**FROM ZERO TO HERO:
ENTREPRENEURIAL EXPERIENCE AND
ITS MOTIVATIONAL DYNAMICS**

**NANYANG
TECHNOLOGICAL
UNIVERSITY**

SIRAN ZHAN

NANYANG BUSINESS SCHOOL

A thesis submitted to the Nanyang Technological University
in fulfillment of the requirements for the degree of
Doctor of Philosophy

2017

Acknowledgements

First of all, I am grateful for my dissertation advisers, Ying-yi Hong, Marilyn Uy, Kim Yin Chan, and Roy Chua for challenging me to think bigger and giving me invaluable guidance. Special thanks go to my supervisor Ying-yi who has stayed true to her role as an advisor: you are always there to challenge me and guide me but always encouraged me to think and act independently. Thank you for always believing in me and nurturing me to be an independent scholar since day one. I will always look up to your passion and dedication. I am forever grateful to Marilyn for taking me under her wing especially during the last year after Ying-yi's departure; this dissertation would not have been possible without Marilyn's unfailing support and encouragements. I am thankful to Kim for urging me to develop skills beyond research to become a better presenter, persuader, and leader. Thanks to you I invested time and efforts to pursue holistic professional growth. Last but not least, I have benefited tremendously from Roy's candid suggestions and feedback in various stages of this dissertation process. He taught me to stay critical and always strive for novel contributions in research.

I am also deeply grateful for the many other faculty members in Nanyang Business School for sharing insights and advice throughout my time in the school. This journey would not have been such a smooth one if not for the constant support from the amazing ladies in the Ph.D. Office: Bee Hua Quek, Karen Barlaan, Amarnisha Mohd, and Tsai Ting Hu. Thank you for always being there to take care of everything, big and small, so that we can fully focus on doing research. I would not have progressed this far without the generosity and kindness of our incredible former and present Ph.D. program coordinators, Prof. Chi-yue

Chiu and Prof. S. Viswanathan, as well as our department head, Prof. Soon Ang. I sincerely appreciate all that you have done for us students.

The journey would not have been nearly as enjoyable if it is not shared with a most wonderful group of helpful and cheerful peers – thank you all for sharing the fears and the tears as well as laughter with me along the way. I am grateful to have your friendship for the past four years and look forward to growing our friendship in the years to come.

Finally I am filled with gratitude toward my family. I am blessed to have two of the most understanding and supportive parents in the world. Although I am sure you would rather that I spend more time visiting you than quietly pursuing a Ph.D. degree far away from home, you have always supported my decisions and aspirations without hesitation. I am eternally grateful for your sacrifices for me. I owe this work to my dearest maternal grandma, who has fearlessly fought cancer over the past years with the hope to see me graduate. You have shown me the meaning of resilience, without which none of this work could have been possible. I am also thankful for my new family, especially my parents-in-law, for being understanding at times when I could not spend time with you during your visits to Singapore and for fueling me with my favorite cheeses and chocolates whenever you get a chance. Finally, I am grateful beyond words for my loving husband Patrick, for always putting me before yourself and always being ready to do anything to take away my frustration and cheer me on. You make me a better person, every day.

Table of Contents

	Page
Acknowledgements.....	iii
Table of Contents.....	v
List of Tables and Figures.....	vi
List of Appendices.....	vii
Abstract.....	viii
Chapter 1. Introduction.....	1
Organization of Studies.....	7
Chapter 2. A conceptual framework of entrepreneurial experience.....	9
Overview.....	9
Personal motivations for new venture creation.....	10
External pressures and demands for business viability and survival.....	13
Early stage entrepreneurial experience as simultaneous dual goal pursuit...	14
Growth stage.....	16
Boundary condition.....	19
Entrepreneurial experience as simultaneous dual goal pursuits.....	20
Consequences of simultaneous dual goal pursuits.....	14
Chapter 3. Consequences of entrepreneurial experience.....	31
Entrepreneurial creativity.....	31
Entrepreneurs' roles identities.....	36
Entrepreneurial experience, dual role identification, and motivation.....	44
Entrepreneurial experience and role identity conflict.....	47
List of propositions, hypotheses, and empirical tests.....	51
Chapter 4. Professional roles and creativity values.....	53
Method.....	53
Analysis and Results.....	54
Discussion.....	57
Chapter 5. Role identification and business idea evaluation.....	58
Method.....	58
Analysis and Results.....	63
Discussion.....	68
Chapter 6. Role identity activation and business idea generation.....	70
Method.....	70
Analysis and Results.....	75
Discussion.....	78
Chapter 7. General Discussion.....	80
Theoretical contribution.....	82
Practical implication.....	84
Limitations and future directions.....	85
Conclusion.....	86
Appendices.....	88
References.....	95

Tables and Figures

Tables	Page
Table 1. List of assumptions, hypotheses, and empirical tests.....	51
Table 2. Study 2 Descriptive statistics and correlations.....	63
Table 3. Study 2 Regression Results for Testing Role Identities' Effects on Creativity Evaluation as Moderated by Entrepreneurial Experience.....	64
Table 4. Study 3 Means and Standard Deviation by Condition.....	77

Figures	
Figure 1. Conceptualization of Entrepreneurial Experience and Associated Role Identity Changes..	30
Figure 2. Summary of Empirical Model.....	52
Figure 3a. Novelty by Inventor Identity and Entrepreneurial Status.....	67
Figure 3b. Commercial Viability by Inventor Identity and Entrepreneurial Status.....	68
Figure 4a. Commercial Viability by Condition and Entrepreneurial Status.....	78
Figure 4b. Novelty by Condition and Entrepreneurial Status.....	78

Appendices

Appendices	Page
Appendix 1. Interview Protocol.....	88
Appendix 2a. Study 2 Scenario 1 (Inventor Condition).....	89
Appendix 2b. Study 2 Scenario 2 (Businessperson Condition).....	90
Appendix 3a. Study 4 Manipulation Scenario Part 1 (Inventor Condition).....	91
Appendix 3b. Study 4 Manipulation Scenario Part 2 (Inventor Condition).....	92
Appendix 4a. Study 4 Manipulation Scenario Part 1 (Businessperson Condition).....	93
Appendix 4b. Study 4 Manipulation Scenario Part 2 (Businessperson Condition).....	94

**From Zero to Hero:
The Role of Entrepreneurial Experience in Entrepreneurs' Identity Processes**

Abstract

This dissertation proposes a theoretical framework of how personal and external motivations may shape entrepreneurs' early venture creation experience, conceptualized as a simultaneous pursuit of the dual goals of venture uniqueness and commercial viability, throughout the founding and growth phases of venture creation. I then develop propositions on how such a psychological and behavioral experience may provide the learning context where entrepreneurs clarify their role schema and the relationship among their multiple role identities. Based on this reasoning, I then develop additional propositions and hypotheses regarding the moderating role of entrepreneurial experience on how role identities motivate entrepreneurs' cognition and behavior, specifically, when generating and evaluating creative business ideas. Across three studies, I found preliminary support for this framework. Particularly, entrepreneurial experience moderates the relationship between role identities and creative behavior such that role identification predicts creativity evaluation criteria consistent with the role schema, only among experienced entrepreneurs but not among nascent entrepreneurs. Moreover, when one (but not the other) role is made salient, experienced entrepreneurs (but not nascent entrepreneurs) still fulfill the schema of the non-salient role. This work contributes to the literatures on entrepreneurial experience, entrepreneurial motivation, and creativity. Practical implications and future directions are discussed.

CHAPTER 1

Introduction

Richard Branson, the dashing entrepreneur behind the Virgin Group, the brand behind some 400 enterprises, was just 16 when he started his first business, a magazine called *Student*. But it was his chain of music stores called Virgin Records, opened six years later, which made his fortune. Building on this experience, he continued onto launching an airline, Virgin Atlantic Airways; a phone company, Virgin Mobile; and most recently, Virgin Galactic, a space tourism company.

Branson's entrepreneurial success resembles a well-known observation that founders' prior entrepreneurial experience can benefit venture performance (Stuart & Abetti, 1990). In general, serial entrepreneurs are more likely to found successful businesses: prior entrepreneurial experience is found to increase sales performance (Delmar & Shane, 2006), the longevity of the next business opened (Lafontaine & Shaw, 2016), and overall survival rates (Brüderl, Preisendörfer, & Ziegler, 1992; Dencker, Gruber, & Shah, 2009). At an aggregate level, serial entrepreneurs create a disproportionate share of both entrepreneurial firms and economic impact (Roberts & Eesley, 2011).

While there is no conclusive explanation as to how entrepreneurial experience is beneficial for subsequent venture performance (Lafontaine & Shaw, 2016), the learning by doing perspective dominates the discourse. According to this perspective, entrepreneurs gain important social and human capital which is instrumental for the success of their next venture, from their experience starting new businesses.

Social capital is referred to as the "who you know" or a set of supporting relationship with other economic actors (Pennings, Lee, & Van Witteloostuijn, 1998). Entrepreneurs accumulate social capital by getting to know and building long-term

relationships with important individuals who have access to resources. In turn, entrepreneurs' social capital accumulated from prior entrepreneurial experience can help them gain prompt access to relevant resources to speed up and successfully carry out business activities such as raising external capital (Hsu, 2007; Shane & Stuart, 2002) and hiring key executives (Bygrave & Timmons, 1992), an advantage which novice entrepreneurs lack.

Similarly, the human capital explanation reasons that entrepreneurial experience provides tacit knowledge of routines and skills to be learned by doing, which can be transferred to the new venture (Ripsas, 1998; Shepherd, Douglas, & Shanley, 2000). These routines, knowledge, and skill learned from previous experiences of hiring new employees, raising capital, developing a new product, and selling one's offering, can provide entrepreneurs the blueprints of what to do and how to execute in order to successfully build a new firm. As a result, founders' prior entrepreneurial experience can reduce the new firm's learning curve and prevents unnecessary mistakes to enhance the firm's chances of success (Unger, Rauch, Frese, & Rosenbusch, 2011).

Although researchers agree that learning by "doing" is how entrepreneurs benefit from entrepreneurial experiences, there has not been a parsimonious model that theorizes about what entrepreneurs typically "do", or the key actions that define the entrepreneurial experience. In other words, the typical content of an entrepreneurial experience remains a black box, despite recent theoretical advancement in understanding the beneficial effect of entrepreneurial experience on subsequent venture creation. By focusing on what entrepreneurs learn but neglect what they may do, the entrepreneurship researchers have left out motivation, a key factor in entrepreneurial actions, in the scholarship on entrepreneurial experience. As

a result, the motivated nature of the entrepreneurial experience and its motivational consequences remains poorly understood. As motivation has been shown to shape much of entrepreneurs' active decisions, choices, and behaviors, examining its role in shaping the entrepreneurial experience, which in turn, shapes subsequent motivational dynamics, can significantly enrich the scholarship on entrepreneurial experience.

While motivational factors such as values and goal orientation are known to guide entrepreneurs' decisions and behavior (e.g., Culbertson, Smith, & Leiva, 2010; Katz, 1992; Kolvereid, 1996), recent research has paid increasing attention to role identity as an important motivational force behind entrepreneurial behaviors (e.g., Cardon, Wincent, Singh, & Drnovsek, 2009; Farmer, Yao, & Kung-Mcintyre, 2011; Fauchart & Gruber, 2011; Hoang & Gimeno, 2010a; Murnieks, Mosakowski, & Cardon, 2012). For example, Murnieks and associates (2012) found that the more individuals identify with the entrepreneur role, the more they engaged in entrepreneurial behavior, via the mediating path of increased entrepreneurial passion. Entrepreneurs may also identify with different types of founder identities which systematically shape their venture-related decisions (Fauchart & Gruber, 2011). For instance, entrepreneurs who hold a Missionary identity tend to produce for customers where they expect the greatest social impact. In comparison, those holding a Communitarian identity tend to be driven by the similarity between themselves and their customers while those holding a Darwinian identity tend to be driven by commercial value and profit, in their choice of target market. While entrepreneurs may start with the general identity of being an entrepreneur or founder, the specific roles that support this overarching identity may only gain clarity through experience. Cardon and associates (2009) made the initial conceptual proposition that entrepreneurs may play three key roles in their new venture: inventor, business

founder, and business developer. Specifically, the inventor role is associated with the responsibility of inventing new product or services, the founder role entails the responsibility of venture creation, and the developer role is associated with venture growth. While these more specific role identities can have important motivational consequences, no prior research has examined whether their associated schema gain clarity through entrepreneurial experience. Instead, prior research seems to implicitly assume that entrepreneurs' role identities hold unambiguous role schema since the start.

Furthermore, while research on multiple identities in other domains have shown that one's different identities may not co-exist in harmony or may even conflict one another (e.g., Brook, Garcia, & Fleming, 2008; Cheng, Sanchez-Burks, & Lee, 2008), this possibility has not been considered with regard to entrepreneurs' multiple role identities. One reason for this lack of consideration may be that the conflict between these identities are not apparent on the outset but only becomes salient through the experience of performing these multiple roles simultaneously. Since experience and motivation, particularly, role identity, have not been examined together before, some of these aforementioned changes in role schema clarity and identity structure, and their impact on entrepreneurial behavior and performance, may not have received the attention they deserve. Integrating these two previously separate bodies of work, I set out to fill this knowledge gap in this dissertation by exploring the broad question of how entrepreneurial experience may be shaped by and subsequently shape the motivational dynamics during early venture creation.

In the growing body of literature on entrepreneurial identity, researchers have typically conceptualized entrepreneurship-related identities in 3 ways. Firstly, some researchers focus specifically on the entrepreneur identity, or the extent to which

individuals see themselves as entrepreneurs. They tend to view it as an overarching identity category that differentiates entrepreneurs from non-entrepreneurs such as paid employees. This line of research builds on role identity theory to understand how the strength of identification induces affective experiences such as passion and behavioral outcomes such as efforts and persistence on entrepreneurial goal pursuit (e.g., Murnieks et al., 2012). A second perspective builds on social identity theory and assumes that there are different types of possible entrepreneurship-related identities that entrepreneurs may selectively take on, through a between-person lens. For instance, Fauchart & Gruber (2011) argues that there may be three types of entrepreneurship-related identities which entrepreneurs may self-categorize into: Missionary, Communitarian, and Darwinian. Entrepreneurs who hold a Missionary identity tend to produce for customers where they expect the greatest social impact. In comparison, those holding a Communitarian identity tend to be driven by the similarity between themselves and their customers while those holding a Darwinian identity tend to be driven by commercial value and profit, in their choice of target market. The assumption in this perspective that entrepreneurs “self-select” into one but not the other social identity categories. In other words, if an entrepreneur self-identifies as Missionary, she would not see herself as Communitarian or Darwinian. Therefore identity differences occur at a between-individual level such that one person assume one identity. The last perspective also builds from role identity theory to suggest that there is a set of different with-person role identities all entrepreneur are likely to take on, to varying degrees. In other words, one person assumes multiple role identities, in contrast to the second perspective described above. In line with this view, Cardon et al. (2009) made the initial conceptual proposition that entrepreneurs may play three key roles in their new venture: inventor, business founder, and

business developer, each of which has its unique impact on entrepreneurs' passion and behavior with regard to a specific type of entrepreneurial task (e.g., inventor role identity motivates the creative task of new product development). In my research, I build from Cardon's framework to focus on entrepreneurs' within-individual multiple identities for two reasons. One, the between-individual social identity perspective portrays identity categories as fixed from the outset thus implies little potential for change over time. Moreover, the assumption that each entrepreneur would only hold one identity (as made by the first two perspectives on entrepreneurial identity) does not account for potential interaction between multiple within-individual identities, which I aim to study. Instead, Cardon's framework of multiple within-individual identities is a suitable foundation for further theoretical development regarding identity processes over time and among multiple identities. Yet these complex dynamics have received little research attention. Thus I contribute to the literature of entrepreneurial identity by offering an initial investigation into these dynamics.

To answer my research question, I first propose a theoretical framework of how personal and external motivations may shape the experience of simultaneous pursuit of dual goals: venture uniqueness and commercial viability, throughout the founding and growth phases of venture creation. I then develop propositions on how such a psychological and behavioral experience may provide the learning context where entrepreneurs clarify their role schema and the relationship among their multiple role identities. Based on this reasoning, I then develop the proposition that entrepreneurial experience moderates how role identity motivates entrepreneurs' cognition and behavior. While my framework theorizes on both the motivational drivers and the subsequent impact of entrepreneurial experience, I focus on the latter in my empirical testing as a first step to demonstrate to its relevance.

I then situate my research in the context of entrepreneurial creativity, i.e., the generation and implementation of novel and appropriate ideas to establish a new venture (Amabile, 1997), to test my hypotheses. I chose to focus on the context of entrepreneurial creativity because entrepreneurship is fundamentally a task of creation: the creation of new product, services, and business entities which lead to the creation of value (e.g., income, GDP growth, jobs, etc.; Roberts & Eesley, 2011; Shane & Venkataraman, 2000). In other words, creativity is at the heart of entrepreneurship as reflected in its definition by Carland, Hoy, Boulton, and Carland (1984) as “one that engages in ... the principal goals of ... profitability and growth and the business is characterized by *innovative* strategic practices” (p. 358). In their seminal article, Shane and Venkataraman (2000) defined the field of entrepreneurship as the scholarly examination of the discovery, evaluation, and exploitation of opportunities to create future goods and services. This definition similarly centers around the act of creation (of future goods and services) based on opportunities, whose identification is similarly associated with entrepreneurial creativity. This closely represents the nature of an entrepreneurial pursuit: since the founders are doing something new without a proven path to follow, they need to be creative to succeed. Coming up with a new product idea and evaluating product potential before devoting resources to exploit is one of the most important first things most entrepreneurs do, therefore the creative behavior in this phase is of high relevance to entrepreneurship theory and practice. Also importantly, entrepreneurial creativity is important for venture success, as creativity results in product differentiation which is critical for establishing barriers of entry (Porter, 1981) and boosting firm performance (Andrews & Smith, 1996; Bloodgood, Sapienza, & Almeida, 1996; Chandler & Hanks, 1994; Cooper, 1979; Ward, 2004). Entrepreneurial creativity gives a

sustainable competitive advantage to a firm because it is a strategic resource that is valuable, flexible, rare, and imperfectly imitable or substitutable (Barney, 1991; Im & Workman, 2004). Yet, we understand relatively little about the nature and dynamics of entrepreneurs' early creative process. Although creativity in mature organizations has been well researched, few studies examined entrepreneurial creativity (cf. Perry-Smith & Coff, 2011). Some research tries to extend general creativity to entrepreneurial creativity (Amabile, 1997; Chen & Yang, 2009; Zhou, 2008). However little theoretical or empirical analysis exists to explicit discuss issues such as the dimensionality of entrepreneurial creativity. Therefore I intend to situate this dissertation in this context in order to advance current understandings of entrepreneurial creativity.

In doing so, I contribute to entrepreneurship research in three ways. First, this thesis made a first attempt to incorporate motivation into the understanding about entrepreneurial experience. It proposes a parsimonious framework of how various personal and external motivational factors shape entrepreneurs' venture creation experience, through which entrepreneurs then clarify their role schema and the relationship among their multiple role identities. Secondly, it enriches the understanding of entrepreneurial motivation by theorizing and empirically demonstrating that the influence of a key motivational factor, role identity, on entrepreneurs' cognition and behavior, is contingent upon entrepreneurial experience. Finally, this thesis proposes and empirically highlights that it is meaningful to expand existing conceptualization of entrepreneurial creativity to include commercial viability as a dimension of the existing criterion of appropriateness (Amabile, 1997).

This thesis also contributes to entrepreneurship practice and education by highlighting the possibility of role identity conflict. Entrepreneurship training and

education may benefit prospective entrepreneurs by explicitly informing them about the potential identity conflict they may experience and help them to mentally prepare for it. Furthermore, this thesis demonstrates that experienced entrepreneurs are better at fulfilling both novelty and commercial viability when developing and evaluating business ideas, possibly due to their clear role schema and identity conflict. Therefore more assistance should be given to first-time entrepreneurs to help ensure that they pay due attention to both aspects when developing and evaluating business ideas.

Organization of Studies

I organize these discussion and exploration in the following sequence. In the next chapter, I propose a theoretical framework of entrepreneurial experience centering around the active behaviors of entrepreneurial – a process of simultaneous dual goal pursuits, its antecedents and consequences. Specifically, I develop theory and propositions on the motivational drivers that shape the entrepreneurial experience of simultaneous dual goal pursuits, followed by propositions on how simultaneous dual goal pursuits in venture creation provides the context in which entrepreneurs clarify their multiple venture-related role schemas and the (conflicting) relationship among the roles. Finally, I develop propositions on how role identity conflict leads entrepreneurs to broaden their attention and behavioral repertoire beyond an immediately salient goal or objective in a given situation. In Chapter 3, I develop testable hypotheses in the context of entrepreneurial creativity, based on the overall framework and propositions developed in Chapter 2. In chapters 4 through 6, I present empirical evidence from 3 sets of studies to test key assumptions and predictions proposed in Chapters 2 and 3. Specifically, I will empirically test Hypotheses 1 through 5 in Chapters 4, 5, and 6.

CHAPTER 2

Overview: Developing a conceptual framework of entrepreneurial experience

I begin my research with the general goal of conceptualizing what entrepreneurial experience may be, behaviorally and psychologically, from the founding to the growth stages of venture creation respectively. I focus on these two early stages (see Quinn & Cameron, 1983, for a review on organizational life cycle models) because following the growth stage, many firms mature and gain significant resemblance to large formal organizations and entrepreneurs tend to get replaced by professional managers. Such an experience becomes more distant from the focus of the entrepreneurial experience of venture creation therefore I do not include those later stages of the firm's development in the current research.

