Foundational Research in Entrepreneurship Studies

Insightful Contributions and *Future Pathways*

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To my parents and sisters for their support; my husband, Pooyan, for his love; and my beautiful children, Arshawn and Arousha, for making me a better person every day.

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To my parents for their guidance and encouragement in everything I do; my wife, Sandra, for all the love and fun we have together; and my sister, Alka, for her enthusiastic support for my academic endeavors.

Vishal K. Gupta

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Dev K. Dutta

For my family and OSC colleagues.

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Grace Chun Guo

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Arturo E. Osorio

Foreword

Just after accepting my first job, I was invited to the Lally Retreat where Venkat presented his notion of the distinctive domain of entrepreneurship, which became the final chapter in this book. Venkat's chapter was so important to the field because prior to its publication scholars were "spinning their wheels" with arguments about defining entrepreneurship. Venkat offered an anchor on which people could adopt or vary from a specific definition and this allowed us all to move forward. The Krueger and Bird chapters were the basis for a substantial stream of research on entrepreneurial intentions. Howard Aldrich, a highly regarded sociologist, turned his attention (and his considerable status and his quirky titles) to the role of institutions and other aspects of the external environment in entrepreneurship. The Baumol chapter is a classic because it kept our enthusiasm for entrepreneurial action in check by detailing how entrepreneurial action can be unproductive and even destructive for society—it has led to a stream of research (albeit too small in my opinion and thus a potential for future research) on the dark side of entrepreneurship.

Miller's paper is a classic because it established what made firms entrepreneurial, which became a foundation of another classic paper—Covin and Slevin. Covin and Slevin established the construct of entrepreneurial orientation, which has become one of the most studied constructs in entrepreneurship. Lumpkin and Dess offered an extension and different perspective of entrepreneurial orientation (EO) (focusing on the dimensions independently and adding new dimensions), which has had a big impact on EO research. The Gartner chapter is a classic because it focused our attention on the process of new venture creation and this led to a stream of research on nascent entrepreneurship. Although I am not sure that everyone will agree that Pennings' paper represents a classic but perhaps it should be or might become more widely recognized in the future. Recent research is starting to dig deeper into quality of life as an outcome of entrepreneurial action. Bowen and Hisrich's paper is one of the first on female entrepreneurship. Gender and entrepreneurship has become a substantial stream of research that has made important contributions to the field of entrepreneurship.

Dean A. Shepherd

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CHAPTER 1

Introduction

Vishal K. Gupta, Grace Chun Guo, and Banu Ozkazanc-Pan

Entrepreneurship, in its broadest sense, is probably as old as civilization itself. Historical records show that profit-minded traders were dealing in goods and services in ancient Egypt, as well as in similar ancient civilizations in other parts of the world. Along major rivers such as the Tigris, Euphrates, Indus, Nile, and Yangtze, business flourished as traders from different parts of the world encountered each other and exchanged various goods and services. The Indian philosopher-statesman Chanakya (or Kautilya) was concerned about the appropriate environment for business and enterprise in *Arthashastra* (literally 'The Science of Money') in fourth century BC. Jesus famously railed against greedy businessmen (perhaps,

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the robber barons of yore) in his time, and before he started preaching in the desert, the Prophet Muhammad apprenticed with a woman (later his wife) who owned a successful trading business. For hundreds of years, the fabled Silk Route was the Silicon Valley of its day, witnessing the economic rise and fall of entrepreneurial traders from China in the East to Europe in the West. It was with commerce and profit in mind that enterprising European businessmen started what later became global behemoths like the East India Company that dominated global trade (and international events) for several centuries. Entrepreneurship, one could argue, is a common theme throughout human history, though it seems that the nature and intensity of entrepreneurial activity has ebbed and waned over the years and across societies (Landes 2010).

Compared to the practice of entrepreneurial activities, the academic study of entrepreneurship is of much recent vintage. Schumpeter's (1911) German-language *The Theory of Economic Development* is believed to be the first academic book on entrepreneurship. Systematic entrepreneurship education started in Japan in 1938 (Hannon 2005), with the first entrepreneurship course in the United States taught in 1947 (Katz 2003). The earliest academic presentation on entrepreneurship seems to have been in the 1950s (Jennings and Brush 2013) and journal papers on this topic started to appear in 1970s. The *Academy of Management* (AoM) accorded division status to entrepreneurship in 1984. Today, hundreds of scientific articles and popular books are published on entrepreneurship worldwide, with the best articles and books on entrepreneurship attracting as much attention, if not more, as leading scholarly contributions in other fields.

Although some may believe otherwise and question the very legitimacy of the field (Hambrick and Chen 2008), entrepreneurship is now a well-established and respected academic discipline. It has a body of knowledge equal in rigor and relevance to its sister academic fields, some of which have much longer histories, such as strategy and organizational behavior. The growth of the field is reflected in the fact that the entrepreneurship division of AoM added the most number of members—around 400—compared to other divisions in 2017 and now has 3,400 members (September 16, 2017 statistics). To contextualize these numbers, the much older divisions of *Organization and Management Theory* has 3985 members and *Strategic Management* has 4963 members. In other words, the field of entrepreneurship has grown steadily and then exponentially in the last few years. Factors contributing to this growth are the increasing importance of entrepreneurship in economic development and the large number of academic positions available for faculty carrying out research and teaching in this domain. To understand how entrepreneurship became one of the most popular and sought-out academic disciplines in the broader management field, this volume of contributions traces the impact and influence of foundational scholarship in the field of entrepreneurship.

A key factor in the legitimacy of entrepreneurship research is the contributions made by seminal publications that came out in the early years of its history and formation. We call these foundational articles or 'classics' as they constitute the core of the academic knowledge about entrepreneurship. The notion of 'classics' comes from the field of literature, where there has been a long tradition of interest in works that were considered foundational to the field. For those in English literature, for example, Shakespeare's works are classics that have an enduring impact on the genesis and evolution of the field. Works such as Hamlet and Macbeth are widely acknowledged as classics in English literature, resulting in their continued consumption by, and inspiring influence on, more recent writers. Other academic fields, such as psychology, have borrowed the idea of 'classics' from literature to recognize original papers that are considered vitally important for the sustenance of the field (Bertilson and Knutson 1980; McCollom 1973).

Our purpose in the present book is to draw attention to 13 articles considered classics in entrepreneurship research. The recent works of Bygrave (2007) and Gupta et al. (2016) have stirred interest in understanding the rich legacy of foundational entrepreneurship articles. Our efforts gain greater salience when one considers that, despite invaluable contributions by early researchers to the development of the field, some consider entrepreneurship research to be a "hodgepodge of papers" in need of a messiah (or several) to raise it from the dead (Shane 2012: 11). Contrary to such nihilistic interpretations of the history of entrepreneurship studies, we believe that seminal articles published in the early days of entrepreneurship research have had a continuing impact on the subsequent development of the field. These articles, we think, deserve recognition, appreciation, and further reflection.

There are several important reasons to draw attention to classics in entrepreneurship at this stage in the field's evolution. First, as the famous physicist Sir Isaac Newton reportedly observed, science progresses when curious folks "stand on the shoulders of giants who came before them", which suggests that it is useful to be familiar with the thinking of impactful scholars whose writings laid the foundation of our field. Second, looking back allows us to look ahead (Bluedorn 2003), so that reflecting on the contributions of seminal articles allows us to think deeply about their future potential. Third, as scholars from different backgrounds and trainings join the growing ranks of entrepreneurship researchers, it is natural that scholarship in this area will fragment (Schildt et al. 2006), which makes it helpful to identify a common core for diverse researchers to learn from and exploit in their writings. Fourth, knowledge of classics can help strengthen the academic training of the next generation of doctoral students, the future researchers, who need to understand where we started as a field to discern where we can go from here.

Identifying the classics in any discipline can be accomplished in several ways, such as by surveying professionals engaged in scholarship (Martin and Erber 2003), perusing most frequently cited works in specific journal outlets (Ratnatunga and Romano 1997), examining web server logs (e.g., web page 'hits' or downloads), or diffusion in textbooks (e.g., Gorenflo and McConnell 1991). The first method, asking professionals working in the field, comes closest to the dominant research methodology in all of management inquiry—key informant survey. While this method is vulnerable to subjective influence (e.g., recall bias and academic training), it has the merit of providing a straightforward and direct look into the work that is considered most influential and impactful by those engaged in scholarly activity in the discipline. Not surprisingly, other fields have also relied on surveying researchers to gauge the collective wisdom about classics in the area, for example, Martin and Erber (2003) in social psychology.

From reading previous efforts to identifying classics in other disciplines, we knew the task of shortlisting enduring original entrepreneurship articles was going to be interesting and challenging. We also understood that this task was fraught with debate and argumentation. We therefore decided to establish ground rules to govern the selection of classics. The first rule we specified, and the one that proved to be uncontroversial, was that the classic had to be a journal article. This decision rule was motivated by the belief that the journal article is the sine qua non of scientific information exchange (Shepherd 2016). Journal articles usually undergo blind peer review to enhance their rigor and quality, a hallmark of classics in any field. The journal article is widely considered a distinct genre with a central influence on the knowledge base of the discipline. We are cognizant that disciplines (e.g., psychology) have included books and book chapters in identifying classics (e.g., Shipley 1961), but our focus was squarely on journal articles.[1]

The second rule we specified, and the one that generated the most debate, was about the temporal boundaries of our endeavor. A recent effort to identify classics in entrepreneurship limited itself to articles published in the 1970s and 1980s (Gupta et al. 2016). When we polled members of the editorial team engaged in the present effort, and asked them to solicit input from their professional acquaintances, there was a strong sentiment in favor of including appropriate articles published in the 1990s. Setting the temporal boundaries to the end of 1999 also provided a clear finishing line in the form of Y2K (the year 2000). In effect, articles published before the turn of the century were eligible for consideration as classics, and those published in or after 2000 were deemed too 'young' to have had the time to make an enduring impact on the field.

Thus, we started with two rules—only journal articles could be considered and the articles had to be published before the dawn of the present century. Of course, each nominated article had to have had a strong influence on the field. With these ground rules in mind, we organized an AoM caucus on classics in entrepreneurship studies (Guo et al. 2016) and sent out emails to the entrepreneurship list-serve soliciting nominations. We asked each person interested in submitting a nomination to deeply consider not only which articles deserved to be called a classic but also explain why it should be considered so. As Devine and Brodish (2003: 196) observed, "knowing which studies are classics is different from knowing why they become classics", and both are equally important for the field. We then asked for short proposals specifying how the authors planned to discuss the enduring influence of the classic they nominated. We advised the authors to also delve into future potential of the classic article. In other words, while it was important to think about the role played by the classic article in the development of entrepreneurship research so far, it was also critical to explore ways it could be influential in the future.

We recognize two main critiques of our work. First, not everyone believes classics are worthy of serious attention. To quote Lowe and Shahabudin (2009: ix), "the longer something has been studied, the less there is to discover or say about it". We disagree with this position! Our view is that much progress in entrepreneurship studies can be made by building on the ideas and questions of these seminal articles, even as many of their insights will gradually be elaborated, strengthened, and perhaps eventually, surpassed. Second, there is no consensus among entrepreneurship researchers that the 13 articles we discuss here are the true classics in our field. Indeed, when we conducted a quick poll of entrepreneurship researchers (using the ENTREP list-serve as our sampling frame), we found considerable disagreement among our respondents on what may be considered classics in entrepreneurship research. The 13 articles discussed in this book received an average score of 3.86 on a 1 to 5 scale (where 1 is 'Not at all a classic' and 5 is 'Truly a classic') in our relatively simplistic survey of entrepreneurship scholars. The range was from 2.84 for the lowest ranked article to 4.63 for the highest ranked article, reflecting the heterogeneity in scholars' perceptions of the value of these articles. Our respondents suggested several additional articles (and four books, by Schumpeter, McClelland, Kanter, and Drucker) as deserving of the classics status. Having spent the last two years or so thinking seriously about foundational work in entrepreneurship research, it seems to us that any listing of classics will inherently be incomplete and subjective. It is perhaps impossible to draw up a completely objective ranking of classics in any field (Martin and Erber 2003), and entrepreneurship is no exception.

The present book is a result of the collective efforts of several researchers who got together to reflect on the early evolution and subsequent progress of entrepreneurship studies. They were united in the belief, and guided by the idea, that early entrepreneurship research played an important role in laying the foundations for strong scientific inquiry on entrepreneurship. The 11 chapters of this provide discussions and reflections on 13 classics covered here. As we noted earlier, the list is not meant to be exhaustive but rather as an initial effort to call more attention to research that formed the foundation of the field of entrepreneurship. It is certainly possible, and we very much encourage future efforts, to identify additional articles deserving of classic status in entrepreneurship research. We believe that we are opening the door for an interesting and fertile discussion about the rich legacy of (some) early works in entrepreneurship research, and we hope members of the growing community from around the world will join us in this effort.

We now turn to a discussion of individual chapters in this volume. Table 1.1 summarizes the 11 chapters of this book, with each chapter focusing on one or two classics.

Table 1.1 Chapters at a glance

Author	*Classic discussed*	*Core theme of classic*	*Core theme of book chapter*
Guo	De Vries (1977)	Entrepreneurs are viewed as creative destructors and individuals who utilize innovative rebelliousness in the conception of new ideas and in the implementation of these ideas. Social and economic factors can give rise to entrepreneurship and have a significant impact on the formation of the entrepreneurial personality profile.	Reviews the core themes of De Vries' (1977) work. Discusses the classic and contemporary entrepreneurial personality research and provides directions for future research.
Osorio	Pennings (1982)	In urban areas, quality of life impacts entrepreneurial activity.	Explores the relevance of quality of life as part of the urban entrepreneurial ecosystem encouraging and preserving the local entrepreneurial capital by supporting the entrepreneurs' lifestyle choices including the start of new ventures.
Dao	Miller (1983)	Entrepreneurship is the process by which firms renew themselves and their markets by risk-taking, pioneering, and innovativeness.	Reviews the work of Danny Miller who wrote the foundational article on entrepreneurial orientation (EO) inadvertently while writing on different characteristics of firms and their configurations; this providence has impacted the field of entrepreneurship for the last 30 years.
Brahma, Tripathi and Bijlani	Gartner (1985)	Entrepreneurship is about new venture creation, which is a complex and multidimensional phenomenon.	Examines the relevance of Gartner's (1985) framework for analyzing contemporary new venture creation.
Ozkazanc-Pan	Bowen and Hisrich (1986)	A careers perspective can help better understand the opportunities and challenges of female entrepreneurship.	Outlines the main contributions of Bowen and Hisrich (1986) on the topic of women's entrepreneurship and examines their influence on the field of gender and entrepreneurship over three decades.

(*continued*)

Table 1.1 (continued)

Author	*Classic discussed*	*Core theme of classic*	*Core theme of book chapter*
Dickson and West	Bird (1988)	Entrepreneurial intentions shape the form and direction of organizations at their inception and are the distinctive domain of entrepreneurship.	Discusses how the themes in Bird's (1988) classic on entrepreneurial intentions have motivated decades of research in the field and continued to resonate with entrepreneurship researchers.
Gupta and Dutta	Covin and Slevin (1989), Lumpkin and Dess (1996)	EO is an important strategic management practice worthy of scientific study.	The large, yet growing, EO literature needs to go back to the two classics for insights into addressing some ongoing challenges and problems.
McCaffrey	Baumol (1990)	Different societies offer different payoffs for productive activities such as innovation and unproductive activities such as organized crime.	Surveys the wide literature on entrepreneurship and institutions, focusing especially on the role institutions play in allocating entrepreneurial talent among productive, unproductive, and destructive activities.
Kaffka and Krueger	Krueger (1993), Krueger and Brazeal (1994)	Entrepreneurial intentions come from perceived desirability and feasibility and the propensity to act on a new business opportunity.	Discusses how entrepreneurial intentions help us make sense of sense making.
Rathee and Malik	Aldrich and Fiol (1994)	Entrepreneurs in emerging industries lack sociopolitical and cognitive legitimacy, which they seek to gain through purposeful action.	Inspired by the seminal work of Aldrich and Fiol (1994), we try to refocus the research that has happened since and map the progress made over last two decades in understanding the struggle of entrepreneurs and organizations for legitimacy acquisition along the two novel dimensions—locus of control and scale of conflict.
Javadian and Singh	Venkataraman (1997)	Entrepreneurship research should seek to understand how new goods and services come into existence, so that the core construct in entrepreneurship is 'opportunities' to bring future offerings into existence.	Reviews the role of entrepreneurial opportunities in entrepreneurship research and discusses the boundaries of entrepreneurship as a distinctive domain of research as identified by Venkataraman (1997).

Guo's interest is in De Vries' (1977) work on the impact of family dynamics, social, and economic forces on the formation of entrepreneurial personality profile. Noting that more than half of the world's population lives in urban areas, Osorio explores the insights on urban quality of life and entrepreneurship articulated in Pennings (1982). Dao discusses how Miller's (1983) view on entrepreneurial firms has shaped the literatures on firm-level entrepreneurship and corporate entrepreneurship. Brahma, Tripathi, and Bijlani divide entrepreneurship research into Before Gartner and After Gartner, contending that before the publication of Gartner (1985) entrepreneurship research largely focused on personality differences between entrepreneurs and non-entrepreneurs. Ozkazanc-Pan is interested in Bowen and Hisrich's (1986) seminal work on women's entrepreneurship for it considered women entrepreneurs and their careers as worthy of research attention in their own right, paving the way for subsequent theoretical and empirical work at the intersections of gender and entrepreneurship.

Dickson and West draw attention to Bird's (1988) work on entrepreneurial intention, which argued for considering deliberate intentions of creating a new venture or creating new values in an existing venture as the distinctive domain of entrepreneurship research. Gupta and Dutta delve into the legacy of Covin and Slevin (1989) and Lumpkin and Dess (1996), examining the substantive impact they have had on the research in the area of EO. McCaffrey reflects on Baumol's (1990) work, which extended previous economic thinking on the relationship between entrepreneurship and institutions. Kaffka and Krueger are interested in the work on entrepreneurial intentions (Krueger 1993; Krueger and Brazeal 1994), discussing how insights on intentions continue to inform entrepreneurship research across topics ranging from entrepreneurial mindset to neuroscience in entrepreneurship research. Rathee and Malik observe that Aldrich and Fiol (1994) were the first to ask if entrepreneurship in new industries is a quest for fool's gold, a question that continues to resonate with academics and practitioners to this day. Finally, Javadian and Singh embrace Venkataraman's (1997) emphasis on 'opportunities' as the distinct domain of entrepreneurship research as it advanced the idea that understanding how opportunities come to be is the central question for the field.

We hope that this collection of 11 chapters accomplishes two key objectives. First, we seek to encourage recognition of classics in the field of entrepreneurship so that the younger generation of scholars has a better understanding of the contributions that have come before their time. Second, the themes and ideas discussed here can stimulate and advance ongoing debates and discussions in entrepreneurship research. We are confident that the chapters in this book can help to fill some gaps in what we know as well as ignite further thought and action in entrepreneurship research.

Note

1. While the rule was uncontroversial in its original formulation, we ended up making one exception when we accepted Venkataraman (1997) as a 'classic' for this book. To quote the ancient Roman statesman Cicero, *exceptio probat regulam in casibus non exceptis.*

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CHAPTER 2

"Entrepreneur as a Person at Crossroads": A Reflection on Kets de Vries (1977)

Grace Chun Guo

Introduction

The role of individuals in the entrepreneurship process and the impact of the environment on entrepreneurial activities have been extensively studied in the field of entrepreneurship. Earlier entrepreneurship studies focused on identifying personality traits of entrepreneurs, which were believed to differ significantly from personality traits of nonentrepreneurs. Later studies acknowledged the importance of the context in which entrepreneurial activities occur; they focused on how entrepreneurs respond to their environments, as well as entrepreneurial behaviors and processes. Indeed, Kets de Vries (1977) presents a synthesized view in which an entrepreneur is described as a person at the crossroads. The article proposes three functions an entrepreneur fulfills: innovation, management coordinating, and risk-taking. Kets de Vries (1977) also discusses personality traits common among entrepreneurs, including the desire to take personal responsibility for decisions, a preference for a moderate degree of risk, and a high need for achievement. In addition, Kets de Vries (1977)

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argues that entrepreneurs are not a homogeneous group; thus, there are different types of entrepreneurs, such as craftsman entrepreneurs and opportunistic entrepreneurs. Kets de Vries (1977) also briefly discusses the emergence of a new type of entrepreneurs—internal entrepreneurs and the existence of "internal entrepreneurship" (p. 43), which involves creation of new product ventures and new technology divisions in large bureaucratic organizations. Most importantly, in this article, Kets de Vries (1977) identifies social and economic factors, for example, social status (e.g., ethnic minorities or immigrants), family background (e.g., having a father who is self-employed), changes in institutional patterns, and environmental turbulence (e.g., industry), which can give rise to entrepreneurship. Kets de Vries (1977) emphasizes the important role of family dynamics as well as one's childhood and upbringing in the formation of entrepreneurial personality profile. Lastly, Kets de Vries (1977) warns of the potential danger of the entrepreneurial mode and challenges associated with entrepreneurial personality traits, especially in later stages of the entrepreneurial process—venture growth and succession.

