation in established companies (Cardon et al., 2005). Thereby, *Chapter 2* and *Chapter 3* address the theoretical shortcomings in entrepreneurship delegation literature by incorporating entrepreneurs' motivational and cognitive factors into the analysis.

More precisely, *Chapter 2* introduces entrepreneurs' role identity as a motivational factor that influences entrepreneurs' decisions about the roles they aim to delegate to others and the roles they intend to retain for themselves. Our discovery of entrepreneurs' incongruencies in their role identity structures as a driver for dysfunctional de-delegation behaviors sheds light on the decision processes that shape entrepreneurs' irrational behaviors. Herein, by uncovering procedural role identity-based mechanisms that lead entrepreneurs to engage in dysfunctional behavior, we explain why some entrepreneurs may not be able to further grow their ventures. These results offer promising opportunities for future research, for instance, entrepreneurship scholars could further build on our findings about the three types of role identities (visionary, growth, and implementer role identity) and examine how these identity variations shape entrepreneurial behavior in different contexts. Especially, researchers could investigate how incongruencies in entrepreneurs' role identity structures may influence other decision-making instances in the entrepreneurial process, such as whether entrepreneurs decide to pursue a particular opportunity or not.

In addition, *Chapter 3* provides a cognitive perspective that can explain entrepreneurs' reluctance to delegate tasks to subordinates. In particular, we add to the literature by proposing

environmental cues (i.e., money and prosociality primes) and entrepreneurs' internal personality characteristics (i.e., resource orientation) as factors that may influence their perceptions about others' work and potentially prevent them to delegate tasks. Because the lack of resources such as money is a ubiquitous challenge in early-stage ventures, investigating the effect that thinking about money has on entrepreneurs' decision-making offers interesting opportunities for future research. In future studies, scholars could examine how money priming effects differ for entrepreneurs with varying opportunities to access financial capital, for instance, by comparing entrepreneurs that are backed by venture capital with entrepreneurs that rely on financial bootstrapping.

Another promising avenue for future entrepreneurial delegation research represents the exploration of additional psychological processes that influence entrepreneurs' decisions to engage in delegation or not. Thereby, an interesting theoretical perspective entails the exploration of gender differences and their effect on male and female entrepreneurs' delegation behavior. Specifically, in a recent study Akinola and colleagues (2018) found that women and men differ in their associations with delegation as a leadership practice that lead to distinct gender-specific delegation behaviors. To explain why women are more reluctant to delegate tasks than men, Akinola and colleagues (2018) suggest that women imbue delegation with more agentic traits, leading them to have more negative associations with delegation compared to men. In a similar vein, Shepherd et al. (2015) highlight that differences associated with gender could explain distinctive decision processes between male and female entrepreneurs. Future research can build on the existing findings and further investigate how gender differences may lead to a variance in entrepreneurs' delegation behavior and additionally explore whether and why there exist different delegation behaviors among female entrepreneurs as well.

Second, *Chapter 4* presents a theoretical model that contributes to the literature on new venture idea elaboration by investigating the role of NMEs' cognitive frames in two different CE contexts. With this study, we extend the literature by highlighting the importance of NMEs' cognitive frames in bottom-up CE processes and help to create a broader understanding about the role of cognitive frames in CE and innovation contexts. More precisely, our findings link to Raffaelli et al.'s (2019) recent study which suggests that through top-down processes, senior managers' cognitive frames can influence whether organizations broaden their innovation routines. Complementary, with our findings we extend Raffaelli et al.'s (2019) research by exploring NMEs' frame-related bottom-up processes in corporate new venture creation. We hope to inspire future research to build on our findings, for instance, by investigating how cognitive frames may function as an inter-individual nexus between NMEs and senior managers that shapes new venture idea selection processes across different hierarchical levels.

Furthermore, we recommend future research to draw upon findings from creativity literature in order to examine how organizational actors' cognitive frames influence the creative revision process. In particular, in the gradually evolving and interactive process of creative revision (Grimes, 2018), NMEs expose their new venture ideas to senior manager for the purpose of receiving feedback. The feedback process entails a two-way interaction between NMEs and senior managers that enables the actors to engage in a collective effort in making sense of a given set of information, further develop an initial new venture idea, and negotiate how the implementation of an idea may look like (Harrison & Rouse, 2015). Because cognitive frames influence how individual NMEs and senior managers perceive and evaluate new venture ideas, it is promising to investigate how the frame-related interactions between the different groups of actors unfold.