New business ventures are formed because a small group of individuals, i.e., the entrepreneurs, deliberately choose against the existing option of paid employment in order to create something new (Reynolds, Camp, Bygrave, Autio, & Hay, 2001)¹. Therefore, entrepreneurs tend to have strong internal motivation (e.g., Katz, 1992; Kolvereid, 1996; Woo, Cooper, & Dunkelberg, 1991) and distinct personal characteristics (Chan, Uy, Chernyshenko, Ho, & Sam, 2015; Crant, 1996; De Vries, 1977) that enable them to make the bold decision of venture creation. Despite the entrepreneurs' instinct to go against the convention, new ventures are not exempted from the rules of any other business: they must demonstrate business viability to survive since its early days. As such, what entrepreneurs do in their venture creation process can be a function of two factors: what they choose to do, as a result of what motivated them to enter into entrepreneurship in the first place, as well as what they need to or are required to do in order to keep the venture alive (O'Neil & Ucbasaran,

¹ I acknowledge that the case of necessity-driven entrepreneurship (Reynolds et al., 2001) is an exception which I discuss as a boundary condition subsequently.

2016). In what follows, I elaborate how these two forces shape entrepreneurs' behavioral and psychological experience in the entrepreneurial process.

To aid the theorizing of the entrepreneurial experience, I also conducted interviews with four experienced entrepreneurs. The purpose of these interviews is to gather examples to help illustrate how entrepreneurs psychologically experience venture creation and the causes and consequences of their psychological experience. While qualitative interviews are commonly used to develop new theories (e.g., Rouse, 2016), it can also be used to provide examples that illustrate new theories (e.g., Piderit, 2000). I follow the approach of Piderit (2000) to use interview data for illustrative purposes in my conceptualization of entrepreneurial experience in this research.

I interviewed four experienced entrepreneurs who have been running their own business or businesses. The interviewees were my personal contacts and were recruited with consent to spend approximately one hour answering questions about their entrepreneurial experiences. This group of entrepreneurs comes from diverse business and cultural backgrounds. Two have businesses based in Singapore while the other two are based in the Netherlands. Regarding their business domain, one manages an email marketing service provider, one runs a company that develops a smart seal for ship cargo containers, one runs a boutique travel planner service, and one runs businesses in art workshops and artistic design. All four interviewees have founded (or cofounded) at least one other business prior to founding the current venture. Their current ventures have been registered for between 2 and 22 months. The interview was mostly structured to focus on the questions of key interest to this research (See Appendix 1 for protocol).

Personal motivations for new venture creation

The question of what drives individuals to choose the unconventional path of entrepreneurship has been a key inquiry in decades of entrepreneurship scholarship. The intellectual views on this topic mainly represent two schools of thought: a psychological perspective and an economics view.

According to the psychological perspective, the decision to enter into entrepreneurship is driven by individual and social factors such as psychological values (Katz, 1992; Kolvereid, 1996), personality and other individual difference characteristics (Chan et al., 2015; Crant, 1996; De Vries, 1977), and the perceived social norm regarding an entrepreneurial career (Krueger, Reilly, & Carsrud, 2000). For example, the intrinsic values of creativity, autonomy, challenge, and self-realization have often been shown to be a strong motivation behind entrepreneurs' decision to start business ventures (e.g., Katz, 1992; Kolvereid, 1996). In comparison, the values of security and stability tend to "push" individuals into the conventional choice of paid employment. Overall, prior studies indicate that many entrepreneurs choose to start new businesses so as to fulfill their desire for autonomously creating something new and different. Individual difference characteristics such as openness to new experience and higher tolerance of risk are also positively associated with the likelihood to enter into entrepreneurship (e.g., Chan et al., 2015). Meanwhile, these individual difference characteristics are also associated with greater novelty seeking and creative tendencies in general (McCrae, 1987), thus further support the observation that entrepreneurs prize creativity and may use new business creation as a means to satisfy their need for novelty seeking.

Researchers subscribing to the economics perspective view entrepreneurial action as driven by expected economic gain (e.g., George, Kotha, Parikh, Alnuaimi, & Bahaj, 2016), regardless of whether the entrepreneur is opportunity-driven or

necessity-driven. According to the economic decision model for entrepreneurial acts such as start-up decisions, an entrepreneur's comparison of the net present values between entrepreneurship and wage labor determines whether they would pursue entrepreneurship (Campbell, 1992). Similarly, the human capital theory predicts that dissatisfaction with their compensation as an employee or expectancies of increased compensation are the likely reason for entrepreneurship entry (Tucker, 1990). There is continuing debate on whether and the extent to which entrepreneurs are driven by economic gain. While entrepreneurs driven by necessity may be more focused on immediate financial gain (George et al., 2016), others who start businesses out of personal motivations seem to be less financially motivated, as suggested by both objective and subjective indicators. Comparing the actual compensation of founders and non-founder executives, Wasserman (2006, 2012) found that founders received heavily discounted compensation compared to non-founder executives performing the same roles and the discount was the largest during the early stage of the venture. In other words, the founders could have made more income by working as employees. Despite receiving a largely discounted income, founders persisted. Consistent with Wasserman's (2006, 2012) findings, Amit, MacCrimmon, Zietsma, & Oesch (2001)'s study measuring self-rated importance of various reasons that motivated them to enter entrepreneurship showed that economic gain was significantly less important to entrepreneurs relative to an aggregate of 10 other reasons, and entrepreneurs did not rate economic gain as more important than did paid executives. Together, these objective and subjective data converge to demonstrate that entrepreneurs (except for the necessity-driven ones) may not be economically motivated in their entrepreneurial pursuit. These counter-intuitive findings may lead one to wonder, how can entrepreneurs be so idealistic as to disregard their financial interest or even basic

financial health in their career decisions? One possibility could be that, they may view financial gain as a long-term goal and thus have prepared themselves for a financial sacrifice in the short-term. Therefore, at the early stage of business creation, financial gain is less salient to the entrepreneur.

In sum, personally, the motivation to create a unique and autonomous company may dominate the early stage of entrepreneurship. During this time, entrepreneurs are motivated to focus on the creative aspect of the new venture such as crafting a unique vision statement and developing new product or service. While they may target financial rewards in the long term, they may be less concerned about it in the short run.

External pressures and demands for business viability and survival

Upon founding the company, the entrepreneurs will soon start to incur real costs (including the opportunity cost of loss of income). As the new venture has limited budget and time (Khaire, 2010; Kimberly, 1976), the accumulating business expenses will constantly remind the entrepreneur of the need to generate sales, gain market share, and cut cost in order to stay alive (particularly for self-funded new ventures). Although the entrepreneur may not be targeting financial gains at the start of the business, they now are required to race against the realistic threat of running out of budget, by generating income to self-sustain (Venkataraman, 2003).

Meanwhile, entrepreneurs may also need to be prepared to source for additional capital from external investors to sustain the business once their initial capital runs out. In order to successfully secure funding, it is crucial for entrepreneurs to demonstrate the venture's commercial viability. For example, potential customers' willingness to pay for the product and the company's ability to capture market share serve as important signal to investors that the venture is likely to grow thus is worth

investing in (Bachher & Guild, 1996; Tyebjee & Bruno, 1984). These commercial indicators therefore become important goals for entrepreneurs to strive for in order to secure funding.

Early stage entrepreneurial experience as simultaneous dual goal pursuit

Entrepreneurs' early venture experience, as motivated by the above two drivers, can be conceptualized as a *simultaneous* pursuit the dual goals of establishing venture uniqueness and ensuring commercial viability. It involves the somewhat competing goals to differentiate (i.e., to pursue a creative business vision) and at the same time, to conform to the viability standards of all businesses. This experience is distinct from what nascent entrepreneurs undergo because nascent entrepreneurs are not yet exposed to the realistic pressure of keeping a business alive. Therefore, without the experience of seeing cash reserve running low and feeling the pressure to sell products and make a profit, nascent entrepreneurs are more likely to focus on the ideals of founding a business to realize a singular vision, and the wide array of preparatory work necessary to get the business started such as saving up cash and establishing new business network. In sum, while nascent entrepreneurs may similarly experience the personal motivation to pursue creativity during the pre-founding stage, they experience much less of the realistic pressure for business viability thus they do not share the simultaneous goal pursuit experience that experienced entrepreneurs undergo.

The simultaneous pursuit of the dual goals of uniqueness and commercial viability is also distinct from the experience of paid employment in established organizations. This is because established organization are at a more advanced stage of business life cycle (Quinn & Cameron, 1983) therefore they focus on functional specialization in order to operate more efficiently (Moch & Morse, 1977). As a result,

the function of creating and innovating is typically separated from the commercial profit seeking functions (Berg, 2016; Mollick, 2012). This is why new product development is typically housed in the Research and Development department, in which researchers and inventors focus on their creative responsibilities without being held accountable for the commercial viability of their creative ideas whereas commercial application of the ideas are fulfilled by sales and marketing managers who are cut off from the process of generating novel ideas or developing new products (Berg, 2016). This functional specialization therefore does not offer paid employees the unique experience of simultaneous pursuit of uniqueness and commercial viability goals which entrepreneurs undergo. Putting these arguments together, I propose:

Proposition 1: During the early stage of venture creation, founders' experience is one of simultaneous dual goal pursuit between establishing uniqueness and commercial viability.

Examples of such a pursuit of the dual goals are collected from my interviews: when responding to the question of “what are your key objectives for your company?”, entrepreneurs commonly organized their goals into the dual pursuits of unique vision and commercial viability:

“To build something that the customers are happy [with], that’s the first thing, that’s my first goal. And you get a lot of profits from it. I think that’s a great feeling.”

“For the company in Cambodia, my target is for it to attract, when everyone comes to Cambodia, they will think of TouriMe, ‘the company will help me customize a comprehensive travel experience’. To make it a brand for Cambodia travels. The second target is in terms of numbers, or financials, I hope to be able to hire a quality team to focus on doing this and be able to make some money from this, so that I can think about the next steps for TouriMe.”

“We have the complaints from people who use Mail Chimp that they really find it hard to use. We just want our customers to say that it [our product] is

really easy to use We made it for them to make it easier, to make it just as good as Mail Chimp. A lot of people are giving these comments. That's really nice. That's really what we do it for. And of course, to build a successful company. If you can make something out of it, and also the profit it makes, of course, that makes it really great to build a platform."

"And I think for a year or two, we build, make it like the biggest container seal ever, so that everybody knows, that seal, is here to stay. And when that happens, and somebody comes by, and they have a good price, I sell it, for sure. Because there are a lot of nice projects we could do. Because now we don't have the financial resources. If you sell it for like 10 Euros, you've 10 Euros resources. So we could build another product. A lot of nice things that I have on my list that we can do. Now, I'll have cash to hire developers and that's different. So the development can be much much higher. The progress will be much faster, maybe in a year you can have a proof of concept."

One entrepreneur went a step further and established two legal entities simultaneously to be able to pursue both goals. She sees the goals of building a special art community and seeking financial rewards as simultaneously important but better managed as two separate businesses, as she described,

"For SO-CA, I think the key goals, first, I want to build a sustainable community, meaning, if I can have about like 10 people are invested in that space, I'll be very happy. That's it. For Zhen Feng, the goal really is to, I guess, in some ways I would say, in many ways, the goal is to be financially rewarded, based on like, the kind of aesthetics we speak. Because when we are doing art, the aesthetics often don't pay off. But when you're doing design, aesthetics can pay, like you can make a living from doing aesthetics, so I think for Zhen Feng it's really to be financially rewarded for your sense of aesthetics."

Growth stage: maintaining uniqueness while increasing mass appeal to grow

If the new venture has survived its initial birth or founding phase and continues to develop into the growth phase (see Quinn & Cameron, 1983, for a review on organizational life cycle models), would the founder(s) face less of the dual-goal tension experienced earlier on? A few reasons suggest this will not likely be the case. Broadly speaking, by targeting a niche market segment with uniquely crafted messages and novel product or service, the young businesses may be able to quickly gain loyal following in its early stage. However, maintaining its unique position may

also hinder its future growth as its offering lacks the mass appeal required for the company to quickly grow (O'Neil & Ucbasaran, 2016). That said, expanding to cater to the mass market may dilute the unique brand value associated with the new business (Loken & John, 2016). In what follows, I suggest and elaborate on a few reasons why the simultaneous pursuit of both uniqueness and commercial goals persists into the next stage of the entrepreneurial venture development.

Pressure to grow

As the firm grows, it is likely to have taken on capital from external investors such as business angels and venture capital (Mason & Harrison, 2002) to sustain its growth. Most investors lend money to business founder(s) for the clear purpose of gaining financial return (Harjula, 2007). By investing in one new venture, the venture capitalist also incurs opportunity cost if the invested venture cannot provide the expected financial return therefore it is important for the new venture to demonstrate profitability early on in order prevent the investor from defecting and instead keep them committed for continued future investments (Cable & Shane, 1997). Also, time is an integral component of financial returns and investors', especially venture capitalists', performance, is measured by total returns over a time period (Mason & Harrison, 2002). It is therefore in the investors' interest to assert pressure for the founder to focus on increasing market share and reducing costs so as to maximize profits quickly.

Entrepreneurs may also feel a personal need to grow the company for greater financial return, after sustaining a period of limited income during the early start-up stage (Wasserman, 2006, 2012). Although the entrepreneur may not have started out with the goal of accumulating wealth in the short run, the financial sacrifice and opportunity cost they endured in the early periods may now have made the goal of

financial reward salient. Therefore the entrepreneur is also likely to be personally motivated to pursue commercial growth during this stage of the venture development.

Motivation to maintain uniqueness

As the firm strived to differentiate its product from existing market offerings since founding, it would have established itself as a unique alternative to existing options. As companies grow, its product features, product range, and customers are likely to diversify. A key challenge is therefore to maintain a consistent brand image around its original unique selling point (Farquhar, 1989). For example, despite experiencing high growth early on, the cloud accounting company FreshBooks' conversation rate plateaued as it failed to maintain a consistent brand image early on. It only managed to address the problem after getting help from brand consistency professionals. To avoid these negative implications of brand image inconsistency or dilution, the founders would need to ensure that the company stay true to the unique products, vision, and brand they first created.

Furthermore, as the entrepreneurs toil through the early stage of venture creation and survival, their investment into the new venture likely turns into a strong personal attachment toward, or psychological ownership of the firm. According to Pierce, Kostova, and Dirks (2001), psychological ownership emerges from controlling, intimately knowing, or investing into the target. Most entrepreneurs tend to develop a strong sense of psychological ownership of the business precisely because they deeply experience full control of the venture creation processes, invest extraordinary efforts into the venture, and develop in-depth knowledge about all aspects of their business. As a result, they develop a strong psychological sense that company is "theirs". Theories of psychological ownership further suggest that it can lead to territorial motive and behavior (Brown, Lawrence, & Robinson, 2005; Pierce

et al., 2001). Territorial motive and behavior follow from psychological ownership because of the desire to protect and defend the target of ownership with clearly defined and communicated boundaries. Entrepreneurs may define the boundaries of their venture by trying to maintain the uniqueness established in the early stage of venture creation to separate their venture from others, in order to reinforce the strong sense of ownership: this is uniquely mine, not yours (Brown et al., 2005). In other words, viewing the entrepreneurial venture as an extension of the self, the entrepreneur may feel the psychological need to maintain the positive distinction or the unique features established, in order to defend the territorial boundary of their own venture.

In sum, while it is in both the investors' and the entrepreneurs' interest to pursue commercial growth, it also would fulfill the entrepreneurs' psychological needs and also the firms' branding needs to maintain its uniqueness. Therefore, the growth stage of the new venture may similarly be characterized by the simultaneous dual goal pursuit between maintaining uniqueness and commercial viability needed for rapid growth.

Proposition 2: During the growth stage of venture creation, founders' experience is one of simultaneous dual goal pursuit between maintaining uniqueness and commercial viability.

Boundary condition

On average, the experience of venture creation may center on a simultaneous pursuit of the dual goals of uniqueness and commercial viability (i.e., achieving marketability, cost-effectiveness, and profitability to ensure venture survival and venture growth). Although the theoretical development primarily focuses on entrepreneurs who voluntarily enter into entrepreneurship, I acknowledge that there

are entrepreneurs whose choice for entrepreneurship is driven by necessity or a lack of alternative employment opportunities (Reynolds et al., 2001). This group of entrepreneurs may constitute a boundary condition to the average entrepreneurial experience I proposed above. I illustrate this consideration below.

Given that entrepreneurs' motivation varies, one who starts a new business out of necessity may be compelled to focus on financial gain right from the beginning. This is because they often lack alternative employment opportunities, are impoverished, and reside in underdeveloped locations (George et al., 2016). Their main motivation is therefore to use the small business to generate cash in order to survive and support one's family. Meanwhile, they may not be driven by higher-level self-actualization needs such as creativity, autonomy, and challenge (Maslow, 1943) as they struggle to meet basic needs. Therefore, the entrepreneurial experience of these individuals may not be characterized by the simultaneous dual goal pursuit common to the average entrepreneur. Instead, they are more likely to focus exclusively on commercial viability.

Proposition 3: Necessity-driven Entrepreneurs experience less simultaneous dual goal pursuit in their venture creation process as they tend to focus exclusively on commercial viability.

Consequences of Simultaneous Dual Goal Pursuits

Role Schema Clarity

In pursuing these dual goals, entrepreneurs come to make sense of them by organizing them into cognitive schema. One way to do so is to associate their goals and responsibilities with distinct roles. According to the perspective of sense making, individuals make sense of their experiences and situations through categorical labels (Weick, Sutcliffe, & Obstfeld, 2005). Roles are a common type of categorical label

that helps individuals clarify their goals and responsibilities. They are prescribed in some settings (e.g., well-structured organizations) and they may also organically emerge in others, especially when the work context is uncertain (Griffin, Neal, & Parker, 2007). Uncertainty is one of the defining features of entrepreneurship (McMullen & Shepherd, 2006), making it an exploratory journey into the unknown. In such a process, roles are often ambiguous and ill-defined, especially for a sole founder or a lead founder whose functions are “a mix of operations, management, promotion, and leadership activities, ranging from stuffing envelopes to running a machine, making sales calls, analyzing competition, meeting with bankers, and forming strategic alliances”, and so on (Bird, 1988: 446). It may be chaotic with a lot of ad hoc efforts for a substantial period of time during the early stage. Such an overload of multiple work roles are reported by my interviewees when asked about the roles they play in their new ventures:

“Because we just started a company I think we have to do [the work that requires] a team of 10 people. We have to wear different hats. We don’t have a marketer, we don’t have sales, we don’t have front-end developer, another back-end developer, we don’t have another designer or conceper, or another other people. So we have to do everything ourselves. [The main hats I wear], I think are the designer hat, the designer, the marketer business strategy, yeah, like an accountant, yeah, I think those. I think there are really more, because like Mail Chimp is a company with more than 100 people, so I think we really have more hats, but those are the main things I can think of that we are doing.”

“I am in charge of the entire design of the product, like a product manager. Besides writing codes and physically draw the designs, I do draw black-and-white pictures, communicate between designer and developer, I need to do some project management, at the beginning. Also, I do product testing, after its functions have been developed. The responsibilities of a product manager, I have to do all of that. Moreover, marketing material and marketing inspiration, creative marketing slogan, I will write them. Also, concerning operations, selecting partner companies, and contacting people, and what kind of contract we should have with them, I will write the guidelines [I do] operations, marketing, and product management.”

Therefore, unlike performing a well-defined role in a structured work system, entrepreneurs engage in adaptive and proactive actions (Griffin et al., 2007) guided by their entrepreneurial aspiration. Building on the perspective of sensemaking, Weick and associates (2005) as well as Corbett and Hmieleski's (2007) contention that event schemas (active knowledge structures or scripts that guide task behavior) need to be understood in the context of role schemas (knowledge structures about role or job appropriate behaviors), I similarly propose that entrepreneurs develop role schemas by making sense of the goals or objectives that they value in each episode of goal-directed pursuits. These role schemas involve a rich set of vivid examples of such choices and actions taken in the event episodes.

Prior research on prototype (e.g., Baron & Ensley, 2006; Matlin, 2005) suggests that cognitive frameworks gain clarity with increasing experience. A particular indicator of such clarity is the extent to which prototypes possessed by different people converge on a set of basic attributes. In the context of entrepreneurship, clarity comes with entrepreneurial experience such that the business opportunity prototypes – beliefs about what constitutes a business opportunity – of experienced entrepreneurs is more clearly defined than those of inexperienced entrepreneurs. In other words, experienced entrepreneurs show greater agreement on the basic dimensions of this prototype (Baron & Ensley, 2006). Similarly, I predict that as the amount of experience or event episodes grows, entrepreneurs' role schemas become increasingly clearly associated with the values that are common among all event episodes. These experiences allow entrepreneurs to more clearly associate the values prototypical to the roles they perform, thus helping them build in structure and predictability in the highly uncertain endeavor of venture creation.

Specifically, an inventor role schema becomes clarified through the pursuit of venture uniqueness. Constant attempts at seeking, establishing, maintaining, and communicating unique features of their venture become associated with the schema of being an inventor. In other words, when experienced entrepreneurs think about the role of an inventor, they refer back to their pursuit for venture uniqueness and form the belief that uniqueness is valued for the creator role. For example, one interviewee described her experience trying to create a brand-new business model which she hoped would revolutionize travel experience in Cambodia:

“Back then we kept thinking about using technology to promote business model innovation. But this way we went into the wrong path then, only to find out that there’s no way to price [our services].”