Kets de Vries (1977) provided novel insights regarding the impact of environments on entrepreneurial personality when entrepreneurship research was in its infancy. Kets de Vries (1977) was among the first to propose a synthesized view and explicitly discussed the influence of family dynamics, early life experiences, and social and economic forces on the formation of entrepreneurial personality traits. Kets de Vries (1977) is considered a core article in early entrepreneurship literature because it was among the first to propose such a synthesized view of entrepreneurial personality, with a focus on interactions between individuals and environments, in the 1970s. This synthesized view was further extended in later entrepreneurial personality studies (e.g., Brandstätter 2011; Korunka et al. 2003) that examined how entrepreneurial individuals reacted to or acted in business environments. Kets de Vries (1977) is also a pioneer in discussing the emergence of internal entrepreneurship, later studied as corporate entrepreneurship (e.g., Zahra 1995, 1996), and the potential danger of entrepreneurial personality traits, a research topic that is still relevant in recent studies (e.g., Miller 2015).

In this chapter, I first review Kets de Vries's (1977) contributions to entrepreneurship research, with a specific focus on how it provides seeding ideas for developing a synthesized view of entrepreneurial personality traits. I discuss other major themes of Kets de Vries (1977), including the reactive entrepreneurial mode and the potential downside of entrepreneurial personality traits. I also review later research on entrepreneurial personality, discuss common themes of recent entrepreneurial personality studies, and provide directions for future research.

Early Entrepreneurship Personality Research and Kets de Vries (1977)

Much of the early entrepreneurship research in the 1960s and 1970s adopted the classic trait approach and focused on identifying personality traits and characteristics that could differentiate entrepreneurs from non-entrepreneurs. For example, the most commonly studied entrepreneurial traits include the "Big Three" (Chell 2008, p. 81)—need for achievement (e.g., McClelland 1961; McClelland and Winter 1969), locus of control (e.g., Liles 1974), and risk-taking propensity (e.g., Liles 1974). Specifically, the need for achievement component suggests that entrepreneurs tend to have a high level of achievement motivation, enjoy taking personal responsibility for finding solutions to problems, and prefer to take retainable challenges. In addition, business owners are expected to have a higher internal locus of control and believe themselves to be in control of their own fate and destiny. Lastly, entrepreneurs are viewed as risk-takers and are more likely to have the propensity to take calculated risks. Other entrepreneurial traits studied in the earlier entrepreneurship literature include, for instance, autonomy (Hornaday and Aboud 1971) and tolerance for ambiguity (Sexton and Bowman 1984).

Consistent with the prior research, Kets de Vries (1977) identified common entrepreneurial traits, differentiated various types of entrepreneurs, and discussed factors that could give rise to entrepreneurship and entrepreneurial personality traits. Kets de Vries (1977) defines entrepreneurs as individuals who are "instrumental in the conception of the idea of an enterprise and the implementation of these ideas" (p. 37). Kets de Vries (1977) describes an entrepreneur as the "creative destructor" (p. 36) and an individual "who utilizes innovative rebelliousness … to break away, to show independence of mind" (p. 35). Kets de Vries (1977) argues that entrepreneurs fulfill three major functions, including (1) the innovation function by being the catalyst of change, (2) the managing-coordinating function that is similar to the responsibilities of managers or business executives, and (3) the risk-taking function that is considered particularly relevant as entrepreneurs often bear not only financial risks but also considerable social and psychological risks.

To explain the formation of a psychological profile of entrepreneurs, Kets de Vries (1977) reviewed previous research (e.g., McClelland 1961, 1975; Litzinger 1965; Lynn 1969) done on entrepreneurial personality traits as well as entrepreneurial types. Kets de Vries (1977) identified common entrepreneurial personality traits, including a high achievement motivation, autonomy, independence, self-reliance, being a moderate risk-taker, being inner directed, and having a higher-than-average aesthetic sense. Kets de Vries (1977) argues that entrepreneurs are a heterogeneous group; hence personality patterns vary across entrepreneurial types. Kets de Vries (1977) reviewed previous research on craftsman entrepreneurs, or individuals narrow in education and training, low in social awareness and involvement, as well as opportunistic entrepreneurs, or individuals with broad education and training, high in social awareness and involvement. Kets de Vries (1977) argues that, besides the main discriminating factor—formal education—other demographic differential factors as well as a more in-depth analysis of personal history and nonwork environment are necessary to identify distinctly different personality patterns across entrepreneurial types. Beyond these entrepreneurial types, Kets de Vries (1977) briefly discussed that a new type of entrepreneurs—internal entrepreneurs—was emerging. According to Kets de Vries (1977), internal entrepreneurs are usually better educated, not as impulsive, less concerned about indolence and control, but more adaptive when they approach the environment. Kets de Vries (1977) speculated that these entrepreneurs should emerge within the existing large companies, hence giving rise to "internal entrepreneurship" (p. 43), which is later studied as corporate entrepreneurship (e.g., Zahra 1995, 1996).

Kets de Vries (1977) discussed and explored the role of social and economic factors in influencing the emergence of entrepreneurship and entrepreneurial personality traits. Extending early entrepreneurial personality studies, Kets de Vries (1977) discussed in depth the influence of family dynamics that entrepreneurs experienced in childhood and the impact of family dynamics on the formation of the entrepreneurial personality. Kets de Vries (1977) noted that many entrepreneurs had disturbing experiences in childhood or encountered difficulties in finding suitable jobs and having others accept their new ideas. As a result of the frustration and rejection experienced in early life, entrepreneurs seemed to build their enterprises as symbols of their capacity to build a new environment where they could be in control. Hence the new venture often carries emotional significance to the entrepreneur (Kets de Vries 1977).

Kets de Vries (1977) also discussed how and why entrepreneurs frequently belonged to ethnic or religious minority groups. According to Kets de Vries (1977), members of minority groups are often victims of discriminatory treatment in one form or another; discriminatory treatment could prevent them from obtaining more established, and usually higher, status roles in the hosting society. As a result, certain ethnic minority groups could have a greater disposition for developing entrepreneurial characteristics and pursuing entrepreneurial careers. In this case, entrepreneurship and new roles are created out of economic necessity, because there are no other occupations available for these minority groups (Kets de Vries 1977). According to Kets de Vries (1977), social backgrounds, family dynamics, and other environmental forces can trigger personality transformation, which can lead to the emergence of creative and innovative entrepreneurial activities that allow entrepreneurs to break away from societal norms. In addition, Kets de Vries (1977) suggests that changes in institutional environments, including the legal system, infrastructure, technology, political situations, and resource availability, can also contribute to the emergence of entrepreneurship. In his analysis, Kets de Vries (1977) stressed the "reactive mode" and visualized the reactive mode in the model of "psychodynamic forces that influence the entrepreneurial personality" (p. 52). The difficulties in the acceptance of one's ideas and social background, disturbing family interactions, and other environmental forces can make entrepreneurs react to situations out of inner insecurity or a sense of inferiority or helplessness. Hence entrepreneurial personality traits are formed to react against the early demands imposed upon the entrepreneur by his or her family and immediate environments.

Kets de Vries (1977) warned about the potential danger of the entrepreneurial mode and discussed challenges associated with entrepreneurial personality traits, especially in later stages of the entrepreneurial process—venture growth and succession. As Kets de Vries (1977) noted, these entrepreneurial personality traits might be helpful for entrepreneurs to keep their subordinates inspired during the initial stage of the venture creation process, but entrepreneurs' traits and rigidity in attitudes, aversion to structure, obsession with control, and the reluctance to accept constructive criticism might complicate, if not hinder, venture growth later. Kets de Vries (1977) argues that the degree of environmental dynamisms, heterogeneity in organizational constituents, and market hostility can also determine how long entrepreneurs would be successful by following their "old style" (p. 55). Kets de Vries (1977) maintains that it is necessary for entrepreneurs to learn to cope with changes in the environment, modify their behavior, and adapt their attitudes and leadership styles accordingly in the entrepreneurial process.

In short, Kets de Vries (1977) was among the first to explore factors contributing to the formation of entrepreneurial personality traits and the emergence of entrepreneurship. It is evident in his theoretical analysis that one's social background, family upbringing, personal history and experience, as well as changes in institutional environments can all lead to the formation of entrepreneurial personality traits. These environmental forces can make individuals become more likely to take risks and be inner directed, independent, autonomous, resilient, and ambitious, all of which help form an entrepreneurial personality profile. His analysis highlights the important role of social contexts and environments in molding entrepreneurial personality traits, providing seeding ideas for developing a more synthesized view and a more contextualized understanding of the entrepreneurial personality profile. Kets de Vries (1977) is also a pioneer in exploring the potential downside of entrepreneurial personality traits. In the following section, I discuss criticisms of early entrepreneurial personality research and studies on this topic after Kets de Vries (1977).

Later Studies on Developing a More Synthesized View and a Contextualized Understanding of Entrepreneurial Personality Traits

Early research on entrepreneurial personality traits was criticized for generating inconsistent and contradictory findings and for providing insufficient evidence to differentiate entrepreneurs from nonentrepreneurs (e.g., Gartner 1985; Low and MacMillan 1988). In addition, these early entrepreneurship studies were also criticized for being unidimensional, focusing on a single aspect of new venture creation—entrepreneurial personality traits—and neglecting the links between personality traits and the organizational context (Gartner 1985). Gartner (1985) argues that, whereas the entrepreneurial individual plays a central role, new venture creation involves three other important aspects—organization, environment, and the new venture process. Low and MacMillan (1988) also called for a more contextualized understanding of entrepreneurial personality traits and more attention to be directed to the relationships between entrepreneurial personality traits, other individual characteristics, and entrepreneurial activities in the creation of a new venture. Hence it is not surprising that later entrepreneurial personality research focused on (1) identifying new personality traits that could help differentiate entrepreneurs from nonentrepreneurs and (2) exploring interactions among entrepreneurial personality traits, entrepreneurial behaviors, and environments in explaining important entrepreneurial outcomes, such as entrepreneurial intentions, venture survival, and venture growth.

For example, similar to Kets de Vries's (1977) analysis, Bird (1988) adopted a synthesized view of the impact of environmental forces on the formation of an entrepreneurial psychological profile and examined how personal and social contexts interacted during the formulation of entrepreneurial intentions. According to Bird (1988), personal factors (e.g., prior experience, personality characteristics, and abilities) as well as contextual factors (e.g., social, political, and economic variables) can create the context for entrepreneurship and can determine entrepreneurial intentionality. In a later study, Krueger, Reilly, and Carsrud (2000) provide further evidence that personal and situational variables typically have an indirect effect on entrepreneurial outcomes through their effects on key attitudes, beliefs, and motivation to act, such as self-efficacy. Along this line of research, Zhao, Seibert, and Hills (2005) examined the mediating role of self-efficacy in the development of entrepreneurial intentions. The results of this study showed that entrepreneurial self-efficacy fully mediated the effects of perceived learning from courses pertaining to entrepreneurship, previous entrepreneurial experience, and risk propensity on entrepreneurial intentions (Zhao et al. 2005).

Further, in their organizing model, Shook, Priem, and McGee (2003) described how enterprising individuals' psychological attributes (personality traits, beliefs, values, etc.), characteristics (demographics, education, past experience, and abilities), and cognitions (content or knowledge structure; process or biases and heuristics) could have an impact on their entrepreneurial intentions, opportunity search and discovery, as well as opportunity exploitation by new venture creation. Similarly, Korunka et al. (2003) adopted a configuration approach and examined the interactions among entrepreneurial personality characteristics, including internal locus of control, risk propensity, personal initiative, motives (security and self-realization), personal resources (human capital), environmental factors, and organizational activities based on a large data set of 1169 nascent entrepreneurs and new business owner-managers. An important finding of this research is that Korunka et al. (2003) identified three clusters of entrepreneurs—nascent entrepreneurs against their will, "would-be" nascent entrepreneurs, and the networking nascent entrepreneurs with risk avoidance patterns. Confirming Kets de Vries's (1977) view of the heterogeneity in the makeup of entrepreneurs, their results provide strong empirical evidence that entrepreneurial types depend not only on the personal characteristics of the entrepreneurial individuals but also on the entrepreneurial contexts and the economic circumstances (Korunka et al. 2003). For instance, among three clusters, nascent entrepreneurs against their will exhibited a combination of unfavorable personality characteristics, poor resources, as well as deficits in environment utilization and organizing. These findings confirmed Kets de Vries's (1977) argument that entrepreneurship can emerge out of economic necessity due to a combination of personality traits and unfavorable social conditions.

In a global context, using a sample of 168 Chinese entrepreneurs in small and medium-sized businesses in Singapore, Lee and Tsang (2001) examined the effects of entrepreneurial personality, social backgrounds, personal experience, and network activities on venture growth. Specifically, Lee and Tsang (2001) found that experience, networking activities, and number of partners as well as internal locus of control and need for achievement all had a positive impact on venture growth; self-reliance and extroversion, however, had a negative impact on the number of partners and a positive impact on networking activities. Lee and Tsang (2001) maintain that, compared with personality traits, entrepreneurs' industrial and managerial experiences have the greatest effect on venture growth and hence call for more research attention to be directed toward entrepreneurial experiences and skills.

It is interesting to note that, as I discussed earlier, Kets de Vries (1977) believed that entrepreneurial activities were mainly due to the reactive mode, and entrepreneurial firms were created as a result of individual reactions to environmental turbulence and early life experiences or social backgrounds. Later entrepreneurial personality studies, however, took a different approach and examined the role of proactive personality as an individual disposition in understanding entrepreneurial intentions and activities. For example, Crant (1996) examined the proactive personality as a predictor of entrepreneurial intentions. Crant (1996) shares the viewpoint that the creation of an entrepreneurial firm is the result of one's psychological needs; however, according to Crant (1996), individuals possessing proactive personality are likely to "identify opportunities and act on them; they show initiatives, take action, and persevere until they bring about meaningful change" (p. 43). Crant (1996) argues that individuals with a proactive disposition are more likely to initiate and maintain actions to alter their surrounding environments and create entrepreneurial careers that best suit their needs.

Along this research line, in a later empirical study, Becherer and Maurer (1999) examined the relationship of the president's proactivity disposition and his or her entrepreneurial behavior based on a sample of 215 small company presidents. They found that a proactive personality disposition was related to entrepreneurship—more proactive presidents created organizations that scanned for opportunities and took a bold and aggressive approach to the market; more proactive leaders aggressively grew firms as a strategic approach to the marketplace (Becherer and Maurer 1999). Similarly, Kickul and Gundry (2002) examined how entrepreneurs' proactive personality, defined as the personality of one who takes action to influence environmental change, was linked to a strategic orientation, which subsequently influenced the types of innovations they engaged. They found that the proactive business owners were more likely to adopt a strategy that was consistent with their beliefs and behavioral intentions in seeking new opportunities or engaging in new business processes and innovations rather than reacting to changes within the market and industry (Kickul and Gundry 2002).

Beyond the specific entrepreneurial traits (e.g., need for achievement, international locus of control, and tolerance of ambiguity) examined in the traditional entrepreneurial personality research, more recent studies examined the relationships between general personality traits, namely the Big Five or the five-factor model (openness, extroversion, agreeableness, neuroticism, and conscientiousness), and entrepreneurial outcomes. For example, Ciavarella, Buchholtz, Riordan, Gatewood, and Stokes (2004) examined the linkages between the Big Five personality traits and venture survival—the likelihood that the venture survived for at least eight years and the overall life span of the venture. Their findings showed that entrepreneurs with a high level of conscientiousness were more likely to be committed to maintaining the operations of the venture during the startup years and had a higher likelihood of venture survivability into maturity and a longer venture life span. In another empirical study, Nga and Shamuganathan (2010) examined the Big Five personality traits and their impact on social entrepreneurs' startup intentions in social vision, sustainability, social networking, innovativeness, and financial returns. Using a student sample in Malaysia, Nga and Shamuganathan (2010) found that agreeableness positively influences all dimensions of social entrepreneurship, whereas openness had a positive influence on social vision, innovation, and financial returns.

Furthermore, Obschonka, Silbereisen, and Schimitt-Rodermund (2010) examined the relationships among entrepreneurs' Big Five personality profile (high in extraversion, conscientiousness, and openness as well as low in agreeableness and neuroticism), entrepreneurial competencies in adolescence, and entrepreneurial intentions. Confirming Kets de Vries's (1977) argument of the impact of early life experience on a person's later entrepreneurial activities, Obschonka et al. (2010) found that entrepreneurial personality profile was positively associated with participants' early entrepreneurial competencies (e.g., early inventions, leadership, and early commercial activities), which, in turn, were positively linked to entrepreneurial intentions (both conditional and unconditional). Obschonka et al. (2010) also found that an entrepreneurial personality profile did not have a significant direct effect on both types of entrepreneurial intentions but rather had an indirect effect on entrepreneurial intentions through its impact on entrepreneurial competence in adolescence and entrepreneurs' control beliefs. Consistent with Kets de Vries's (1977) analysis of the influence of environmental forces on the formation of the entrepreneurial personality profile, Obschonka et al. (2010) maintain that personality characteristics may drive activities and expectations that later lead to an individual's career choice; hence a developmental perspective should be added to the personality approach in entrepreneurship personality research.

A few, more recent studies closely examined the relationships among Big Five factors and various entrepreneurial outcomes. In a meta-analysis, Zhao, Seibert, and Lumpkin (2010) examined the Big Five personality traits and risk propensity and their influence on two important entrepreneurial outcome variables—entrepreneurial intentions and entrepreneurial performance. Their analysis provided empirical evidence that out of five factors, four (except for agreeableness) were related to both entrepreneurial intentions and entrepreneurial performance; risk propensity was also moderately related to entrepreneurial intention but not significantly related to entrepreneurial performance. These findings provide support to the early entrepreneurial personality research and suggest that personality does play a role in explaining the intention to become an entrepreneur and later entrepreneurial success. These later studies (e.g., Zhao et al. 2010) contribute to the research on reconciling the contradicting findings of earlier entrepreneurial personality studies by providing a more finely grained analysis of the influence of personality factors on distinct outcomes at different stages of the entrepreneurial process. Based on these findings, Zhao et al. (2010) called for more attention to be directed to effects of entrepreneurial personality traits on various outcomes in the entrepreneurial process.

Shane, Nicolaou, Cherkas, and Spector (2010) took a novel approach and empirically examined whether genetic factors account for part of the covariance between the Big Five personality characteristics and the tendency to be an entrepreneur. Using a large sample of 3412 monozygotic and dizygotic twins from the United Kingdom and 1300 monozygotic and dizygotic twins from the United States, Shane et al. (2010) found a modest association between two of the Big Five personality characteristics—extraversion and openness to experience and the tendency to be an entrepreneur. Their study also showed that, for both of these personality characteristics, the modest association was largely genetic in origin. Findings of this study suggest that entrepreneurs may be born not made—people become entrepreneurs due to the fit of their genetically influenced personalities to the job of creating and running their own business.

Taken together, later studies provide strong empirical evidence that overall entrepreneurial personality traits matter in entrepreneurship research and in understanding important entrepreneurial outcomes. Consistent with Kets de Vries's (1977) view, most of these later studies took a synthesized approach. They examined the interactions among conventional and new personality traits, other individual-level factors (e.g., self-efficacy), as well as the role of social and economic contexts in explaining entrepreneurial outcomes, hence contributing to a more balanced and contextualized understanding of entrepreneurial personality traits.

What Do We Know About Entrepreneurial Personality Research 40 Years After Kets de Vries (1977): An Agenda for Future Research

It has been more than four decades since Kets de Vries (1977) published the article on the entrepreneur as a person at the crossroads. Although the personality research is one of the classic and early approaches to entrepreneurship, it remains one of the more controversial areas of research (Rauch and Frese 2007b). What do we know about entrepreneurial personality research 40 years after Kets de Vries (1977)? In the following section I summarize common themes of entrepreneurial personality studies and discuss opportunities for future research in this area.

A few recent meta-analyses providing comprehensive reviews of the entrepreneurial personality literature may help us draw tentative conclusions on the common themes of entrepreneurial personality research. A general conclusion is that, despite the early criticisms of entrepreneurial personality research, personality traits remain relevant and important in understanding entrepreneurial attitudes, beliefs, intentions, behaviors, and various entrepreneurial outcomes, such as entrepreneurial intentions, venture creation, survival, and growth. Hence entrepreneurial personality research should be taken as seriously as research on personality and job performance in general (Rauch and Frese 2007b). Findings of recent meta-analyses, as summarized in Brandstätter (2011), provide clear empirical evidence of the relevance of personality traits (e.g., risk propensity, achievement motivation, and Big Five personality) in entrepreneurship research. However, this general conclusion should be made with caution, and future research attention should be directed toward the following issues: the impact of situational/contextual factors, types of personality traits being examined, the explanatory power of personality traits, the need for longitudinal studies, and the potential downside of entrepreneurial personality traits.

First, as demonstrated in Kets de Vries (1977), more research attention should be directed toward contextual factors and their roles in moderating the effects of entrepreneurial personalities on entrepreneurial outcomes (Rauch and Frese 2007b). Personality can have an effect on behavior only if situations and contexts are relevant and allow the expression of individual traits (Rauch and Frese 2007b). Although Kets de Vries (1977) focused on unfavorable environments, favorable environments, such as growing markets and demands, may also encourage individuals to pursue entrepreneurial opportunities (Rauch and Frese 2007b). In addition, the size of a business can affect the extent to which personality traits can influence entrepreneurial decisions and actions (Rauch and Frese 2007b). Therefore, a promising research line is to explore the moderating effects of contextual and situational factors (Brandstätter 2011; Rauch and Frese 2007b).