Another opportunity for future research lies in exploring how entrepreneurs' cognitive frames influence entrepreneurs' strategy making and the related decision processes as they

execute on the established strategy. For such research, entrepreneurship scholars could draw upon the notion of entrepreneurs as theorists (Felin & Zenger, 2009) that create a venture strategy as "a unique, firm-specific point of view" (Felin & Zenger, 2017: 258) which guides them through the general process of value creation. As entrepreneurs' cognition directs their perceptions that represent the foundation for their strategy making, it will be interesting to examine the influence of entrepreneurs' cognitive frames on venture strategy. Relatedly, future research can further investigate how entrepreneurs' cognitive frames shape their decision processes as they apply different approaches to execute on their strategy. It would be especially interesting to understand the frame-related mechanisms underlying entrepreneurs' different approaches to decision-making, such as a scientific (Camuffo et al., 2020) or a search heuristics (Shepherd, Haynie, & McMullen, 2012) decision-making approach.

To sum up, this dissertation provides valuable theoretical insights about the relationships between entrepreneurs' motivational and cognitive psychological factors, and their decision-making. Especially, the dissertation contributes to the entrepreneurship literature by illuminating understudied entrepreneurial decision-making contexts such as the delegation of roles and tasks, and the new venture idea elaboration in CE. We hope that our findings inspire future research to further investigate the psychological factors that circumvent entrepreneurs' decision processes throughout their entrepreneurial journey.

5.3 Practical Implications

The findings of this dissertation provide several individual- and organizational-level practical implications. On the individual level, with the knowledge about motivational and cognitive factors that may bias their decision-making, entrepreneurs can reflect on their intuitions and aim to explore the origin of their preferences for certain decision alternatives. To mitigate the risk of biased decision-making, entrepreneurs should engage in discussions with

others in order to explore diverging points of view and gather feedback that helps them to make well-informed and balanced decisions. In that sense, with the awareness about their own limitations in information processing, entrepreneurs need to be attentive to other's sources for motivation and individual perceptions. Furthermore, to successfully navigate decision processes that require an alignment between different individuals (e.g., internal stakeholders), entrepreneurs should aim for frequent and high intensity interactions between all actors involved in the process. In turn, these interactions will expose the involved individuals to another's motivation- and cognition-based biases and assumptions that may manifest in different preferences for decision-making.

Particularly, *Chapter 2* and *Chapter 3* hold implications for individual entrepreneurs' practical decision-making when delegating key responsibilities as well as individual tasks to others. The two chapters show that entrepreneurs' internal motivational and cognitive psychological factors can lead to dysfunctional behaviors that may result in inefficient resource allocation and impede venture growth. Therefore, before making intuition-based delegation decisions, entrepreneurs should consciously corroborate their intuition with other sources of information such as objective performance data or other's diverging points of view in order to mitigate the risk of implementing inefficient organizational structures that absorb entrepreneurs' and employees' time and energy.

On the organizational level, especially *Chapter 5* provides practical implications by highlighting how individual- and team-level cognition can influence organizational-level CE processes. The study findings suggest that organizations should ensure that organizational actors from different business functions take part in new venture idea elaboration processes. This will enable a diverse group of organizational actors (e.g., consisting of NMEs and senior managers from different business functions) to be exposed to another's interpretations about certain environmental information and allow a group of actors to follow a more rational

decision-making approach. Additionally, an environment that entails a variety of interpretations and understandings from different parts of an organization facilitates the generation and effective refinement of new venture ideas.

However, senior leaders of established organizations need to pay attention to the human factor surrounding CE processes that can potentially lead to chaos and incongruence among organizational actors. To mitigate the risk for frame-based conflicts among individuals that take part in the new venture elaboration process, senior leaders could facilitate workshops that allow all individuals to share their specific interpretations and evaluations about particular new venture ideas. In that context, it may also be useful to train the team of NMEs in entrepreneurship methodologies such as lean startup, design thinking and the business model canvas, in order to establish a common methodological approach throughout CE processes.