A businessperson role schema is defined through the pursuit of profit-making, product marketing, and cost-effectiveness for experienced entrepreneurs; therefore businessperson role becomes strongly associated with these commercial viability values. For instance, when one entrepreneur elaborated on his businessperson role, he did so by contrasting it with his designer role and his teammate’s technical role:

“He is really a back-end developer I’m a front-end developer I’m doing the front-end development and design. So I’m the designer of all the things in the platform. I am also more business-oriented. I think a lot about strategies, like the bet we take, and the marketing, and administration, I do support, yeah, that’s really my role.”

A role schema also contains multiple normative expectations and values. Some are central (thus prototypical) to the definition of the role while others are peripheral. Simultaneous performance of both roles allows entrepreneurs to compare and contrast between them. By doing so, entrepreneurs gain greater clarity of the schema associated with each role therefore their identification with the roles is based on a set of generally shared core values of each role. Consequently, experienced entrepreneurs’ role identification would be reflected by the extent to which they

accurately pursue the values of the role. In comparison, nascent entrepreneurs without such an experience may self-identify with the roles via their peripheral features, e.g., “I am an inventor because I am going to create my own business” or “Being a businessperson is an important part of me because I have always dreamed of building my own business empire”. This is because they are unable to form coherent role schemas containing the core values of the creator and businessperson roles due to a lack of experience. Thus they do not possess the same level of clarity with regard to the meaning of each role and their identification with these roles does not correspond to role-consistent behaviors.

Proposition 4: Entrepreneurial experience positively moderates the relationship between role identification and adherence to the core values of the role, such that role identification is positively associated with adherence to the core values of the identified role for experienced entrepreneurs but this association is weaker, if any at all, for nascent entrepreneurs.

Dual role taking

As these two values (uniqueness and commercial viability) and their pursuits co-occur in entrepreneurial experience, both roles should be experienced with similar intensity. This is because the founder experiences strong individual motivation to create a unique new business while she is also constrained by limited time and capital to make the business a viable one that survives. Failing to fulfill either can lead to the lack of motivation or resources to achieve the other. Therefore, the two roles may be heavily interrelated, as commented by an interviewee when talking about his key roles in the startup:

“I’m the guy with ideas and [do] sales Because an idea is not an idea if you can’t sell it. You have to develop a product and that’s your idea. There are a lot of ideas But how are you going to make money? And that’s the question, how are you going to make money.”

In comparison, nascent entrepreneurs have not experienced the real pressure to ensure venture viability as they are still early in the business idea formulation and preparatory stage of the new venture creation process. Hence they have not experienced the simultaneous pursuit of venture uniqueness and commercial viability. Due to their lack of such an experience, nascent entrepreneurs would not have a high level of correspondence between their two roles.

Proposition 5: Entrepreneurial experience positively moderates the relationship between entrepreneurs' two role identities such that the two are highly positively correlated among experienced entrepreneurs but not related among nascent entrepreneurs.

The start-up process is uncertain and filled with setbacks which can easily distract or discourage the entrepreneurs. The less committed individuals may be negatively affected by obstacles and lack of progress and may be more likely to give up. Only the highly committed individuals would persevere in the face of difficulties, to strive for venture progress and eventual success. For instance, an extensive study by Klein, Wesson, Hollenbeck, & Alge (1999) found that goal commitment predicts higher performance and that this relationship is strongest when the goal is difficult to achieve. Therefore, entrepreneurs' goal commitment, defined by how long an individual is willing to strive for their entrepreneurial goal², is vital in situations or tasks that involve difficult goals such as starting a new business (Uy, Foo, & Ilies, 2015).

² Entrepreneurs' venture goal commitment should be distinguished from their psychological ownership of the venture. Psychological ownership is "the feeling of possessiveness and of being psychologically tied to an object" (Pierce et al., 2001: 299). For entrepreneur, the new venture is the target of this feeling of possessiveness or psychological attachment. Entrepreneurs' venture goal commitment is defined by how long an individual is willing to strive for their entrepreneurial goal (Uy et al., 2015), which can result from psychological ownership (Pierce et al., 2001).

Role identification motivates commitment to and persistence on actions that facilitate the achievement of role-consistent values. For example, those who strongly defined themselves as volunteers tended to be psychologically (Reich, 2000) and behaviorally more committed to activities such as blood donation (Charng, Piliavin, & Callero, 1988). If entrepreneurs identify with both roles to a similar extent, they should be similarly motivated by both roles. This should particularly be the case for the experienced entrepreneurs, as their role identities as inventors and businesspersons are specifically attached to and shaped by the ventures they are trying to create. Therefore the schema of committing to and persisting on their venture-related goals are part of their role identities, which in turn motivates their future commitment.

On the contrary, nascent entrepreneurs are still at the early stage of trying to start a business thus their role identities as inventors and businesspersons are not based on the concrete experience of creating a business. Instead, they might identify with the inventor role because they have many business ideas or enjoy coming up with new business ideas. These traits or behaviors, by themselves, do not requirement commitment. Similarly they might identify with the businessperson role because they aspire to become one regardless of what business they eventually start and own. In other words, nascent entrepreneurs' role identities are not likely to be target-specific or associated with concrete past experience of playing these roles. It is therefore likely that nascent entrepreneurs view their current venture-creation plan as a tentative one that may allow them to pursue their creative business ideas or commercial ambition, without feeling the need to commit to it - if they do not progress on the current one, they can always work on a different business idea in order to fulfill their inventor or businessperson identity. For this reason, their identities may not be associated to high levels of commitment to the currently chosen business venture.

Proposition 6a: Both inventor role identity and businessperson role identity are positively associated with entrepreneurial goal commitment for experienced entrepreneurs.

Proposition 6b: Neither inventor nor businessperson role identity is associated with entrepreneurial goal commitment for nascent entrepreneurs.

Role Conflict

Simultaneous pursuits of dual goals of uniqueness and viability can also lead to role conflict – the lack of alignment between the many inner “voices” which reflect different and conflicting values and wishes underlying these goals (Bird, 1988). This is because these two goals are facilitated by different factors thus the pursuit of uniqueness may get in the way of the pursuit of commercial viability and vice versa. As both goals weigh similarly to the entrepreneur, role conflict may arise in this process. For example, an entrepreneur noted:

“I think the biggest conflict is more like, how fast we should commercialize When you are talking about being on the art side, what I mean is, you’re more interested in process, you’re more interested in experimentation, you are more interested in how can you do things better and better and better. You’re not as interested in, ‘how can I earn more profit from doing something more efficiently?’. And that profit maximization part is the part where I usually just get very tired from.”

While one may expect these entrepreneurs to learn to cope better with the consequences of role conflict over time thus experience less role conflict, I argue that this may not be the case for two reasons. First, entrepreneurs are likely to juggle between the competing goals of uniqueness and commercial viability in both the founding and growth stage of their new venture creation process. This means that the demand of dual goal pursuit continues to be salient to the entrepreneur even as time passes thus he is likely to continue to sense the role conflict. Moreover, my focus here regarding role conflict is whether or not entrepreneurs feel it, but not whether or not

they can cope with it. It may be true that entrepreneurs have difficulty coping with the experience of role conflict thus suffer from more stress and reduced well-being early on but learn to contain the damage of role conflict over time; but this is not within the scope of the discussion here. However, getting better at coping with role conflict does not mean the entrepreneur ceases to sense or experience role conflict, which is the focus here. Taking these points into account, I expect experienced entrepreneurs' sense of role conflict to be high and continuing. In comparison, nascent entrepreneurs without the experience of simultaneous dual goal pursuit will not face as high a sense of conflict, as they may only focus on developing the business idea without having to bear the pressure of making the business commercial viable yet.

Proposition 7: Experienced entrepreneurs experience higher role identity conflict than nascent entrepreneurs.

Role identity conflict can lead individuals to behave in a contrastive manner when one of their identities is made salient. For example, Mok and Morris (2009, 2012, 2013) compared Asian-American with conflicted cultural identities to those with compatible cultural identities. Conflicted Asian-Americans exhibited a contrastive or contrarian response--more Western biases (on measures such as focal/holistic attention, need for uniqueness, and individualism) after Chinese priming and more East Asian biases after American cultural priming. They do so out of the motivation to accommodate the less salient identity. For experienced entrepreneurs, this may be a way in which they reserve attentional resources to the non-salient roles they play and the schemas or valued goals of those roles thus maintain a broad view on the "big picture". In other words, the superiority in experienced entrepreneurs' skills compared to nascent entrepreneurs' may be reflected in experienced entrepreneurs' ability to comprehend greater interdependence among various

components in their schema and think holistically. Role identity conflict may be an unconscious way in which experienced entrepreneurs achieve their superior skills and performance. Through developing a tension or conflict between their inventor and businessperson role identities, they become capable of maintaining a broad overview of all their roles and ensuring all important goals are met, even when only one role or goal is temporarily salient.

Proposition 8: When one of their role identities is highlighted or made salient situationally, experienced entrepreneurs will behave in a way that contrast away from what is expected of the highlighted role identity while nascent entrepreneurs will assimilate to the expectations of the highlighted role identity.

Figure 1 below illustrates the overall conceptualization of entrepreneurial experience outlined in this chapter. In the subsequent chapter of this dissertation, I will develop Propositions 4 through 8 on the consequences of entrepreneurial experience into testable hypotheses in the context of entrepreneurial creativity: the generation and evaluation of creative business ideas. I also clarify that Propositions 1 through 3 (e.g., the arguments on firm growth stage and boundary conditions) are not included in the empirical test of this thesis.

Figure 1. Conceptualization of Entrepreneurial Experience and Associated Role Identity Changes

CHAPTER 3

Entrepreneurial creativity

In the fiercely competitive start-up world, entrepreneurial creativity is important for venture success because creativity results in product differentiation which is critical to establishing barriers of entry (Porter, 1981) and boosting firm performance (Andrews & Smith, 1996; Bloodgood et al., 1996; Chandler & Hanks, 1994; Cooper, 1979; Ward, 2004). The start-up scene is filled with examples of well managed new ventures perishing quickly due to lack of novelty and thus inability to compete for market share. For example, Belgium-based start-up Take Eat Easy joined the booming food delivery business and was able to create impressive commercial success right away: within one year they scaled their operations from 2 to 20 cities, increased their restaurant partnerships from 450 to 3,200, and grew their customer base from 30,000 to 350,000. In their second year, the company reached a 30% monthly growth and even hit the 1 million order mark. Despite their initial success, they could not sustain such a growth. This is because their service offered hardly anything new compared to competitors'. Thus after fighting an uphill battle against early entrants and market leaders, the start-up ran out of cash and went out of business.

At the early stage of venture creation, entrepreneurial creativity plays a crucial role in the recognition and evaluation of entrepreneurial opportunities (Gielnik, Frese, Graf, & Kampschulte, 2012; Grégoire & Shepherd, 2012; Perry-Smith & Coff, 2011). This is because in order to recognize opportunities in uncommon places where most people neglect, one needs to interpret market and technology information through creative or unconventional insights (Grégoire & Shepherd, 2012). Similarly, past research also indicates that entrepreneurial creativity is necessary for the development

of new product (Blauth, Mauer, & Brettel, 2014). Going beyond opportunity recognition and new product development at the early stage of entrepreneurship, entrepreneurial creativity is also shown to contribute to entrepreneurial performance in a number of ways. For instance, Creative business idea is positively associated with venture growth (Gielnik et al., 2012). Product differentiation based on creativity gives new ventures strong competitive advantage in their international expansion efforts (Bloodgood et al., 1996). Also, having patents is associated with attracting higher valuation and investment for the new venture (Heeley, Matusik, & Jain, 2007; Mann & Sager, 2007). In sum, entrepreneurial creativity has been associated with a variety of positive outcomes in different aspects of entrepreneurship, ranging from opportunity recognition, new product development, venture growth and expansion, and valuation and capital raising ability. Therefore, entrepreneurial creativity gives a sustainable competitive advantage to a firm as a strategic resource that is valuable, flexible, rare, and imperfectly imitable or substitutable (Barney, 1991; Im & Workman, 2004).

In spite of its contribution to venture performance and success, we understand relatively little about the nature and motivational dynamics of entrepreneurs' creative process. In this chapter, I seek to address this gap by first investigating the dimensionality of entrepreneurial creativity and then adopting the lens of entrepreneurial role identity to examine how entrepreneurs' role identities influence entrepreneurial creativity.

Although creativity in mature organizations has been well researched, few studies examined entrepreneurial creativity (cf. Perry-Smith & Coff, 2011). Some research tries to extend general creativity to entrepreneurial creativity (Amabile, 1997; Chen & Yang, 2009; Zhou, 2008). However, few efforts have been made to

theoretically reason how entrepreneurial creativity might differ from general creativity. Entrepreneurial creativity has been conceptualized similarly to general creativity, as encompassing a delicate balance between novelty and appropriateness (Amabile, 1997). Novelty requires the idea to be original and groundbreaking while appropriateness requires it to be effective in addressing a need such that it is better than existing or alternative solutions (Yong, Mannucci, & Flipo, 2015). While the novelty criterion is defined relatively uniformly across contexts, the appropriateness criterion tends to vary across contexts and can be viewed as elaboration (Erez & Nouri, 2010), practicality (Mueller, Melwani, & Goncalo, 2011), likelihood to be used, (Miron-Spektor & Beenen, 2015), aesthetics (Miron-Spektor & Beenen, 2015), potential usefulness (Berg, 2014), effectiveness (Rietzschel, Nijstad, & Stroebe, 2010), and cost-effectiveness (Miron-Spektor, Erez, & Naveh, 2011).

I build from but also extend Amabile's (1997) definition of entrepreneurial creativity as the generation and implementation of novel and appropriate ideas to establish a new venture. Although it is not explicitly expressed, the existing definition of creativity as novel and appropriateness takes the perspective of the users or customers. That is, in the case of developing and marketing a product or service for the purpose of establishing a new venture, the criteria of novelty and appropriateness can manifest via product, service, or business process which differ from competing alternatives in a way that is meaningful to customers (Sethi, Smith, & Park, 2001). In other words, the potential users must view the business idea as useful such that it solves a consumer problem on the one hand, and is novel on the other hand, so that the amount of consumer interests attracted must be sufficient so as to deter future imitation. Indeed, both aspects of creativity are necessary because the inability to meet customer demands hurts product marketability while a lack of novelty can make

the venture easily substitutable and prevents it from attaining a sustainable competitive advantage (Reed & DeFillippi, 1990).

In addition to defining appropriateness from the customer's perspective, I suggest that appropriateness from the entrepreneurs' perspective in terms of commercial viability of the idea is also an important dimension for entrepreneurial creativity; however, it is missing from the current definition. Indeed, the literature on entrepreneurial action highlights the importance of monetization and ultimately, profitability, in any entrepreneurial endeavor. Commercial viability indicators such as marketability and profit potential are also an important objective to pursue (Kirzner, 1979; Schumpeter, 1934; Stewart Jr., Watson, Carland, & Carland, 1999) even at the early stage of entrepreneurial creativity, as the ability for the new product or service to generate economic returns will help the venture obtain the cash flow needed to survive and attract investors (Mason & Stark, 2004). In my interview with entrepreneurs, profitability also emerged as an important criterion for entrepreneurial creativity:

“You have to be creative, so you have to know what technology is, so you have to read a lot about technology How can I use it in technology? And how are you going to make money? That's the three key things. There should be a problem, you can do both ways. You can do from a problem kind of view, or you can do this from a technology's point of view.”

The three things highlighted by this high-tech entrepreneur similarly point to three criteria of novelty (knowing what's new in the technology you use), usefulness (figuring out how to use the technology to solve a problem), and commercial viability (asking whether the business idea can monetize).

Although prior research emphasizes that commercial viability (as indicated by marketability and profit potential, e.g., Kirzner, 1979; Schumpeter, 1934; Stewart Jr. et al., 1999) is also an important objective to pursue even at the early stage of

entrepreneurial creativity, existing definitions of entrepreneurial creativity has not considered this dimension or criterion. Failure to include this criterion in the definition of entrepreneurial creativity can prevent researchers from asking the important question of why novel and useful products fail in the market place, as in the example of the Concorde supersonic jet, which was a highly novel technological success, a useful product that significantly reduced air travel time, but was commercially unviable due to its exorbitant operation costs. To fill this gap in the definition of entrepreneurial creativity thus enrich the understanding of creativity in entrepreneurial pursuits, I propose to include the criterion of commercial viability (e.g., marketability, cost-effectiveness, and profitability) in the definition of entrepreneurial creativity, as an additional dimension of appropriateness from the perspective of the entrepreneurs. Specifically, I extend Amabile's (1997) definition to define the appropriateness criterion as requiring that the product or service is 1) useful to the customers such that it solves a problem they face and 2) useful to the entrepreneurs such that it has the potential to be commercial viable, i.e., marketable, cost-effective, and profitable.

I follow prior research on entrepreneurial creativity to focus on individual-level creativity in this thesis. While creative processes at the team and firm level are outside the scope of this thesis, it is important to note that they are also highly important for venture performance. Nonetheless I focus on individual entrepreneur's creativity because most new ventures are started by single founders (Sage Software, 2015) or a lead founder who comes up with an idea for a new venture (Gray, Knight, & Baer, 2015). Although lead founders often need others to help her materialize their idea; they claim control over most part of the idea (Gray et al., 2015). Therefore the individual sole or lead founder plays a pivotal role in shaping the initial business idea.

Although one may argue that the idea always changes, research also showed that the initial idea would set the tone for how it would develop in the future (Berg, 2014). Moreover, it is well-known that there is a large effect of homophily in start-up team formation – the founder tends to attract co-founders with similar functional background (Ruef, Aldrich, & Carter, 2003; Gray, working paper) – therefore it is unlikely that the initial idea changes drastically as a result of being shaped by subsequent co-founders or team members. Therefore, while creativity shifts from individual to team and to the firm as the venture progresses, the extent to which the initial idea is creative, is likely to persist to the team and firm level. It is thus important to understand individual-level entrepreneurial creativity.

Entrepreneurs' role identities

Emerging research shows that multiple role identities have powerful influence on entrepreneurs' cognition and behavior. For example, Mathias and Williams (2014) classified entrepreneurial roles into those of an entrepreneur, an investor, and a manager. They further proposed that founders' perception and consideration of risks as well as approaches to opportunities differ as a function of their role identities. Specifically, when considering and selecting opportunities, founders take an innovative approach in their entrepreneur role, a profit- and market-oriented approach in their manager role, and a long-term and future-oriented approach in their investor role. Meanwhile, Cardon and associates (2009, 2013) proposed three role identities central to an entrepreneur: inventor, founder, and developer. Specifically, the inventor role is strongly associated with the responsibility of inventing new product or services, the founder role entails the responsibility of venture creation, and the developer role is associated with venture growth. New research is also starting to suggest that work-related roles in large organizations have profound impact on

individual creativity. For instance, creators are very accurate at judging the creativity of ideas produced by their peers but not those produced by themselves. Meanwhile, managers are less accurate in their judgment in general compared to the peers of creators (Berg, 2016). Building on this new research evidence and my broader theoretical framework on the development of entrepreneurial role identity laid out in Chapter 2, I investigate the influence of entrepreneurs' roles on entrepreneurial creativity.

As reasoned in Chapter 2, entrepreneurs simultaneously pursue the two values of uniqueness and commercial viability, which help clarify the roles and role schemas they develop. Mapping these dual goals onto Cardon and associates' (2009, 2013) conceptualization of entrepreneurial roles, i.e., inventor, business founder, and business developer, I focus on two broad role identities: inventor role and businessperson role (which includes the founder and developer roles), in this dissertation. While the inventor role is strongly associated with the responsibility of inventing new product or services, the businessperson role entails founding an organization and ensuring its survival and continued growth. I take on a normative approach to examine how the normative expectations associated with each role uniquely associate with and influence different criteria of entrepreneurial creativity. I develop hypothesis on these relationships in the following sections.

Roles are social categories. Each role as a category is associated with multiple role-defining and role-relevant characteristics and expectations (Stets & Burke, 2000), or role schemas. Some of the characteristics are central (i.e., unique or important) to the definition of a given role while some other characteristics are marginally associated to a much smaller extent. The central characteristics reliably form the necessary prototype of a role category whereas the marginal or peripheral

characteristics are associated with the same role category on an occasional and idiosyncratic basis (Deaux, 1992). Take gender role for example, while being nurturing and caring are central and prototypical characteristics of being female, having long hair and enjoying gossip are much more peripheral characteristics – some people view it as relevant to being female while many others do not. In other words, there are fewer consensuses on whether these peripheral features are characteristic of the role.

Normative expectations associated with roles are often prescribed as values to both the role occupant and others who simply have notions about it (Rizzo, House, & Lirtzman, 1970). While normative expectations are an essential feature of the social life thus have stimulated vast research efforts, there is little consensus on its theoretical conceptualization (see Cialdini & Trost, 1998 for a review). For clarity, I follow Cialdini and associates (1990, 1991) to treat role-related norms as injunctive, i.e., they prescribe values to be met via the role occupant's behavior.