A handful of studies already taking this initiative can be found in research by, for instance, Lee and Tsang (2001) and Hmieleski and Baron (2008). Lee and Tsang (2001) found that the entrepreneur's education had a small but positive effect on venture growth of larger firms but had a negative effect on venture growth of smaller firms. In addition, Hmieleski and Baron (2008) examined two moderators of the effects of entrepreneurial efficacy on firm performance—dispositional optimism and environmental dynamism. Their findings showed that, in dynamic environments, the effects of high entrepreneurial self-efficacy on firm performance were positive when combined with moderate optimism but negative when combined with high optimism; in stable environments, the effects of self-efficacy were relatively weak and were not moderated by optimism. These findings suggest that high levels of self-efficacy are not necessarily beneficial to entrepreneurs and do not always lead to improved performance. Hence Brandstätter (2011) also called for more future research on identifying contextual factors, such as the developmental stage of the firm (life cycle), the speed of change (dynamism), adverse economic conditions (hostility), the branch of business (industry), and their impact on entrepreneurial outcomes.

Second, Rauch and Frese (2007a) called for more attention to be directed to differentiating different types of personality traits and their varying effects in entrepreneurship research. Specifically, Rauch and Frese (2007b) argue that researchers need to differentiate between traits that are matched to tasks of entrepreneurship (e.g., detecting and exploiting opportunities, making rapid decisions in a resource-constraint environment, and working harder than most employees) and traits that are not matched to the task of entrepreneurship. Their meta-analysis found higher correlations for personality traits matched to entrepreneurship (need for achievement, innovativeness, proactive personality, generalized self-efficacy, stress tolerance, need for autonomy, internal locus of control, and risk-tasking) than for traits not matched to the task of entrepreneurs. Although these matched traits are more relevant in explaining entrepreneurial behaviors and outcomes, the impact of each of these specific traits on entrepreneurial outcomes is not the same. Rauch and Frese (2007a) maintain that need for achievement is an important characteristic of a successful entrepreneur and hence should be included in studies of entrepreneurial success. Similarly, autonomy and innovativeness, defined as one's willingness and interest in looking for novel ways of action, are also found to have a direct relationship with business success. However, the effects of risk-taking and locus of control on entrepreneurial and business success were positive and significant but also small. Indeed, as I discussed previously, Zhao et al.'s findings (2010) suggest that it might be beneficial for future research to understand the relevance and effects of risk propensity at different stages of the entrepreneurial process—risk propensity might be beneficial in venture creation, but sustaining a successful venture requires careful and calculated decision-making.

In addition, Rauch and Frese (2007a) note that researchers need to be aware of the relevance of both general (broad) and more specific personality traits in entrepreneurship research. The broad personality traits (e.g., the Big Five personality taxonomy) may not always be a good predictor of specific entrepreneurial outcomes because, as aggregated constructs, they may predict aggregated classes of behaviors but not specific behaviors. These general personality traits may influence traits that are more specific to entrepreneurship, such as the need for achievement, risk-taking, and innovativeness, which, in turn, affect goal settings and strategies leading to business success. Hence the relationships between these broad traits and entrepreneurial success tend to be smaller. Rauch and Frese's (2007a) argument was later empirically tested in a study by Leutner, Ahmetoglu, Akhtar, and Chamorro-Premuzic (2014). In their study, Leutner et al. (2014) examined the relationship between the Big Five factors, the Measure of Entrepreneurial Tendencies and Abilities (META), a measure that assesses specific entrepreneurial personality traits related to individuals' tendency to engage in entrepreneurial behaviors (opportunity recognition, opportunity exploitation, innovation, and value creation), and various entrepreneurial outcomes. Leutner et al. (2014) found that, although all personality traits of the Big Five correlated with entrepreneurial success, most associations became nonsignificant after META was added to the analysis, hence providing empirical evidence to Rauch and Frese's (2007b) speculation that specific traits matched to the task of entrepreneurship may be better predictors of entrepreneurial success than broad personality traits, such as the Big Five factors. Future research should further investigate the relationships among different types of personality traits and entrepreneurial outcomes at different stages of the entrepreneurial process.

Third, researchers need to be aware of the explanatory power of personality traits. In Zhao et al. (2010), the estimated effect size for the Big Five constructs as a set was moderate, explaining 13% of the variance in entrepreneurial intention and 10% of the variance in entrepreneurial performance. Similarly, in the study by Shane et al. (2010), the Big Five personality factors had only a modest effect on the tendency to become an entrepreneur. Hence Shane et al. (2010) suggest that researchers need to be mindful of personality traits' limited explanatory power and need to examine additional factors other than these personal characteristics in explaining entrepreneurial outcomes. These findings again showed the importance of contextual factors beyond personality traits in entrepreneurship research.

Fourth, as I discussed previously, future research needs to adopt a developmental approach; hence a longitudinal design is necessary. Kets de Vries (1977) is a pioneer in explicating the impact of family dynamics and one's early life experience on the formation of entrepreneurial personality profile.

Later research (e.g., Obschonka et al. 2010) empirically showed the impact of personality on one's early entrepreneurial competencies in adolescence, which, in turn, were related to later intentions to become entrepreneurs. However, in Obschonka et al.'s (2010) study, the impact of personality traits on early entrepreneurial competencies was captured in retrospective reports and hence may not accurately reflect the time effect that can be captured in a longitudinal study. Therefore, more longitudinal research is needed to fully explain the causal relationships among situational factors, formation of entrepreneurial personality traits, entrepreneurial attitudes, beliefs, motivations, intentions, and short-term (e.g., venture creation and survival) and long-term (e.g., entrepreneurial success) outcomes. Such a longitudinal design could also help reconcile whether entrepreneurial activities are due to the reactive mode described by Kets de Vries (1977) or due to genetically influenced proactive personality traits.

Last but not least, Kets de Vries (1977) warned of the potential danger of the entrepreneurial mode and discussed challenges associated with entrepreneurial personality traits. Kets de Vries in his later studies further examined these issues (e.g., Kets de Vries 1985; Kets de Vries and Miller 1985). Four decades later, these topics remain relevant. For example, Hmieleski and Baron (2008) argue that, in certain circumstances, high levels of self-efficacy can encourage complacency and overconfidence and result in negative effects on entrepreneurial firm performance. In recent research on the downside of entrepreneurial personality traits, Miller (2015) maintains that some positive entrepreneurial personality traits are Janus-faced, and in the extreme these positive entrepreneurial personality traits can lead to detrimental entrepreneurial outcomes. For instance, Miller (2015) argues that self-efficacy and self-assurance, in the extreme, may turn into hubris and narcissism; one's desire for achievement and influence can lead to behaviors that cut corners and disregard stakeholders; a craving for autonomy may also result in alienation. Miller (2015) suggests that it may be helpful for future research to explore personality dimensions that differentiate ethical entrepreneurs from those "whose darker side is more manifest" (p. 5). Future research can explore how early hardship can result in more ruthless entrepreneurial behavior, how much family background matters, and how social forces and compromised ethics in a community turn nascent entrepreneurs into reprobates (Miller 2015).

Miller's (2015) arguments in this article resonate with Kets de Vries's (1977) analysis of the potential danger of entrepreneurial personality traits. Although there is a counterargument that most of Miller's (2015) speculations can be explained in the inverted U-shaped relationships of entrepreneurial personality and entrepreneurial outcomes (DeNisi 2015), it still might be helpful for researchers to further explore entrepreneurial personality traits that are more likely associated with positive versus negative entrepreneurial outcomes in the entrepreneurial process and explore dominant personality traits that are associated with different types of entrepreneurial types, such as social entrepreneurs and nascent entrepreneurs against their will. In doing so, research may adopt a developmental perspective and may also need to explore additional personality traits, such as core self-evaluations, as recommended by DeNisi (2015), in explaining entrepreneurial behaviors and outcomes.

Conclusion

Kets de Vries (1977) was truly a pioneer when the research on entrepreneurship was in its infancy. Kets de Vries's (1977) synthesized view of entrepreneurial personality traits with a focus on the influence of environments provided seeding ideas for later research on examining the interactions among personality traits, individual characteristics, and entrepreneurial outcomes. Shane and Venkataraman (2000) defined the study of entrepreneurship as the scholarly examination of "how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited" (p. 218). Their definition and theorization of entrepreneurship focus on how entrepreneurial individuals react to or act on business environments in engaging various entrepreneurial activities as they create and develop new business ventures, suggesting that a synthesized view should be adopted in entrepreneurship research.

As we continue to explore myths and facts about entrepreneurship, it would be wise for us to bear in mind the classic article and theorization by Kets de Vries (1977). The interest in studying the interactions among the entrepreneurial individual, family, organization, and environment is evident in more recent research on, for example, immigrant entrepreneurs (e.g., Ndofor and Priem 2011), the role of human capital in technological entrepreneurship (e.g., Wright et al. 2007), as well as work conflict and psychological well-being of entrepreneurs (e.g., Parasuraman and Simmers 2001). From this perspective, future research should carry Kets de Vries's (1977) thoughts forward in explicating the nexus of these important components of entrepreneurship.

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CHAPTER 3

The Urban Quality of Life and Entrepreneurship: Past, Present, and Future

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In 1982 Pennings wrote an article on urban quality of life and entrepreneurship (Pennings 1982). In this article, it is argued that "quality of life is conducive to the frequency of business start-ups in urban metropolitan areas" (p. 65). It is further explained that quality of life indicators might be better suited to account for the entrepreneurs' site selection criteria and subsequent urban clustering of new startups than merely economic metrics. Pennings did not reject the adequacy of economic indicators but rather stressed that they alone are not sufficient to provide clarity to the actions of entrepreneurs within urban spaces. This insufficiency derives from the economic indicators' inability to account for the well-being of all members of society. To address the issue in an urban context a new type of indicator was proposed; the quality of life indicator. This new indicator focuses on the local conditions that encourage urban entrepreneurs to start new ventures while enacting their lifestyle. This indicator also helps to explore how entrepreneurial actions may build themselves into the local environment

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creating an upward quality of life spiraled by locally provided products and services and consequently attracting more entrepreneurs.

Quality of life metrics include traditional economic elements and noneconomic components such as social, educational, health, and ecological conditions. By including both economic and noneconomic factors, the resulting indicators provide with a multidimensional lens that better accounts for the entrepreneurs' personal perceptions of both local munificence and lifestyle fit. Hence, they represent more adequately the entrepreneurs' site selection preferences toward, and within, urban spaces when starting a new venture. Quality of life metrics can serve to explore the selection process that informs the entrepreneurs' choice of new ventures.

Since this paper was first published, more than half of the world population has become urban (Urbanization and Health 2010) leading to an increased demand for urban ventures capable of fulfilling local expectations of urban quality of life. Growing awareness of the impact of urban entrepreneurs has placed a rising need to better understand the implementation of urban innovation by local entrepreneurs (e.g., Florida 2002b; Florida et al. 2008; Markusen et al. 2008). As such, it seems timely to revisit the origins of Pennings original work, as well as to assess its contributions and guidelines for future research on urban entrepreneurship.

The analysis of Pennings' (1982) article, "The urban quality of life and entrepreneurship," is performed in the following sequence. First, the genealogy of the relationships between business clusters and communities is briefly discussed (Foucault 1982). Second, a summary of the highlights of the article is provided. Third, the contributions of the paper to research in entrepreneurship are presented. Fourth, the current relevance of the ideas presented by Pennings is examined including how they can inform future research agendas. Finally, a brief conclusion is provided. The discussion areas include quality of life, urban entrepreneurship, urban innovation, and urban entrepreneurial ecosystems.

Pennings (1982), "The Urban Quality of Life and Entrepreneurship" Revisited

Pennings' original article was positioned at a period when a renewed interest in the role that social conditions within communities had in incentivizing and/or preventing the local emergence of business clusters, as well as of new ventures. At the time, the success stories of the emergent clusters at San Francisco peninsula, Austin, Texas, and Route 128 in Boston (e.g., Cooper 1971, 1973; Shapero 1975; Susbauer 1972) helped to fuel this urban entrepreneurship inquiry in the field of management, just like the emergence of industrial districts in England in the 1800s inspired the study of industrial spatial agglomerations in the field of economics (e.g., Marshall 1890). Prior to Pennings' article, entrepreneurship research on clusters' emergence and startups had mostly taken for granted the role of the social environment and merely focused on entrepreneurs as unique individuals. As a result of this entrepreneur-centric perspective, research at the time was centered on understanding entrepreneurial personality traits (e.g., McClelland 1965)[1] and how these personal traits could help entrepreneurs to benefit from local economic conditions (e.g., Alonso 1975). It was early argued that while the individual characteristics of the entrepreneur and economic conditions are important to understand the occurrence of startups and clusters, the social environment also plays a crucial role that cannot be overlooked (e.g., Cooper 1971, 1973; Shapero 1972). However, it was not until Pennings' work, that management scholars started to ask to which extent the quality of life in metropolitan areas was conducive to business startups and local business clusters.

Clusters' Genealogies: Emergence of Business Clustering and Business Site Selection Criteria Concepts

While Pennings (1982) was the first scholar to link quality of life at urban spaces and the emergence of clusters, the idea of business clusters in itself is not new in the literature. The first framework to explore business clusters and communities was developed by the British economist Alfred Marshall (1890). In his nineteenth-century study of the Lancashire cutlery industry and the Sheffield steel industry, Marshall first noted the propensity of business to position at prime locations near key suppliers, labor, customers, and competitors. This original work explains why businesses within the same industry may stay geographically close to each other, and why industries may flourish at a given location and not another. While using an economic lens to its analysis, Marshall's work acknowledges the relevance of community cohesiveness as vital to the survival of clusters when discussing social forces and local friendships among employees and also between employees and employers.

Almost 40 years after clusters were first discussed by Marshall, Alfred Weber (1929) took a closer look at the site selection criteria in an attempt to further clarify why clusters got started and kept together over time. Weber (1929) brought Marshall's ideas on externalities and industry concentrations into concrete cost-benefit analysis of proximity and he extended the arguments of neoclassical economics to explicitly consider the spatial dimension of firms. By doing so, Weber (1929) developed the basis of modern *location theory*, core to neoclassical arguments of clustering. As part of his argument, Weber assumed that demand is given (and known), hence the site selection is determined by the optimization of transportation costs of raw materials into the business and the cost of placing the final goods at the market, thus removing Marshalls' nascent ideas of community embeddedness (Granovetter 1991). Under this purely economic location theory framework, it was suggested that entrepreneurs would seek to establish their startups in environments that were the most advantageous in terms of transportation cost efficiencies and other economic considerations (Alonso 1975).

In response to location theory and neoclassical oversimplification of the agglomeration economies concept, Edgar Hoover (1937) developed the well-known typology of agglomeration economies that framed for a long time most of the work on business clusters. The ideas behind this typology analysis brought back the element of community into consideration, even if briefly. In short, Hoover argued that "the benefits from agglomeration include (1) large-scale economies resulting from traditional economies of scale; (2) localization economies that result from the firms in the same industry collocating in the same area; and (3) urbanization economies, which result from the collocation of firms in different industries" (Dawkins 2003, p. 154).

While the aforementioned economic models of clusters and clustering forces were good initial frameworks to provide a larger understanding of why ventures got started in the first place or may cluster over time, they were not enough to clarify the entrepreneurs' personal preferences (i.e., non-rational choices) of the site selection criteria. The need for a view that includes environment and individual agency became forefront. To address this limitation, and bridge the social-economic gap, new models started to account for noneconomic elements when looking at local business clustering and their economic success. As part of this trend, Mahar and Coddington (1965) discussed five elements to identify entrepreneurial communities. Two of the five, "living conditions" and "cultural environment" referred to personal well-being within the local community. The remaining three looked at the local business environment and its possibilities. All five categories are needed to work together to attract and retain intellectual capital and local entrepreneurs. This work by Mahar and Coddington (1965) helped to pave the work to Pennings' (1982) work as it presented a model that equally acknowledged economic and noneconomic elements to explain clusters in general.

The last leap to integrate social and economics came in the early 1970s when the noneconomic metrics were formally integrated with other economic measurements into the factor dubbed "quality of life" (e.g., Cooper 1971, 1973; Shapero 1972). As the general idea of quality of life was further developed, it was proposed that quality of life conditions do help to bring talent into the area in the form of qualified technical workers, thus fostering the emergence of a generic local startup environment.

Pennings' Contribution: Exploring the Urban Clustering of New Ventures

The original work on quality of life metrics (e.g., Cooper 1971, 1973; Shapero 1972) was the result of a long genealogy of work seeking to answer why entrepreneurs choose some spaces and not others to start a venture (Foucault 1982). The cumulative work provided a new insight in the entrepreneurial process by advancing the idea that the entrepreneurs' actions are not purely economically driven but also involve personal lifestyle choices. Yet this knowledge was still limited to explain why workers may migrate to new places creating labor clusters (i.e., access to job opportunities in good communities (Cooper 1973)), and why some entrepreneurs may choose to open a new venture within their home community (i.e., desire to preserve ongoing quality of life (Cooper 1971)). Similarly, these works do not account for the environmental differences between urban and non-urban spaces, even when hinting the relevance of the differences across types of locations through their use of samples and case studies. While the overall work presented that most entrepreneurs started their ventures within urban areas, these perspectives were still not addressing the reason for the entrepreneurs to select urban areas to start and cluster their entrepreneurial ventures in the first place. Pennings' (1982) work addresses this gap and closes the loop with Marshall's original arguments calling attention to local communities when studying clusters and entrepreneurs. Pennings does so by introducing tools to test whether quality of life conditions may actually explain the geographical clustering of new ventures within urban metropolitan communities, which was not explicitly done before.

Through this novel contribution, Pennings (1982) can be considered the first management scholar to retake the original ideas of noneconomic local conditions and establish the link between the different types of urban environments and the emergence of clusters and startups. He also recognizes that not all urban spaces have the same entrepreneurship allure or are equally fitted to become entrepreneurial ecosystem. In doing so, he opened the conversation to Porter's (1995) work on the competitive advantage of the inner city, Markusen's (1996, 2005) ideas of urban development and businesses, and the arguments of the creative class by Richard Florida (2002b). Most recently this line of work was also linked to concepts of urban entrepreneurship as a distinct type of entrepreneurship (e.g., Beyes 2009; Osorio et al. 2015; Osorio and Ozkazanc-Pan 2013; Sriram et al. 2007).

Pennings' contribution to assess entrepreneurship within urban environments based on lifestyle choices is not limited to conceptual developments but also advances practical considerations to overcome two challenges: (1) the difficulty to perform direct observations at the individual level and (2) the need of objectivity to make fair comparisons across different urban areas.

As a response to the first challenge (i.e., the difficulty to record individual-level perceptions of local quality of life), Pennings proposed a pragmatic solution still in use today: the exploitation of government-curated databases that include aggregated perspectives of individual-level views. Attaining a direct sample of individual perspectives across all geographies was not a trivial issue to overcome. Technological and economical limitations made this pursuit impractical and overwhelming, particularly by the private sector. Thus, his study relies on 120 archival variables, both economic and noneconomic, mostly from governmental sources previously curated and updated (Ben-Chieh 1975). These metrics report actual conditions within urban metropolitan areas that help to represent the local everyday environment (e.g., number of crimes per period at a zip code, number of health outbreaks per period within a neighborhood, number of new startups within a census track). The small unit of analysis (e.g., zip code, census track, neighborhood) of these metrics allowed Pennings to use them as proxies for aggregated opinions on how people see and experience their community. An initial factor analysis on these metrics uncovered five elements conforming the idea of local quality of life. The five elements are (1) economic, (2) political, (3) environmental, (4) health/education, and (5) social. While these metrics served their purpose in the original study, Pennings was aware of their limitations as aggregated indexes rather than individual-level perceptions of the location. Thus, he discussed the need for better data sources that, in future studies, could provide direct accounts of individual-level perceptions of local quality of life. He refers to these individual-level metrics as subjective as they are based on surveys that report how people perceive or experience their own community, instead of reporting tallies of events. This discussion on emerging metrics signaled new directions in research and shared with the reader ongoing efforts to construct these direct metrics and their value. The National Opinion Research Center at the University of Chicago (www.norc.org) and the Institute for Social Research at the University of Michigan (http://home.isr.umich.edu/) were indicated as forefront institutions that pursued these efforts.

Pennings also addressed the second challenge, the need for objectivity to attain both independence and uniformity in the analysis through the use of the governmental databases. The use of curated and independently certified data helped to overcome the inherent bias and lack of objectivity that permeated the small samples available to researchers at that time. The factors developed from the use of these governmental metrics contributed to the objectivity of the project as they were straightforward to attain and relatively easy to standardize. These metrics recorded conditions at regular intervals using uniform protocols across all locations. Thus, they allowed for a fair comparative analysis (1) between different urban metropolitan areas within the same time period and (2) across different time intervals within the same urban metropolitan space. The first analysis serves to identify best locations at a given point in time, hence illustrating optimal conditions for a given industry. The second analysis serves to identify changes over time at a given location, giving a window on how changes in quality of life may affect, or not, local industries (see Table 3.1).

Through a factor analysis, the 120 economic and noneconomic metrics were grouped within five factors to describe quality of life conditions at each urban space during two consecutive intervals of time, as shown in Table 3.1. The first interval covered from 1967 to 1971 and the second from 1972 to 1975. To test for startup clustering, the study selected three industries to further identify and tally the total number of new ventures that were first founded during each one of two periods across all urban metropolitan areas. The selection of the three industries, namely plastic products, telecommunications equipment, and electronic components, was based on their predominant position during the period of the study. Clustering by industry code and controlling by urban metropolitan area across the two consecutive time periods allowed to assess the stability of local conditions and their relevance to foster large numbers of new ventures over time. Also, by controlling for location, the impact of size population (i.e., number of residents and number of new startups) is removed from the results by normalizing the sample, thus assessing the increase in numbers of new ventures without the bias of the size of the local population.