To sum up, while individuals engaging in entrepreneurial activity need to be aware of the potential for biased decision-making that is influenced by their motivational and cognitive associations, organizations need to consider the human factor in organizational decision processes as well. From a motivational factor perspective, entrepreneurs and organizations need to reflect on individuals' innate tendencies and desires that may result in biased decision-making. From a cognitive factor perspective, entrepreneurs and organizations need to acknowledge individuals' selective perception of environmental information that can lead to inaccurate evaluations and misinterpretations.

5.4 Synopsis

Entrepreneurs' decision-making throughout different phases of the entrepreneurial process is an intriguing phenomenon as single decisions can influence the future trajectory of a venture, an industry, or even an entire economy. While entrepreneurial decision-making recently gained more scholarly attention, we still lack knowledge about the mechanisms underlying entrepreneurs' decision processes in various context. Theoretical perspectives from psychology literature entail promising research opportunities that will help entrepreneurship scholars as well as practitioners to better understand why entrepreneurs tend to make certain decisions in different environments. While the future is uncertain and holds unexpected challenges that require entrepreneurs to make decisions in complex, stressful, and emotionally charged situations, we hope that our work will provide entrepreneurs with valuable insights that can support their decision processes. At the same time, we hope that our theoretical contributions will inspire future research to continuously illuminate unexplored entrepreneurial decision-making phenomena.

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Appendix

Chapter 2

Appendix 1. Guideline for semi-structured interviews (*Chapter 2*)

Part 1: General Information

1. Was macht ihr Unternehmen? Wann haben Sie das Unternehmen gegründet und wie viele Mitarbeiter beschäftigen Sie aktuell? Wann war der Markteintritt? Umsatz? Wachstum?
2. Bitte skizzieren Sie den organisationalen Aufbau Ihres Unternehmens.
3. Inwiefern versucht Ihr Unternehmen Dinge anders zu machen und mit branchentypischen Geschäftsmodellen zu brechen oder unkonventionelle Wege zu gehen?
   Bitte nennen Sie konkrete Maßnahmen.
4. Inwiefern versucht Ihr Unternehmen operativ besser zu sein als der Wettbewerb?
   Bitte nennen Sie konkrete Maßnahmen.
5. Welche Berufserfahrung haben Sie gesammelt bevor Sie das Unternehmen gegründet haben? Was haben Sie für einen Schulabschluss und ggf. Studium?
   Können Sie die Angaben auch für die anderen Personen in Ihrem Managementteam machen?
6. Auf welche Meilensteine sind Sie besonders stolz?
7. Wie schätzen Sie den derzeitigen Wettbewerb in Ihrer Branche ein?

Part 2: Roles & Daily Routines

1. Bitte skizzieren Sie Ihren typischen Tages- und Wochenablauf.
   Wie abwechslungsreich sind Ihre Aufgaben?
2. Haben Sie das Gefühl, dass Sie als Unternehmer in verschiedene Rollen schlüpfen müssen?
   Wenn ja, welche sind das?
   Wie schwer fällt es Ihnen zwischen den verschiedenen Aufgaben hin und herzuspringen?
3. Wie priorisieren Sie Ihre Aufgaben?
4. Bitte beschreiben Sie Ihren Führungsstil gegenüber Ihren Mitarbeitern.
5. Haben Sie eine konkrete Wachstumsstrategie? Wenn ja, wie sieht die aus?