Entrepreneurs' inventor and businessperson roles also encompass their respective set of values. In connection with entrepreneurial creativity, some research and anecdotal evidence suggests that the inventor role is closely associated with novelty-related values such as newness, originality, and uniqueness (Miner, Smith, & Bracker, 1992; Smith, 1967) whereas the businessperson role is more closely related to pursuing the ultimate business goals of commercial viability, e.g., marketability, cost-effectiveness, and profitability (Cardon et al., 2009; Hofstede, 2004). These values associated with the inventor and businessperson roles are likely to be salient to both occupants and non-occupants of these roles. Although these assumed relationships between these roles and values appear intuitive, they have never been empirically formalized. As my subsequent hypotheses and empirical tests are built

upon these assumptions, it is important to demonstrate that they indeed hold empirically. Therefore, I verify the following assumptions in Study 1 as a pre-test.

Assumption 1: The inventor role is associated more positively with novelty value than the businessperson role.

Assumption 2: The businessperson role is associated more positively with commercial viability values than the inventor role.

According to identity theory, “the self is reflexive in that it can take itself as an object and can categorize, classify, or name itself in particular ways in relation to other social categories or classifications” (Stets & Burke, 2000). This process is called identification (McCall & Simmons, 1978; Stets & Burke, 2000). Through the process of self-categorization or identification, one forms a role identity, which is “the meanings one attributes to oneself in a role” (Burke & Reitzes, 1981). This view of role identity implies that the meaning attribution in a role can be a subjective and dynamic process such that it changes with one’s knowledge and perception of the meanings associated with the role. Since the meanings consist of both central and peripheral characteristics and values associated with a role as elaborated earlier, individuals can identify with a role via either central or peripheral characteristics and values. For example, both a tenured professor and a fledgling graduate student may self-identify with the role of a scholar. However, the tenured professor is likely to self-identify as a scholar via the more central meaning of creating new knowledge or resolving current debate in the field whereas the fledgling graduate student likely identifies via the more peripheral characteristic such as “I am busy running experiments in the lab” or “I just presented my first poster at a conference”.

In pursuing their dual goals of venture uniqueness and venture survival, entrepreneurs come to make sense of them by organizing them into cognitive

structures relating to how one's knowledge is organized about the set of behaviors expected of them in the roles of inventor and businessperson, respectively. I follow Corbett and Hmieleski (2007) to refer to this cognitive structure representing the values of a role as role schema. As entrepreneurs engage in adaptive and proactive actions (Griffin et al., 2007) guided by their dual entrepreneurial aspirations, they come to shape and grasp their emerging roles in the dynamic process. Entrepreneurs may gradually make sense of their key responsibilities in the new venture by associating them with roles that help them build in structure and predictability. They do so by reflecting on their values (uniqueness and commercial viability) and the tasks they perform in order to achieve these goals in the venture creation process.

Prior research on prototype (e.g., Baron & Ensley, 2006; Matlin, 2005) suggests that cognitive frameworks gain clarity with increasing experience. Role identity theory also suggests that identities are reflexive such that it gains clarity through one's interaction with others in role relevant situations (Burke & Reitzes, 1981). As such, one may expect entrepreneurs to gain clarity about the roles they play as they accumulate experiences pursuing the values of uniqueness and venture survival simultaneously. The events and actions in which they pursue uniqueness may become associated with the inventor role whereas those in which they pursue venture viability goal may become associated with the businessperson role. These experiences allow entrepreneurs to more clearly associate the prototypical values with the roles they perform.

The inventor role becomes clarified through the pursuit of uniqueness. Constant attempts at seeking, establishing, maintaining, and communicating unique features of their venture become associated with the schema of being an inventor. In other words, when experienced entrepreneurs think about the role of an inventor, they

refer back to their pursuit for venture uniqueness and form the belief that uniqueness is valued for the creator role. Businessperson identity is defined through the pursuit of profit-making, product marketing, and cost-effectiveness for experienced entrepreneurs; therefore businessperson role becomes strongly associated to these commercial viability values.

Moreover, the meaning of one role is also clarified in the presence of counter-roles, i.e., roles that hold disparate characteristics or norms (Burke & Reitzes, 1981). Simultaneous performance of the inventor and businessperson roles also allows entrepreneurs to compare and contrast between these two distinct roles. By doing so, entrepreneurs gain greater clarity of the values central to each role and the differences between them. Identification with the roles among entrepreneurs is therefore based on a generally shared understanding of the core features of each role. In other words, entrepreneurs with the experience of starting a business tend to self-categorize into the roles (e.g., inventor and businessperson) through the values that are commonly agreed upon by other entrepreneurs. Consequently, experienced entrepreneurs' role identification would be reflected in the extent they pursue the values of the role.

In contrast, for those without experience, role identification may take place via both central and peripheral features. Overall, it tends to be random. Nascent entrepreneurs without the experience of simultaneous pursuit of uniqueness and venture survival may self-identify with the roles via their peripheral features, e.g., "I am an inventor because I love day dreaming about cool ideas" or "Being a businessperson is an important part of me because I want to be rich". They would not be able to consolidate their experiences to associate them with the core features of the inventor and businessperson roles. Thus they do not possess the same level of clarity

with regard to the meaning of each role and their identification with these roles does not correspond to role-consistent normative behaviors.

Role identification leads to behaviors that conform to the normative expectations and values of the role. Social identity research has produced robust evidence that strong identification with a social group promotes compliance to the norms and values of the group (Ashforth & Mael, 1989; Jetten, Postmes, & McAuliffe, 2002; Stets & Burke, 2000; Tajfel & Turner, 1986). Role identity can induce compliance to role-specific norms in a similar fashion. By norm compliance, I mean to behave in a way that results in meeting the normative values for a particular role. For instance, identification with the female gender role predicts higher conformity to socially desired female values (e.g., being nice, caring, and faithful, Mahalik et al., 2005). Similarly, strong creative role identity predicts higher creative performance (Farmer, Tierney, & Kung-Mcintyre, 2003). In other words, role identification is important in shaping perception, cognition, and behavior (Jain, George, & Maltarich, 2009; Mathias & Williams, 2014; Pratt, Rockmann, & Kaufmann, 2006; Stets & Burke, 2000; Weick, 1995) due to its pressure for enacting appropriate role-consistent behaviors so as to meet role-based norms and values.

What the social identity and role identity theories are relatively silent about is the importance of role experience in moderating the relationship between role identification and role-consistent behavior. As I reasoned above, only for individuals with substantial experience performing the role, their identification with the role is via role schema – the central characteristics that represent the important norms and values of the role. Therefore when experienced individuals identify with the role, they behave consistently with the central normative values of the role. On the contrary, for individuals with little experience performing the role, even though they wish to or

claim to identify with the role and are motivated to conform to the norms of the role, they do not have accurate role schema, or mental representation of what the central norm is and how it is pursued in concrete behaviors. Therefore, their behaviors may not align with the central norms and values of the role even though they claim to identify with the role. The example of a graduate student and tenured professors again can be used to illustrate this comparison. While the inexperienced graduate student would identify with the role of a scholar based on their daily responsibilities of assisting data collection and analysis in research projects, they may not be able to recognize a highly impactful research article that addresses a heated debate. This is because the schema of new knowledge creation is not clear in the student's mind due to a lack of actual experience in doing so. However, a seasoned professor can recognize such an impactful article right away because their experience in creating knowledge has helped them to form a schema of the objectives in knowledge creation and crafting impactful articles.

Similarly, I expect only experienced entrepreneurs' identification with their inventor and businessperson roles to be positively associated with compliance with normative values associated with each role respectively. Since I assume that novelty would be normatively valued in an inventor role, I also expect experienced entrepreneurs who identify with the inventor role to value novelty more when they evaluate whether a business idea is creative. Meanwhile, I expect that experienced entrepreneurs who identify with the businessperson role to value commercial viability more when they evaluate whether a business idea is creative. I do not expect such an unambiguous pattern among nascent entrepreneurs.

Hypothesis 1a: Entrepreneurial experience positively moderates the relationship between role identification and adherence to the core values of the role

such that identification with the inventor role is positively associated with valuing novelty (i.e., according it high importance) in creative business idea evaluation among experienced entrepreneurs but not among nascent entrepreneurs.

Hypothesis 1b: Entrepreneurial experience positively moderates the relationship between role identification and adherence to the core values of the role such that identification with the businessperson role is positively associated with valuing commercial viability (i.e., according it high importance) in creative business idea evaluation among experienced entrepreneurs but not among nascent entrepreneurs.

Entrepreneurial experience, dual role identification, and goal commitment

As entrepreneurs pursue both the values uniqueness and commercial viability simultaneously in their venture creation processes, both the inventor and businessperson roles should be experienced with similar intensity. This is because the founder experiences strong individual motivation to create a unique new business while she is also constrained by limited time and capital to make the business a viable one, i.e., one that can survive. Failing to fulfill the uniqueness value can decrease entrepreneurs' personal motivation whereas failing to ensure the new venture's commercial viability can quickly drain the resources necessary for sustaining business operations. Therefore, the two roles may be strongly interrelated among experienced entrepreneurs as they experience the simultaneous pursuit of uniqueness and commercial viability.

In comparison, without this experience of *simultaneous* pursuit of venture uniqueness and venture survival, nascent entrepreneurs would not have a high level of correspondence between their two roles. Nascent entrepreneurs have not experienced the real pressure to ensure venture viability as they are still early in the business idea

formulation and preparatory stage of a new venture creation process. Hence they have not experienced the simultaneous pursuit of venture uniqueness and commercial viability. Due to their lack of such an experience, nascent entrepreneurs would not have a high level of correspondence between their two roles.

Hypothesis 2: inventor and businessperson role identities are highly positively correlated among experienced entrepreneurs but not among nascent entrepreneurs.

The start-up process is uncertain and filled with setbacks which can easily distract or discourage the entrepreneurs. The less committed individuals may be negatively affected by obstacles and lack of progress and may be more likely to give up. Only the highly committed individuals would persevere in the face of difficulties, to strive for venture progress and eventual success. For instance, an extensive study by Klein et al. (1999) found that goal commitment predicts higher performance and that this relationship is strongest when the goal is difficult to achieve. Therefore, entrepreneurs' goal commitment, defined by how long an individual is willing to strive for their entrepreneurial goal, is vital in situations or tasks that involve difficult goals such as starting a new business (Uy et al., 2015).

Apart from encouraging norm-consistent behaviors, role identification can also motivate commitment to and persistence on goal-oriented actions. For example, those who strongly defined themselves as volunteers tended to be psychologically (Reich, 2000) and behaviorally more committed to activities such as blood donation (Chang et al., 1988). In the process of venture creation, strong role identities lead to passion and subsequently, entrepreneurial persistence because engagement in entrepreneurial tasks validates and bolsters the entrepreneurial identity (Cardon et al., 2009; Hoang & Gimeno, 2010; Murnighan et al., 2012). It is through venture goal commitment, or the motivation to stay committed to and persist on the entrepreneurial

goal, that entrepreneurial role identity contributes to venture survival and performance (Gimeno, Folta, Cooper, & Woo, 1997). Strong identification with the inventor and businessperson roles should therefore also translate into strong venture goal commitment, as the performance of both roles can contribute to venture success. As experienced entrepreneurs associate both uniqueness and commercial viabilities as central aspects of entrepreneurial goals and simultaneously identify with both inventor and businessperson roles, I predict that both roles will be positively associated with entrepreneurial goal commitment among experienced entrepreneurs.

On the contrary, nascent entrepreneurs are still at the early stage of trying to start a business thus their role identities as inventors and businesspersons are not based on the concrete experience of creating a business. Instead, they might identify with the inventor role because they have many business ideas or enjoy coming up with new business ideas. By themselves, these characteristics do not requirement commitment. Similarly they might identify with the businessperson role because they aspire to become one regardless of what business they eventually start and own. In other words, nascent entrepreneurs' role identities are not likely to be target-specific or associated with concrete past experiences of playing these roles. It is therefore likely that nascent entrepreneurs view their current venture creation plan as a tentative one that may allow them to pursue their creative business ideas or commercial ambition, without feeling the need to commit to it - if they do not progress on the current one, they can always work on a different business idea in order to fulfill their inventor or businessperson identity. For this reason, their identities may not be associated to high levels of goal commitment to the currently chosen business venture.

Hypothesis 3a: Among experience entrepreneurs, both inventor role identity and businessperson role identity are positively associated with their venture goal commitment.

Hypothesis 3b: Among nascent entrepreneurs, neither inventor nor businessperson role identity is associated with their venture goal commitment.

Entrepreneurial experience and role identity conflict

Past research demonstrated that simultaneously pursuing both uniqueness and commercial viability means a delicate balance that is difficult to achieve in reality (Berg, 2014; Miron-Spektor & Beenen, 2015; Miron-Spektor, Erez, & Naveh, 2011), as both aspects are motivated by distinct or even opposite conditions (Bechtoldt, De Dreu, Nijstad, & Choi, 2010; Beersma & De Dreu, 2005; Mueller, Melwani, & Goncalo, 2011; Rietzschel, Nijstad, & Stroebe, 2010). For instance, learning goal orientation leads to increased product novelty whereas achievement goal orientation leads to increased product appropriateness (Miron-Spektor & Beenen, 2015). Also, novel ideas are likely to surface when individuals feel safe to take risks and are eager to explore the unfamiliar (Hirst, Van Knippenberg, & Zhou, 2009) whereas useful and practical ones are more likely to result from uncertainty avoidance (Mueller et al., 2011). Regarding social norms, Morris and Leung (2010) argued that the norms of individualistic societies value novelty whereas those of collectivistic societies emphasize appropriateness; in turn, individuals from individualistic societies or endorsing individualistic norms display more novelty whereas those from collectivistic societies or endorsing collectivist norms demonstrate more appropriateness in their respective creative performances. Supporting this argument, Erez and Nouri (2010) found that Israelis (i.e., people from an individualistic society) produced more novel solutions whereas Singaporeans (i.e., people from a

collectivistic society) produced more elaborated solutions in the presence of peers (whose presence reminds them of their cultural norm); this difference was absent when the participants were alone. Likewise, Bechtoldt and associates (2010) showed that originality is valued more in individualistic cultures (the Netherlands) whereas appropriateness is valued more in collectivistic cultures (Korea). In sum, the achievement of uniqueness versus commercial viability (i.e., the appropriateness aspect of creativity studied in prior research) demands contrasting goal orientations, values, and social norms, making the pair somewhat incompatible thus potentially prone to goal conflict. As a result, simultaneous pursuit of both goals of uniqueness and commercial viability can be challenging as the simultaneous demands of both sets of norms causes role overload and role conflict (Albert & Whetten, 1985; Hall, 1972).

Prior research showed that women working in highly male-dominated professions where the dominant professional values of aggressiveness and non-emotionality contrast with feminine values report high levels of conflict between their gender role and their professional role (Fournier & Kelemen, 2001; Hood & Koberg, 1994; McIlwee & Robinson, 1992). Similarly, I expect experienced entrepreneurs to experience more role conflict as a result of simultaneously performing both roles and being pulled by their contrasting demands. While one may expect these entrepreneurs to learn to cope better with the consequences of role conflict over time thus experience less role conflict, I argue that this may not be the case for two reasons. First, as theorized in Chapter 2, entrepreneurs are likely to juggle between the competing goals of uniqueness and commercial viability in both the founding and growth stages of their new venture creation process. This means that the demand of dual goal pursuit continues to be salient to the entrepreneur even as time passes thus

he is likely to continue to sense the role conflict. Moreover, my focus here regarding role conflict is whether or not entrepreneurs feel it, but not whether or not they can cope with it. It may be true that entrepreneurs have difficulty coping with the experience of role conflict thus suffer from more stress and reduced well-being early on but learn to contain the damage of role conflict over time. But coping is not within the scope of the discussion here. However, getting better at coping with role conflict does not mean the entrepreneur ceases to sense or experience role conflict, which is the focus here. Taking these points into account, I expect experienced entrepreneurs' sense of role conflict to be high and continuing. In comparison, nascent entrepreneurs may not experience much role conflict as their roles of inventor and businessperson are not performed simultaneously or perceived as related.

Hypothesis 4: Experienced entrepreneurs experience greater role conflict than nascent entrepreneurs.

Identity conflict is associated with contrastive responses when one identity is made salient temporarily. In other words, individuals with high identity conflict will behave in contrast to the norms of the salient identity. For example, (Mok & Morris, 2009, 2012, 2013) compared Asian-American with conflicted cultural identities to those with compatible cultural identities. Conflicted Asian-Americans exhibited a contrastive or contrarian response--more Western biases (on measures such as focal/holistic attention, need for uniqueness, and individualism) after Chinese priming and more East Asian biases after American cultural priming. One explanation is the motivation to protect the non-cued cultural identity. Recent studies using subliminal priming indicate this response occurs implicitly rather than through conscious impression management (Mok & Morris, 2013). While this response of conflicted bicultural individuals may prevent them from meshing with cultural contexts, it is

useful in protecting them from groupthink when working in groups from their two cultures (Mok & Morris, 2010).

Experienced entrepreneurs who experience strong conflict between their role identities as inventor and businesspersons may also similarly avoid leaving out the other important role when only one is made salient. I further argue that such a conflict between the inventor and businessperson role identities and its resultant contrastive cognitive and behavioral tendencies constitute a key characteristic of entrepreneurial expert cognition. These contrastive cognitive and behavioral tendencies prevent experienced entrepreneurs from falling prey for cognitive blind spots when the demands of one role are more salient than those of the other. This could be a beneficial tendency for entrepreneurs as they can cast more holistic attention on multiple goals. In other words, it allows them to take multiple objectives and goals into consideration to make more holistic decisions.

With regard to entrepreneurial creativity, their role conflict could mean that when their inventor role is highlighted, they will be more likely to want to protect their businessperson role and produce ideas or solutions that are more commercially viable. On the other hand, when their businessperson role is highlighted, they will be more likely to want to protect their inventor role and produce ideas or solutions that are more novel.

In contrast, nascent entrepreneurs who do not experience as much role conflict will be more likely to assimilate into the more salient focal role (Hong, Morris, Chiu, & Benet-Martínez, 2000) but neglect the non-salient role. Therefore, they will be more likely to produce ideas or solutions that are more novel but not as commercially viable when their inventor role is highlighted and more likely to produce ideas or

solutions that are more commercially viable but not as novel when their businessperson role is highlighted.

Hypothesis 5a: when the inventor role is made salient, experienced entrepreneurs produce ideas that are more commercially viable than nascent entrepreneurs.

Hypothesis 5b: when the businessperson role is made salient, experienced entrepreneurs produce ideas that are more novel than nascent entrepreneurs.

Table 1 below outlines the assumptions and hypotheses, and the studies that test them. Figure 2 below provides a summary of the main model to be tested in the empirical studies.

Table 1. List of assumptions, hypotheses and empirical tests

Hypothesis	Empirical Study
Assumption 1: The inventor role is associated more positively with novelty value than the businessperson role.	Study 1
Assumption 2: The businessperson role is associated more positively with commercial viability values than the inventor role.	Study 1
H1a: Entrepreneurial experience positively moderates the relationship between role identification and adherence to the core values of the role such that identification with the inventor role is positively associated with valuing novelty (i.e., according it high importance) in creative business idea evaluation among experienced entrepreneurs but not among nascent entrepreneurs.	Study 2
H1b: Entrepreneurial experience positively moderates the relationship between role identification and adherence to the core values of the role such that identification with the businessperson role is positively associated with valuing commercial viability (i.e., according it high importance) in creative business idea evaluation among experienced entrepreneurs but not among nascent entrepreneurs.	Study 2
Hypothesis 2: inventor and businessperson role identities are highly positively correlated among experienced entrepreneurs but not among nascent entrepreneurs.	Study 2
H3a: Among experience entrepreneurs, both inventor role identity and businessperson role identity are positively associated with their venture goal commitment.	Study 2

H3b: Among nascent entrepreneurs, neither inventor nor businessperson role identity is associated with their venture goal commitment.	Study 2
H4: Experienced entrepreneurs experience greater role conflict than nascent entrepreneurs.	Study 3
H5a: when the inventor role is made salient, experienced entrepreneurs produce ideas that are more commercially viable than nascent entrepreneurs.	Study 3
H5b: when the businessperson role is made salient, experienced entrepreneurs produce ideas that are more novel than nascent entrepreneurs.	Study 3

Figure 2. Summary of Empirical Model

CHAPTER 4

STUDY 1: PROFESSIONAL ROLES AND THEIR ASSOCIATED CREATIVITY VALUES

The purpose of this study is two-fold. First, I aim to establish the dimensionality of entrepreneurial creativity, by including commercial viability values that were previously excluded from the criteria of creativity. Secondly, I set out to test whether the inventor role is perceived to be positively associated with novelty values (H1) while the businessperson role is perceived to be positively associated with commercial viability values (H2) using a creativity evaluation task.

Method

Participants and Procedure

Seventy-nine participants (47% male), recruited from the student survey pool at a public university in Singapore, completed this survey. Of all participants, a majority of 72% self-identified as Singaporeans. Other nationalities consist of 16% Indonesian and 12% others (Malaysian, Chinese, and Australian).

I employed a two-condition within-subject design to assess the effect of perceived role (inventor vs. businessperson role) on the expected normative values in creativity evaluation (See Appendices 2a and 2b for the scenario). Participants read the following instructions:

“Sam (Francis) is an inventor (businessperson) and currently a judge for a product design competition. Compared to non-inventors, what qualities do you expect from a product voted for by Sam (Francis)? Please indicate on the scale below, to what extent is each of the following qualities important to Sam (Francis), in your opinion.”

Participants rated each of the following values on a 7-point Likert scale from “Not at all important” to “Extremely important”: novel, unique, original, revolutionary, daring, unconventional, practical, effective, feasible, appropriate, cost-

effective, marketable, profitable, useful, affordable, and durable. I presented this set of values randomly to each participant and counterbalanced the order to which participants were exposed to the inventor vis-à-vis the businessperson conditions.