Table 3.1 Experimental design used to test startup clustering within urban metropolitan spaces across two consecutive time periods

		Location		
		Place no. 1	*Place no. 2*	
Time period	Period 1: 1967–1971	1. Population 2. Industry size 3. Quality of life (a) Economic (b) Political (c) Environmental (d) Health/education (e) Social	1. Population 2. Industry size 3. Quality of life (a) Economic (b) Political (c) Environmental (d) Health/education (e) Social	Do conditions change from one period to the next within the same location? If so … do they result in changes in the local industry composition over time?
	Period 2: 1972–1975	1. Population 2. Industry size 3. Quality of life (a) Economic (b) Political (c) Environmental (d) Health/education (e) Social	1. Population 2. Industry size 3. Quality of life (a) Economic (b) Political (c) Environmental (d) Health/education (e) Social	
		Are conditions different across places within the same time frame? If so … do they result in different types of industry clustering across places?		

In conclusion, Pennings' study confirms that both social and economic conditions at urban metropolitan areas matter to business clustering within these urban locations. The results, when controlling for population size and industry growth values, suggested that larger cities are more likely to have larger numbers of startups across all assessed industries, as later presented by Florida in his work on the creative class (Florida 2002a, b). Pennings' study also suggests that economic elements are necessary to foster clusters of new ventures, yet access to capital alone is not sufficient. In doing so, the study sets the ground for a new understanding of entrepreneurial ecosystems. Under this framework, other elements that are often taken for granted such as access to education, adequate political environment, a good social space, and a healthy environment come into consideration, even when they do not seem to be immediately relevant (Mack and Mayer 2016). In all, the study acknowledges that the decisions to start a new venture are not purely rational as they are done in the context of lifestyle choices and personal preferences (Florida 2002a, b).

Besides the originally reported findings, there are another three issues that can only be fully appreciated by re-reading this pioneer study in today's socioeconomic context. These three additional elements bring forward subsequent understandings of startups and local industry ecosystems (e.g., Aldrich 1990; Mason 1991). The first point is the uneven relationship between the access to health/education across industries. In other words, while health/education matters, it does not matter the same for all industries. In this study, health/education is not only relevant but also strong in the electronic component industry, moderate in the telecommunications equipment, and negative in the plastic products, thus suggesting a latent relationship that may be associated with educational attainments within each industry as well as their corresponding health regulatory conditions. This is further reinforced when looking at the environment factor that has relationship values in opposite direction as the health/education with strong negative relationships toward plastic products and weak positive to electronic components with small and negative to telecommunications equipment. Thus suggesting that in the past, the impact of regulations might have outweighed the value of education for industries where environmental issues conflicted with profit maximization views.

The second latent finding is the acknowledgement that urban spaces are incubators of innovation. Pennings' work hints the intrinsic value of cities as spaces where ideas get exchange and refined. The work does not elaborate any further, yet it opens the conversation in a direction that has become fundamental in today's socioeconomic conversations; cities are nurseries of innovation. This point was later picked up by scholars like Florida (2002b) and others (e.g., Glaeser et al. 2010; Osorio et al. 2015) who highlight the value of cities as playgrounds for new ideas. Along these lines, Pennings' article talks about local industry "critical mass." With this last idea, Pennings suggests the existence of a tipping point that marks the minimum threshold to jump-start a local self-sustained cluster of a particular industry.

A third issue that is present, though tacit, in Pennings' work is the importance of supply chain clusters, as it was first discussed by Weber (1929) in his location theory. By choosing the telecommunications equipment and electronic components industry, this work opens the door to a conversation on local supply chains and economic growth. This is particularly noticeable when looking at the rankings of urban metropolitan areas across industries between the two periods under consideration; 1967–1971 and 1972–1975. Although, in the analysis, the top urban areas fostered all the selected industries, each industry was not equally ranked across the geographical locations, particularly when considering the plastic product industry. This variation suggests that while local conditions are relevant to foster the local clusters of startups, these conditions may not have the same impact across all industries limiting the reach of local supply chains.

Impact of Pennings' Contribution to Urban Startup Clustering and Innovation Research

Pennings (1982) can be considered the first management scholar to formally test the link between quality of life and urban spaces and also between types of startups and different types of urban environments, thus recognizing that not all urban spaces have the same allure for all types of industries and/or entrepreneurship. Therefore, Pennings' work advances the idea that the entrepreneurs' decisions of urban-site selection cannot be solely explained through rational economic models alone. Instead, he suggests that local noneconomic conditions also need to be accounted if the actions of entrepreneurs are to be properly explained. This integration of economic and noneconomic metrics provides a multidimensional perspective that allows for a more direct explanation of the carrying entrepreneurial capacity of urban metropolitan areas. These "quality of life" metrics seek to reflect the elements that are relevant for entrepreneurs as urbanites and not just as economic entities.

Pennings' ideas opened a conversation within two theoretical frameworks in management: *resource dependency* (Child 1972) and *population ecology* (Aldrich 2007; Amburgey and Rao 1996). Both lenses offer a valid way to understand the dynamics among firms located within the same geographical space subject to a shared environment competing for access to the same resources (Begley et al. 2005). For resource dependency, the nature of the existing resources explains the types of firms that may emerge. In the case of population ecology, survival, not emergence, is the focus hence it assesses if firms are fit to subsist (i.e., are sustainable) in the local environment over time.

Although there is a compelling argument for the use of either resource dependency or the population ecology frameworks to position Pennings' work, the realm of possibilities to extend current research was early fitted for a population ecology perspective because of its innovative inclusion of social elements to explain and relate business startups and clustering (e.g., Gartner 1985; Katz and Gartner 1988). As such, Pennings' ideas on quality of life were immediately incorporated within arguments of regional development (e.g., Fritsch and Falck 2007; Gartner and Bhat 2000), carrying capacity (e.g., Specht 1993), and entrepreneurs' criteria for new venture formation (e.g., Gartner 1985; Katz and Gartner 1988) where social dynamics were to be accounted to explain entrepreneurial fit and socioeconomic ecosystems. Another important area of research that benefited from this quality of life perspective was the design of research variables that provide better insights of the entrepreneurial phenomenon itself (e.g., Cohen et al. 2008).

Pennings' ideas also served to open broader perspectives of clusters, startups, and community development by considering alternative lenses to neoinstitutional economics (e.g., Hannan and Carroll 1995). This new framework incorporates noneconomic elements to explore the reciprocal nature between the local environment and the entrepreneur when assessing why entrepreneurs may select a particular location to start a venture, even when it is a non-optimal economic choice (e.g., Gartner 1985; Marcketti et al. 2006). Through this perspective, management scholars opened the research possibilities to consider the entrepreneur as an agent of social change who may not have economic gains as a single operational goal.

Moving things further, Pennings' quality of life lens opened research opportunities within other disciplines beyond management. For instance, Pennings' quality of life ideas have also found a voice with economic geography researchers such as Richard Florida (2002b; Florida et al. 2008) and his concept of the creative class, or in sociology when considering the entrepreneurial processes (e.g., Thornton 1999). Other area that included this, at the time, innovative view of entrepreneurship site selection criteria was the field of urbanism with the research on smart cities. The research on smart cities has recently paid particular attention to the role of entrepreneurs as local resources to enhance local quality of life (e.g., Kraus et al. 2015; Richter et al. 2015).

Future Research

By 2010 more than half of the world population was already living in urban areas and it is estimated that by 2050 this percentage will surpass 70% as the process of urbanization builds on itself (Urbanization and Health 2010). This urbanizing trend presents an urgency to secure local access to products and services within urban spaces to guarantee a good local quality of life. Yet not all urban spaces are equally alluring to entrepreneurs, hence the local access to products and services, and subsequent levels of quality of life, are not consistent or maintained across all urban spaces. This unevenness, in turn, builds on itself as the variations across communities make some spaces more attractive than others to capture entrepreneurs and their ventures.

To address the consequences of this accelerated urban growth, new research frameworks need to be proposed if local quality of life is to be preserved and new ventures are to stay sustainable within urban spaces. Pennings' work, as discussed earlier, presents key ideas that can help to address urban growth by bringing awareness to the noneconomic elements considered by entrepreneurs in terms of their decision-making criteria within urban spaces. Extending this urban-site selection inquiry can help to explain how suboptimal entrepreneurial site selection, born from personal lifestyle choices, may help to improve the economic value of the target urban space as was the case of New York, Chicago, and Los Angeles since they first become objects of interest in the 1970s. These ideas can cover work on the integration and collaboration of business and communities (e.g., Birla 2006; Blowfield 2007; Dearlove 2002; Ellis 2001; Karnani 2008), cities as the organizational extension of business (e.g., Forman and Goldfarb 2008; Hillman and Keim 2001), urban places as an organizationally manageable space (e.g., Buschmann and Coletta 2009), and the organization of the community as a single economic unit to achieve socioeconomic sustainability (e.g., Peredo and Chrisman 2006).

Under this research agenda, entrepreneurs can be understood as individuals rather than merely economic agents. They can also be presumed to care about the place where they work and live because of the place's relationship to their own private life. This perspective can help to understand the importance of the startup site selection as a personal decision about where to live and not only about where to capture economic gains (Florida 2002b; Glaeser et al. 2010; Osorio et al. 2015). These concepts emphasize the value of urban metropolitan areas as the optimal spaces where lifestyle choices may find a fit to professional interests (Florida 2002b; Florida et al. 2008; Markusen et al. 2008). Similarly, this idea presents a new perspective where social responsibility is a selfish interest of the entrepreneur seeking to preserve their quality of life (Aspelund et al. 2017). This work can also bring a new understanding to recent research looking at social responsibility within entrepreneurial ecosystems (e.g., Alvedalen and Boschma 2017) by introducing personal agency as the driver for the entrepreneurial actions.

The quality of life selection criterion as an extended research agenda could help illuminate the distinction between economic choice and actual decision-making by individuals, thus opening the possibilities to an alternative behavioral conceptualization of the firm (March and Simon 1958). This alternative theory of the firm that includes social elements can present a relational position between the new venture creation and the entrepreneurs' environment which can be further developed (Higgins and Savoie 1995). This new perspective could replace the rational decision-making assumptions that currently dominate the field of population ecology (Amburgey and Rao 1996). In this new context, it can also be acknowledged that entrepreneurs do not objectively observe the environment but perceive it with their own flawed views (Smircich and Stubbart 1985). This line of research on urban entrepreneurship can become cornerstone to further extend current methodology that identifies different types of local munificence as sources of local entrepreneurship (e.g., Boyd and Vozikis 1994; Specht 1993). This new framework can be achieved by linking conversations on principles of venture creation (e.g., Amezcua et al. 2013; Gartner 1985) and ideas of population ecology and entrepreneurial ecosystems (e.g., Aldrich 1990; Marin-Aguilar and Vila-López 2014) under a framework of embeddedness (Granovetter 1990).

Likewise, extending Pennings' work to explore urban smart growth can also benefit the population ecology framework by considering the paths guiding sustainable urban growth. This research opportunity can explore places where local access to products and services that fit particular lifestyle choices may attract additional entrepreneurs who in turn bring more products and services, creating a local upward spiral of development. Similarly, opportunities to study urban sustainability may emerge through the study of events of organizational adaptation and selection where non-economic environmental conditions may bring forward new types of organizations as the existing ones may no longer be adequate to survive the new quality of life expectations by entrepreneurs (Calás et al. 2009). Through this suggested research the emergence of adequate urban spaces with optimal quality of life possibilities can be understood not to be fortuitous but the result of concrete actions where entrepreneurs become not only beneficiaries of the process but also responsible for it (Muñoz and Cohen 2016). These ideas can also help to extend Porter's (1995) work on the competitive advantage of the inner city, Markusen's (1996, 2005) ideas of urban development and businesses, and on the arguments of the creative class by Florida (2002b).

Similarly, this work can be extended to include politico-economic dimensions to explore the impact of governmental policies and regulations seeking to promote local entrepreneurial actions. This perspective can help provide a microlevel perspective to complement current works comparing regional developmental models (e.g., Begley et al. 2005). In doing so, elements of culture and urbanization can be put into context of the lifestyle choices of urban entrepreneurs.

Considering the development of new quality of life metrics that can provide better analytical tools can also be a unique opportunity to extend Pennings' original work. While the original work was limited because of technological and economical limitations, the emergence of social media and big data analysis can help provide new theoretical insights guided by Pennings' original premises of quality of life and urban entrepreneurship.

Conclusion and Discussion

In all, Pennings' (1982) findings can become cornerstone for future research in entrepreneurship as the number of urban dwellers increases and socioeconomic issues take forefront in communities. Likewise, findings at the industry level on the impact of lifestyle choices over economic gains could offer valuable insights on the impact of zoning, lobbying, and advocacy at the industry level. Original analysis on urban spaces looks at the product and services provided by the local ventures as externalities to their environment thus it does not consider their impact as resources to encourage the actions of new entrepreneurs. By extending the research variables to include local quality of life, the new ecology model introduces the products and service of local ventures not only as part of the local supply chain but also as part of the entrepreneurial ecosystem encouraging and preserving the local entrepreneurial capital.

Note

1. Mahar & Coddington (1965) *might consider an exception as their work on scientific complexes and industrial parks recommend to ensure that local living conditions should be better than the average ones found in other major metropolitan areas in the country.*

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CHAPTER 4

Danny Miller (1983) and the Emergence of the Entrepreneurial Orientation (EO) Construct

Ba Anh Khoa Dao

Introduction

As Danny Miller ironically mentioned, "when I attended a local conference in 2004, an article on EO was being presented. […] I asked, 'What does EO stand for?' The incredulous speaker responded, 'You're kidding, right?' I was not. [I] never used the term EO [in the 1983 article]" (Miller 2011; p. 873). Although, incidentally, his 1983 article has impacted the field of entrepreneurship in quite an important manner as well as the very definition of entrepreneurial orientation (EO). Miller's paper inspired the concept of EO, representing an important leap for research in entrepreneurship as previous work had mainly focused on the individual characteristics of the entrepreneur. Subsequent work on EO and new ventures thus put the emphasis on characteristics of the firm and what makes them entrepreneurial. In this regard, it shed some light on the behaviors and attitudes of a firm that would make it more or less entrepreneurial.

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Amazingly, although the article has been cited over 4000 times, it had only 62 citations in the ten years following its publication. This can be attributed to the fact that the EO construct was not the main message within the article and that it does not immediately come to mind at first read. However, with the seminal works of Covin and Slevin (1989, 1991) and Lumpkin and Dess (1996), who formulated the construct of EO based on the dimensions proposed by Miller (1983), EO has consistently been in discussion as demonstrated by the number of citations over the years with more than 100 per year since 2005. This is a sign that, rather than slowing down, the notion of EO is instead picking up steam. As such this paper has recorded its highest number of citations in 2016 with 550 and both in 2013 and in 2015 with 427. Figure 4.1 shows the evolution of citations on a yearly basis. In a way, it demonstrates that this paper still exercises its influence even after 30 years. What has helped its relevance is the fact that so many scholars were interested in the phenomenon and it broached many different research topics related to entrepreneurship.

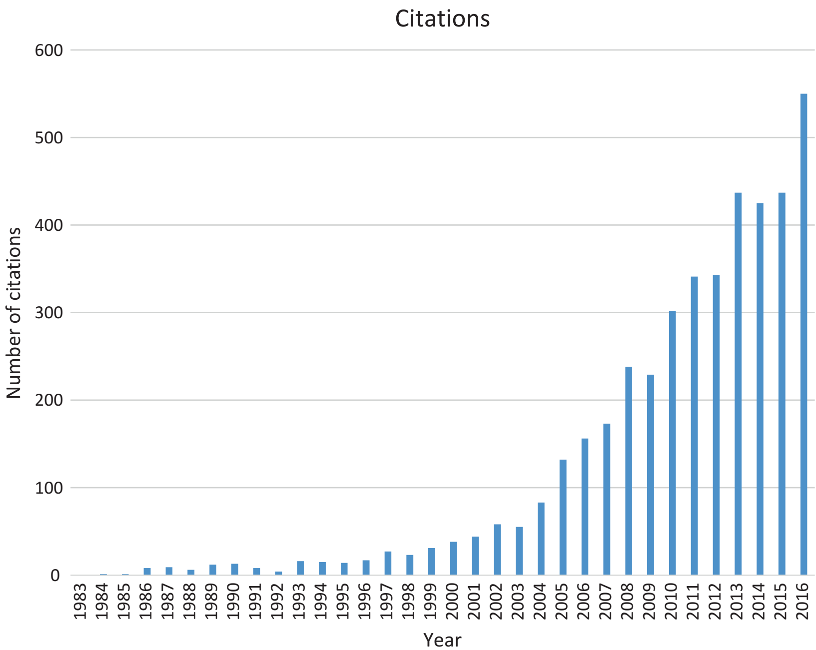

Fig. 4.1 Evolution of citations over years

Two main outcomes from the article can be identified. First, as already mentioned, the construct of EO and its components, proactiveness, innovativeness and risk-taking have been widely investigated by entrepreneurship scholars. Second, and in a way related to EO, was how the study of corporate entrepreneurship (CE) was facilitated. With EO and scales measuring it, scholars were afforded with a means to measure the entrepreneurial capability of firms and to show how this affects their performance. As such, EO provides a perspective on the relation between organizations and new ventures, no matter their size or stage (Miller 2011).

The present chapter is organized as follows: first, we present a summary of the article. Second, we discuss how the concept of EO evolved from Miller (1983) in its early days. We look at the two topics of research in EO that were most interesting and prompted the most enquiries: firm performance and CE while also looking at an underexplored topic in the configurational approach. Third, in an interesting revisit of his 1983 article, Miller (2011) discusses the concept of EO, how it has evolved and where research was heading. It provides a perspective of how the author perceived the evolution of the construct. Fourth, we explore how the concept of EO has evolved 30 years after the introduction of its dimensions and the Miller (1983) article. An overview of the research field provides four topics related to EO that show potential: the evolution of the measurement of EO, firm growth, family firms and internationalization. Each of these topics extends the concept of EO. Finally, we conclude with a synthesis of how the Miller (1983) article has helped the entrepreneurial field and what effectively makes it a foundational article.

The Correlates of Entrepreneurship in Three Types of Firms

In this article, Miller (1983) discusses how different configurations of firms are associated with different ways of organizing and different types of behaviors. He proposes three types of firms inspired by Mintzberg (1973, 1979): Simple, Planning and Organic. The Simple firm is characterized by a smaller size, operating in a homogeneous environment, centralized structure and implicit reliance in the leaders. In this type of organization, how entrepreneurial the firm is would reflect the owner(s)/manager(s).

The Planning firm is characterized by a larger size, in a stable environment, with centralized structure and reliance to control and planning systems. Efficiency is privileged in this type of firm. Entrepreneurship would be much related to the firm's strategy and would follow a systematic process of innovation. The Organic firm is characterized by different organizational sizes, a complex environment, a decentralized structure with delegation of authority and reliance to a flexible and adaptive planning. The complexity and hostility of the environment could dictate how entrepreneurial the firm would be.

In considering these firms, he discusses three characteristics that relate to entrepreneurship: innovativeness, proactiveness and risk-taking. He describes an entrepreneurial firm as:

> One that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch. A nonentrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of competitors instead of leading the way. We can tentatively view entrepreneurship as a composite weighting of these three variables. (Miller 1983; p. 771)

This last sentence seems to lie at the foundation of what came to be known as EO. Although he never mentions the words "Entrepreneurial Orientation" in his article, the concept is described clearly.

Another major contribution to the field of entrepreneurship is the focus on the firm as the unit of analysis as opposed to the entrepreneur as an individual. As such, it has effectively opened the door to the study of entrepreneurial actions within larger organizations, CE. Taken together, EO and CE allow scholars to study how all firms, not just start-ups, are able to innovate and start new ventures. It is not just the creation of new firms but also innovative projects by a firm's subunit.

By presenting three types of firms with very different characteristics and looking at how entrepreneurial they are, this article considers how different firm configurations might present distinct patterns of entrepreneurial actions. In a configurational approach, the setup of the firm, its environment, its context and its strategies are interrelated to dictate how entrepreneurial the firm would act.

Early Influence of Entrepreneurial Orientation Research

Considering the importance of EO within entrepreneurial research, it is a wonder why it took such a long time for the concept to pick up steam. Two articles helped bring EO to prominence: "Strategic management of small firms in hostile and benign environments" by Covin and Slevin (1989) and "Clarifying the entrepreneurial orientation construct and linking it to performance" by Lumpkin and Dess (1996). Both are further discussed in other chapters so they are only summarily discussed in how they relate to Miller (1983). First, Covin and Slevin (1989) build on Miller (1983) to highlight how the environmental context might favor or harm different types of strategic management practices. They show that the structure and strategy adopted by firms affect how they can answer the specific demands of their industry. Meanwhile, Lumpkin and Dess (1996) extend the three dimensions of EO (proactiveness, innovativeness and risk-making) previously introduced by Miller (1983) with two additional dimensions (competitive aggressiveness and autonomy). They suggest that EO could act as an indicator of the entrepreneurship process by firms.