Part 3: Delegation and Participative Decision-Making

1. Wie sind Sie gestartet mit dem Unternehmen? Wie sahen Ihre Aufgaben direkt nach der Gründung aus und welche Aufgaben machen Sie heute selber?
2. Würde das Tagesgeschäft Ihres Unternehmens auch ohne Ihre Anwesenheit reibungslos funktionieren? Wenn ja, wie ist das möglich?
3. Wo sehen Sie Ihre derzeitige Rolle im Unternehmen? Was sind Ihre Hauptaufgaben?
4. Bitte erläutern Sie, wie wichtige Entscheidungen in Ihrem Unternehmen getroffen werden.
5. Sind Sie eher ein „Kontrolltyp“, der am liebsten alles selber macht oder fällt es Ihnen leicht Aufgaben abzugeben?
6. Warum delegieren Sie Aufgaben?
7. Welche Aufgabentypen delegieren Sie an wen?
8. Wie delegieren Sie diese Aufgaben? Bedeutet Delegieren für Sie Risiko oder Entlastung?
9. Glauben Sie, dass sie bestimmte delegierte Aufgaben besser oder schneller bearbeiten können als Ihre Mitarbeiter? Wie fühlen Sie sich dabei?
10. Bei welchen delegierten Aufgaben haben Sie Angst, dass sie nicht richtig bearbeitet werden?
11. Kam es schon vor, dass Sie eine Aufgabe formal delegiert haben und anschließend die Aufgabe trotzdem selber bearbeitet haben oder anderweitig involviert waren?
12. Wie fühlen Sie sich, wenn Mitarbeiter Aufgaben anders erledigen als Sie? (oder besser?)
13. Welche Aufgaben möchten Sie unbedingt selbst erledigen? Warum?
    Wie schwer fällt es Ihnen Zeit für diese Aufgaben zu finden?
14. Welche Aufgaben lagern Sie aus (Outsourcing) bzw. welche Dienstleistungen kaufen Sie extern ein? Warum?
15. Welchen Mitarbeitern vertrauen Sie auch sehr wichtige Aufgaben an? Warum?
    Nach welchen Kriterien haben Sie Ihre „Top-Manager“ für die jeweilige Position ausgewählt?
    Beabsichtigen Sie diesen Mitarbeitern in der Zukunft weitere Autorität und Verantwortlichkeiten zu übertragen? In welcher Form kann das geschehen?
16. Wie fühlt sich dieser Übergang an? Ich meine, Sie waren seit Gründung des Unternehmens irgendwo für alles zuständig, Sie wussten immer genau, was im Unternehmen passiert. Wie fühlt es sich an, dass Sie immer mehr aus der Hand geben müssen und viele Sachen nicht mehr in Ihrem direkten Zugriff sind? Welche Bedenken haben Sie dabei? Wie gehen Sie damit um? Gucken Sie noch was operativ passiert oder haben Sie völliges Vertrauen in Ihre Mitarbeiter und die Arbeitsroutinen, also in die Organisation? Trauern Sie der Anfangszeit auch ein stückweit nach?

Part 4: Identity

1. Möchten Sie auch in der Zukunft operativ involviert sein?
2. Haben Sie eine konkrete Vision von Ihrem Unternehmen in der Zukunft? Wie sieht diese Zukunft aus (Organisation)? Was ist Ihre Rolle?
3. Was macht Ihnen als Unternehmer am meisten Spaß? Welche Aufgaben empfinden Sie demgegenüber als lästig?
4. Macht es Ihnen Spaß das Unternehmen weiterzuentwickeln? Gefällt es Ihnen Routinen aufzubauen und die ganzen Prozesse zu formalisieren? Sehen Sie dieses Unternehmen in dieser Branche als Ihre Lebensaufgabe an oder möchten Sie lieber nochmal was anderes aufbauen?
5. Inwiefern springen Sie zwischen operativen und strategischen Themen hin und her?

Part 5: Individual Characteristics

1. Wie würden Sie Ihren Charakter beschreiben?
2. Warum haben Sie das Unternehmen gegründet?
3. Bitte skizzieren Sie Ihre Strategie um (komplexe) unternehmerische Probleme zu lösen.
   Passen Sie Ihre Strategie für verschiedene Problemarten an? Bitte nennen Sie Beispiele.
4. Macht es Ihnen Spaß die Lösung für ein kompliziertes Problem zu finden?
   Wenn ja, bitte erläutern Sie, was Sie an diesem Prozess besonders begeistert.
5. Wie oft kommt es vor, dass Sie die Aufgaben, welche Sie sich für den Tag vorgenommen haben, aufgrund von Zeitmangel nicht erledigen können? Wie gehen Sie damit um?

Part 6: Performance

1. Wie schätzen Sie die Leistung Ihres Unternehmens im Vergleich zu Ihrem direkten Wettbewerb ein?
2. Wie messen Sie die Unternehmensleistung?
   Messen Sie auch die Innovationskraft Ihres Unternehmens? Wenn ja, wie?
3. Wie zufrieden sind Sie persönlich mit Ihrer Work-Life Balance?

Möchten Sie mir abschließend sonst noch irgendetwas mitteilen? Möchten Sie z.B. einen Punkt hervorheben, der im Laufe des Interviews zu kurz kam oder was Sie noch unbedingt erwähnen möchten?