Perceive Role-Consistent Creativity Norm. The above-mentioned normative values (e.g., novel and unique) are used to measure different dimensions of creativity. I assembled this list consisting of attributes which are either synonyms of “novel” (e.g., unique, original, revolutionary, daring, unconventional) or aspects of appropriateness used in past research (e.g., useful and practical; Berg, 2014; Morris & Leung, 2010) and criteria of creativity generated by participants in my previous studies (e.g., durable and affordable). Furthermore, based on a review of the entrepreneurship literature and insights from interviews with entrepreneurs, I included “profitable”, “marketable”, and “cost-effective” to capture commercial viability.

Analysis and Results

To explore the sub dimensions of creativity values, I first performed a principal component analysis (PCA) on the list of 16 attributes, under each condition (i.e., inventor or businessperson). Promax rotation was applied to allow factors to freely correlate as there is no prior evidence to disconfirm their conceptual commonality. Principal component analysis, rather than principal axis factoring, is the appropriate test as creativity is a formative rather than a reflective construct. This is because according to Amabile’s (1983; 1996) classic definition of the creativity construct, something is creative if it is both novel and appropriate. In other words, novelty and appropriateness together “cause” an idea or product to be creative (e.g., Berg, 2014; Erez & Nouri, 2010; Miron-Spektor & Beenen, 2015; Mueller, Melwani, & Goncalo, 2011), rather than creativity “causes” them to be novel and appropriate. This can be likened to the construct of socio-economic status (SES), which is typically conceived

as a combination of education, income, and occupation and thus, these three indicators are formative in that they “cause” the construct: people have high SES because they are wealthy and/or educated; they do not become wealthy or educated because they are of high SES (Nunnally & Bernstein, 1994: p. 449). But when not all 3 component are available, income is often used as a single indicator of SES. Similarly, in the creativity literature, as appropriateness is harder to define and measure in a context-sensitive manner, novelty is often used as a single measure of creativity (e.g., Bledow, Rosing, & Frese, 2013; Chua, 2013; Grant & Berry, 2011). For a similar reason that the definition of appropriateness changes with context, different researchers have operationalized appropriateness differently, in their efforts to capture this aspect of creativity. For instance, appropriateness has been conceptualized as elaboration (Erez & Nouri, 2010), practicality (Mueller et al., 2011), likelihood to be used, (Miron-Spektor & Beenen, 2015), aesthetics (Miron-Spektor & Beenen, 2015), potential usefulness (Berg, 2014), effectiveness (Rietzschel et al., 2010), and cost-effectiveness (Miron-Spektor et al., 2011). Furthermore, cross-cultural work has demonstrated that creativity is viewed as context-specific (e.g., Chua, Roth, & Lemoine, 2015; Erez & Nouri, 2010), thus indicating that creativity is not an inherent underlying construct, but instead, is an outcome defined by a number of essential criteria in a given context. Following these prior research, I treat creativity as a formative construct in the present research thus adopt principal component analysis to examine its dimensions. This practice is in line with prior research that investigated the dimensionality of creativity (e.g., Demirkan & Hasirci, 2009).

For the inventor condition, there are five factors with Eigenvalue greater than 1. Some researchers suggest that factors with Eigenvalue greater than 1 can all be retained; meanwhile, other researchers suggest that the number of variables that have

significant factor loadings on the factor should also be considered when determining the number of factors to retain (Floyd & Widaman, 1995). I followed this advice to further inspect the pattern matrix and found that the fourth and fifth factors only have two indicators with significant factor loading respectively. It can be problematic to retain factors with only two indicators for two reasons. First, since factor stability requires higher number of indicators per factor, factor stability can be a concern for the fourth and fifth factors (Guadagnoli & Velicer, 1988)³.

Moreover, and equally importantly, the decision on how many factors to retain in an EFA analysis should also be guided by theoretical consideration. As Fabrigar, Wegener, MacCallum, & Strahan (1999: 278) noted, “Solutions with too many factors might prompt a researcher to postulate the existence of constructs with little theoretical value and thereby develop unnecessarily complex theories”. Indeed, deciding the number of factors to retain is a delicate balance between the need for plausibility (i.e., sufficient number of factors) and the need for parsimony (i.e., only necessary factors for theorizing). To this end, I should retain only the “‘major’ factors

³ Factor stability, or sometimes referred to as pattern stability, means how likely a factor structure approximates the population structure or replicate over many samples (Guadagnoli & Velicer, 1988). For instance, suppose that I decide that a 5-factor model is the most suitable to retain, based on my first sample; if I run the same factor analysis on data from a second sample (or split half of the first sample provided the first sample is sufficiently large) and the same 5-factor model holds, I can be more confident that this factor structure or pattern is stable. Achieving high factor stability requires higher number of indicators per factor. In other words, a factor that has merely 1 or 2 indicators is likely to be less stable than a factor with 3 or 4 indicators. Therefore from this statistical point of view, since the remaining 2 factors in my results, i.e., the 4th and 5th factors, have only 2 indicators with significant factor loading respectively, retaining them may actually lead to a less stable factor structure. This is undesirable. I further demonstrate this point by running the same principal component analysis for the same set of indicators collected from a different sample in Study 2. If I specify a 5-factor structure, the factor structure (i.e., factor loading patterns) found in Study 2 differs from that found in Study 1, indicating that if I concluded Study 1 by retaining a 5-factor model, it would not be replicated in Study 2 (thus lacking stability). Instead, if I specify a 3-factor structure, the factor structure found in Study 2 very closely replicates that in Study 1. Therefore from a statistical point of view, my data demonstrate that a 3-factor structure is superior.

underlying a battery of measures” (Fabrigar, Wegener, MacCallum, & Strahan, 1999: 278) that are necessary for my theory. Since my conceptual definition of entrepreneurial creativity in terms of novelty, usefulness, and commercial viability are accurately reflected with relative stability (across 2 samples), by the first 3 factors extracted from the principal component analysis, I conclude that a 3-factor structure is best suited for my theory. Based on these reasons, I retained three factors, which account for 57.87% of total variance explained. I then ran a subsequent PCA with Promax rotation to extract three factors. The resultant three factors included one with attributes of novelty (i.e., unique, revolutionary, novel, original, daring), one with attributes of usefulness (i.e., effective, practical, feasible, appropriate, appropriate, useful, and durable), and one with attributes of commercial viability (i.e., marketable, profitable, cost-effective, affordable). I retained this three-factor structure as it maps well onto the theoretical dimensions of novelty, appropriateness, and commercial viability. The novelty factor has a weak positive correlation with the usefulness factor ($r = .21$) but no relationship with the commercial viability factor ($r = .05$). Meanwhile, the usefulness factor is moderately positively associated with the commercial viability factor ($r = .47$).

For the businessperson condition, there are four factors with Eigenvalue greater than 1. Again, based on theoretical meaningfulness described above, I retained three factors that account for 61.08% of total variance explained. Again, I ran a subsequent PCA with Promax rotation to extract three factors. The resultant three factors included one with attributes of novelty (i.e., unique, revolutionary, novel, original, daring), one with attributes of usefulness (i.e., effective, practical, feasible, appropriate, appropriate, useful, durable, and affordable), and one with attributes of commercial viability (i.e., marketable, profitable, cost-effective). This structure

closely resembles the one found for the inventor condition overall. The novelty factor has a moderate positive correlation with the usefulness factor ($r = .35$) but no relationship with the commercial viability factor ($r = -.01$). Meanwhile, the usefulness factor is positively associated with the commercial viability factor ($r = .33$).

For each condition, I checked each subscale for unidimensionality and reliability. To do so, I first ran PCA for each subscale. Specifically, under the inventor condition, the novelty, usefulness, and commercial viability subscales show unidimensionality, as shown by their scree plots, with Eigenvalue of the first factor being about more than three times that of the second factor. Each of these subscales is also reliable, with Cronbach's Alpha at .78, .83, and .80. Under the businessperson condition, the novelty, usefulness, and commercial viability subscales similarly display unidimensionality and reliability, with Cronbach's Alpha at .81, .85, and .83. Subsequently, I averaged the items for each subscale (i.e., novelty, appropriateness, and commercial viability) to form factor scores for each condition and use these factor scores to conduct between-condition comparisons next.

A general linear model with repeated measure was applied to compare novelty, appropriateness, and profitability respectively, between the inventor and businessperson conditions. The average score for novelty was significantly higher in the inventor ($M = 5.77$, $SD = .90$) than in the businessperson condition ($M = 4.91$, $SD = .88$), $t(78) = 7.76$, $p = .00$, $\eta^2 = .44$. In contrast, the average score for profitability was higher in the businessperson ($M = 6.12$, $SD = .89$) than in the inventor condition ($M = 4.40$, $SD = 1.28$), $t(78) = -9.58$, $p = .00$, $\eta^2 = .54$. The difference of the usefulness

ratings between the inventor ($M = 5.29$, $SD = 1.02$) and businessperson ($M = 5.43$, $SD = .99$) conditions was not significant, $t(78) = .99$, $p = .33$, $\eta^2 = .01$.⁴

Discussion

Overall, the results of Study 1 suggest that commercial viability is a part of entrepreneurial creativity and it is differentiated from novelty and usefulness⁵. Moreover, the results demonstrate that people indeed perceive that inventors and businesspersons embrace different normative values in their evaluations of product creativity. Specifically, our results suggest that people perceive that inventors value novelty more than do businesspersons while businesspersons value commercial viability more than do inventors thus providing empirical support for assumptions 1 and 2. Inventors and businesspersons are not perceived to value usefulness differently.

⁴ I further tested the possibility of a gender effect by including gender as a between-subject factor in the original general linear model with repeated measure (i.e., the within-subject factor). Results indicate that women's rating of the importance of novelty ($M = 5.40$, $SD = .15$) does not significantly differ from men's ($M = 5.27$, $SD = .12$), $F(1, 77) = .58$, $p = .45$.

⁵ It is useful to note that the sample size of 79 used in this study is considered small for EFA and thus the power may be low. This limitation implies that the factor loadings found in Study 1 may be unstable (MacCallum, Widaman, Zhang, & Hong, 1999). To address this concern, I repeated the PCA analysis on the sample of 175 nascent and experienced entrepreneurs used in Study 2 and the factor structure and loadings broadly replicated those found with the 79 participants in Study 1, indicating that the three factors of creativity found in Study 1 tend to be robust.

CHAPTER 5

STUDY 2: ROLE IDENTIFICATION AND BUSINESS IDEA EVALUATION

In this study, I test Hypotheses 1 through 3, regarding whether a set of relationships among role identities and between role identity and creative behavior and goal commitment are contingent upon having entrepreneurial experience. First, I examine the set of hypotheses regarding the moderating role of entrepreneurial experience on the relationship between entrepreneurs' role identity and creativity evaluation. Specifically, I test Hypotheses 1a and 1b – the relationship between role identification and the criteria valued in business idea evaluation among experienced versus nascent entrepreneurs. I also test Hypothesis 2 - inventor and businessperson role identities are highly positively correlated among experienced entrepreneurs, but not among nascent entrepreneurs. I further examine the differences in the relationship between experienced and nascent entrepreneurs' role identification and venture goal commitment (Hypotheses 3a and 3b).

Method

Participants and Procedure

One hundred seventy-five nascent and experienced entrepreneurs (55.6% male, 42.7% female, 1.7% did not report gender; mean age = 24.10 years), recruited from an entrepreneurship center and a student entrepreneurship society of a public university in Singapore, completed this survey. Of all participants, 45.7% self-identified as Singapore citizens. Other nationalities consist of 25.1% Chinese and 29.2% others (e.g., Indonesian, Indian, Filipino, Malaysian, British, etc.). Sixty-one participants are experienced entrepreneurs who are either running their own business at the time of this study (54.10%) or had run their own business in the past (45.90%). The entrepreneurs' length of experience in business ventures ranges from 5 months to

102 months, with a mean experience of 30.76 months. Participants from China are given an option to take the survey in Chinese and 43 chose to do so. The survey items were translated into Chinese by the author, who has native fluency in both English and Mandarin Chinese. The Chinese version was then back-translated into English by an assistant who is also bilingual in English and Mandarin Chinese. The back-translated version was compared with the original scale items and the two translators worked together to resolve all discrepancies.

Participants received an email invitation to complete the survey, upon successful registration. They clicked on the survey link in the email to complete the survey online. Participants first chose the language in which they wish to answer the survey; they then completed the survey in their chosen language. They were reminded to find a quiet place to complete the survey alone in one sitting. Participants were informed that the study aimed to study experienced and nascent entrepreneurs' background, personality, attitude, opinions, thinking style, and behavioral tendencies. They then filled out the questionnaires that consisted of various individual difference measures, lasting about 20 to 30 minutes. The scales used for the present analysis are described in the Measures section below.

Measures

Independent variables.

Inventor role identity. I adapted the identity subscale of Luhtanen & Crocker's (1992) Collective Self Esteem into the present inventor role identity scale. The present scale includes the following four items: "Overall, being an inventor / creator has very little to do with how I feel about myself" (reverse coded), "Being an inventor / creator is an important reflection of who I am", "Being an inventor / creator is unimportant to my sense of what kind of a person I am" (reverse coded), and "In

general, being an inventor / creator is an important part of my self-image". Participants responded on an eight-point Likert scale. Cronbach's alpha for this scale is .73, demonstrating acceptable reliability.

Businessperson role identity. Similar to inventor role identity, I adapted from the identity subscale of Luhtanen & Crocker's (1992) Collective Self Esteem into the present inventor role identity scale. The present scale includes the following four items: "Overall, being a businessperson has very little to do with how I feel about myself" (reverse coded), "Being a businessperson is an important reflection of who I am", "Being a businessperson is unimportant to my sense of what kind of a person I am" (reverse coded), and "In general, being a businessperson is an important part of my self-image". Participants responded on an eight-point Likert scale. Cronbach's alpha for this scale is .83, demonstrating good reliability.

Entrepreneurial Experience. Previous research typically operationalized entrepreneurial experience either as binary (qualitatively, distinguishing between having had experience or not; e.g., Baron & Ensley, 2006; Gimeno, Folta, Cooper, & Woo, 1997; Ucbasaran, Westhead, Wright, & Binks, 2003; Zhang, 2011) or continuous (quantitatively, referring to the amount of experience in terms of number of prior start-up founded; e.g., Delmar & Shane, 2006; Eesley & Roberts, 2012; Hmieleski & Baron, 2009).

As my theory is about the behavioral and psychological experience common to most entrepreneurs (see P3 for boundary conditions) in their early venture creation process, I view experience as the qualitative difference of having versus not having started a prior business. Engaging in the pursuit of venture uniqueness and commercial viability goals constitutes the common entrepreneurial experience. Meanwhile, I do not theorize about how the extent or amount of experience (e.g.,

time) would have an impact on entrepreneurs' identity processes; this is outside the scope of the current focal question of "what the early venture experience is".

Theoretical mismatch aside, years of experience as a quantitative measure of experience can be useful when the full sample consists of only experienced entrepreneurs whereas my choice of operationalizing experience as a binary variable is appropriate for the purpose of contrasting between a sample of experienced entrepreneurs and nascent/novice entrepreneurs. Operationalizing experience quantitatively in a sample that consists of both experienced and nascent/novice entrepreneurs would not result in high skewness in the experience variable. To sum, given my intention to contrast between a sample of experienced entrepreneurs and nascent/novice entrepreneurs based on theory and empirical consideration, I chose to operationalize experience using a binary variable.

To categorize the participants by whether they had entrepreneurial experience, i.e., the experience of starting their own business, participants responded to two questions. First, participants indicated whether they are now running their own (registered) business. Furthermore, participants answered whether they had started and run their own business in the past even if they had ceased to do so now. Participants who have responded "yes" to either question are coded as experienced entrepreneurs; the remaining participants are coded as nascent entrepreneurs (i.e., entrepreneurs engaging in initial start-up activities for the first time; Davidsson & Honig, 2003).

Dependent variable.

Creativity Evaluation. I assessed the norms participants used to evaluate product creativity using the list of attributes from Study 1. Participants read the following description and instruction:

“Some industry leaders predicted that self-driving car will prove to be an innovative success in the next 5 years. To what extent must self-driving cars resemble each of the following qualities, for it to become an innovative success? Please indicate your opinion on the scale below”.

Participants indicated their responses on a 7-point Likert scale ranging from “not at all important” to “extremely important”, regarding the following qualities (identical to those used in Study 1): novelty (i.e., novel, unique, original, revolutionary, daring, unconventional), commercial viability (i.e., cost-effective, marketable, profitable), and usefulness (e.g., practical, effective, feasible, appropriate, useful, affordable, durable). The reliability of each dimension is $\alpha = .83$, $\alpha = .82$, and $\alpha = .88$ respectively for novelty, commercial viability, and usefulness.

Control variables.

Creative self-efficacy. I administered Tierney and Farmer's (2002) 4-item Creative Self Efficacy Instrument to measure participants' creative self-efficacy. Sample items include “I have confidence in my ability to solve problems creatively” and “I feel that I am good at generating novel ideas”. Participant rated on an 8-point Likert scale ranging from “completely disagree” to “completely agree”, $\alpha = .81$.

Creative Cognition. I included the creativity subscale of the cognitive style scale (Miron, Erez, & Naveh, 2004) to control for individual differences in creative thinking styles. Sample items include “I have a lot of creative ideas” and “I prefer tasks that enable me to think creatively”. Participants rated on an 8-point Likert scale ranging from “completely disagree” to “completely agree”, $\alpha = .87$.

Family business background. I also controlled for family business background as a form of indirect entrepreneurial experience for the participants in our sample. Participants indicated whether their parents had been involved in a family business.

Gender. Participants chose between “male” and “female” options.

Additional variables.

Entrepreneurial Goal Commitment. I measured venture goal commitment using the scale developed by Brunstein (1993). The scale consists of six items in total with three positively worded items (e.g., “No matter what happens, I will not give up my entrepreneurial goal.”) and three negatively worded items (e.g., “I sometimes doubt whether I shall definitely accomplish my entrepreneurial goal.”). The negatively worded items were reverse coded. Although Cronbach’s alpha shows acceptable scale reliability ($\alpha = .72$), exploratory factor analysis (Principal Axis Factor with Promax rotation) shows a lack of unidimensionality: the positively worded items fall onto a different factor from the negatively worded items and the two factors are moderately correlated ($r = .45$). This suggests that participants may have processed and responded to the negatively worded items somewhat differently from the positively worded items. To ensure scale unidimensionality and reliability, I formed a factor score by averaging only the three positively worded items. The 3-item scale shows acceptable reliability ($\alpha = .79$) and a unidimensional factor structure that accounts for 51.20% of total variance explained. Entrepreneurial goal commitment is used for testing hypothesis 3a (Among experienced entrepreneurs, both the inventor role identity and businessperson role identity are positively associated with their venture goal commitment) and hypothesis 3b (Among nascent entrepreneurs, neither the inventor nor the businessperson role is positively associated with their venture goal commitment).

Analysis and Results.

Table 2 presents the descriptive statistics and correlations for key variables in this study.

Table 2

Study 2: Descriptive Statistics and Correlations

Variable	Mean	SD	Min	Max	1	2	3	4	5	6	7
1. Inventor Role Identity	5.24	1.07	2.00	8.00							
2. Businessperson Role Identity	5.45	1.15	2.75	8.00	.34**						
3. Novelty	4.81	1.36	1.00	7.00	.10	-.04					
4. Commercial Viability	5.94	1.02	1.00	7.00	-.01	.15*	.28*				
5. Appropriateness	6.06	0.89	1.00	7.00	-.05	.05	.28*	.62**			
6. Creative Self-Efficacy	6.43	1.17	4.00	9.00	.02	.14†	.11	.07	.16*		
7. Creative Cognition	5.86	1.15	3.00	8.00	.23**	.22**	-.03	.03	.11	.55**	
8. Family Business Background	0.47	0.50	0.00	1.00	.09	.12	.02	-.07	-.03	.10	
9. Gender	1.43	0.50	1.00	2.00	.04	-.09	.28*	.02	-.01	-.02	-.01

N = 175.

** $p < .01$. * $p < .05$. † $p < .10$.

I conducted ordinary least square regression to test the moderating effects of entrepreneurial experience on the relationships between inventor and businessperson role identities and creativity evaluation; results appear in Table 3. Novelty rating is the dependent measure in models 1, 2, and 3 and commercial viability rating is the dependent measure in models 4, 5, and 6. Because the novelty and commercial viability ratings are correlated but I am concerned with the unique variance that the two variables do not share, novelty was included as a control when analyzing commercial viability as the dependent variable and vice versa, in order to account for any spillover between the two dimensions of entrepreneurial creativity. In other words, this approach allowed me to focus on the unique variance captured by each creativity criterion, as demonstrated in prior studies (Berg, 2014).