The early days of building up the concept of EO has played a significant role in the perception of how firms grow and survive. It provides a firm-level perspective that helped understand how organizations develop an entrepreneurial mindset and culture.

EO and Firm Performance

While Lumpkin and Dess (1996) were the first to discuss performance related to EO, research has subsequently picked up on how EO influences a firm performance. Wiklund and Shepherd (2005) highlight how performance can be measured through different ways such as growth, profit and cash flow. For their study, they use a measure of the perceived level of satisfaction for the access to financial capital. The respondents mostly self-reported on some subjective indicators such as "better or worse" than competitors. This indicates that EO really depicts how firms evolve and how it influences not only performance but how it is measured.

Rauch, Wiklund, Lumpkin and Frese (2009) published a meta-analysis on EO. They find a distinction between financial and nonfinancial measures. Sales and return on investments (ROIs) are the primary financial measures. Meanwhile, satisfaction and global success ratings are the primary nonfinancial measures. They also observe that most studies relied on performance self-assessment. They conclude that EO is related to performance.

In regard to performance, the influence of Miller (1983) can be easily detected. When discussing Simple, Planning and Organic forms of the firm, he concludes that the relation between the structure and the strategy of those firms provides them with a positioning toward entrepreneurial activities. In this instance, how each different type of firm chooses to pursue its activities plays a role directly on its performance.

Corporate Entrepreneurship

Miller (1983) was among the first papers to discuss entrepreneurship at a firm level rather than an individual level. EO provides a perspective of how different components of a firm would make it more or less entrepreneurial and how it plays a role in the firm's continual survival and growth.

CE can be described in different ways. Covin and Miles (1999) provide three of the most common situations in which it takes effect:

> (1) an "established" organization enters a new business; (2) an individual or individuals champion new product ideas within a corporate context; and (3) an "entrepreneurial" philosophy permeates an entire organization's outlook and operations. These phenomena are not inherently alternative (i.e. mutually exclusive) constructs, but may co-exist as separate dimensions of entrepreneurial activity within a single organization. (p. 48)

Covin and Slevin (1991) highlighted the growing interest in CE. They discuss the development of the entrepreneurial process and how it evolved into including firm-level characteristics and how it can be measured through a firm's performance. They pursue the idea put forth by Miller (1983) and Burgelman (1984) that entrepreneurship can be a firm-level phenomenon. They build on the idea that, depending on the structure of the firm, individual-level and organizational-level characteristics can overlap but would diverge as the size of the firm increases and its structure changes.

Zahra and Covin (1995) define their concept of CE from Miller's (1983) perception of a firm's commitment to innovation and how it links to EO. They equate CE to the components of EO. In that sense, they indicate that CE represents a firm's willingness, "to engage in business ventures or strategies in which the outcome may be highly uncertain. Together, product innovation, proactiveness, and risk-taking capture the essence of CE" (Zahra and Covin 1995; p. 45). They also highlight how it relates to the firm's financial performance. They suggest that CE would be a long-term commitment by the firm and is embedded in their organizational culture. It would be greatly influenced by their environment.

Barringer and Bluedorn (1999) define CE as behavioral phenomena. They argue that "all firms fall along a conceptual continuum that ranges from highly conservative to highly entrepreneurial. Entrepreneurial firms are risk-taking, innovative, and proactive" (p. 422). They suggest that entrepreneurial firms include extensive scanning, short-term planning and flexibility.

Covin and Miles (1999) studied CE and correlate it to the components of EO as introduced by Miller (1983): innovativeness, proactiveness and risk-taking. They argue that the study of EO should be related to firm performance or competitiveness. CE follows the same pattern with an emphasis on the increase of competitiveness. It seeks to observe the rejuvenation, reinvigoration and reinvention of firms. EO would influence directly how firms would enact their entrepreneurial spirit. As such, CE could be situated within a continuum of EO. It would span from organizational rejuvenation all the way to domain redefinition. EO would then be a marker of what firms might do in order to achieve competitive advantage and how it relates to the firm's strength and its industry context.

The study of CE has implications for how firms can sustain growth over time and how they can maintain their advantage. Miller's (1983) paper provided the impetus to develop CE. The components of EO, as introduced in the paper, play a role in CE. They influence how a firm acts and how it can position itself within its industry.

Configurational Approach

An important theme of Miller (1983) that has mostly been underappreciated is the configurational approach. By separating into Simple, Planning and Organic firms with different levels of innovativeness, risk-taking and proactiveness, there is an emphasis on how distinct configurations influence the way firms operate. The focus of the firm and its personality are important determinants of how entrepreneurial a firm is. The configuration also would dictate how the firm works with its environment and how the different correlates are influenced by it.

Wiklund and Shepherd (2005) describe how increased comprehension of firm-related phenomena like performance and growth can be attained by better understanding how firms share some commonalities. The further exploration of how certain attributes span across firms would identify why those firms share those attributes. Configurations display how certain aspects of a firm are complementary and would thus be present within different firms. Within a configurational logic, a firm's structure, its different attributes and its interaction with its environment affect its performance and its positioning toward its competitors. As such, there could be an isomorphism of configurations as firms that adequately match their configurations to their structure would show better odds of surviving. Ultimately, there would be a congruence of configurations depending on the structure of a firm. Therefore, the study of EO would be most appropriate following a configurational approach.

Miller Revisited (2011)

In an interesting evolution to his 1983 article, Miller (2011) wrote a paper to assess how the concept of EO has been studied by other scholars. With almost 30 years between the two articles, there were many opportunities to sit back and reflect on what had been achieved. In reviewing the different directions in which research has gone, he provides an overview of how EO has attracted scholars into a multitude of themes such as environmental and organizational factors, strategic context, organizational resources and performances.

Within the paper, Miller (2011) highlights the evolution of EO into a process. He also discusses how the different components of EO have been perceived by other researchers. As such, from the original components of proactiveness, innovativeness and risk-taking, some studies add competitive aggressiveness and autonomy. He also describes a broadening of the scope of study of the EO construct. This is represented by the interest in the antecedents of EO and its effect on firm performance. Finally, he points toward the sophistication of methodology and measurements related to EO.

An important part of this paper is Miller's suggestions on how to improve on EO research and what scholars can focus on in the future. He highlights a few weaknesses of EO research and how to improve on them. He pleads for researchers to investigate EO on a deeper level and a more cumulative knowledge. He argues that there are too few quality qualitative studies and that the scales used in evaluating EO have been the same for most studies. It has led to a restraint in the operationalization of the EO construct. He also adds that longitudinal studies such as panel data research and event history studies would improve the knowledge of how EO emerges and evolves over time.

In order to further the knowledge on EO, Miller recommends a few directions for researchers to investigate. He suggests alternative operationalizations of the EO construct, most specifically different measures and instruments. He argues for a separation of the aspects of EO into attitudinal and behavioral ones. This could effectively provide a clear scheme of research for scholars. On the one hand, attitudinal aspects would be reflected through qualitative methodologies such as interviews and observations to better understand their conceptions of EO and how it impacts their vision of their organizations. On the other hand, behavioral aspects would be measured with quantitative methodologies such as secondary data like investments and sales to better understand how they act based on each component of EO.

He highlights how EO research might benefit from a clearer clarification of the different types of entrepreneurial initiatives. He discusses how a variety of new entries exists depending on the circumstances of the firm. He distinguishes how start-ups, high-tech venturing and intrapreneurship might be studied differently. By looking at new entries at both different levels of analysis and at different periods of organizations, it could effectively uncover new variables of EO. By attaining a higher degree of specificity customized to different types of firms, EO indicators might provide a better assessment of their entrepreneurial process. Miller additionally advocates for further precision by disaggregating the components of EO and studying them specifically within the particular context of organizations. He suggests that each component could potentially impact the organization differently at discrete instances in its lifecycle. It also brings to mind that each different component could impact organizational indicators such as performance or growth.

Miller argues for both more fine-grained research into the context of firms and linking EO to current theories. He highlights how the precise circumstances and environment of an organization affect how it operates. Thus, studies within specific industries, specific regions and following specific events would add to the knowledge on EO. In addition, he contends that theories such as agency theory, resource-based theory and the dynamic capabilities have contributed to better study the construct of EO but that further endeavors within organizational theories would enhance EO research in the future.

Finally, Miller advocates for the configurational approach. In what arguably is the core of this paper, he insists that it could be integral to the study of EO. Returning to Miller (1983) and incorporating some of the previous elements from the 2011 paper, he reiterates the importance of the context of organizations and how they compare to each other. As such, he argues that understanding theoretical typologies and empirical taxonomies gives a perspective to how EO is enacted. He goes further in reasoning that how theories are applied to study EO could be impacted by the type of industry, environment or context. His example is that institutional logics might dictate that EO would impede law firms while enhancing consultancy firms.

Miller provides a fair assessment of the status of research on EO and how it has evolved since the early years of the introduction of the construct. As such, while Miller (1983) acts as the catalyst in introducing EO to entrepreneurship scholars, Miller (2011) would serve as a guide to better understanding it and to expand its reach. First off, by reintroducing the different dimensions of EO and the configurational approach, he efficiently summarizes his 1983 paper. Second, his recommendations of following EO as a process and of diversifying the methods to study are given. This is particularly relevant as it could influence how future scholars can approach research on EO. A more qualitative methodology with in-depth studies and a process perspective effectively create a whole new dimension to research in EO. Finally, his suggestions of domains of enquiry serve as a bridge to other fields. This would effectively allow to broaden the scope of research of EO. As such, Miller (2011), as a complement to Miller (1983), plays a critical role in the EO literature since the two taken together help define the field.

Contemporary Research on the EO Construct

As Miller (2011) advocated, recent studies on EO have evolved and helped the construct progress. The EO construct has been maintaining the interest of scholars since the early 1990s but it has garnered additional attention since 2011. As such, more than three decades after it was published, Miller (1983) has been cited 437 times in 2013, 425 times in 2014, 437 times in 2015 and 550 times in 2016.

The topics presented in the following section include some contemporary researches that help the progression of the EO construct. They are influenced by Miller (1983) and build from the recommendations from Miller (2011) to broaden the research scope on EO.

EO Measurement

A topic that has been discussed since the Miller (1983) paper is how to measure EO. As mentioned earlier, the dependent variable usually hinges on performance, whether financial or nonfinancial. As Miller (2011) expressed, a more difficult task has been to measure the determinants of EO and their relation with performance. As such, scholars have tried to both expand and organize how the determinants of EO can be measured.

Covin and Wales (2012) discussed how these measures can be divided into two different types: formative and reflective. Formative measures are independent among themselves. In that regard, they recommend examining their external validity. Reflective measures are correlated between themselves and would lean toward the same direction. They recommend examining their correlation and internal consistency. They posit that EO can effectively be measured through both types of measures depending on the model selected for research. They present four different models that can be measured differently: the Miller/Covin and Slevin, an alternative first-order reflective EO scale, the Hughes and Morgan EO scale and a "Type II" second-order formative EO scale. They conclude that each model measures a different phenomenon of EO.

Anderson, Kreiser, Kuratko, Hornsby and Eshima (2015) proposed a different approach to EO and to its measurement. They suggest an EO model of entrepreneurial behaviors and managerial attitude toward risk. They took the three components from Miller (1983) and associated with the two dimensions. Proactiveness and innovativeness would be related to entrepreneurial behaviors and risk-taking would be related to managerial attitude toward risk. Within this approach, the components would require formative measures. Meanwhile, the two dimensions would be measured in a reflective way as they relate to EO. Their reconceptualization of EO opens the door to future research and to the broadening of the concept.

EO and Firm Growth

Miller (2011) argued that the determinants of EO would have different effects based on the configuration of firms. As such, growth might be related to the context, the structure and the environment of the firm. EO might be particularly salient to young firms as well as older firms that seek to avoid stalling. Scholars studying the EO-growth relationship examine how EO influences the growth of the firm based on different factors such as firm age, scarcity of resources and strategic posture.

Anderson and Eshima (2013) discuss how growth becomes more difficult for older firms. They argue that organizational routines can hinder the process of their growth. They can limit their adaptability, decrease their market responsiveness and provide them with outdated market knowledge. They posit that as firms age and accumulate intangible resources, EO has a lowered effect. However, they also find that those intangible resources, by themselves, are an important source of growth for new ventures. EO and intangible resources are correlated and interact to provide growth. As such, while EO plays a role in the growth of small and medium-sized enterprises (SMEs), it becomes much more complicated for older firms. Since EO is a strategic posture that consumes large quantities of resources, it requires a commitment from the firm. Furthermore, with EO being associated with a renewal of the organization and its resources, a path dependency based on intangible resources could prevent effective growth within older organizations. And so, intangibles that are so important for young ventures could become limitations to older firms. EO thus needs to be studied differently for younger firms than it would be for older firms.

Eggers, Kraus, Hughes, Laraway and Snycerski (2013) discuss SME growth and the impact of EO and customer orientation (CO) on it. They argue that the scarcity of resources for SME might preclude them from following both postures. They determine that EO is a driver of growth because it puts a focus on innovation that will bring a renewal of the firm. On the other hand, CO focuses on the immediate and how to satisfy the current needs of customers. In the case of SME, scarcity of resources would lead them to concentrate on generating immediate revenues. They are thus posturing toward CO and the gathering of financial resources. However, they find that the highest growth rate among SMEs is achieved through a high EO coupled with a low CO. As such, they do not see EO as a continuous trait of growing and performing firms but that, rather, it is fluctuating between high EO/low CO and low EO/high CO to balance successful growth strategies.

Lechner and Gudmundsson (2014) discuss how EO relates to not only growth but also survival of the firm. They find that the different dimensions of EO have different impacts on survival. As such, innovativeness correlates positively while risk-taking and competitive aggressiveness correlate negatively. So, although EO can help firms grow, it can also become a hindrance to their survival if its dimensions such as risk-taking and competitive aggressiveness reach high levels. Also, they compare how different types of strategies relate to EO and how they influence growth. They find that EO has a positive association with differentiation and a negative one with cost leadership when it comes to firm growth. It is linked to characteristics that are related to both EO and differentiation such as speed and flexibility. On the other hand, cost leadership is related to routine and uniformity.

McKinley, Latham and Braun (2014) discuss how EO plays a role, both positively and negatively, in the decline and turnarounds of firms. They propose that EO can provide a turnaround when a declining organization stimulates innovation that helps to reverse their decline. This requires that those innovations be flexible. On the other hand, if the innovation produced is rigid, it could lead to further decline. As such, innovativeness can help the survival and growth of firms, even those that are going through a decline. However, other dimensions of EO would play a role in the effect of innovativeness on decline and turnarounds. Proactiveness would help firms to not be locked into a rigid innovation while risk-taking would be the impetus to use the innovation to turn around the decline. Eshima and Anderson (2016) discuss how adaptive capability relates to EO for the growth of the firm. They argue that fast-growing firms are faced with a changing market. As such, adaptability has to increase to cope with it. It affords the firm with increased resources and the possibilities of resource combinations. In this regard, since EO is a resource-consuming strategic posture, increased adaptive capabilities would be correlated with EO. Furthermore, adaptive capabilities might be related to uncertainties coming from exploiting opportunities. As they do so, they might be required to adapt quickly. In the same sense, opportunity uncertainties are better coped with by firms through EO.

The components of EO as originally introduced by Miller (1983) showed that firms grow differently based on the way they are configured. He discussed how the three types of firms studied operated differently. It displayed that they not only had a different orientation but also demanded a totally different setup. As such, the different concepts discussed such as intangible resources, CO and adaptive capabilities affect the growth of firms differently as they interact with the way their EO is enacted.

EO and Family Firms

A topic that has gained steam in EO research is its impact on family firms. They have characteristics that make their studies compelling from an EO perspective. Miller (2011) suggested that the configurational approach might be integral to EO research. As such, a family firm can be configured in many ways with their own internal factors that influence how EO would be enacted. Scholars studying EO within family business answer calls to investigate different contexts related to family firms, how each determinant of EO acts differently within family firms and how longitudinal studies of EO within transgenerational firms could provide deeper knowledge.

Kellermanns, Eddleston, Sarathy and Murphy (2012) discuss how innovativeness is enacted in family firms. They highlight three characteristics of the family influence: how the family gets involved in the management, how dispersed the generational ownership is and the reciprocity of the family members. The way a family firm behaves can be explained in great part by how much the family is involved in the firm management. Furthermore, the maintenance of the family control over generations is a main feature of family firms.

In an EO fashion, the development of long-term goals and strategies by family members could lead to high performance by family firms. In opposition to non-family firms, family firms add a level of complexity as the firm grows. They have a generational layer that has a potential for discord. Relationships are not managed in the same manner either. Family firms generally start with more goodwill and altruism but these characteristics might erode over time. As more family members get involved and generations overlap, family ties and commitment to the firm might loosen. Another characteristic of family firms is the desire of their members to put aside their interests for that of the business. As such, they are more willing to assist each other and share responsibilities. This plays a role into how these firms can renew themselves and how they innovate.

Family members greatly influence the EO of family firms. In that regard, there is some complexity in how it is enacted, since family firms serve two different interests: that of the business and of the family. When these interests converge, then EO-related posturing can be achieved in the same manner as in non-family firms. However, when these interests diverge, the way EO is performed could be complicated. In such an instance, innovativeness and its perceived value to the firm could be the result of internal strife and would thus evolve in the same manner as family-member involvement increases. Therefore, family firms would likely experience stagnancy and slowly lose market shares. However, for families that embrace an EO posture, it would seem that their firms benefited from it than non-family firms. As opposed to generational decline, a clear entrepreneurial strategic positioning and organizational culture would effectively turn current family members and incoming generations into assets to the firm. With a clear and united vision, family members can work together to help with the identification of the opportunities and threats of the firm.

While EO has an impact on the continual growth of organizations, it might play an even bigger role in family firms. Because of the unique features of the family firm, a clearly defined entrepreneurial posture will enhance the relationship among family members and provide a direction for incoming generations.

T. Zellweger and Sieger (2012) discuss EO within family firms. They evaluate how each of its dimensions interacts differently as opposed to non-family firms. They argue that the dimensions of autonomy, proactiveness and innovativeness are related to their long-term performance. However, the perspective on performance and the dimensions of EO for family firms might be based on different points of reference. To protect the interests of the family, family firms might make decisions that would go against their performance. Autonomy is a driver of entrepreneurial activity because it empowers members of the firm. They find that it decreases as the firm grows. Each new generation would reduce the control in the hands of families. The latter generations would become less involved. And thus, the professionalization and involvement of managers outside the family reduce the internal autonomy of the family firm. They find that proactiveness is enacted in a particular manner within family firms. It exhibits a pattern that fluctuates over time. There would be low proactiveness most of the time with specific periods of high proactiveness. As such, the general attitude would be one of lying low until the right moment at which they would take carefully planned initiatives. However, they find that the structure of family firms might be a hindrance to proactiveness.

One particularity of family firms is the possibility of non-active family members owning parts of the firm. Since they are not involved in firm operations, they adopt a safer posture to protect their assets. As for innovativeness, there is also a particularity associated with family firms. There seems to be a preference for internal innovations as opposed to external innovations. This is explained by members of the family looking to build for the future. They aim to develop organizational system or structure rather than look for new products. As such, they focus on building internal capabilities before moving on to product innovation and inventions. The impact of EO on family firms, particularly as it pertains to crossing generations, might be of a dynamic nature. It might not be beneficial for them to try to attain the maximum level on all levels of EO. Rather, it would seem that it needs to be constantly adjusted to the situation of the firm. Also, it might seem that EO would be impacted strongly by changes in generation.

T.M. Zellweger, Nason and Nordqvist (2012) discuss how the particularities of family firms provide them with certain specificities in terms of EO. They compare it to a family orientation with the following dimensions: loyalty, security, stability and tradition. They also examine transgenerational entrepreneurship which is defined as the entrepreneurial mindset to renew the firms through generations. They highlight how those firms are confronted with a paradox of continuity for the family and change for the business. They suggest a concept called family entrepreneurial orientation (FEO) that they define as the family's attitudes toward entrepreneurship. A unique specificity of family firms is their divestment and rearrangement in their business portfolio between generations. This is reflected in FEO where the EO of the firm is not seen uniquely in terms of its own growth but also the growth of the family's wealth. In this instance, the dimensions of EO related to firm performance would need to be balanced with the dimensions of family orientation. These dimensions would take into account the interest of the family while covering entrepreneurial attitudes. They suggest that FEO focuses on value creation through generations by accommodating both the family and the business.

Eddleston, Kellermanns, Floyd, Crittenden and Crittenden (2013) discuss how generational differences affect the growth of family firms and how dimensions of EO would play a role in it. They find that strategic planning and succession planning help family firms grow but at different stages of their lifecycle depending on the generation in charge. Strategic and succession planning are a reflection of the firm's engagement to its growth and how well it is communicated to members of the family as well as non-family members of the organization. It is required in order to keep family firms entrepreneurial. This is brought on by the fact that changes in generation bring different types of posture to the firm. First-generation members are the ones finding and exploiting an opportunity. The founder's traits are embedded within the firm and its orientation is usually directed by them. EO is not usually overly present within the second generation because of its dynamics. It is created by conflicts among siblings. As such, decisions about firm development are more difficult to make because of a lack of consensus. With the third generation, an increase on EO might occur. This could be because of an increase in professionalization. With less strife and more non-family managers, there is more opportunity to make decisions about growth opportunities. However, with an increase of passive shareholders composed of family members, they might have a short-term perspective and seek dividends over long-term planning. As such, there are elements playing against EO and the growth of firms at each different generation. First generation might have some blindness related to their beliefs in themselves and in what they perceived as a successful strategy. Second generation might be slowed down by conflicts among siblings. Finally, third generation and later generations have a more fragmented ownership and passive family members. This slows decision-making and puts up barriers to growth. EO would be enacted differently with each generation of the firm because of their idiosyncratic nature. The study of EO within family firms would be required to take that into account.