Postscriptum: Interviewnr., Interview am, Dauer, Geschlecht, Alter, berufliche Position

Chapter 3

Appendix 2. Results of exploratory factor analysis of performance evaluation (*Chapter 3*)

Item	Factor 1
Der Entwurf ist kreativ und originell.	0.61
Der Entwurf spricht die Zielgruppe an.	0.56
Für den Entwurf hat sich mein Mitarbeiter Mühe gegeben.	0.77
Mit dem Entwurf demonstriert mein Mitarbeiter seinen "Geschäftssinn."	0.67
Gesamtqualität des Entwurfs.	0.94
Excluded Items	
Der Entwurf ist verständlich.	

Extraction Method: Principal Axis Factoring
Rotation Method: Direct Oblimin Rotation

Appendix 3. Second supplemental analysis: Continuous money and time orientations included as independent moderators (*Chapter 3*)

	Model 1		Model 2		Model 3		Model 4	
Variables	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Dependent Variable: Performance Evaluation								
Controls								
Age	-0.12*	0.05	-0.12*	0.05	-0.13*	0.05	-0.12*	0.05
Gender	0.27	0.17	0.26	0.17	0.25	0.17	0.27	0.18
International Business Studies	0.17	0.36	0.19	0.36	0.17	0.32	0.18	0.33
Business Administration	0.18	0.34	0.17	0.35	0.17	0.30	0.16	0.31
Income	0.13	0.17	0.17	0.18	0.21	0.16	0.17	0.16
Main Effects								
Money Orientation			-0.06	0.09	-0.13	0.11	-0.06	0.13
Time Orientation			-0.02	0.09	-0.02	0.12	-0.02	0.13
Money Prime			-0.14	0.19	-0.16	0.19	-0.15	0.19
Prosocial Prime			-0.01	0.19	-0.02	0.20	-0.01	0.20
Interaction Effect								
Money Prime x Money Orientation					0.26	0.31		
Money Prime x Time Orientation					0.10	0.30		
Prosocial Prime x Money Orientation							-0.01	0.26
Prosocial Prime x Time Orientation							0.05	0.28
R^2		0.06		0.07		0.08		0.07
$\triangle R^2$				0.01		0.00		0.00

*p < 0.05; **p < 0.01; ***p < 0.001

Appendix 4. Resource Orientation Measure (Whillans et al., 2016) (*Chapter 3*)

Bitte kreuze im Folgenden an, inwieweit du den jeweiligen beschriebenen Menschen aus den beiden Beispielen ähnelst.							
	Ich ähnele ihnen überhaupt nicht			Ich ähnele ihnen teils/teils			Ich ähnele ihnen voll und ganz
Beispiel 1: **Es gibt Menschen, die ihre <u>Zeit</u> mehr schätzen als ihr <u>Geld</u>.** Diese Menschen sind bereit, ihr Geld zu opfern, um mehr Zeit zu haben. Zum Beispiel würden sie lieber weniger Stunden arbeiten und weniger Geld verdienen, als mehr Stunden zu arbeiten und mehr Geld zu verdienen.	1	2	3	4	5	6	7
Beispiel 2: **Es gibt Menschen, die ihr <u>Geld</u> mehr schätzen als ihre <u>Zeit</u>.** Diese Menschen sind bereit, ihre Zeit zu opfern, um mehr Geld zu haben. Zum Beispiel würden sie lieber mehr Stunden arbeiten und mehr Geld verdienen, als weniger Stunden zu arbeiten und mehr Zeit zu haben.	1	2	3	4	5	6	7

Appendix 5. Performance Evaluation (Pfeffer et al., 1998) (*Chapter 3*)

Bitte kreuze an, inwieweit folgende Aussagen deiner Meinung nach zutreffen.							
	Trifft überhaupt nicht zu			Trifft teils/teils zu			Trifft voll und ganz zu
Der Entwurf ist kreativ und originell.	1	2	3	4	5	6	7
Der Entwurf ist verständlich.	1	2	3	4	5	6	7
Der Entwurf spricht die Zielgruppe an.	1	2	3	4	5	6	7
Für den Entwurf hat sich mein Mitarbeiter Mühe gegeben.	1	2	3	4	5	6	7
Mit dem Entwurf demonstriert mein Mitarbeiter seinen „Geschäftssinn“.	1	2	3	4	5	6	7
Gesamtqualität des Entwurfs	schlecht						hervorragend
	1	2	3	4	5	6	7

Appendix 6. Scrambled Sentence Task (Srull & Wyer, 1979) (*Chapter 3*)

Beispiel: sahen, Zug, den, Fahrzeug, sie

Möglicher Satz: ....*Sie sahen den Zug*.....