Table 3
Regression Results for Testing Role Identities' Effects on Creativity Evaluation as Moderated by Entrepreneurial Experience

Factor and statistics	Novelty			Commercial Viability		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Step 1: Control variables						
Family Business Background	.15	.19	.26	-.17	-.18	-.24
Creative Self Efficacy	.11	.13	.14†	.04	.02	-.03
Gender	.78***	.68**	.70***	-.14	-.12	-.13
Novelty				.22***	.23***	.24***
Commercial Viability	.36***	.38***	.38***			
Step 2: Predictors variables						
Inventor Role Identity		.16†	.22*		-.09	-.16*
Businessperson Role Identity		-.14	-.22*		.17*	.26**

Experience		-.13	-.13		-.03	-.03
Step 3: Interaction variables						
Inventor X Experience			.28**			-.14†
Businessperson X Experience			-.03			.14†
<i>F</i>	8.55***	5.71***	5.57***	4.16**	3.36**	3.08**
<i>R</i> ²	.17	.19	.23	.09	.12	.14
Adjusted <i>R</i> ²	.15	.16	.19	.07	.09	.10

N = 175.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Models 1, 2, and 3 in table 3 presents the results for novelty ratings. As shown in model 1, the control variables are entered into the model. The independent variables of interest are entered into model 2 subsequently. Finally, the interaction terms between each role identity and entrepreneurial experience are entered into the last step of the regression in Model 3. Results in model 1 show that family business background is not significantly associated with novelty rating ($b = .15$, *ns*; Model 1). Creative self-efficacy is also not significantly associated with novelty rating ($b = .11$, *ns*; Model 1). Gender is significantly associated with novelty rating (i.e., men are significantly more likely than women to value novelty more; $b = .78$, $p < .001$; Model 1). Commercial viability rating is significantly associated with novelty value ($b = .36$, $p < .001$; Model 1). When I entered the independent variables, inventor and businessperson role identities and entrepreneurial experience, into the model in the second step, the set of variables did not significantly increased the variance predicted in novelty rating ($\Delta R^2 = .02$, *ns*). Only inventor role identity is marginally positively associated with novelty rating ($b = .16$, $p < .10$; Model 2). Businessperson role identity is not associated with novelty rating ($b = -.14$, *ns*; Model 2). Entrepreneurial experience is also not associated with novelty rating ($b = -.13$, *ns*; Model 2). However, when the interaction terms between entrepreneurial experience and each role identity respectively are entered into the regression in step three, the set of

variables significantly increased the variance predicted in novelty rating ($\Delta R^2 = .04$, $p < .05$). The interaction term between businessperson role identity and entrepreneurial experience is not significantly associated with novelty rating ($b = -.03$, *ns*; Model 3). However, the interaction term between inventor role identity and entrepreneurial experience is positively associated with novelty rating ($b = .28$, $p < .05$; Model 3). This result is further interpreted using simple slope analysis. Figure 3a below demonstrates that only among experienced entrepreneurs, inventor role identity is significantly positively associated with placing value or high importance on the novelty criteria when evaluating creativity ($b = .40$, $p < .01$) whereas this relationship is not statistically significant among nascent entrepreneurs ($b = -.14$, *ns*). This result is further interpreted using simple slope analysis. Figure 3a below demonstrates that only among experienced entrepreneurs, inventor role identity is significantly positively associated with placing value or high importance on the novelty criterion when evaluating creativity ($b = .40$, $p < .01$) whereas this relationship does not hold among nascent entrepreneurs ($b = -.14$, *ns*).

Models 4, 5, and 6 in table 3 presents the results for commercial viability ratings. Again, the control variables are entered into the model first. As shown in model 4, family business background is not significantly associated with commercial viability rating for experienced entrepreneurs ($b = -.17$, *ns*; Model 4). Creative self-efficacy is also not significantly associated with commercial viability rating ($b = .04$, *ns*; Model 4). Gender is not significantly associated with commercial viability rating ($b = -.14$, *ns*; Model 4). Novelty rating is significantly associated with commercial viability rating ($b = .22$, $p < .001$; Model 4). When the independent variables, i.e., inventor and businessperson role identities and entrepreneurial experience, are entered into the model in a second step, the set of variables marginally significantly increase

the variance predicted in commercial viability rating ($\Delta R^2 = .03, p < .10$). Inventor role identity is not significantly associated with commercial viability rating ($b = -.09, ns$; Model 5). Businessperson role identity has a positive association with commercial viability rating ($b = .17, p < .05$; Model 5). Entrepreneurial experience is also not associated with commercial viability rating ($b = -.03, ns$; Model 5). When the interaction terms between entrepreneurial experience and each role identity respectively are entered into the regression in step three, the set of variables did not significantly increased the variance predicted in commercial viability rating ($\Delta R^2 = .02, ns$). Nevertheless, inspection of the coefficients indicates that the interaction term between inventor role identity and entrepreneurial experience is marginally associated with novelty rating ($b = -.14, p < .10$; Model 6). The interaction term between businessperson role identity and entrepreneurial experience is also significantly associated with commercial viability rating ($b = .14, p < .10$; Model 6). This result is further interpreted using simple slope analysis. Figure 3b below demonstrates that only among experienced entrepreneurs, businessperson role identity is significantly positively associated with placing value or high importance on the commercial viability criterion when evaluating creativity ($b = .35, p < .01$) whereas this relationship does not hold among nascent entrepreneurs ($b = .08, ns$).

Figure 3a.
Novelty by Inventor Identity and Entrepreneurial Status

Figure 3b.
Commercial Viability by Inventor Identity and Entrepreneurial Status

To test the relationships between the role identities (H2) and their relationships with entrepreneurial goal commitment (H3a and H3b) among nascent versus experienced entrepreneurs, I conducted simple correlation for each sub sample. As predicted by Hypothesis 2, inventor role identity is strongly positively correlated with businessperson role identity ($r = .63, p < .001$) among experienced entrepreneurs but not among nascent entrepreneurs ($r = .13, ns$). The difference between the two correlation coefficients is statistically significant, Fisher's $Z = 3.77, p < .001$. Also consistent with my predictions, both inventor role identity ($r = .38, p = .002$) and businessperson role identity ($r = .34, p = .008$) are significantly positively correlated with entrepreneurial goal commitment among experienced entrepreneurs (H3a). Among the nascent entrepreneurs, although the inventor role identity is not related to entrepreneurial goal commitment ($r = .04, ns$), the businessperson role identity is positively associated with entrepreneurial goal commitment ($r = .39, p < .001$).

Discussion

Results of Study 2 support Hypothesis 1a and 1b by demonstrating that the more experienced entrepreneurs identify with the inventor role, the more they value novelty when evaluating creative business ideas. Conversely, the more experienced entrepreneurs identify with the businessperson role, the more they value commercial viability when evaluating business ideas. However, this clear pattern was not observed among nascent entrepreneurs, whose role schemas might not have developed due to their lack of experience in pursuing dual conflicting goals, as my theory suggests. The additional analysis in Study 2 also supports Hypothesis 2: as they make sense of their experiences pursuing the goals of uniqueness and venture survival, experienced entrepreneurs gain strong identification with both inventor and businessperson roles. However, nascent entrepreneurs do not seem to hold strong identification with both these identities simultaneously. Furthermore, supporting Hypothesis 3a, the results of this study confirm that identification with both the inventor and businessperson roles is positively associated with entrepreneurial goal commitment among experienced entrepreneurs. On the other hand, only the businessperson role identity is positively associated with entrepreneurial goal commitment among nascent entrepreneurs. This might be because nascent entrepreneurs who identify with the role of businessperson are similarly determined to make their first business a success despite their lack of experience. However, the nascent entrepreneurs who see themselves as inventors are more motivated to try out new business ideas without the commitment to persist should the idea turn out to be challenging; they might be willing to try a different idea instead of committing to making the current one work.

It is interesting to note that the results indicate a strong gender effect such that men value novelty significantly more than women. This gender

difference may be accounted for by the different norms associated with gender role which men and women are differentially socialized into. For men, the norms of being masculine, assertive, risk-taking, and competitive are positively associated with novelty pursuit, as being novel requires one to take risk, assert, and not fear standing out (Proudfoot, Kay, & Koval, 2015). On the contrary, women tend to be socialized with the gender norms of being nice, caring, and obedient. Seeking novelty violates these norms as it requires one to challenge the convention and status quo. Therefore while men may view novelty as compatible with their gender norms thus highly valuable, women may shy away from it as it violates their gender norm.

CHAPTER 6

STUDY 3: ROLE IDENTITY ACTIVATION AND BUSINESS IDEA GENERATION

This study aims to provide further evidence that entrepreneurial experience moderates the motivational influence of role identity on entrepreneurs' creative behavior using an experimental design. It does so by examining a) whether experienced entrepreneurs experience more role identity conflict than nascent entrepreneur (H4) and b) whether when only one role identity is made salient, experienced entrepreneurs (but not nascent entrepreneurs) respond in a way that fulfills the values of the non-salient role identity (H5a and H5b).

Method

Participants and Procedure

One hundred thirty four nascent and experienced entrepreneurs (58.2% male, 39.6% female, 2.2% did not report gender; mean age = 24.37 years, age range is 18 to 50 years), recruited from an entrepreneurship center and a student entrepreneurship society of a public university in Singapore, took part in this experiment. Of all participants, 45.52% self-identified as Singapore citizens. The remaining participants consist of Chinese, Malaysian, Indonesian, Indian, and a number of other nationalities. Forty eight participants are entrepreneurs who are either running their own business at the time of this study (60.42%) or had run their own business in the past (39.58%). The entrepreneurs' experiences in business ventures ranges from 5 months to 102 months, with a mean experience of 30.14 months. Participants from China are given an option to take the survey in Chinese and 43 chose to do so. The survey items were translated into Chinese by the author, who has native fluency in both English and Mandarin Chinese. The Chinese version was then back-translated

into English by an assistant who is also bilingual in English and Mandarin Chinese. The back-translated version was compared with the original scale items and the two translators worked together to resolve all discrepancies. For the experimental tasks soliciting open-ended responses, participants' responses written in Chinese were translated into English by a bilingual student assistant and finalized by the researcher who is also bilingual. Nineteen students did not respond to the role identity conflict variable, which is both the dependent variable for testing Hypothesis 6 and the control variable for the experiment therefore they were excluded from the study. The final sample consisted of 115 participants.

I applied a two-condition between-subject design (inventor vs. businessperson role) to assess the effect of role identity on creative business idea generation. Participants were randomly assigned into either the inventor or businessperson role condition and worked on the role identity priming manipulation described below. Participants then took part in a creative business product idea generation and elaboration task, adapted from Berg (2014). Specifically, participants are told that "the university's student enterprise, CO-OP, is looking for creative ideas for an innovative PRODUCT to sell to students and CO-OP is looking for PRODUCT ideas that will help students do well in job interviews. Participants then read that their goal is to "develop a creative PRODUCT idea that serves this purpose". Since prior research suggests that setting explicit goals of producing ideas that are both novel and appropriate can facilitate creativity (Shalley, 1991), to avoid anchoring participants on either novelty or appropriateness, I asked participants to develop just "creative" idea without specifying the criteria of what is "creative". From here on, participants are guided through two main stages of creative ideation procedures, i.e., idea generation and idea validation and elaboration stages. In the idea generation stage, participants

first generated a list of at least 3 different ideas of products or services to be sold by CO-OP, which will help students do well in job interviews. Participants then entered into the next stage of idea validation and elaboration, in which they were presented with all the ideas they generated in the prior stage and told to select one of these nascent product ideas to further develop. Upon selection, the chosen idea was confirmed with the participant in a subsequent page. To motivate participants, I next informed them that “if your final idea is highly creative, you will be entered into a lucky draw for a \$30 gift card. To qualify for the Lucky Draw, your idea must be considered very creative by CO-OP's product managers”. This performance-based extrinsic motivation is only introduced during the validation stage of the creative process following suggested practice by Amabile (1996) and Berg (2014).

Participants then spent at least 5 minutes elaborating their final product/service idea. They were given the option to describe the details of their idea by typing into an essay box or make visual illustrations of their idea on a scratch paper we provided, or both. I gave participants both options because in our pilot study I found that many participants provided text description only even when told to use the scratch paper, which is ideal for visual illustrations. By giving them the typing option, I ensure that I do not receive handwritten text descriptions on the scratch paper, which can often be illegible.

Manipulation.

I used a memory recall methodology (Leavitt, Reynolds, Barnes, Schilpzand, & Hannah, 2012; Libby, Eibach, & Gilovich, 2005) to activate either an inventor or a businessperson identity (see Appendices 3a, 3b, 4a, and 4b for the scenarios used in this experiment). I first used the following introduction to convince participants that everyone can behave like a typical inventor (businessperson) at times and we want to

know their experience behaving like a typical inventor (businessperson) in this exercise.

“In an interview with a large number of ordinary people, researchers found that almost everyone behaves like a typical inventor (businessperson) from time to time, although they are not inventors (businessperson) by profession. In this survey we want to know your experience behaving like a typical inventor (businessperson)”.

I then asked participants to recall and write about their experience behaving like a typical inventor (businessperson) with the following instruction.

Inventor Condition: “Recall one instance whereby you put in active efforts to eventually come up with a new idea, solution, design, or product (e.g., craft, tool, decoration, etc.). Please describe your experience as vividly as you can. You will not be able to proceed until your description meets the minimum length requirement of 600 characters.”

Businessperson Condition: “Recall one instance whereby you put in active efforts to eventually negotiate a new agreement, close a new sale, secure a good deal, or achieve any other business gain. Please describe your experience as vividly as you can. You will not be able to proceed until your description meets the minimum length requirement of 600 characters.”

Examples of each role identity in the role identity recall instruction were provided to facilitate the recall. This is necessary because the recall exercise was intended to lead participants to assume the recalled role identity. However, the lack of immediate salience can make recalling effortful for some participants thus causing them to conclude that they do not fit this recalled role (Schwarz et al., 1991). Therefore, I provided examples to make the recall smooth. A panel of 4 colored pictures depicting the primed identity in each condition (see Appendices 3a, 3b, 4a, and 4b) were displayed at the top center of this survey page, as participants completed the recall exercise.

Upon completing the memory recall exercise, participants answered four questions designed to increase the memory’s vividness (e.g., “Can you see what you

were wearing?"; Leavitt et al., 2012; Libby et al., 2005). Participants were instructed to type a brief description of the memory from an observer's visual perspective.

Measures

Creativity. Creativity of the final ideas was rated by two expert raters with substantial experience in entrepreneurship and the domain of job interview training in accordance with the Consensual Assessment Technique (Amabile, 1983, 1996). The raters were blind to the study questions and hypotheses and rated the business ideas on the dimensions of novelty, usefulness, and commercial viability, using a 1-7 scale (1 = "very low", 4 = "moderate", 7 = "very high"). Novelty is defined as such: "Based on your professional experience, to what extent do you consider this idea new or original, that is, the extent that it is unique from other products currently available in or related to the domain of interview aid?". Usefulness is defined as "the extent to which this idea can offer value by fulfilling real needs in the domain of interview aid". Commercial viability is defined this way: "To what extent can it compete effectively in the marketplace to generate attractive revenues?" In discussion with the researchers, the raters further included the following the key factors for judging commercial viability: cost of business, degree of market saturation, or suitability given the consumer behavioral patterns in the target market. The intraclass correlation of the two experts' average ratings were .76, .74, and .73 for novelty, usefulness, and commercial viability, respectively, demonstrating acceptable interrater agreement. Therefore I averaged the two raters' ratings to derive a final score of novelty, usefulness, and commercial viability for each idea.

Role identity conflict. I measured role identity conflict by adapting from the conflict subscale of the Bicultural Identity Integration instrument (Benet-Martínez & Haritatos, 2005). The four adapted items used in this study are: "I am conflicted

between my role as an inventor/creator and my role as a businessperson.”, “I feel like someone moving between an inventor/creator role and a businessperson role.”, “I feel torn between my role as an inventor/creator and my role as a businessperson.”, “I do not feel any tension between my inventor/creator role and my businessperson role.” (reverse coded). The reliability of the 4 items is low ($\alpha = .45$) and exploratory factor analysis using principal axis factoring shows that only items 1 and 3 fall onto the same factor. Simple correlation reveals that items 1 and 3 are quite highly positively correlated ($r = .68, p < .001$). Therefore, I retained only items 1 and 3 and averaged them to form a measure of role identity conflict.

Manipulation Checks

Two independent coders blind to the manipulation conditions and study hypothesis carried out manipulation check in accordance with the procedures taken by Yang, Liu, Fang, and Hong (2014). The coders read the manipulation prompt and coded each response for relevance independently. The interrater agreement was high: interrater disagreement only occurred on 8 out of 134 (6%) responses. Disagreements were resolved by discussion facilitated by the researcher; a final 5 cases were ruled as irrelevant and excluded from subsequent analysis.

Analyses and Results

To test Hypothesis 4 (Experienced entrepreneurs experience greater role conflict than nascent entrepreneurs), I conducted independent sample t-test. Results show that albeit the difference in role identity conflict between experienced and nascent entrepreneurs is in the predicted direction, i.e., experienced entrepreneurs reported higher role identity conflict ($M = 4.31, SD = 1.54$) than nascent entrepreneurs ($M = 3.93, SD = 1.29$), it did not reach statistical significance, $t(117) = 1.45, p = .15$. One explanation for this lack of significance is that among the experienced

entrepreneurs there are some who once owned a business but ceased to do so now therefore they might report lower conflict as the memory fades. To test this explanation, I compared between current entrepreneur and the rest (i.e., nascent entrepreneurs and those who owned a business in the past but not now) using independent sample t-test again. The result confirmed my prediction: current entrepreneurs reported significantly higher role identity conflict ($M = 4.72$, $SD = 1.25$) than past and nascent entrepreneurs ($M = 3.92$, $SD = 1.36$), $t(116) = 2.72$, $p = .007$. It should be noted that the t-test comparing current entrepreneurs with past and nascent entrepreneurs has 1 subject fewer as one of them did not report whether they are currently running their own business and is thus excluded from the analysis. These results provide partial support for hypothesis 4: experienced entrepreneurs, specifically, the one who are currently running their business, experience higher role identity conflict than past entrepreneurs and nascent entrepreneurs. I conducted a robustness check by repeating the independent sample t-test to contrast between only experienced current entrepreneurs and nascent entrepreneurs (i.e., excluding experienced past entrepreneurs). The results similarly demonstrate that current entrepreneurs ($N = 25$) reported significantly higher role identity conflict ($M = 4.72$, $SD = 1.25$) than nascent entrepreneurs ($M = 3.93$, $SD = 1.29$), $t(95) = 2.66$, $p = .009$.

Next, I conducted an analysis of covariance (ANCOVA) to test the hypothesized interaction effects (H5a and H5b) of salient role identity and entrepreneurial status on the novelty and commercial viability of participants' business ideas, controlling for role identity conflict. Experienced entrepreneurs includes those who are currently running their business and those who had started and owned at least one business in the past whereas nascent entrepreneurs have not yet started and owned any business either in the past or the present.

Means and standard deviations for each condition appear in Table 6. Comparison by experiment condition and entrepreneurial experience is illustrated in Figure 4a and 4b.

Table 4
Study 4: Means and Standard Deviation by Condition

Condition	Commercial Viability ^a	Novelty ^a	Commercial Viability ^b	Novelty ^b
Experienced Entrepreneur, Inventor Prime (N = 24)	2.94 (1.26)	4.10 (1.57)	3.12 (.14)	4.12 (.28)
Experienced Entrepreneur, Businessperson Prime (N = 21)	2.67 (1.21)	4.31 (1.74)	2.85 (.16)	4.54 (.30)
Nascent Entrepreneur, Inventor Prime (N = 30)	2.75 (1.12)	4.28 (1.57)	2.56 (.13)	4.21 (.26)
Nascent Entrepreneur, Businessperson Prime (N = 40)	2.95 (.98)	4.11 (1.37)	2.88 (.11)	4.04 (.21)

^a Raw mean, with standard deviations in parentheses

^b Estimated marginal mean, with standard error in parentheses

Results demonstrated the expected interaction effect of role identity manipulation and entrepreneurial status on the commercial viability of the business idea, $F(1, 108) = 4.90, p = .03$. Simple effects showed that experienced entrepreneurs generated more commercially viable business ideas than did nascent entrepreneurs only when their inventor role identity is made salient ($F(1, 108) = 8.22, p = .005$), but not when their businessperson role identity is made salient ($F(1, 108) = .04, p = .85$), supporting Hypothesis 5a. The hypothesized interaction effect of role identity manipulation and entrepreneurial status on the novelty of the business idea did not reach statistical significance ($F(1, 108) = 1.21, p = .27$), although the pattern of results are consistent in the hypothesized directions: experienced entrepreneurs generated more novel business ideas than did nascent entrepreneurs when their businessperson role identity is made salient ($F(1, 108) = 1.82, p = .18$), but not when their inventor role identity is made salient ($F(1, 108) = .05, p = .83$).

Figure 4a.
Commercial Viability by Condition and Entrepreneurial Status

Figure 4b.
Novelty by Condition and Entrepreneurial Status

Discussion

Results from this study partially support that experienced entrepreneurs, specifically, those engaged in starting and/or running a business presently, face with greater conflict between their inventor and businessperson roles compared to nascent and former entrepreneurs (H4). Furthermore, there is partial support that when one of their role identities is made situationally salient but not the other, experienced

entrepreneurs respond in a way that also fulfills the valued goal of the non-salient role, possibly due to their role identity conflict which motivates them to protect the non-salient role (H5a and H5b). Taken together, these results provide initial support for the overall thesis that entrepreneurs could experience role identity conflict in their experience of simultaneously pursuing the goals of uniqueness and commercial viability. As such, how entrepreneurs behaviorally respond to a salient role identity depends on whether they have entrepreneurial experience: the experienced ones are more likely to fulfill the valued goal of the non-salient role compared to nascent entrepreneurs. In other words, entrepreneurial experience may benefit entrepreneur's performance when only one of their roles is situationally salient as the experience entrepreneur does not neglect the non-salient role.