Boling, Pieper and Covin (2015) discuss how the tenure of CEOs in family firms plays a role in their EO. They address how short-tenure and long-tenure CEOs have a negative effect on EO. They find, however, that this inverse u-shaped relationship is tampered in family firms. Because of the nature of family firms, CEOs that are family members do not have as much pressure to perform and have the freedom to follow an EO posture.

Miller (1983) showed the importance of the configurational approach because it shows how each type of firm acts differently. In doing so, it put forward EO and its dimensions. Family firms add a layer of component within the configurational approach with their different characteristics.

Furthermore, EO has a distinct impact on family firms and is enacted in a separate manner. Because of generational disparities, EO and its dimensions are represented differently at discrete stages in their life.

EO Internationalization

Miller (2011) argues that the location of firms would have an influence on EO research. The internationalization of firms would serve as a proper field of study for EO scholars. The different dimensions of EO would interact in a divergent manner with firms that are in the process of internationalization or that are already in multiple countries.

Brouthers, Nakos and Dimitratos (2015) discuss how firm internationalization is facilitated by higher EO. They argue that it is provided through alliances with foreign market partners. As such, high EO firms gain more from these alliances because they possess the necessary capabilities and mindset to exploit resources from these external sources. They highlight innovations in marketing and technology as the two primary benefits of international alliances. This is mainly because of their willingness to innovate, their proactiveness in doing so and their ease with the risk that comes from changes to their currently used technology or their marketing process. While there is a higher cost associated with adapting to their targeted foreign market, it can provide them more legitimacy within that market. By matching with the demands of the consumers' base, these firms enhance their probability of success in the new market. Finally, they find that higher EO provides firms with a better posture in the identification and pursuit of opportunities in foreign markets.

Covin and Miller (2014) review international entrepreneurial orientation (IEO). They suggest that it has been both discussed within the construct of EO and within the construct of international entrepreneurship (IE). They cite McDougall and Oviatt (2000) in defining IE: "a combination of innovative, proactive and risk-seeking behavior that crosses national borders and is intended to create value in organizations" (p. 903). It can thus be perceived as being quite close to EO. This would include a global orientation to the dimensions of EO. As such, the mindset of global organizations would both be entrepreneurial and international. They discuss how international performance is related to IEO. Most studies reviewed indicate that there is a positive impact of IEO on those international ventures. Proactiveness has been highlighted as being the better indicator for how firms perform in the international arena. One way through which it is achieved is by positively affecting the speed of internalization. It would be achieved through the amount of foreign market knowledge they can acquire. A factor that could play a significant role in how performance is achieved through IEO is the IT capability of the firm. They suggest that IEO might not only be at the juncture of EO and IE but that there might exist some dimensions that are not recognized or discussed. It makes IEO an interesting domain of research.

IEO is an interesting construct at the juncture or EO and IEO. It might as well possess its own characteristics and dimensions. Following Miller (1983), it becomes an extension of the three dimensions presented of proactiveness, innovativeness and risk-taking. As such, they play an important role in how firms internationalize but there is an addition related to the types and configuration of firms. Firms that are seeking to internationalize are entrepreneurial in nature but they also have an additional dimension related to culture. As such, IEO could be a significant research stream in future.

Conclusion

The article presented in this chapter is an example of how some of the work carried out in the 1980s has been invaluable to the development of the research in entrepreneurship. Its influence on entrepreneurship research has been twofold. First, the introduction of the EO concept has provided ample opportunities for scholars to develop research projects that enhanced knowledge on a variety of themes in entrepreneurship. It has broached into research domains such as international entrepreneurship, family business, knowledge transfer, market orientation, CO, learning orientation and top management team (TMT). It highlights how EO is deeply embedded within the domain of entrepreneurship. In allowing future research on such a variety of topics, this article has influenced the shape of the field in the past 30 years. Second, this article has provided an opportunity for scholars to explore the phenomenon of CE. While there were prior studies on how firms innovate, this article has offered a link to the behaviors and attitude of a firm with how entrepreneurial they are. The study of different types of firms and of different configurations allowed to observe a difference in how those firms acted and their characteristics in their specific context. In doing so, it afforded future researchers with the perspectives that the study of entrepreneurship and new ventures can be achieved in larger organizations as well as in SMEs.

The fact that this article has been consistently cited over time and that it has received more yearly references as time passes on shows it is still much in discussion now. As a foundational article in the field of entrepreneurship research, its evolution in a way reflects that of the field. The number of citations showed an increase in the 2000s while it effectively exploded in the 2010s. It displays how the field has truly come into its own and how interest has built over time to really emerge as an important research domain in the last few years.

As shown by the few examples presented in this chapter as well as with recommendations from Miller (2011), there are many future research opportunities originating from this article and the phenomena of EO and CE. An amazing feature of this article is that its main message has been mostly underexploited. As explained by Miller (2011), the purpose of the article was to discuss how distinct configurations in different contexts can result in divergent firm behaviors. The configurational perspective has not been overly discussed in the entrepreneurship literature (Wiklund and Shepherd 2005). It has the potential to become an important research stream in entrepreneurship.

Table 4.1 summarizes what Miller accomplished with his 1983 paper and his 2011 paper. It displays the importance of some of the elements introduced in those papers and how they are represented by the author through some quotes. EO, CE and the configurational approach would be the most important concepts put forward in Miller (1983). Meanwhile, a process perspective and alternative operationalizations of EO can be taken from Miller (2011). Finally, based on recommendations from Miller (2011), some work can be further done in order to improve the EO field.

The research in the early years has served to strengthen the concept of EO. It effectively provided a perspective of how firms can adopt an entrepreneurial posture. In recent years, EO has expended its research scope to different topics. Research has evolved into different streams. Each of them explores a different way of pushing the limits of knowledge on the working of EO. We are a long way from the original work of Miller (1983) but he initiated a stream of research that has developed into a major domain of entrepreneurship. It has still much to be developed and, furthermore, it has the potential to spread to even more streams of research.

Table 4.1 Summary of what has been done by Miller (1983, 2011) and what still needs to be done

Miller (1983)		
EO	Firms have an EO that dictates how entrepreneurial they are. Different dimensions would dictate this EO such as innovativeness, proactiveness and risk-taking.	Entrepreneurship is integrally related to variables of environment, structure, strategy and leadership personality and these relationships vary systematically and logically from one type of a firm to another.
CE	How entrepreneurial a firm does not depend on the characteristics of the owner but also depends on the makeup of the firm and its determinants.	In Simple firms, entrepreneurship is very tied up with the leader's personality, power and information that almost nothing else seems to count. Planners make an effort to buffer themselves from their environments. Thus they do not gear their levels of entrepreneurship to the external circumstances which they face. Neither environmental dynamism, heterogeneity nor hostility relate significantly to entrepreneurship. Instead, entrepreneurial activity depends upon internal initiative. Organic firms have so many interdependencies among all classes of variables. Given that their goal is to adapt to the environment, the nature of environment will influence structure and strategy. Strategy and structure can in sum influence decision-making and entrepreneurship. In other words, in Organic firms there may be tightly interdependent constellations of variables.
Configurational approach	The makeup of a firm dictates how it operates and the strategies it adopts.	Different firms probably do require very different kinds of forces to stimulate entrepreneurship. There seem to be very few panaceas for promoting entrepreneurial activity.

(*continued*)

Table 4.1 (continued)

Miller (2011)		
Process	The context of a firm and how it evolves contribute greatly on how entrepreneurial it can be.	The challenge to derive fine-grained contextualized findings that are relevant to specific, richly described contexts exists across the management discipline and in most of the social sciences. Indeed, there is a growing need to fragment complexity so we can get informative and relevant accounts of particular situations. Event-based aspects of context also may be useful to explore: these include transformations in an industry or crises in a firm, changes in leadership, ownership or in the top team and the implementation of new laws and policies. Context specificity may limit generality but may enhance application and generate more fine-grained and more empirically valid knowledge.
Alternative operationalizations	As there are different determinants to EO, there might also be different ways to operationalize and measure it.	It may be time to try different measures, perhaps those that distinguish quite sharply the attitudinal from the behavioral aspects of EO.
What still needs to be done		
Measurement	With its influence on many aspects of the firm, mainly attitudes and behaviors, further work needs to be done in order to achieve a better understanding of the EO construct and how to measure its determinants properly.	
Firm growth	The relation between firm growth and EO has been approached by Miller (1983). However, there have not been sufficient studies to formally show how they influence one another.	
Family firms	Family firms are particular because they might carry different objectives than non-family firms. The way they enact EO might thus be quite different also. Further enquiry into EO within family firms would improve the knowledge of EO.	
Internationalization	The internationalization of a firm is a particular context that would be greatly influenced by the study of EO. IEO could provide a deeper understanding of the mechanisms of EO.	

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CHAPTER 5

New Venture Creation: From Gartner to the Present

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Introduction

William B. Gartner's seminal paper in 1985 (Gartner 1985) on new venture creation brought a fresh focus on the process of entrepreneurship, the birth of a new venture and on all the factors that made the birth possible. Much of the research before his paper was focused on the successful personalities running a business venture. It explored questions like whether entrepreneurs were different from non-entrepreneurs, whether entrepreneurs were born or made and whether entrepreneurial skills could be measured and predicted (Sexton et al. 1981).

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This chapter explores the areas of entrepreneurship research that have evolved and been built upon Gartner's framework. It examines whether and to what extent Gartner's framework explains these areas and the new sub-dimensions identified. It ends with a discussion on areas that would require modification of the framework and may lead to newer dimensions of research in order to advance the research on new venture creation. The paper uses a framework of asking questions of "What, Why, When, How, Where and Who" of new venture creation, as asked in the famous poem by Rudyard Kipling (1903):

I have six honest serving men
They taught me all I knew
Their names are What, and Why and When;
and How and Where and Who.

Gartner's paper, cited by 3408 research papers (Web of Science, till July 2017), provided a framework to study the commonalities and the differences between entrepreneurs and their entrepreneurial firms. Instead of keeping a focus on the entrepreneurial situation vis-à-vis a non-entrepreneurial one, it recognized that an entrepreneur was what an entrepreneur does. It brought focus to what the entrepreneur was doing, to the entrepreneurial venture created and to all the dimensions of the entrepreneurial process. To be able to design a framework to explore these dimensions, it was necessary to agree on a definition of a new venture. Gartner (1985) used the definition of a new venture as being one of the following: "a. an independent entity; b. a new profit center within a company which has other established businesses; or c. a joint venture satisfying the following criteria: 1. Its founders must acquire expertise in products, process, market and/or technology. 2. Results are expected beyond the year in which the investment is made. 3. It is considered a new market entrant by its competitors. 4. It is regarded as a new source of supply by its potential customers." Gartner's framework listed, as well as categorized, the variables of new venture creation into four factors, that is, the "individuals" responsible for creating the venture; the "process" of creation; the "organization" getting created; and the "environment" in which the venture was created.

The framework allowed researchers to examine the phenomenon of venture creation in its totality, along one of the dimensions or along the sub-dimensions. While the creators of different ventures may all be vastly different, may have operated in different business environments and created different kinds of ventures in different industries, the process of venture creation could be described using Gartner's framework, with a common language and format. Some researchers focused on the individual entrepreneurs creating the venture, their driving factors and decision-making process. Some researchers focused on the process of venture creation and how resources and competencies were identified and utilized. Some other researchers focused on the circumstances of venture creation, the environment that the venture had responded to and the response of markets to it. Finally, some researchers focused on the venture itself, what type of venture it was and what kind of returns it would be able to give.

Several of the sub-dimensions of the entrepreneurship process have evolved since Gartner's paper. The individual entrepreneur may further be described as an immigrant, diaspora or an ethnic entrepreneur, a parallel or part-time entrepreneur or a serial entrepreneur. The entrepreneurial process may have got initiated and developed as part of an academic, family business, corporate or government initiative. The new venture may be operating in a transnational, global or international environment, in an emerging market or in a particular geographical cluster. The new venture may also have been created to solve rural, social or sustainability issues and may not have mainly a profit motive. The new venture may be in the e-commerce space, selling physical goods or it may be selling digital products.

The Framework for New Venture Creation by Gartner

The framework provided by Gartner elegantly covered all the variables of new venture creation and provided a method to conduct meaningful analyses into the sub-dimensions, while simultaneously providing a synthesis. Different new ventures, of varying size, age, locations, type of industry and performance, could be analyzed and compared. The dimensions for individual entrepreneurs or entrepreneurial teams included measures of age, educational background, work experience, parental influence and the psychological characteristics of need for achievement, locus of control and risk-taking propensity. The process dimensions were derived from the common behaviors of entrepreneurs, of locating a business opportunity, accumulating resources for it, producing and marketing its products and services, responding to regulations and norms of government and society, and building an organization. The environmental variables contained variables considered relatively fixed for the entrepreneur: availability of venture capital, land, facilities and supporting services; presence of skilled and experienced resources, and proximity of universities; accessibility of suppliers, customers, markets and transportation; attitude of the population and living conditions in the neighborhood; and influence in government. High occupational and industrial differentiation, a high percentage of recent immigrants in the population, a large industrial base, larger size urban areas and availability of financial resources were all correlated with a high frequency of venture creation. The five competitive environmental influences on organizations (Porter 1980) of barriers to entry, rivalry among existing competitors, pressure from substitute products and bargaining power of buyers and suppliers complete the list. The venture dimensions include strategic choices for the venture-like overall cost leadership, differentiation and focus (Porter 1980). They include other strategic choices of the new venture like the new products and services; parallel competition, customer contract, franchise entry, joint ventures and licensing; tapping unutilized resources, supply shortage, becoming a second source, market relinquishment or sell off of a division; and geographical transfer, favored purchasing by government and government rule changes.

As the types of ventures and the types of entrepreneurship have grown since Gartner's paper, the framework has assisted in analyzing these differences. It has done so with more sub-dimensions getting added to the framework, taking into account the necessary complexity, yet retaining the essence and simplicity of the framework. The dynamic nature of the variables in each aspect of venture creation and the nature of the relationships between them have also been the subject of research.

Post-Gartner

One contribution of Gartner's framework was the understanding that there was a great diversity among entrepreneurs and their ventures. This diversity was presumably even greater than between entrepreneurs and non-entrepreneurs or between entrepreneurial firms and non-entrepreneurial firms. Subsequent research has embraced this thought wholeheartedly and applied the framework to analyze evolving areas of new venture creation. To obtain an idea of recent research that has used Gartner's framework, a review of pertinent literature was done based on the papers published post-1985 and listed in Google Scholar. The papers had all cited Gartner's article and were arranged in order of the number of times they had themselves been cited. After an examination of all these papers and a careful selection of the relevant papers that had an impact on research into new venture creation, 100 articles were identified from 1985 to 2017. The dimensions and sub-dimensions that these articles dealt with, that were in line with those listed in Gartner's paper, were noted. New sub-dimensions or themes emerging from these articles, which were not mentioned in the original framework by Gartner, were noted as well. Several papers were found to deal with the entire framework, and not with any one particular dimension.

This analysis was not aimed at getting an exhaustive list of themes but to get an idea of the main research areas that were built upon Gartner's framework. In Gartner's framework there were four building blocks and each building block had a number of variables that could be studied. An analysis of the 100 selected articles post-Gartner's work, and which have cited the paper, is presented in Table 5.1. The framework of four dimensions and sub-dimensions in the original framework of Gartner was used for classification of these articles, as well as for identification of sub-dimensions that were new.

Individual(s): *Who creates a new venture? Why create a new venture?*

The new themes of inquiry about the background of the individual entrepreneur were an entrepreneurial education, emotional experience of entrepreneurship, culture and behaviors. While the personality of individual(s) creating a venture remained the largest area of interest, the questions were both more in-depth as well as broad based. Personality factors were studied for creation, as well as for nurturance and growth of ventures. The personality factors and decision-making process were explored for the founder-entrepreneur, for the entrepreneurial manager as compared to the corporate manager, for entrepreneurial teams as compared to individuals and for women entrepreneurs and women leaders. Misalignment or lack of consensus in entrepreneurial teams gave an opportunity to explore the consensus building process and style of leadership in such teams. The behaviors, interactions and processes of the team were analyzed in view of the educational and social background, experience, motivation and psychological factors of the individuals comprising the team.

An entrepreneurial intention takes place in the mind of the entrepreneur as a "choice" and as an outcome of several processes, some internal and some external to the entrepreneur. Some of the internal factors explored

Table 5.1 Articles in Google Scholar that cited Gartner's article

Focus dimension	*Sub-dimensions*	*Number of articles*
Individual(s)/firm(s) involved in creating a new venture	***Existing:*** Locus of control (Mueller and Thomas 2001) and risk-taking propensity (Palich and Bagby 1995; Das and Teng 1997; Simon et al. 2000; Stewart and Roth 2001; McMullen and Shepherd 2006); ***New sub-dimensions that emerged from the articles:*** Entrepreneurial behavior (Gartner et al. 1992; Becherer and Maurer 1999; Levesque and Minniti 2006), entrepreneurial culture (McGrath et al. 1992b), entrepreneurial decision-making (Shook et al. 2003), entrepreneurial education (Jack and Anderson 1999; Peterman and Kennedy 2003; Fayolle et al. 2006; Rasmussen and Sørheim 2006), entrepreneurial intensity (Morris and Sexton 1996), entrepreneurial intention (Boyd and Vozikis 1994; Thompson 2009; Bhaskar and Garimella 2017), entrepreneurial leadership (Daily et al. 2002), entrepreneurial learning (Cope and Watts 2000; Cope 2005), entrepreneurial motivation (Naffziger et al. 1994; Kuratko et al. 1997; Shane et al. 2012), entrepreneurial orientation (Smart and Conant 1994; Lumpkin and Dess 1996), entrepreneurial passion (Cardon et al. 2005; Cardon et al. 2009), entrepreneurial personality (Shane et al. 1991; McGrath et al. 1992a; Westhead and Wright 1998; Stewart et al. 1999; Mazzarol et al. 1999; Littunen 2000; Rauch and Frese 2000b; Gartner 2007; Kickul and Gundry 2002; Carter et al. 2003; Korunka et al. 2003; Vecchio 2003; Arenius and Minniti 2005; Rauch and Frese 2007), entrepreneurial teams (Ruef et al. 2003; Amason et al. 2006), women entrepreneurs (Bird and Brush 2002; Langowitz and Minniti 2007; Minniti and Nardone 2007), passion and grit of the entrepreneur (Mueller et al. 2017) and emotional experience of entrepreneurship (Zampetakis et al. 2017)	50

New venture processes	***Existing:*** Accumulating resources (Zott and Huy 2007; Lichtenstein and Brush 2001), building an organization (Stevenson and Jarillo 1990; Kazanjian 1988; Bruyat and Julien 2001; Cunningham and Lischeron 1991; Bhave 1994; Carter et al. 1996; Delmar and Shane 2004; Ucbasaran et al. 2001; Tornikoski and Newbert 2007), locating business opportunity (Alvarez and Barney 2007; Sarason et al. 2006; Dutta and Crossan 2005) and responding to government and society (Reynolds et al. 2005; Jack and Anderson 2002; Peredo and Chrisman 2006; Peng 2001; Dubini 1989; Shane 1996); ***New sub-dimensions that emerged from the articles:*** Regulatory focus theory (Brockner et al. 2004), social interaction (Lechler 2001) and prior entrepreneurial exposure (Zapkau et al. 2017)	23
New venture or organization that was created	***New sub-dimensions that emerged from the articles:*** Social entrepreneurship (Mair and Marti 2006; Sharir and Lerner 2006), venture performance (Chrisman et al. 1998; Cooper 1993; Kazanjian and Drazin 1989; Orser et al. 2000; Song et al. 2008) and new venture employer attractiveness (Moser et al. 2017)	8
New venture environment	***Existing:*** Accessibility of customers or new markets (Navis and Glynn 2010) and governmental influences (Gnyawali and Fogel 1994); ***New sub-dimensions that emerged from the articles:*** Industry evolution (Low and Abrahamson 1997) and network dynamics (Lechner et al. 2006; Coviello 2006; De Carolis and Saparito 2006)	6
Overall framework	***New sub-dimensions that emerged from the articles:*** Corporate entrepreneurship (Dess et al. 2003; Morris et al. 1994; Hornsby et al. 1993; Jones and Butler 1992) and future directions for research (Low and MacMillan 1988; Low 2001; Shane and Venkataraman 2000; Ogbor 2000; Zahra et al. 1999; Brazeal and Herbert 1999; Morris and Jones 1999; Gartner 1993; Wortman 1987)	13
Total		**100**

earlier were need for achievement, risk-taking propensity and an internal locus of control. The new sub-dimensions added were entrepreneurial intensity, entrepreneurial learning, entrepreneurial leadership, entrepreneurial motivation, entrepreneurial orientation, entrepreneurial passion, grit, personality and decision-making. While these factors could not be deemed to be necessary, and like the DNA of entrepreneurship, there was correlation between them and the behavior of entrepreneurship. The external factors could be task difficulty and luck, both of which were very individual dependent and variable (Shaver and Scott 1991). The entrepreneur had a personal view of the internal and external factors, which led to making a choice of "Do I want to do this?" "Can I do this?" and gave rise to "the entrepreneurial intention". Different types of entrepreneurs may have different entrepreneurial intentions (Bhaskar and Garimella 2017) while creating a new venture. For some it may be acquiring short-term profit, and for some others it may be creating an organization that survives in the long run. The gender of the entrepreneur was found to moderate the intent-behavior relationship (Shinnar et al. 2018). The entrepreneurial intentions may also change with time. For example, a social entrepreneurship firm can become a profit-making corporate firm if its business model is robust and successful. Similarly, passion and grit of the entrepreneur (Mueller et al. 2017) have emerged as behavioral traits of the entrepreneurs. Also, as suggested by Zampetakis et al. (2017), entrepreneurship is an emotional journey and the entrepreneur undergoes various positive and negative emotional experiences throughout his entrepreneurial journey. Therefore, the socio-psychological change that an entrepreneur undergoes while establishing and taking the new venture forward is also an interesting theme that could be researched further.