Money Prime (Hansen et al., 2012)

1. lebt, Luft, im, Anna, Wohlstand
2. Boxen, Garten, teuer, sind, die
3. wunderschön, tanzend, der, Regenbogen, ist
4. wäre, gelb, ich, gerne, reich
5. Schokolade, angefangen, der, Sommer, hat
6. Menschen, erfolgreiche, haben, Geld, Hühner
7. ein, eröffnet, Brücken, sie, Bankkonto
8. ausländische, sie, singen, Münzen, sammelt
9. trotzdem, sind, farbig, Blätter, die
10. eine, gefragt, bekommt, sie, Gehaltserhöhung
11. sind, Geldscheine, Schweiz, englische, schön
12. Kasse, geschlossen, Schlüssel, ist, die
13. verdient, Popstar, ein, Lied, viel
14. kontinuierlich, Haus, steigt, Mehrwertsteuer, die
15. müssen, abspült, wir, abrechnen, noch

Prosocial Prime (Molinsky et al., 2012)

1. ist, Flugzeug, wichtig, Anna, Freundschaft
2. gerne, alles, ihn, unterstützt, sie
3. wunderschön, tanzend, der, Regenbogen, ist
4. bin, ausgesprochen, ich, tanzen, beliebt
5. Schokolade, angefangen, der, Sommer, hat
6. Menschen, erfolgreicher, sind, freundliche, Wetter
7. warmherzig, war, Rede, Raum, ihre
8. sind, ist, höflich, das, sehr
9. trotzdem, sind, farbig, Blätter, die
10. Verhalten, ist, bekommt, sein, vertrauenswürdig
11. herzensgut, viele, Himmel, sind, Menschen
12. sie, fürsorglich, Baum, sich, kümmert
13. das, schaffen, Tisch, gemeinsam, wir
14. ihr, Haus, verbunden, ist, er
15. bilden, spielt, wir, Gemeinschaft, eine

Control Condition (Hansen et al., 2012)

1. lebt, Luft, in, Anna, Italien
2. Boxen, Garten, laut, sind, die
3. wunderschön, tanzend, der, Regenbogen, ist
4. wäre, gelb, ich, gerne, dünn
5. Schokolade, angefangen, der, Sommer, hat
6. Menschen, erfolgreiche, sind, fleissig, Hühner

7. eine, eröffnet, Brücken, sie, Diskussion
8. Haus, Uhr, defekt, ist, die
9. trotzdem, sind, farbig, Blätter, die
10. einen, gefragt, bekommt, sie, Kuss
11. wunderschön, tanzend, der, Regenbogen, ist
12. Laden, geschlossen, Schlüssel, ist, der
13. singt, Popstar, ein, Lied, viel
14. Film, Kino, ist, langweilig, der
15. müssen, abspült, wir, abwaschen, noch

Appendix 7. Experimental Scenario (Pfeffer et al., 1998) (*Chapter 3*)

Stell dir vor, dass du in einer Werbeagentur in einer Führungsposition arbeitest. Ein Uhrenhersteller hat dich mit dem Design und der Ausarbeitung einer Printanzeige beauftragt, um das Modell einer neuen Armbanduhrenkollektion auf dem deutschen Markt zu bewerben. Die Zielgruppe der Kampagne sind junge Erwachsene.

Du delegierst die Erstellung eines ersten Entwurfs der Anzeige an einen deiner kürzlich neu angestellten Mitarbeiter.
Bitte schaue dir den folgenden ersten Entwurf deines Mitarbeiters für einen Moment lang an und beantworte anschließend die Fragen auf der nächsten Seite.

Chapter 4

Appendix 8. Guideline for semi-structured interviews (*Chapter 5*)

Part 1: General Information

1. Bitte stellen Sie sich und Ihren bisherigen Karriereweg in 1-2 Minuten kurz vor.
2. Was ist Ihr höchster Bildungsabschluss und wann haben Sie diesen abgelegt?
3. Wie alt sind sie? (Wie lautet Ihr Geburtsjahr?)
4. In welcher Abteilung arbeiten Sie aktuell?
5. Welche Tätigkeiten üben Sie zurzeit aus und in welcher Position befinden Sie sich?
6. Für wie viele Personen sind Sie im Unternehmen verantwortlich?