CHAPTER 7

GENERAL DISCUSSION

In this dissertation, I started by identifying key gaps in the literature. First, albeit researchers agree that entrepreneurial experience is an important factor in shaping venture performance because it allows entrepreneurs to learn useful knowledge and skills, little is known about what shapes entrepreneurs' experience and what the experience consists of in terms of entrepreneurial behaviors and psychology. Meanwhile, research on entrepreneurial motivation, especially the recent focus on entrepreneurial identity, have made two implicit assumptions: (1) entrepreneurs' role identities hold unambiguous role schema and (2) entrepreneurs' multiple role identities independently influence behaviors. Although theoretical advancement can be gained by integrating these two bodies of literature, they remained separate till date. I propose to fill these knowledge gaps in this research by integrating these two bodies of work to explore the broad question of how the entrepreneurial experience may be shaped by and may subsequently shape the motivational dynamics of venture creation.

To answer this question, I first propose a theoretical framework of how personal and external motivations may shape the experience of a simultaneous pursuit of dual goals: venture uniqueness and commercial viability, throughout the founding and growth phases of venture creation. I then develop propositions on how such a psychological and behavioral experience may provide the learning context where entrepreneurs clarify their role schema and the relationship among their multiple role identities. Based on this reasoning, I then develop the proposition that entrepreneurial experience moderates how role identity motivates entrepreneurs' cognition and behavior. While my framework theorizes about both the motivational drivers and

subsequent impact of entrepreneurial experience, I focus on the latter in my empirical testing as a first step to demonstrate its relevance.

I then situate my research in the context of entrepreneurial creativity, i.e., the generation and implementation of novel and appropriate ideas to establish a new venture (Amabile, 1997), to test my hypotheses. In a series of three studies, I tested how entrepreneurs' role identities as inventors and businesspersons interact with their entrepreneurial experience to influence their behavior and performance on creative business idea generation and evaluation tasks. I first showed that commercial viability constitutes an important dimension of entrepreneurial creativity and it is positively associated with the businessperson role while the inventor role is positively associated with novelty. Building on this foundation, Study 2 demonstrates that experienced entrepreneurs hold clear role schemas and identify with each role via these schemas thus their role identities systematically predict how they evaluate entrepreneurial creativity. Specifically, the more they identify with an inventor role, the more they value business idea novelty whereas the more they identify with a businessperson role, the more they value commercial viability. In contrast, the findings suggest that nascent entrepreneurs who lack venture experiences may not have developed such clear role schemas to base their role identities on. The finding also suggests the possibility that experienced entrepreneurs can face role identity conflict, because their identification with both inventor and businessperson roles are highly related while these roles pose contrasting demands. The final study provides partial empirical support that experienced entrepreneurs may indeed develop greater role conflict as a result of their venture experience, compared to nascent entrepreneurs. Together with their clearly defined role schemas, experienced entrepreneurs' conflicted role identities help them develop holistic attention by leading them to achieve the goals of

the alternative role when only one role is made salient situationally. Specifically, I found that when the inventor role is activated, experienced entrepreneurs generated business ideas that are rated as more commercially viable than nascent entrepreneurs. By integration theories of motivation and entrepreneurial experience, this paper makes several unique contributions which I discuss next.

THEORETICAL CONTRIBUTIONS

First, this thesis made a first attempt to incorporate motivation into the understanding about entrepreneurial experience. Although the construct of entrepreneurial experience has been well studied, it was predominantly used as a proxy for human and social capital (e.g., Delmar & Shane, 2006; Kotha & George, 2012). Little is known about what goes on in this “experience” until recently, when Morris, Kuratko, Schindehutte, & Spivack (2012) adopted an affective events lens to conceptualize entrepreneurial experience as a collection of events. This thesis proposes a parsimonious framework of how various personal and external motivational factors shape entrepreneurs’ venture creation experience: a continuous process of simultaneously pursuing the dual goals of uniqueness and commercial viability for the new venture. In doing so, this dissertation opens up the black box of entrepreneurial experience to conceptualize the behavioral and psychological processes taking place in this endeavor, which provides the context for entrepreneurs to clarify their role schema and the relationship among their multiple role identities.

Secondly, this thesis enriches the understanding of the motivational effect of entrepreneurs’ identities by relaxing two implicit assumptions held by prior research: (1) entrepreneurs’ role identities hold unambiguous role schema and (2) entrepreneurs’ multiple role identities independently influence behaviors. Instead, this thesis theorizes and empirically demonstrates that the influence of entrepreneurs’ role

identities on entrepreneurs' cognition and behavior is contingent upon entrepreneurial experience. One reason is that the experience of starting one's own business helps entrepreneurs clarify their role schema, without which role identities alone would not result in an accurate performance of role-consistent actions. A second reason is that entrepreneurs' multiple role identities may develop greater integrative but also conflicting relationships with experience thus the effect of the salient identity on entrepreneurs' behavior depends on the relationship among the multiple identities rather than a single identity alone.

Moreover, this thesis also contributes to research on entrepreneurial creativity. Extant conceptualization of creativity has consisted of the dual criteria of novelty and appropriateness since the 1980s (e.g., Amabile, 1986). This dissertation contributes to the creativity literature by adding an additional dimension of commercial viability. This additional dimension provides a useful first step to bridge creativity research at the micro level and innovation research at the meso- and macro-level. Micro-level creativity research focuses almost exclusively on the idea itself. For creativity to result in innovative success, especially in new product and service development, a key consideration is its commercial potential and a well-executed commercialization plan. However, the current literature typically treats the commercial viability of ideas as a responsibility beyond the creator and to be pursued by other parties. The effectiveness of such a two-stage model is unclear and emerging research findings reveal that this model can be prone to goal misalignment and conflict (Alexander, 2014). By showing that different role identities – inventor vs. businessperson – are associated with different valued criteria of creativity, this dissertation suggests a reason why inventors and managers conflict in the innovation process and offers a new perspective on innovation management.

PRACTICAL IMPLICATIONS

The business world is filled with examples of great innovation that fails to commercialize. The finding that novelty and commercial viability relate differently with inventor and businessperson roles suggests that having inventors who exclusively identify with the inventor role may lead to the invention of novel but commercially unviable ideas. Companies typically have a team of commercial managers who work on a novel idea to realize its commercial potential. However, the differential focus (on novelty vs. commercial viability) can cause misunderstanding and conflict between inventors and managers. The findings from this research show that individuals with entrepreneurial experience identify with both inventor and businessperson roles to a similar extent therefore also value novelty and commercial viability more equally; the findings thus suggest that organizations can consider hiring individuals with entrepreneurial experience into their Research and Development (R&D) functions. It can be particularly helpful to have these individuals in leadership positions where their ability to pay holistic attention to the big picture may prove especially beneficial. Moreover, the finding that entrepreneurial experience can lead individuals to take the roles of inventor and businessperson to similar extent suggests that organizations can also try to involve inventors in the commercialization process to help them develop a schema of and identification with the businessperson role through first-hand experience.

An additional implication of this dissertation is that it may be beneficial for entrepreneurs, entrepreneurship educators and mentors to acknowledge the experience of role conflict. Identity conflict can cause discomfort and stress and is thus often viewed negatively. However this research suggests that role identity conflict can have a silver lining – it can be useful for developing clear role schemas and holistic

attention to the big picture. Entrepreneurs may therefore aim to manage and embrace the conflict rather than avoiding it altogether. Entrepreneurship training and education may also benefit prospective entrepreneurs by explicitly informing them about the potential identity conflict they may experience and help them to mentally prepare for it.

This research also suggests that nascent entrepreneurs may lack the accurate role schema pertaining to venture creation. Therefore, left on their own, they may wrongly pursue objectives that do not contribute to their venture performance. For example, they may associate the role of an inventor with experimenting with multiple new ideas at one given period of time. This tendency is noted by a successful entrepreneur in our interview: inexperienced application developers tend to develop multiple applications without focusing on monetizing any single one. Given their lack of experience and expertise, nascent entrepreneurs should seek guidance from experienced mentor early in their venture process to avoid costly mistakes. It may also be a good idea for first-time entrepreneurs to considering a less costly business so as to learn from the experience at relatively low risk.

LIMITATIONS AND FUTURE DIRECTIONS

First, the empirical tests in this thesis are cross-sectional therefore I could only compare experienced and nascent entrepreneurs but could not capture more fine-grained within-person developmental changes. As Morris et al. (2012) and I theorize that episodes of entrepreneurial activities or events can have important impact on how entrepreneurs gain clarity of role schemas and experience role conflict, greater insights on the process can be gained from longitudinal designs such as experience sampling. Such an approach will enable us to dynamically capture the immediate and delayed effect of venture uniqueness and venture survival goal pursuit on the

development of role schema, role integration, and role conflict over time. Furthermore, the impact of role schema clarity and role conflict on entrepreneurs' decision making and well-being can also be examined using a longitudinal design.

Boundary conditions of the theoretical framework need to be tested in future work. Both individual differences and contextual factors could present as boundary conditions. For instance, would entrepreneurs pursuing self-employment out of survival (or necessity) thus seeing it as a means to a practical end be driven by venture uniqueness goal? Do portfolio entrepreneurs experience similarly high levels of novelty-seeking motivation toward all of their venture? Is role conflict exceptionally strong for entrepreneurs in some industries (e.g., the creative industry)? These questions remain open for future exploration.

While this dissertation focuses on the individual-level phenomenon, the issues of roles and conflict are clearly relevant for founding team too. In the process of commercializing a creative business idea or product, tasks are distributed among team members such that different team members work on improving the technology, developing the product, fund raising, marketing, overall project management, and so on (Bird, 1988). It is important that non-founding team members who selectively identify with only the inventor or businessperson role can also take the perspectives of the other members, in order to facilitate shared identity and goals. Therefore it would be interesting to extend the dual goal pursuit framework to include team and intersubjective experiences in future research.

CONCLUSION

This dissertation takes the first step to address the question of how motivation influences entrepreneurs' venture creation experience and how having experience therefore also shapes entrepreneurs' subsequent motivational dynamics. A new

theoretical framework is proposed to illuminate the role of personal and external motivation in shaping the behavioral and psychological experience of venture creation, conceptualized as a simultaneous dual pursuit of uniqueness and commercial viability for the new venture. Such an experience provides the learning context where entrepreneurs clarify their role schema and the relationship among their multiple role identities. Based on this reasoning, a set of proposition were developed regarding the moderating role of entrepreneurial experience on the relationship between entrepreneurs' role identity and creative behavior. While my framework theorizes on both the motivational drivers and impact of entrepreneurial experience on subsequent motivational dynamics, I focus on the latter in my empirical testing as a first step to demonstrate to its relevance. A series of empirical findings present initial evidence that supports the mechanisms proposed in this framework. Overall, the findings of this work demonstrates that the entrepreneurial experience of simultaneously pursuing two contrasting goals helps entrepreneurs to clarify and develop accurate role schemas and holistic attention to multiple schemas, possibly through the experience of role identity conflict. The theoretical framework and findings of this study contributes to the literature on entrepreneurial experience, entrepreneurial identity, and creativity. This dissertation also heeds the call for a new perspective to understand not only how entrepreneurs shape the venture but also how entrepreneurial experiences shape the entrepreneur (Morris et al., 2012) and lays down the conceptual and theoretical foundations for future work in this domain.

Appendix 1. Interview Protocol

Thank you for making time to share your experiences with me. I am researching on the experiences, goals, and feelings you have in your entrepreneurial pursuit. In the interview I will ask you some questions, please try to reflect on your journey and experiences to in your answers.

If you are a portfolio entrepreneur, that is, you have multiple ongoing businesses, please focus on your most significant business in this interview.

1. What is your business about?
2. What motivated you to start it?
3. Think about the home, car, or special keepsake that you own or co-own with someone, and the experiences and feelings associated with the statement ‘THIS IS MY (OUR) HOUSE!’.
 - a. To what extent do you feel such a ‘sense of ownership’ over your company?
 - b. What would it be on a scale of 0 to 10?
 - c. Since when did you develop this sense of ownership? Was there a defining event?
4. What key objectives do you most want to achieve for your business?
5. Can you tell me what are the various roles that you play in this company?
 - a. Do you experience conflicts or tension playing these roles? If you do, can you describe what they are?
 - b. How do you resolve the above-described conflicts or tension?
6. What do you see as being creative in the context of founding and running your own venture? Can you give me specific examples to illustrate what you mean?

Appendix 2a. Study 2 Scenario 1 (Inventor Condition)

Sam is an inventor and currently a judge for a product design competition. Compared to non-inventors, what qualities do you expect from a product voted for by Sam?

Please indicate on the scale below, to what extent is each of the following qualities important to Sam, in your opinion.

	Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
Novel		100		10	10		
Unique				100		100	0
Original		10		100			
Revolutionary				10		100	
Daring				100		100	
Unconventional	100		10	100		100	10
Practical	10		10	100		100	100
Effective			10	100		100	100
Feasible				100		100	10
Appropriate				10		100	10
Cost-effective		100	10	100	10	100	
Marketable		100		100		10	
Profitable		100		100	10	10	
Useful		10		10	10	100	
Affordable		100		100	10	10	
Durable		100		100	10		

Appendix 2b. Study 2 Scenario 2 (Businessperson Condition)

Francis is an **business person** and currently a judge for the same product design competition. Compared to non-business-persons, what qualities do you expect from **a product voted for by Francis?**

Please indicate on the scale below, to what extent is each of the following qualities important to Francis, in your opinion.

	Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
Novel		100				100	
Unique		100		100			
Original		100				100	
Revolutionary		100		100			
Daring	100	100					
Unconventional		100				100	
Practical		100				100	
Effective		100				100	
Feasible				100			
Appropriate				100			
Cost-effective		100				100	
Marketable		100	100	100		100	100
Profitable				100		100	
Useful				100		100	
Affordable		100				100	
Durable		100		100		100	

Appendix 3a. Study 4 Manipulation Scenario Part 1 (Inventor Condition)

Q10

Q60

In an interview with a large number of ordinary people, researchers found that almost everyone behaves like a typical inventor from time to time, although they are not inventors by profession. In this survey we want to know your experience behaving like a typical inventor.

Recall one instance whereby you put in active efforts to eventually come up with a new idea, solution, design, or product (e.g., craft, tool, decoration, etc.).

Q121

Please describe your experience as vividly as you can. You will not be able to proceed until your description meets the minimum length requirement of 600 characters.

Appendix 3b. Study 4 Manipulation Scenario Part 2 (Inventor Condition)

Q43:

We will ask you a few more questions about the experience you just described.

Q44:

Please type a brief description (one or two sentences) of this memory from an observer's visual perspective.

Q45:

1. Can you see what you were wearing, while you were coming up with a new idea, solution, design, or product?

Q46:

2. Can you see what your facial expression was?

Q47:

3. Can you see how you were wearing your hair?

Q48:

4. Can you see whether you were standing or sitting?

Appendix 4a. Study 4 Manipulation Scenario Part 1 (Businessperson Condition)

1.771

0.81

In an interview with a large number of ordinary people, researchers found that almost everyone behaves like a typical businessperson from time to time, although they are not businesspersons by profession. In this survey we want to know your experience behaving like a typical businessperson.

Recall one instance whereby you put in active efforts to eventually negotiate a new agreement, close a new sale, secure a good deal, or achieve any other business gain.

0.002

Please describe your experience as vividly as you can. You will not be able to proceed until your description meets the minimum length requirement of 600 characters.

Appendix 4b. Study 4 Manipulation Scenario Part 2 (Businessperson Condition)

We will ask you a few more questions about the experience you just described.

Please type a brief description (one or two sentences) of this memory from an observer's visual perspective.

1. Can you see what you were wearing?

2. Can you see what your facial expression was?

3. Can you see how you were wearing your hair?

4. Can you see whether you were standing or sitting?

References

- Albert, S., & Whetten, D. A. 1985. Organizational Identity. In L. L. Cummings & B. M. Staw (Eds.), *Research in Organizational Behavior*, vol. 7: 263–295. Greenwich, CT: JAI Press.
- Alexander, L. 2014. *People, Politics, and Innovation (Unpublished doctoral dissertation)*. Erasmus University Rotterdam, Rotterdam, NL.
- Amabile, T. M. 1983. The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2): 357–376.
- Amabile, T. M. 1986. The personality of creativity. *Creative Living*, 15(3): 12–16.
- Amabile, T. M. 1996. *Creativity in Context*. Boulder, CO: Westview.
- Amabile, T. M. 1997. Entrepreneurial Creativity Through Motivational Synergy. *Journal of Creative Behavior*, 31: 18–26.
- Amit, R., MacCrimmon, K. R., Zietsma, C., & Oesch, J. M. 2001. Does money matter? Wealth attainment as the motive for initiating growth-oriented technology ventures. *Journal of Business Venturing*, 16(2): 119–143.
- Andrews, J., & Smith, D. C. 1996. In Search of the Marketing Imagination: Factors Affecting the Creativity of Marketing Programs for Mature Products. *Journal of Marketing Research*, 33(2): 174–187.
- Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. *The Academy of Management Review*, 14(1): 20–39.
- Bachher, J. S., & Guild, P. D. 1996. Financing early stage technology based

- companies: investment criteria used by investors. *Frontiers of Entrepreneurship Research*, 363(March): 363–376.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99–120.
- Baron, R. A., & Ensley, M. D. 2006. Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. *Management Science*, 52(9): 1331–1344.
- Bechtoldt, M. N., De Dreu, C. K. W., Nijstad, B. A., & Choi, H.-S. 2010. Motivated Information Processing, Social Tuning, and Group Creativity. *Journal of Personality and Social Psychology*, 99(4): 622–637.
- Beersma, B., & De Dreu, C. K. W. 2005. Conflict's consequences: Effects of social motives on postnegotiation creative and convergent group functioning and performance. *Journal of Personality and Social Psychology*, 89(3): 358–374.
- Benet-Martínez, V., & Haritatos, J. 2005. Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, 73(4): 1015–1050.
- Berg, J. M. 2014. The primal mark: How the beginning shapes the end in the development of creative ideas. *Organizational Behavior and Human Decision Processes*, 125(1): 1–17.
- Berg, J. M. 2016. Balancing on the Creative Highwire: Forecasting the Success of Novel Ideas in Organizations. *Administrative Science Quarterly*, 61(3): 433–468.

- Bird, B. 1988. Implementing Entrepreneurial Ideas: The Case for Intention. *Academy of Management Review*, 13(3): 442–453.
- Blauth, M., Mauer, R., & Brettel, M. 2014. Fostering creativity in new product development through entrepreneurial decision making. *Creativity and Innovation Management*, 23(4): 495–509.
- Bledow, R., Rosing, K., & Frese, M. 2013. A dynamic perspective on affect and creativity. *Academy of Management Journal*, 56(2): 432–450.
- Bloodgood, J. M., Sapienza, H. J., & Almeida, J. G. 1996. The internationalization of new high-potential US ventures: Antecedents and outcomes. *Entrepreneurship Theory and Practice*, 20(4): 61–77.
- Brook, A. T., Garcia, J., & Fleming, M. A. 2008. The effects of multiple identities on psychological well-being. *Personality and Social Psychology Bulletin*, 34(12): 1588–1600.
- Brown, G., Lawrence, T. B., & Robinson, S. L. 2005. Territoriality in organizations. *Academy of Management Review*, 30(3): 577–594.
- Brüderl, J., Preisendörfer, P., & Ziegler, R. 1992. Survival Chances of Newly Founded Business Organizations. *American Sociological Review*, 57(2): 227–242.
- Brunstein, J. C. 1993. Personal goals and subjective well-being: A longitudinal study. *Journal of Personality and Social Psychology*, 65(5): 1061–1070.
- Burke, P., & Reitzes, D. 1981. The link between identity and role performance. *Social Psychology Quarterly*, 44(2): 83–92.
- Bygrave, W. D., & Timmons, J. A. 1992. *Venture capital at the crossroads*.

Harvard Business Press.

- Cable, D. M., & Shane, S. 1997. A prisoner's dilemma approach to entrepreneur-venture capitalist relationships. *Academy of Management Review*, 22(1): 142–176.
- Campbell, C. A. 1992. A decision theory model for entrepreneurial acts. *Entrepreneurship Theory and Practice*, 17(1): 21–28.
- Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. 2013. Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of Business Venturing*, 28: 373–396.
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. 2009. The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3): 511–532.
- Carland, J. W., Hoy, F., Boulton, W. R., & Carland, J. A. C. 1984. Differentiating entrepreneurs from small business owners: A conceptualization. *Academy of Management Review*, 9(2): 354–359.
- Chan, K.-Y., Uy, M. A., Chernyshenko, O. S., Ho, M.-H. R., & Sam, Y.-L. 2015. Personality and entrepreneurial, professional and leadership motivations. *Personality and Individual Differences*, 77: 161–166.
- Chandler, G. N., & Hanks, S. H. 1994. Market attractiveness, resource-based capabilities, venture strategies, and venture performance. *Journal of Business Venturing*, 9(4): 331–349.
- Charng, H. W., Piliavin, J. A., & Callero, P. L. 1988. Role Identity and Reasoned Action in the Prediction of Repeated Behavior. *Social*

Psychology Quarterly, 51(4): 303–317.

Chen, M. H., & Yang, Y. J. 2009. Typology and performance of new ventures in Taiwan: A model based on opportunity recognition and entrepreneurial creativity. *International Journal of Entrepreneurial Behavior {&} Research*, 15(5): 398–414.

Cheng, C.-Y., Sanchez-Burks, J., & Lee, F. 2008. Connecting the Dots Within: Creative Performance and Identity Integration. *Psychological Science*, 19: 1178–1184.