The relationship between entrepreneurial traits and entrepreneurial behaviors has been explored as a possible antecedent to entrepreneurial success. Differences between entrepreneurs are as wide as the differences between their ventures. Business planning and strategies mediate the relationship between traits and entrepreneurial actions, and the degree of mediation is different for specific entrepreneurs. Situational characteristics like the business and networking environment also acted as mediators. The correlations between traits and venture success have been found to be small, suggesting the need for further research into the mediating and moderating processes (Rauch and Frese 2000a). For small-scale enterprises, the owner's character assumed far greater importance than in large organizations. However, even for these, correlations between entrepreneurial traits and success were moderated by environmental hostility and dynamism, the lifecycle of the venture, the typology of the venture (Miles and Snow 1978), organizational goals and culture.

Several researchers have focused on variables relating to the individuals creating the venture as the most defining ones and the ones that set the direction for subsequent conceptualization and experience. Barbara Bird (1988) focused on entrepreneurial intention and brought back the discussion to the entrepreneurial personality, the "who" and "why" of creating a venture. Entrepreneurial intention was found to influence the formation, survival, development and growth of a venture due to the kind of attention, state of mind and actions of the entrepreneur. While the rational, analytical, cause-effect thinking of the entrepreneur was influenced by the social, political and economic context, the intuitive, holistic and contextual thinking was influenced by the personal history, current personality and abilities. The intentional process began with the needs, habits, values and wants of the entrepreneur and decided the strategic focus and entrepreneurial posture required to create a venture.

In a "call to action" for psychology, Hisrich et al. (2007) have argued that the lack of strong correlations between studies of entrepreneurial personality and subsequent venture success may be due to several limitations produced by research design and methodology factors. For example, the entrepreneurial journey of every entrepreneur was a long one, while studies were limited to a particular period and had a cut-off date. The entrepreneur evolved during the birth and growth of the venture and through the subsequent births of different ventures. Rarely were the founders studied during the process of giving birth to a new venture; rather they were observed at a stage when they could be identified as entrepreneurs with growing concerns. For ventures that had grown, there was an apparent confusion between personal successes of the entrepreneur and the success of the venture. The entrepreneurial personality was greatly influenced by its surrounding culture, the language, ethnicity, social class, regional, religious, national and international factors, as these determined the attitude toward entrepreneurship, the educational support for entrepreneurship and the funds available for entrepreneurship.

The entrepreneur or the entrepreneurial team deals with several uncertainties, ambiguities and constraints as part of the entrepreneurial journey. Some of the decision-making processes during the journey have been disentangled from individual traits and identified in terms of the cognition processes of making and sharing of managerial goals, tasks and responsibilities; information sharing; and mindfulness to tasks. It has been suggested that these processes be explored at individual, managerial and organizational levels of analyses (Grégoire et al. 2011). Entrepreneurship is no longer seen as a lone affair but a way of management in entrepreneurial teams and entrepreneurial organizations. Hence team cognition and team consensus have acquired greater importance in a new venture as they do in an organizational setting. While most research on entrepreneurial behavior has focused on behavioral factors as causative for venture performance, the effectuation process has focused on the means and resources available to the entrepreneur and the possible effects that could be created. Given a set of means and constraints that are unique and given for the entrepreneur, there are a set of limited options possible to realize a set of entrepreneurial aspirations. The entrepreneur selects options in the face of a set of risks and losses. An entrepreneurial firm forges alliances and partnerships to be able to exploit opportunities and offset risks. The effectuation theory recognizes the control in the hands of the entrepreneur and gives a method to analyze decisions taken to realize aspirations (Sarasvathy 2001).

Members of an entrepreneurial team select one another and decide on the business concept, strategy and growth plans (Kamm et al. 1990). The aspirations of entrepreneurs and the intensity of feelings to their work give rise to “entrepreneurial passion”. As entrepreneurs often work in teams, a “team entrepreneurial passion” has been defined, as something that measures how passionate the team is about the business of inventing a business concept or product; about founding a venture; and about developing the venture (Cardon et al. 2017).

Women entrepreneurs face unique challenges, biases and constraints by virtue of their gender in society. There have been a number of in-depth and qualitative studies to capture the personal background, motivation and unique stories behind women-driven ventures. However, research on women entrepreneurs has often suffered from gender-driven assumptions and bias. There is a need for objective studies, along with an assessment of the environment: how it is different for women in terms of social, financial and political support systems (Ahl 2006).

Another area or theme that is emerging is student entrepreneurship, where students who are studying drop out from a class to create new ventures. This has been a rather neglected area of research and the research into sub-groups of entrepreneurs is relatively scarce. Research has focused on the traits of an entrepreneur rather than the background where he or she was coming from. Some emerging sub-groups are novice, portfolio and serial entrepreneurs; parallel, part-time and full-time entrepreneurs; immigrant, ethnic, diaspora, minority community entrepreneurs and majority community entrepreneurs. The classification of entrepreneurs and a comparison across a cross-section of gender, economic status, literacy levels and past entrepreneurial experience are some of the offshoots of the building blocks called "individuals" in Gartner's framework.

Process: *How was the new venture created?*

The second building block of Gartner's framework for new venture creation was the process of new venture creation. It dealt with questions like how the entrepreneurial opportunity was identified, created, recognized and evaluated; how the entrepreneur acquired critical resources; and how the organization was built from the conceptual stage. While new areas like social interaction between entrepreneurial team members and regulatory focus emerged later on, the main area of interest remained creation of a new organization and its nurturance.

The process of opportunity recognition or discovery, analysis and its exploitation, the first step of new venture creation, was explored by Shane and Venkataraman (2000). This perspective shifted the focus of entrepreneurship research from new venture creation to the process of creation of entrepreneurial opportunities. The entrepreneurial process could now be explored in terms of: when, how and why the discovery of opportunities happened; why, when and how some people discovered these opportunities and not others; and having discovered the opportunities, why some people exploited them, when they did so and in what manner. Opportunities often arise due to new information being found or new technologies being available; the presence of market inefficiencies; shifts in relative costs and benefits, or due to alternative benefits of resources being found. By focusing on the recognition and exploitation of opportunities, the venture creation process was given a larger framework of (1) interaction of the entrepreneur and opportunities which may or may not eventually lead to venture creation and (2) entrepreneurial processes extending far beyond venture creation and into a broader process of value creation by individuals, teams and organizations. This value creation process led to development of innovative products and services and enhanced learning in organizations. Entrepreneurs decided on exploiting opportunities, after weighing out the value creation, their own costs for obtaining and putting the resources together and opportunity costs. Other factors influencing entrepreneurs were their sense of self-efficacy, their perceived chances of success and their achievement drive. The process of opportunity identification and exploitation has emerged as an important area of research in itself. Other areas of research that emerged were the antecedents of opportunity exploitation; the process of discovery and of creation of opportunities; and the role of universities, corporate firms and public institutions in encouraging or discouraging opportunity creation. Research in firm entrepreneurial orientation and entrepreneurship education are some of the areas that benefitted as a result of the findings.

The entrepreneurial process was split into its operational steps and analyzed by several researchers. Bhave (1994) split the process into those of opportunity recognition, arriving at a concept for the venture and making a commitment to creating a venture, setting up of the required technologies and production, creating an organization, establishing customer relationships, executing sales, establishing processes and collecting customer feedback. Entrepreneurs wish to add a novel way of doing business at each of these steps and this creates unique value for their ventures.

While the entrepreneur is the creator of a new venture or a new business model, what is accomplished during the process is new value creation. Value creation is the engine that keeps business and society going. Bruyat and Julien (2001) enhanced Gartner's model by incorporating the dynamic nature of venture creation and introducing the element of new value creation evolving with time. The relationship between the entrepreneur and the venture was represented as a dynamic model, with the value creation by the entrepreneur changing with time and with the changing environment. Further, value creation could be categorized in terms of the changes it brought about in the individual and the business environment. Value creation could be small for both as in the case of an "entrepreneurial reproduction", where a new venture was created based on existing models. An "entrepreneurial limitation" of a product or service may not change the business scenario much but may change the entrepreneur a lot in terms of learning and execution ability. "Entrepreneurial valorization" occurred in areas of niche technologies where people with unique knowledge could reassemble or re-engineer products and services and create value at the market place. An "entrepreneurial venture" created substantial value for the individual entrepreneurs as well as in the environment they were operating in.

In an exploration of knowledge spillovers from a university and that from a corporate experience, entry into new ventures was found to be far greater from a corporate setting than from a university. Survival and performance of the new venture was found to be far better in the case of a corporate experience. Relevant industry experience and the nature of the parent organization had a substantial influence on spinning off of new ventures (Wennberg et al. 2011). In cases where the entrepreneur has prior entrepreneurial experience, it affects the tasks and processes involved in new venture creation (Zapkau et al. 2017). For example, locating a business opportunity would be different and may be easier for an entrepreneur having past experience as compared to one with no prior experience of doing the same. The entrepreneur would have learned some lessons, understood certain constraints or identified some opportunities in previous experiences and gained greater familiarity with the business. Similar arguments hold for resource accumulation, market or product identification.

Organization: *What was created? What were the various kinds of ventures?*

The articles under scrutiny did not focus on sub-dimensions in Gartner's framework like strategy for the new venture, mode of entry, rules or the structure of the venture. There was greater interest on success of the new venture. The focus was on the determinants for venture performance, the challenges and the process of problem-solving. There was also an interest in new areas like social entrepreneurship. There was interest as to how success should be determined for social ventures, and how the success may be gauged or such ventures.

Social entrepreneurship, rural, community, academic, institutional and governmental entrepreneurship are some forms of entrepreneurship that have emerged to solve social, cultural, societal and environmental issues. The cumulative negative effects on the natural environment of the Earth and the degradation in air and water that has been seen in the last 30 years post-Gartner's article have given rise to a movement for sustainable entrepreneurship. Environmental entrepreneurs, for example, seek opportunities in enforcement of government and market regulations that address environmental ills. These forms of entrepreneurship result in creation of ventures that provide employment to members of the society for a greater cause. These ventures have some commonalities with new venture creation in the creative act of synthesis required to implement a new concept and in the processes required to set up an organization. The ventures have their unique challenges, however, and an exploration of their features, activities and trends is an evolving area of research.

Another new area post-Gartner's article is the evolution of innovation and incubation centers in academic institutions and in corporate firms. As these centers have gained momentum, some of them have gradually got shifted from their parent base or got institutionalized by the companies into corporate business incubation centers. These incubation centers allow people from all walks of life to collaborate with the firms and co-create value. A greater degree of co-creation and autonomy contributes to corporate entrepreneurship or internal corporate venturing (Burgelman 1983) where corporate managers are empowered to act as entrepreneurs. Entrepreneurship in family owned businesses and internal corporate venturing in family driven organizations have been subjects of research. However, most of the research remains focused on performance of the venture, and antecedents of performance to be found in its organizational and environmental context, rather than the special circumstances of these newer forms of entrepreneurship.

One major parameter of creating a successful new venture is to have the right kind of people resources. In this context new venture employer attractiveness and new venture employer branding are important factors for the right kind of talent to get attracted towards the new venture employer. Moser et al. (2017) opined that new venture employer attractiveness is moderated by the prospective applicant's entrepreneurial behavior. The research implies that for a potential applicant with proactiveness, innovativeness and risk-taking behavior, a possibility of a new venture employer providing greater scope for corporate entrepreneurship will increase the attractiveness of the employer.

Environment: *When was the new venture created? Where was the new venture created?*

In Gartner's framework, environmental variables were related with availability and accessibility of all kinds of resources in the entrepreneurial business environment as well as they were related to the factors of Porter's five forces model (2008). This building block of the framework tried to answer questions like whether the venture was created to exploit opportunities like accessibility of suppliers, new customers and new markets; government relationships and influences; a geographic location with good living conditions, proximity of universities, availability of land, infrastructure and transportation; an industrial, social and political environment that was encouraging in terms of the availability of supporting services, a large urban and industrial base, attitude of the area population; the presence of a skilled labor force, high occupational and industrial differentiation, a high percentage of immigrants and experienced entrepreneurs; and availability of financial resources and venture capital.

Network activities, network dynamics, social capital and marketing activities especially in the digital space have evolved, along with the digital presence and profile of industry and business. In the articles dealing with the environment of the venture, there was greater mention of social capital, network dynamics and resultant opportunities rather than the sub-dimensions present in the original framework. New ventures created by entrepreneurs had to face more complex environments involving elements like dynamism, volatility, ambiguity and transient competitive advantages. New ventures made more effective use of the power of social and relational networks that were available in the business environment. The resource-based view which was acceptable in entrepreneurship research at the time of Gartner's article had become much more complex and had to incorporate interdependencies of various players in the network. For example, the dimensions of Porter's five forces model that was also a part of the environmental building block in Gartner's paper were criticized for being static and not taking into account the dynamism in the business environment. Industries have evolved and changed over a period of time and new business models have emerged where being resource rich was no longer a guarantee to get success in a business. Often being more networked was a better predictor of success. The models for availability of financial resources had undergone a total change with emergence of venture capitalists and crowd funding. Overall, on the environmental front, the variables given by Gartner in his framework for new venture creation were still necessary but no longer sufficient.

The contemporary technology hubs of innovation have an ecosystem of innovators, accelerators and venture capital providers. This has resulted in a shift of the geographical distribution of start-ups over time. New geographic clusters have emerged in the world. In the technology-driven world, business processes are distributed across the world. New ventures are called transnational, global or international according to the distribution of their operations, market reach and span of value creation. These ventures have driven and been driven by regional and local clusters of industrial development. The geography of under-developed, developing, emerging and developed nations has undergone a change since Gartner's article. There are new lessons for governments and businesses in the changed distribution. The business environment variables in Gartner's framework are being interpreted in the context of contemporary technology-driven innovation and venturing. With the information flow, and consequent digital disruptive forces in business, the immediate physical environment of a venture has lost a lot of its importance.

The Overall Framework of New Venture Creation

A large number of articles have built upon Gartner's framework and generated new concepts to explore contemporary themes. Some have explored the issues, activities, challenges and characteristics for the management of new models of entrepreneurship within organizations. They include strategic entrepreneurship activities, internal corporate ventures, nascent ventures, joint ventures and alliances, acquisitions and businesses funded or incubated by corporate venture capital and external corporate venturing. Several articles have used the framework to inquire into, define or add to the concept of entrepreneurship. They have explored the genesis of entrepreneurship and the antecedents and consequences of entrepreneurship. They have applied the framework to different kinds of organizations: the public sector, the non-profit sector, family-held businesses and digital firms. Several of them are aimed at developing a typology to document, integrate and evaluate current understanding.

With the passage of time, the overall generalist framework for new venture creation may evolve into domain-specific frameworks. Researchers may extract specialist frameworks adapted from Gartner's conception of new venture creation, suitable for specific domains of entrepreneurship like social entrepreneurship, corporate entrepreneurship, entrepreneurship in family business firms, student entrepreneurship, digital entrepreneurship, urban entrepreneurship, women entrepreneurship and academic entrepreneurship, to name a few.

Discussion

Gartner's work has provided a simple framework for understanding new venture creation. However, in a span of 30 plus years post his seminal article, a lot has changed in the way business is conducted. The organization and its boundaries have grown fuzzy; physical office spaces have given way to virtual and sometimes temporary spaces. Much of the infrastructure, technology systems and people resources are available on hire or pay-as-you-use basis. Key production and operating processes can be located and outsourced from across the world. Finances may be raised based on an idea through venture capitalists and crowdsourcing. Technology enables ideas to go international even before a cash breakeven by the organization. The nature of businesses has changed too, with opportunities arising out of social and environmental concerns; rapidly changing demographic profiles of countries; and voids created by economic and political uncertainties, tax and regulatory practices, and the giant strides in information technology, health care and communication. Thus, the nature of all four variables of venture creation, the individual(s), the organization created, its environment and the process of creation, has undergone a change, the most disruptive influence being that of technological innovation, availability of computing power and dissemination of technology tools. In fact, with the availability of abundant capital today it is said that present entrepreneurs get success first and then learn how to crawl as compared to the earlier ones who used to crawl to get success.

The importance of the behavioral and psychological dimensions of individual entrepreneurs, entrepreneurial teams and firms has stayed with subsequent researchers. However, it has been placed in a modern context and enriched. Entrepreneurial orientation of the firm has been developed as a construct and there is scope for further research in the context of various environments and for various entrepreneurial groups. For example, how women entrepreneurs are same or different as compared to men entrepreneurs; how entrepreneurs from family owned businesses compare with those from non-family owned businesses; how entrepreneurial behavior is different across various immigrant groups; or how social entrepreneurs in organizations are different from corporate entrepreneurs.

While much of the research has focused on entrepreneurial individuals and organizations, the building blocks of environment and the process of new venture creation have remained relatively less researched areas. One reason for this can be that although the constructs used by Gartner are still relevant, they are more static in nature and do not take into account the dynamism, hostility and turbulence in the entrepreneurship environment. There are various models of entrepreneurship that are possible in the present age, spanning across national boundaries, types of firms, types of products and services, means of resource accumulation and utilization, processes of search and identification of new business opportunities and whether opportunities are created or discovered, and the market orientation and responsiveness of the entrepreneurial firm to create or discover these opportunities. In the current volatile, uncertain, complex and ambiguous world, market outcomes may not be predicted. What can be explored is the entrepreneurial attitude and orientation and pursuit of opportunities (Foss and Klein 2017). Researchers have responded with fresh perspectives to examine similarities and differences in the entrepreneurial process, that is, the pursuit of opportunities and the principle of effectuation. Both put greater volition and decision-making in the hands of the entrepreneur.

The building blocks of environment and organization present an opportunity to future researchers in the area of new venture creation as new ventures and their creation can be studied in the context of a dynamic business environment, hyper-competition, transient competitive advantages, various forms of innovation, industry-academia interfaces, technology platforms, social networks, social media, cloud computing and complementarity of assets.

Conclusion

Gartner's framework for new venture creation has given a robust start to research in the process of new venture creation. It has given four building blocks required for the creation of new ventures, that is, individuals, organization, process and environment. Most of the variables originally listed in the blocks are still relevant which is evident from recent citations of the paper. Researchers have added value to this list by adding sub-dimensions to do with new forms of entrepreneurship, new business models, changes in the environment and new groups like entrepreneurial teams or an entrepreneurial board. The phenomenon of some of these sub-dimensions declining in importance and others appearing in research literature is itself an indication of the history of venture creation in the twenty-first century. A systematic review of suggested additions and modifications to the framework may well serve as an important record of these trends.

Gartner had suggested in his paper that a focus on entrepreneurs and their ventures from one dimension alone, to the neglect of the entire framework, might throw up conflicting results. There is a need to recast and redefine the framework and to explore inter-relationships between the sub-dimensions and the variables themselves, for new business models and for new entrepreneurship research themes that have emerged like social, environmental or geographical entrepreneurship. Gartner's paper conceded that the framework only outlined a format for future research methodologies and for emerging themes. The framework has given a starting point for researchers in new areas of business. Some of the commonalities and differences of new business models may well lie in the different inter-relations among the sub-dimensions and variables.

The framework made no claim to be a repository of all the sub-dimensions. Rather, it provided a means to inquire into, document and appreciate the complexities and differences among different ventures.

Researchers citing Gartner's framework have explored in-depth some of the variables and sub-dimensions. However, most of them have focused on one of the building blocks and made some valuable additions to the body of knowledge of entrepreneurship. This is the reason the paper is still regarded as a seminal paper and continues to be used as a starting point for research in the area of new venture creation. However, the strength of the model lies in also exploring the relationships and viewing the framework as an integrated whole. Current global businesses are driven by social, mobility, analytic and cloud technologies, and forces of globalization and are subject to contemporary challenges and opportunities. The business ecosystem has undergone great changes since the publication of the paper. Gartner's framework continues to be seen by researchers as robust, simple, clear and flexible and one that can be built upon. It needs to be refined, customized, updated and enhanced to continue to be relevant for exploring new venture creation processes in the contemporary and evolving business ecosystem.