Part 2: Cognitive Frames

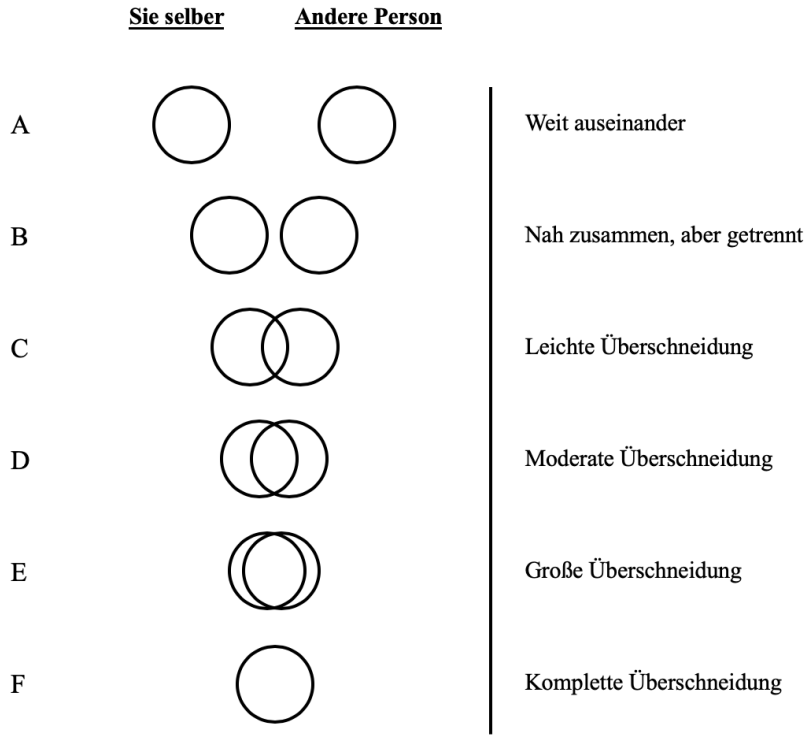
1. Wie würden Sie den Begriff „Innovation“ definieren?
2. Man sagt ja, dass Menschen die Welt durch verschiedene „Brillen“ sehen. Was würden Sie sagen, durch welche „Brillen“ betrachten die Mitarbeiter in Ihrem Unternehmen Innovationsideen?
3. Wie sind Sie **persönlich** disruptiven Innovationen gegenüber eingestellt? Mit welcher „Brille“ betrachten Sie diese Art der Innovation?
4. Wie sieht das **für andere Personen** im Unternehmen aus? Gibt es Unterschiede bzgl. der angewendeten „Brillen“ zwischen den einzelnen Abteilungen?
    a. Z.B., wodurch werden Innovationsprojekte normalerweise angestoßen?
5. Welche Unternehmen definieren Sie als Ihre Wettbewerber?
    a. Brillen & Wettbewerb *(„Die Linie denkt in der alten Welt, wir such eher etwas Neues“)*
6. Wenn Sie die verschiedenen „Brillen“ in 3-5 Kategorien zuordnen müssten, welche wären das?

Part 3: Frame Interactions

1. Für die nächsten Fragen fokussieren wir uns auf die „Brillen“ bzgl. Innovationideen: Bitte geben Sie mit Hilfe der folgenden Abbildung an, wie sehr Ihre eigene „Brille“ mit den „Brillen“ von anderen Personen aus Ihrem Unternehmen übereinstimmen.
2. Wie blicken Sie selber auf Innovationen? Wie ist das für:
    a. Ihre direkten Arbeitskolleg*innen (ihr eigenes Team eingeschlossen)? Warum ist das so? Hast du Beispiele?
    b. Ihren direkten Vorgesetzten? Warum ist das so? Hast du Beispiele?
    c. Die Unternehmensführung? Warum ist das so? Hast du Beispiele?

d. Personen aus anderen Fachbereichen bzw. Abteilung/Innovationseinheit? Warum ist das so? Hast du Beispiele?
e. Auf Organisationsebene: Welche Abteilungen stimmen in ihren „Brillen“ bzgl. Innovationen eher überein? Welche Abteilungen betrachten Innovationsideen durch gänzlich unterschiedliche „Brillen?“ Warum ist das so? Hast du Beispiele?