Chua, R. Y. J. 2013. The costs of ambient cultural disharmony: Indirect intercultural conflicts in social environment undermine creativity. *Academy of Management Journal*, 56: 1545–1577.

Chua, R. Y. J., Roth, Y., & Lemoine, J. 2015. The Impact of Culture on Creativity: How Cultural Tightness and Cultural Distance Affect Global Innovation Crowdsourcing Work. *Administrative Science Quarterly*, 60: 189–227.

Cialdini, R. B., Kallgren, C. A., & Reno, R. R. 1991. A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior. *Advances in Experimental Social Psychology*, 24(C): 201–234.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. 1990. A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6): 1015–1026.

- Cialdini, R. B., & Trost, M. R. 1998. Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th ed.): 151–192. Boston: McGraw-Hill.
- Cooper, R. G. 1979. The Dimensions of Industrial New Product Success and Failure. *Journal of Marketing*, 43(3): 93–103.
- Corbett, A. C., & Hmieleski, K. M. 2007. The conflicting cognitions of corporate entrepreneurs. *Entrepreneurship Theory and Practice*, 31(1): 103–121.
- Crant, M. J. 1996. The Proactive Personality Scale as a Predictor of Entrepreneurial Intention The Proactive Personality Scale as a Predictor of Entrepreneurial Intentions. *Journal of Small Business Management*, 34(3): 42–50.
- Culbertson, S. S., Smith, M. R., & Leiva, P. I. 2010. Enhancing entrepreneurship: The role of goal orientation and self-efficacy. *Journal of Career Assessment*, 1069072710385543.
- Davidsson, P., & Honig, B. 2003. The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3): 301–331.
- Deaux, K. 1992. Focusing on the Self: Challenges to Self-Definition and Their Consequences for Mental Health. In D. N. Ruble & P. R. Costanzo (Eds.), *The Social Psychology of Mental Health: Basic Mechanisms and Applications*: 301–327. New York: Guilford.
- De Vries, M. F. R. K. 1977. the Entrepreneurial Personality: a Person At the

- Crossroads. *Journal of Management Studies*, 14(1): 34–57.
- Delmar, F., & Shane, S. 2006. Does experience matter? The effect of founding team experience on the survival and sales of newly founded ventures. *Strategic Organization*, 4(September): 215–247.
- Demirkan, H., & Hasirci, D. 2009. Hidden Dimensions of Creativity Elements in Design Process. *Creativity Research Journal*, 21: 294–301.
- Dencker, J. C., Gruber, M., & Shah, S. K. 2009. Pre-entry knowledge, learning, and the survival of new firms. *Organization Science*, 20(3): 516–537.
- Eesley, C. E., & Roberts, E. B. 2012. Are you experienced or are you talented?: When does innate talent versus experience explain entrepreneurial performance? *Strategic Entrepreneurship Journal*, 6: 207–219.
- Erez, M., & Nouri, R. 2010. Creativity: the influence of cultural, social, and work contexts. *Management and Organization Review*, 6(3): 351–370.
- Fabrigar, L., Wegener, D., MacCallum, R., & Strahan, E. 1999. Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3): 272–299.
- Farmer, S. M., Tierney, P., & Kung-Mcintyre, K. 2003. Employee creativity in Taiwan: An application of role identity theory. *Academy of Management Journal*, 46(5): 618–630.
- Farmer, S. M., Yao, X., & Kung-Mcintyre, K. 2011. The Behavioral Impact of Entrepreneur Identity Aspiration and Prior Entrepreneurial Experience. *Entrepreneurship Theory and Practice*, 35(2): 245–273.
- Farquhar, P. H. 1989. Managing brand equity. *Marketing Research*, 1(3): 24–

- Fauchart, E., & Gruber, M. 2011. Darwinians, communitarians, and missionaries: The role of founder identity in entrepreneurship. *Academy of Management Journal*, 54(5): 935–957.
- Floyd, F. J., & Widaman, K. F. 1995. Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment*, 7(3): 286–299.
- Fournier, V., & Kelemen, M. 2001. The crafting of community: Recoupling discourses of management and womanhood. *Gender, Work and Organization*, 8(3): 267–290.
- George, G., Kotha, R., Parikh, P., Alnuaimi, T., & Bahaj, A. S. 2016. Social structure, reasonable gain, and entrepreneurship in Africa. *Strategic Management Journal*, 37(6): 1118–1131.
- Gielnik, M. M., Frese, M., Graf, J. M., & Kampschulte, A. 2012. Creativity in the opportunity identification process and the moderating effect of diversity of information. *Journal of Business Venturing*, 27(5): 559–576.
- Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. 1997. Survival of the fittest? Human entrepreneurial capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42(4): 750–783.
- Grant, A. M., & Berry, J. W. 2011. The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of Management Journal*, 54: 73–96.

- Gray, S. M., Knight, A. P., & Baer, M. 2015. The development of collective ownership in pre-founding venture teams. *Academy of Management Proceedings*.
- Grégoire, D. a., & Shepherd, D. a. 2012. Technology-market combinations and the identification of entrepreneurial opportunities: An investigation of the opportunity-individual nexus. *Academy of Management Journal*, 55(4): 753–785.
- Griffin, M. A., Neal, A., & Parker, S. K. 2007. A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *The Academy of Management Journal*, 50(2): 327–347.
- Guadagnoli, E., & Velicer, W. F. 1988. The relationship of sample size to the stability of component patterns. *Psychological Bulletin*, 103(2): 265–275.
- Hall, D. T. 1972. A Model of Coping with Role Conflict: The Role Behavior of College Educated Women. *Administrative Science Quarterly*, 17(4): 471–486.
- Harjula, L. 2007. Tensions between venture capitalists' and business-social entrepreneurs' goals: will bottom-of-the-pyramid strategies offer a solution? *Greener Management International*, (51): 79–88.
- Heeley, M. B., Matusik, S. F., & Jain, N. 2007. Innovation, appropriability, and the underpricing of initial public offerings. *Academy of Management Journal*, 50(1): 209–225.
- Henard, D. H., & Szymanski, D. M. 2001. Why Some New Products Are More Successful Than Others. *Journal of Marketing Research*, 38(3): 362–375.

- Hirst, G., Van Knippenberg, D., & Zhou, J. 2009. A cross-level perspective on employee creativity: Goal orientation, team learning behavior, and individual creativity. *Academy of Management Journal*, 52(2): 280–293.
- Hoang, H., & Gimeno, J. 2010. Becoming a founder: How founder role identity affects entrepreneurial transitions and persistence in founding. *Journal of Business Venturing*, 25(1): 41–53.
- Hofstede, G. 2004. Business Goals and Corporate Governance. *Asia Pacific Business Review*, 10(3–4): 292–301.
- Hong, Y. Y., Morris, M. W., Chiu, C. Y., & Benet-Martínez, V. 2000. Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*, 55(7): 709–720.
- Hood, J. N., & Koberg, C. S. 1994. Patterns of Differential Assimilation and Acculturation for Women in Business Organizations. *Human Relations*, 47(2): 159–181.
- Hsu, D. H. 2007. Experienced entrepreneurial founders, organizational capital, and venture capital funding. *Research Policy*, 36(5): 722–741.
- Im, S., & Workman, J. 2004. Market Orientation, Creativity, and New Product Performance in High-Technology Firms. *Journal of Marketing*, 68(2): 114–132.
- Jain, S., George, G., & Maltarich, M. 2009. Academics or entrepreneurs? Investigating role identity modification of university scientists involved in commercialization activity. *Research Policy*, 38(6): 922–935.
- Jetten, J., Postmes, T., & McAuliffe, B. J. 2002. “We”re all individuals’: Group

- norms of individualism and collectivism, levels of identification and identity threat. *European Journal of Social Psychology*, 32(2): 189–207.
- Katz, J. A. 1992. A Psychosocial Cognitive Model of Employment Status Choice. *Entrepreneurship Theory and Practice*, 17(1): 29–37.
- Khaire, M. 2010. Young and No Money? Never Mind: The Material Impact of Social Resources on New Venture Growth. *Organization Science*, 21(1): 168–185.
- Kimberly, J. R. 1976. Organizational size and the structuralist perspective: A review, critique, and proposal. *Administrative Science Quarterly*, 571–597.
- Kirzner, I. M. 1979. *Perception, opportunity, and profit: Studies in the theory of entrepreneurship*. Chicago: University of Chicago Press.
- Klein, H. J., Wesson, M. J., Hollenbeck, J. R., & Alge, B. J. 1999. Goal commitment and the goal-setting process: conceptual clarification and empirical synthesis. *Journal of Applied Psychology*, 84(6): 885–896.
- Kolvereid, L. 1996. Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice*, 21(1): 47–57.
- Kotha, R., & George, G. 2012. Friends, family, or fools: Entrepreneur experience and its implications for equity distribution and resource mobilization. *Journal of Business Venturing*, 27(5): 525–543.
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. 2000. Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5): 411–432.

- Lafontaine, F., & Shaw, K. 2016. Serial Entrepreneurship: Learning by Doing? *Journal of Labor Economics*, 34(S2): S217--S254.
- Leavitt, K., Reynolds, S. J., Barnes, C. M., Schilpzand, P., & Hannah, S. T. 2012. Different hats, different obligations: Plural occupational identities and situated moral judgments. *Academy of Management Journal*, 55(6): 1316–1333.
- Libby, L. K., Eibach, R. P., & Gilovich, T. 2005. Here's looking at me: the effect of memory perspective on assessments of personal change. *Journal of Personality and Social Psychology*, 88(1): 50–62.
- Loken, B., & John, D. R. 2016. When Do Brand Extensions Have Diluting Brand Beliefs : a Negative Impact ? *The Journal of Marketing*, 57(3): 71–84.
- Luhtanen, R., & Crocker, J. 1992. A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18(3): 302–318.
- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. 1999. Sample Size in Factor Analysis. *Psychological Methods*, 4(1): 84–99.
- Mahalik, J. R., Morray, E. B., Coonerty-Femiano, A., Ludlow, L. H., Slattery, S. M., et al. 2005. Development of the Conformity to Feminine Norms Inventory. *Sex Roles*, 52(7–8): 417–435.
- Mann, R. J., & Sager, T. W. 2007. Patents, venture capital, and software start-ups. *Research Policy*, 36(2): 193–208.
- Maslow, A. H. 1943. A Theory of Human Motivation. *Psychological Review*,

50(4): 370–396.

Mason, A. 2008, July 20. *How to Avoid the Curse of Vision Overload*.

<https://gigaom.com/2008/07/20/fr-how-to-avoid-the-curse-of-vision-overload/>.

Mason, C. M., & Harrison, R. T. 2002. Is it worth it? The rates of return from informal venture capital investments. *Journal of Business Venturing*, 17(3): 211–236.

Mason, C., & Stark, M. 2004. What do Investors Look for in a Business Plan?: A Comparison of the Investment Criteria of Bankers, Venture Capitalists and Business Angels. *International Small Business Journal*, 22(3): 227–248.

Mathias, B. D., & Williams, D. W. 2014. The Impact of Role Identities on Entrepreneurs' Evaluation and Selection of Opportunities. *Journal of Management*, 1–27.

Matlin, M. W. 2005. *Cognition* (6th Ed.). New York: John Wiley and Sons.

McCall, G. J., & Simmons, J. L. 1978. *Identities and interactions: An examination of human associations in everyday life* (Rev. ed.). New York: Free Press.

McCrae, R. R. 1987. Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6): 1258.

McIlwee, J. S., & Robinson, J. C. 1992. *Women in engineering: Gender, power, and workplace*. Albany: State University of New York Press.

McMullen, J. S., & Shepherd, D. A. 2006. Entrepreneurial Action and the Role

- of Uncertainty in the Theory of the Entrepreneur. *Academy of Management Review*, 31(1): 132–152.
- Miner, J. B., Smith, N. R., & Bracker, J. S. 1992. Defining the inventor-entrepreneur in the context of established typologies. *Journal of Business Venturing*, 7(2): 103–113.
- Miron-Spektor, E., & Beenen, G. 2015. Motivating creativity: The effects of sequential and simultaneous learning and performance achievement goals on product novelty and usefulness. *Organizational Behavior and Human Decision Processes*, 127: 53–65.
- Miron-Spektor, E., Erez, M., & Naveh, E. 2011. The effect of conformist and attentive-to-detail members on team innovation: Reconciling the innovation paradox. *Academy of Management Journal*, 54(4): 740–760.
- Miron, E., Erez, M., & Naveh, E. 2004. Do Personal Characteristics and Cultural Values That Promote Innovation, Quality and Efficiency Complete or Complement Each Other? *Journal of Organizational Behavior*, 25(2): 179–199.
- Moch, M. K., & Morse, E. V. 1977. Size, Centralization and Organizational Adoption of Innovations. *American Sociological Review*, 42(5): 716.
- Mok, A., & Morris, M. W. 2009. Cultural chameleons and iconoclasts: Assimilation and reactance to cultural cues in biculturals' expressed personalities as a function of identity conflict. *Journal of Experimental Social Psychology*, 45(4): 884–889.
- Mok, A., & Morris, M. W. 2010. An upside to bicultural identity conflict:

- Resisting groupthink in cultural ingroups. *Journal of Experimental Social Psychology*, 46(6): 1114–1117.
- Mok, A., & Morris, M. W. 2012. Attentional Focus and the Dynamics of Dual Identity Integration: Evidence From Asian Americans and Female Lawyers. *Social Psychological and Personality Science*, 3(5): 597–604.
- Mok, A., & Morris, M. W. 2013. Bicultural self-defense in consumer contexts: Self-protection motives are the basis for contrast versus assimilation to cultural cues. *Journal of Consumer Psychology*, 23(2): 175–188.
- Mollick, E. 2012. People and process, suits and innovators: The role of individuals in firm performance. *Strategic Management Journal*, 33(9): 1001–1015.
- Morris, M. H., Kuratko, D. F., Schindehutte, M., & Spivack, A. J. 2012. Framing the entrepreneurial experience. *Entrepreneurship Theory and Practice*, 36(1): 11–40.
- Morris, M. W., & Leung, K. 2010. Creativity East and West: Perspectives and parallels. *Management and Organization Review*, 6(3): 313–327.
- Mueller, J. S., Melwani, S., & Goncalo, J. A. 2011. The Bias Against Creativity: Why People Desire but Reject Creative Ideas. *Psychological Science*, 23(1): 13–17.
- Murnieks, C. Y., Mosakowski, E., & Cardon, M. S. 2012. Pathways of Passion: Identity Centrality, Passion, and Behavior Among Entrepreneurs. *Journal of Management*, 40: 1583–1606.
- Nunnally, J. C., & Bernstein, I. H. 1994. *Psychometric theory* (3rd ed.). New

York: McGraw-Hill.

- O'Neil, I., & Ucbasaran, D. 2016. Balancing “what matters to me” with “what matters to them”: Exploring the legitimation process of environmental entrepreneurs. *Journal of Business Venturing*, 31(2): 133–152.
- Pennings, J. M., Lee, K., & Van Witteloostuijn, A. 1998. Human capital, social capital, and firm dissolution. *Academy of Management Journal*, 41(4): 425–440.
- Perry-Smith, J. E., & Coff, R. W. 2011. In the mood for entrepreneurial creativity? How optimal group affect differs for generating and selecting ideas for new ventures. *Strategic Entrepreneurship Journal*, 5(3): 247–268.
- Piderit, S. K. 2000. Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review*, 25(4): 783–794.
- Pierce, J. L., Kostova, T., & Dirks, K. T. 2001. Toward a Theory of Psychological Ownership in Organizations. *Academy of Management Review*, 26(2): 298–310.
- Porter, M. E. 1981. The contributions of industrial organization to strategic management. *Academy of Management Review*, 6(4): 609–620.
- Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. 2006. Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal*, 49(2): 235–262.

- Quinn, R. E., & Cameron, K. 1983. Organizational life cycles and shifting criteria of effectiveness: Some preliminary evidence. *Management Science*, 29(1): 33–51.
- Reed, R., & DeFillippi, R. J. 1990. Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage. *Academy of Management Review*, 15(1): 88–102.
- Reich, W. A. 2000. Identity structure, narrative accounts, and commitment to a volunteer role. *Journal of Psychology*, 134(4): 422–434.
- Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. 2001. *Global Entrepreneurship Monitor: 2001 Executive Report*. Kansas City, MO: Kauffman Center for Entrepreneurial Leadership.
- Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. 2010. The selection of creative ideas after individual idea generation: Choosing between creativity and impact. *British Journal of Psychology*, 101(1): 47–68.
- Ripsas, S. 1998. Towards an interdisciplinary theory of entrepreneurship. *Small Business Economics*, 10(2): 103–115.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. 1970. Role Conflict and Ambiguity in Complex Organizations. *Administrative Science Quarterly*, 15(2): 150–163.
- Roberts, E. B., & Eesley, E. C. 2011. Entrepreneurial Impact: The Role of MIT - An Updated Report. *Foundations and Trends® in Entrepreneurship*, 7(1–2): 1–149.
- Rouse, E. D. 2016. Beginning's end: How founders psychologically disengage

- from their organizations. *Academy of Management Journal*, 59(5): 1605–1629.
- Ruef, M., Aldrich, H. E., & Carter, N. M. 2003. The structure of founding teams: Homophily, strong ties, and isolation among US entrepreneurs. *American Sociological Review*, 68(2): 195–222.
- Sage Software. 2015. *Survey report: 2015 State of the Startup*. Irvine, CA. <https://www.sage.com/na/~media/site/sagena/responsive/docs/startup/report>.
- Schumpeter, J. A. 1934. *Theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. New York: Oxford University Press.
- Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., et al. 1991. Ease of retrieval as information: Another look at the availability heuristic. *Journal of Personality and Social Psychology*, 61(2): 195–202.
- Sethi, R., Smith, D. C., & Park, C. W. 2001. Cross-functional product development teams, creativity, and the innovativeness of new consumer products. *Journal of Marketing Research*, 38(1): 73–85.
- Shalley, C. E. 1991. Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied Psychology*, 76(2): 179–185.
- Shane, S., & Stuart, T. 2002. Organizational endowments and the performance of university start-ups. *Management Science*, 48(1): 154–170.
- Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a

- field of research. *Academy of Management Review*, 25(1): 217–226.
- Shepherd, D. A., Douglas, E. J., & Shanley, M. 2000. New venture survival: Ignorance, external shocks, and risk reduction strategies. *Journal of Business Venturing*, 15(5): 393–410.
- Smith, N. R. 1967. *The Entrepreneur and His Firm: The Relationship Between Type of Man and Type of Company*. East Lansing, MI.
- Stets, J. E., & Burke, P. J. 2000. Identity theory and social identity theory. *Social Psychology Quarterly*, 63(3): 224–237.
- Stewart Jr., W. H., Watson, W. E., Carland, J. C., & Carland, J. W. 1999. A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers. *Journal of Business Venturing*, 14(2): 189–214.
- Stuart, R. W., & Abetti, P. A. 1990. Impact of entrepreneurial and management experience on early performance. *Journal of Business Venturing*, 5(3): 151–162.
- Tajfel, J., & Turner, J. C. 1986. The social identity theory of intergroup behavior. In S. Worchel & G. Austin (Eds.), *Psychology of Intergroup Relations*: 7–24. Chicago: Nelson-Hall.
- Tierney, P., Farmer, S. M., & Farmer, S. M. 2012. Creative Self-Efficacy: Its Potential Antecedents and Relationship To Creative Performance. *Academy of Management Journal*, 45(6): 1137–1148.
- Tucker, I. B. 1990. Employer seniority discrimination: Evidence from entrepreneurial occupational choice. *Economics Letters*, 32(1): 85–89.

- Tyebjee, T. T., & Bruno, A. V. 1984. A model of venture capitalist investment activity. *Management Science*, 30(9): 1051–1066.
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. 2011. Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3): 341–358.
- Uy, M. A., Foo, M.-D., & Ilies, R. 2015. Perceived progress variability and entrepreneurial effort intensity: The moderating role of venture goal commitment. *Journal of Business Venturing*, 30(3): 375–389.
- Venkataraman, S. 2003. Entrepreneurship: Creating something new and of enduring value with very limited resources. *The Portable MBA* (4th ed.). New York, NY: Wiley.
- Ward, T. B. 2004. Cognition, creativity, and entrepreneurship. *Journal of Business Venturing*, 19(2): 173–188.
- Wasserman, N. 2006. Stewards, agents, and the founder discount: Executive compensation in new ventures. *Academy of Management Journal*, 49(5): 960–976.
- Wasserman, N. 2012. *The founder's dilemmas: Anticipating and avoiding the pitfalls that can sink a startup*. Princeton University Press.
- Weick, K. E. 1995. What theory is not, theorizing is. *Administrative Science Quarterly*, 40(4): 385.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 2005. Organizing and the process of sensemaking. *Organization Science*, 16(4): 409–421.
- Woo, C. Y., Cooper, A. C., & Dunkelberg, W. C. 1991. The development and

interpretation of entrepreneurial typologies. *Journal of Business Venturing*, 6(2): 93–114.

Yang, Y., Liu, X. X., Fang, Y., & Hong, Y. 2014. Unresolved World War II animosity dampens empathy toward 2011 Japanese earthquake and tsunami. *Journal of Cross-Cultural Psychology*, 45(2): 171.

Yong, K., Mannucci, P. V., & Flipo, C. 2015. Networks and Creativity in Context: A Meta-Analytic Exploration of Contextual Contingencies. *Academy of Management Proceedings*, 2015(1): 11883.

Zhou, J. 2008. New look at creativity in the entrepreneurial process. *Strategic Entrepreneurship Journal*, 2(1): 1–5.