Bitte geben Sie an, inwiefern Ihre eigene Perspektive von Innovation (Ihre „Brille) mit der Perspektive von anderen Personen in Ihrem Unternehmen übereinstimmt.



3. Bitte beschreiben Sie 2-3 Situationen, in denen Ihre „Brille“ mit den „Brillen“ von anderen Beteiligten **übereinstimmten bzw. in denen es Konflikte** gab. Sofern möglich, beziehen Sie sich bitte auf **konkrete Innovationprojekte**, die Sie an Ihre Vorgesetzten oder eine andere Abteilung herangetragen haben.
4. Um was für eine Situation, bzw. um welches Projekt oder Innovationsidee hat es sich gehandelt? War das eine inkrementelle oder disruptive Innovationsidee?
5. Was war Ihre Rolle?
    a. Haben Sie die Idee gehabt, oder wurde Ihnen eine Idee vorgeschlagen?
    b. Welche anderen Personen waren involviert?
    c. Wer war der Projektverantwortliche?
    d. Welche „Brille“ hatten Sie in den jeweiligen Situationen auf?

   e. Welche „Brillen“ konnten Sie bei den anderen Projektbeteiligten beobachten?
   f. Durch welche „Brille“ hat der Projektverantwortliche bzw. Entscheider die Innovationsidee betrachtet?
   g. Was war das Resultat der einzelnen Situationen? Wie wurden Konflikte gelöst?
   h. Wie fühlen sich diese Konflikte zwischen verschiedenen „Brillen“ bzw. Sichtweisen für Sie an?
   i. Was würden Sie sich wünschen, durch welche „Brillen“ sollten die Mitarbeiter in Ihrem Unternehmen Innovationsideen generell betrachten?
6. Gibt es Situationen in denen Abteilungen die Adaption einer Innovationsidee gänzlich ablehnen? Sodass der Ideengeber dementsprechend keine „Landebahn“ findet? Bitte beschreiben Sie beispielhaft 1-2 solcher Situationen.

Part 4: Gathering Support

1. Was tun Sie, wenn Ihre Arbeitskolleg*innen oder Vorgesetzten eine Innovationsidee, von der Sie überzeugt sind, nicht verstehen oder ablehnen?
2. Was ist Ihre Herangehensweise, um Ihren Arbeitskolleg*innen oder Vorgesetzten Innovationsideen attraktiv zu machen? Bitte nennen Sie Beispiele.
3. Wie wecken Sie positive Emotionen für Ihre Ideen?
4. Wie pitchen Sie gewöhnlicher Weise Ihre Innovationsideen?
5. Wie nutzen Sie Dokumente oder Präsentationen? Gibt es vorgefertigte Templates?
6. Was ist mit Prototyping?
7. Wo sehen Sie die Vor- und Nachteile der einzelnen Methoden?

Möchten Sie mir abschließend sonst noch irgendetwas mitteilen? Möchten Sie z.B. einen Punkt hervorheben, der im Laufe des Interviews zu kurz kam oder was Sie noch unbedingt erwähnen möchten?

Postscriptum: Interviewnr., Interview am, Dauer, Geschlecht, Alter, berufliche Position

Co-Author Statements and Share of Contribution

Chapter 2

Entrepreneurs' Role Identities and Their Delegation Behavior: Discovering the Phenomenon of De-Delegation

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- Mirko Brunk, Katrin Burmeister-Lamp, and Diemo Urbig developed the research question
- Mirko Brunk collected and analyzed the data
- Mirko Brunk, Katrin Burmeister-Lamp, and Diemo Urbig developed the theoretical model
- Mirko Brunk wrote the paper

16.05.2022, Mirko Brunk

16.05.2022, Katrin Burmeister-Lamp

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Chapter 3

How Money Priming Influences Performance Evaluation: The Moderating Effect of Resource Orientation

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- Mirko Brunk designed the experiment and collected the data
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Chapter 4

How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship

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Eidesstattliche Erklärung

Ich, Herr Mirko Brunk, versichere an Eides statt, dass die vorliegende Dissertation von mir selbstständig und ohne unzulässige fremde Hilfe unter Beachtung der „Grundsätze zur Sicherung guter wissenschaftlicher Praxis an der Heinrich-Heine-Universität Düsseldorf“ erstellt worden ist.

Berlin, 13.06.2022

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Mirko Brunk