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CHAPTER 6

Bowen and Hisrich (1986) on the Female Entrepreneur: 30 Years of Research and New Directions for Gender and Entrepreneurship Scholarship

Banu Ozkazanc-Pan

In recent years, women's entrepreneurship and the contributions of women-owned businesses to the overall economy have gained visibility and traction as more policymakers, government entities, cities and entrepreneur support organizations have worked to provide appropriate incentives and support to encourage the growth of such businesses (Knowlton et al. 2015). Organizations, such as the National Women's Business Council among others, have highlighted the economic value of women-owned businesses to the overall economy, fueling growing research across academic disciplines to understand the antecedents, drivers and outcomes associated with women's entrepreneurship. To this end, the study of women's entrepreneurship has become an important academic discipline and policy area that can provide much-needed insights and new directions to highlight

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the challenges and opportunities facing women-owned businesses. To understand how women's entrepreneurship has become an important field of study, this chapter traces the emergence and growth of the field inclusive of new streams of research by focusing on Bowen and Hisrich's (1986) seminal journal article.

At the time of its publication three decades ago, Bowen and Hisrich's (1986) article was one of the first to address and examine the notion of women's entrepreneurship and focus attention exclusively on female entrepreneurs. Their work was seminal for bringing together, through a career development perspective, what had previously been disjunctive studies and approaches to the study of women entrepreneurs. Their paper offered a comprehensive framework for understanding the entrepreneurial behavior of women through a careful outline of impacts and influences on women's ability and choices in pursuing entrepreneurship. In doing so, they offered the entrepreneurship field a first glance at why and how women become engaged in entrepreneurship. In this chapter, I focus on the contributions of these authors at the time they wrote the article and then consider their influence in relation to current work in the field of gender and entrepreneurship. In suggesting that Bowen and Hisrich (1986) should be considered a classic work in the entrepreneurship, I focus on how their paper gave credibility and visibility to research on women entrepreneurs and the topic of gender and entrepreneurship more broadly. Further, I outline how the various issues they outlined have continued to influence researchers interested in the ways in which women entrepreneurs engage in entrepreneurial activities including the particular challenges they face and obstacles they overcome.

Summary of Bowen and Hisrich (1986) Paper and Main Ideas

The paper by Bowen and Hisrich (1986) outlines several important streams of research that at the time were beginning to emerge in relation to female entrepreneurs including research that was starting to understand the antecedents of female entrepreneur's career development trajectories. In prefacing their paper, Bowen and Hisrich (1986) note that most research conducted on entrepreneurs at the time focuses on the experiences of male entrepreneurs despite the growing number of women coming into the US workforce in the late 1980s. Further, they suggest that while research is just starting to understand the career trajectories of entrepreneurs in general such that there is little available research on these issues particularly with respect to female entrepreneurs. To address this gap in the extant entrepreneurship literature, they focus on organizing existing research on female entrepreneurs to highlight what has already been researched and to further offer new directions for research. They organize existing streams on female entrepreneurs by using the conceptual framework of Sonnenfeld and Kotter (1982). This framework outlines the various dimensions associated with a life-cycle approach to conceptualizing and understanding careers.

These dimensions include genetic factors, educational environment, personality, childhood family environment, work history, adult development history, adult family/non-work history, current work situation, individual's current perspective and their current family/non-work situation taking place over time from childhood to the present (Sonnenfeld and Kotter 1982). Bowen and Hisrich (1986) deploy this framework to fill in the details related to female entrepreneurs with the limited number of research that has explored these same areas. In other words, they review the field of women's entrepreneurship by using this framework to categorize extant research and offer additional insights related to the future of the field.

In doing so, they find that most research related to female entrepreneurs paints an uneven picture such that there are no common or generalizable findings across studies to explain career trajectories. Further, their scan of the extant women's entrepreneurship at the time yields no common patterns or findings, given that sample sizes are quite small. Yet what they do offer is a more holistic picture of female entrepreneurship, which at the time is a novel contribution. Bowen and Hisrich's (1986) suggestions lay the foundation for building on the small amount of research focusing on female entrepreneurs and in doing so, provide contemporary researchers with a rich base for informing their work. In their conclusion, they offer the following topics or variables as additional areas for future: personality variables, childhood family environment, prior work history, family/non-work situation, nature and size of business, work hours, work values, management/managerial styles, obstacles and barriers, and current perspectives and family/non-work situation (Bowen and Hisrich 1986: 405). Consequently, their suggestions for future work in relation to the various dimensions also provide much-needed direction for the field and enable research in relation to female entrepreneurs to gain further legitimacy and credibility.

Next, I outline decade by decade the various streams of research that have cited this seminal work (total of 556 in Google Scholar as of September 11, 2017) and grown the field of women's entrepreneurship. In doing so, I highlight how the paper continued to influence the field but also how the field changed and developed in the years following Bowen and Hisrich's (1986) important contribution. By utilizing a time-based approach to understanding their influence for the field of women's entrepreneurship, I demonstrate how their initial set of ideas impacted the field immediately and then how those ideas changed over time with some streams growing more popular and others becoming less so.

1986–1996: Streams of Research During the First Decade

In the decade immediately following the publication of Bowen and Hisrich (1986), 75 publications cited their work according to Google Scholar and focused on different dimensions in relation to female entrepreneurship including additional life-cycle approaches (Erwee 1987) as well as a general focus on the issues facing women entrepreneurs (Hisrich 1986). Fischer, Reuben and Dyke (1993) a few years later conducted a similar overview of gender and entrepreneurship research, utilizing feminist lenses in order to address issues related to choice, structural challenges and possibilities for change.

Other research during this initial decade focused on career selection for women entrepreneurs based on socialization theories (Scherer et al. 1990), while others carved out a typology of female entrepreneurs (Cromie and Hayes 1988). Additionally, research within this decade focused on outlining psychological dimensions in relation to women entrepreneurs, such as locus of control and motivation in women entrepreneurs (Nelson 1991; Nelson and Sharp 1989), entrepreneurial desire (Scherer et al. 1991), inclination (Koh 1995), achievement motivation (Langan-Fox and Roth 1995), self-efficacy (Boyd and Vozikis 1994) and attitude (Robinson et al. 1991).

Further research expanded our knowledge on the ways management takes shape in women-founded companies (Chaganti 1986). Other work focused on the challenges and experiences women faced when garnering funding (Fay and Williams 1991, 1993) including those in home-based businesses (Carter et al. 1992) as well as their experiences working in male-dominated fields (Olson and Currie 1992; Smith et al. 1992).

Work addressing family histories of women focused on ways daughters can be brought into family businesses (Dumas 1992) as well as examined the relationship between family background, gender and interest in starting a business (Mathews and Moser 1995, 1996). At the intersections of family research and values, research examined differences between male and female entrepreneurs in terms of their work, family backgrounds and career success (Parasaruman et al. 1996).

In addition, several studies in the early years focused on differences between male and female entrepreneurs in various areas including competitive strategies and planning (Gaskill et al. 1996), communication styles and preferences that potentially lead to gender bias in teamwork (Halterman et al. 1991), values (Fernald and Solomon 1987), motivation (Cromie 1987), self-concepts (Stern 1988), assistance needs (Chrisman et al. 1990), business performance (Fischer 1992; Kalleberg and Leicht 1991), education and work experience in relation to success (Robinson and Sexton 1994) and development of entrepreneurial behaviors (Scherer et al. 1989).

In all, the first ten years saw the emergence of several different streams of research in relation to women and entrepreneurship as researchers aimed to grow the field, find potential patterns and commonalities in relation to female entrepreneurs and expand our understanding of differences between male and female entrepreneurs. The following decade built further on these streams while also providing newer and more nuanced approaches to gender and entrepreneurship.

1997–2006: The Second Decade

During this time, 123 articles (based on Google Scholar citations) cited Bowen and Hisrich (1986) seminal paper and in doing so, they continued the growth of the field in various ways including new research areas. Rather than focusing on each of these 123 papers, here I focus on the new research streams that emerged as well as cover research streams that were continued from the prior decade or those that become more nuanced in their approach to the topic. During this decade, Gundry, Ben-Yoseph and Posig (2002) carried out a review of the field using a venture creation model as their guiding template to consider women entrepreneurs in relation to “individual characteristics of the founder, organization created, environment surrounding the organization, and the process by which the new venture is created” (p. 39). In doing so, they provided further insights about the challenges and opportunities facing women entrepreneurs.

One emergent area of research within the domain of gender and entrepreneurship is the cross-cultural or comparative research that began to take shape and examine issues related to the gender gap across cultures (Mueller 2004). Emergent research in this stream expanded out from the North American context to other parts of the world to examine the experiences of women entrepreneurs in Brazil (Machado et al. 2002), India (Das 2000; Mitra 2002) and Australia (Bennett and Dann 2000). Others compared women entrepreneurs in different nations, such as Ireland and Finland (Galloway et al. 2002), the USA and Finland (Hyrsky and Tuunanen 1999), Bahrain and Oman (Dechant and Lamky 2005), and South Africa and the USA (Schindehutte et al. 2003) across various dimensions including experiences, innovativeness and risk-taking. Similar to Bowen and Hisrich's (1986) findings, these studies do not offer any generalizable findings for the field but rather, they offer opportunities for understanding relevant issues for women's entrepreneurship in different national contexts.

Related to the comparative stream but taking shape in a slightly different form was the growth of research that examined how gender and race impacted women entrepreneurs' experiences, access to networks and funding (Shim and Eastlick 1998; Smith-Hunter 2006) as well as research addressing indigenous entrepreneurship in different contexts (Foley 2005) such that additional insights were gained about the experiences of entrepreneurs beyond white males in the USA. This stream has continued well into the next decade as I discuss next and has also grown tremendously albeit not all articles within this domain cite the seminal article under focus in this chapter.

At the same time, another emergent but small stream of work focused on policy and practice aspects such as specific suggestions for policymakers and those in positions or organizations providing assistance to women entrepreneurs (Lee and Rogoff 1998; Stanger et al. 2002) and gender differences in accessing such assistance (Stanger 2004).

A fourth emergent stream of research focused on making explicit challenges faced by women entrepreneurs under concepts such as "barriers" (Winn 2005) and those works that employ critical (Ogbor 2000) and feminist lenses (Calás and Smircich 1999, 2006; Greer and Greene 2003; Mirchandani 1999) to address and challenge gendered assumptions guiding entrepreneurship research. Thus in this stream of work, gender is not equated with women, and gender relations, gender norms, gendered ways of conceptualizing entrepreneurship become central to redirecting the body of work in the field.

In addition to the abovementioned newer streams of research, research that started in the prior decade but continued into this decade expanded further on work/life conflict in relation to women entrepreneurs. This research is similar to work done to underscore the work and family environment of women as identified by Bowen and Hisrich (1986) but goes a step further to identifying those areas in which these environments are in conflict or competition. Examples of this research during this decade include the works of Ferguson and Durup (1998) that provide an overview of extant work in this area and research by Parasuraman and Simmer (2001) on the relationship between type of work, work/family conflict and well-being.

The career development and life-cycle approaches to understanding women entrepreneurs continues in this decade as well (Ensher et al. 2002; Perrin Moore 2004; Russell and Burgess 1998) including work that examines the experiences of mature women entrepreneurs (Moult and Anderson 2005). Other research has examined whether entrepreneurial experience and success allows women who cross over into management positions at organizations a faster way to get to top management (Daily et al. 1999) and the relationship between owner gender and succession planning in family businesses (Harveston et al. 1997).

Streams of research that continued into this decade after their emergence in the first included further comparative studies between male and female entrepreneurs in terms of psychological dimensions, such as opportunity perception (Jones 1997), motivation (Kirkwood 2004), personality (Brandstatter 1997; Korunka et al. 2003) and perceptions about start-ups (Peterman and Kennedy 2003).

Other research underscoring gender in the context of entrepreneurship focused on the relationship between an entrepreneur's gender and evaluations of their venture (Knotts et al. 2004) and strategic capabilities and firm performance for women-owned small ventures (Lerner and Almor 2002). Further underscoring the gender dimensions of entrepreneurship, research has also continued to understand the experiences and challenges of women working in traditional and nontraditional fields (Anna et al. 2000) and examined the venture size choices of women entrepreneurs (Morris et al. 2006).

2007–2017: The Third Decade

In more recent times, interest and research in gender and entrepreneurship has grown exponentially, yet compared to the majority of entrepreneurship research, this work represents a small fraction of the broader field. During the period between 2007 and 2017, 350 articles (based on Google Scholar citations) cited Bowen and Hisrich (1986). What is noteworthy is the growing importance of their work as indicated by the increasing or rather doubling number of citations over the decades that cite the seminal paper. Further, close to 70 of the articles that cite Bowen and Hisrich (1986) during this time are in a language other than English including Spanish, Korean, Finnish, Chinese, French, Portuguese and Turkish. More importantly, around half of the studies citing Bowen and Hisrich (1986) during this decade have a non-US focus such that their research context and subjects reflect the growing international dimension of gender and entrepreneurship scholarship. Thus, the global growth and importance of the gender and entrepreneurship field is much more rapid and evident during this decade. Again, rather than addressing each of the different articles, here I focus on new research streams as well as how existing streams have begun to develop further or change.

Similar to the international and comparative focus from the previous decade, a number of studies continue to examine the experiences of women entrepreneurs in non-US and non-North American contexts. A large number of these studies have started to focus on India by predominantly Indian scholars (e.g., Sharma 2013; Sheela 2016; Srivastava et al. 2017), while others have expanded to examine the experiences of women entrepreneurs in different nations including Afghanistan (Holmén et al. 2011), Ghana (Kuada 2009), South Africa (Sibanyoni 2012), United Arab Emirates (Naser et al. 2009), Japan (Lin 2008), Russia and Norway (Iakovleva 2017), Sweden and Thailand (Kongsinsuwan and Johnsson 2008), Pakistan (Ahmed et al. 2017), Ireland (Drew and Humbert 2011), Malaysia (Yusof 2012), Nigeria (Egwu 2017) and Bangladesh (Rahman et al. 2011) among other nations. What is noteworthy is that much of emerging research across different nations is becoming nuanced in terms of its focus in relation to women entrepreneurs. In the Indian context, much of the conversation in relation to women entrepreneurs is with respect to economic development (Mendonca and Sequeira 2014). To an extent, this focus is also seen in other developing nations' research that focuses on women entrepreneurs, such as research in El Salvador (Mas-Tur et al. 2015).

Work within this domain has also started to focus more explicitly on examining psychological dimensions of entrepreneurship albeit in non-US contexts, such as start-up motivations in Australian women (Sharafizad and Coetzer 2016), self-efficacy in German women entrepreneurs (Tegtmeier and Mitra 2015) and personality in relation to the gender gap in entrepreneurship across multiple nations (Obschonka et al. 2014). More explicitly, there is growing interest in understanding indigenous entrepreneurship guided by psychological lenses (Lindsay et al. 2007). Finally, there is a growing body of work focusing on work/life conflicts in non-US contexts, such as Germany (Konig et al. 2012) and other nations.

Other research which is emergent during these decades includes a focus on the relationship among entrepreneurial intentions, education and gender across different nations (Shirokova et al. 2016) including university students in Turkey (Goksel 2011; Ozyilmaz 2011), women graduates in Bangladesh (Hossain et al. 2009), students in Libya (Saleh 2011), students in Austria (Strobl et al. 2012), students in China (Millman et al. 2010), engineering graduates in Israel (Yemini and Yeheskel 2011) and women-owned ventures in a Swedish university incubator (Lindholm Dahlstrand and Politis 2013) among others. What is noteworthy in this stream of emergent research is that growing link or assumed relationship between education and entrepreneurship such that, as we see in the broader entrepreneurship field, a sense that entrepreneurship education is an important part of developing entrepreneurs and entrepreneurial skill sets. To this end, there is now a growing body of research that has focused on effective and meaningful ways entrepreneurial education should take shape in universities with debates about whether entrepreneurship can be taught central to the development of the field. The growth of this education/entrepreneurship relationship has also impacted research in developing nations as programs are now offered to educate women on how to become entrepreneurs, such as those in Ghana (Agbényiga and Ahmedani 2008) and India (Kumar 2011). To this end, such work will likely continue to grow as the entrepreneurship field matures as a field of academic inquiry.

During this decade, we see that US-based gender and entrepreneurship research still continues with a focus on psychological dimensions with the aim of differentiating among male and female entrepreneurs. One example of this work that cites Bowen and Hisrich (1986) is a comparison of male and female entrepreneurs in relation to motivation factors (Daulerio Jr 2016) and gender-role orientation in relation to self-efficacy (Mueller and Dato-On 2008). While these two citations might suggest that the field of differentiation between male and female entrepreneurs is small, this is not the case at all. In fact, this is a growing area of research despite the fact that much of it does not cite the seminal article under focus in this chapter. Thus, it is important to acknowledge how the field has developed along trajectories which at times do not necessarily provide a clear link to past research, given that Bowen and Hisrich (1986) was cited more often in relation to psychological dimensions in previous decades than in this one.

In addition, there are further studies that examine women entrepreneurs without a comparison to male entrepreneurs including works that examine negotiation and self-efficacy (Guerrero and Richards 2015), psychological and family background in relation to becoming entrepreneurs (Llussá 2010), determinants of human capital (Junquera 2011), social capital in relation to firm creation (Rodriguez and Santos 2009), leadership styles (Tibus 2010), support service needs (Pardo-del-Val 2010) and the interplay of entrepreneurial and social identities (Chasserio et al. 2014). The psychological perspective impacts further research examining whether misalignment of perceptions and self-efficacy are related to the gender gap in entrepreneurial activity (Kickul et al. 2008) and the relationship between role models, self-efficacy and entrepreneurial career intentions (BarNir et al. 2011).

Other research focusing on gender has continued to focus on firm factors, such as sustainability of women-managed family firms after natural disasters (Stafford et al. 2010), motivation and firm performance in small service firms (Akehurst, Simarro and Mas-Tur 2012) and firm performance differences between male- and female-led firms in Lao (Inmyxai and Takahashi 2010).

The gender and multifactor career developments' focus that was foundational to the work of Bowen and Hisrich (1986) continues well into its third decade in research that aims to understand entrepreneurial life cycles of women (Bann 2007; Mayrhofer et al. 2007) and the impact of gender and family decision on work (Powell and Greenhaus 2010). Some of this work extends to contexts beyond the USA, such as South Korea (Bae et al. 2012) and Austria through a critical lens (Schneidhofer et al. 2010). Expanding beyond the career life-cycle approach, multidimensional research has also emerged (Huarng et al. 2012) in examining the various factors that give rise to women's entrepreneurship in different contexts, such as Turkey (Cetindamar et al. 2012) and Finland (Kautonen et al. 2010). This research stream has also expanded to include general factors across a variety of dimensions under the umbrella concept of the "entrepreneurial process" and includes work which cites Bowen and Hisrich (1986), such as the work of Haber and Reichel (2007) which examines the role of human capital, planning and environmental resources.

The third decade of research that cites Bowen and Hisrich (1986) in relation to gender and entrepreneurship provides ample opportunities for scholars to review the extant field and provide suggestions for future directions. In their review of gender and entrepreneurship research over the last 30 years in 12 entrepreneurship journals, Yadav and Unni (2016) suggest that much of this research has been dominated by a positivist paradigm. They call for more social constructionist approaches and transnational communities of research so as to overcome the nation-based research perspectives that limit our understanding of the phenomenon. Further, Loza (2011) in her review of the field suggests that much more engagement is needed particularly at the intersections of legal studies and entrepreneurship given the related nature of innovation-driven entrepreneurial activities and the legal field. She calls for further research that examines these issues from a multidisciplinary perspective. More critically, after conducting a systemic literature review of gender and entrepreneurship over the past three decades, Henry, Foss and Ahl state, "Findings reveal a proliferation of large-scale empirical studies focused on male/female comparisons, often with little detail provided on industry sector or sampling methods and with either a weak, or no feminist critique whatsoever" (2016, p. 217). They suggest that much more research in a critical and feminist stream is necessary to challenge underlying assumptions of the field. In their review and assessment of the women's entrepreneurship field, Jennings and Brush (2013) provide historic details about the development of the field inclusive of the challenges still ahead in growing the field vis-à-vis the broader field of entrepreneurship research.

In highlighting seminal women scholars examining gender and entrepreneurship, Holmquist and Carter (2009) note that the Diana Project led by Candida Brush, Nancy Carter, Elizabeth Gatewood, Patricia Greene and Myra Hart has been pivotal in brining visibility and voice to gender issues in the context of the broader entrepreneurship field. To this end, these scholars have laid the foundations for a robust field of inquiry in terms of their singular focus on gender and entrepreneurship in examining the challenges related to business growth and venture funding for women. In all, as this review demonstrates, much more work is necessary in order to uncover and understand the experiences of women entrepreneurs, the challenges they face in different contexts and the ways in which they engage in entrepreneurial activities.

Future Directions for the Field of Gender and Entrepreneurship

In many ways, the frameworks and concepts that guide gender and entrepreneurship research in the USA have also been impactful in creating a set of research questions that now guide gender and entrepreneur researchers in other parts of the world. As a consequence, there is a need to produce research that is historically and locally contextualized in uncovering the ways in which women may engage in entrepreneurial activities in different ways, for different reasons and with different opportunities around choice of industry and sector. However, it should also be noted that in nations where women's entrepreneurship is relatively newer phenomenon, there are more contextualized conversations around the challenges that women face particularly in relation to issues of empowerment, economic development and independence. While economic development has not been a major focus of US-based gender and entrepreneurship, there are similarities in how notions of female empowerment and economic independence are also resonant in other nations across the globe.

To this end, there is now a growing concern around the equality dimensions of women's entrepreneurship and whether entrepreneurial activities are sufficient or related to the quest for gender equality (Klyver et al. 2012; Thebaud 2010), concerns around women's agency in the context of entrepreneurship (Madsen et al. 2008), outlining the experiences of women in emergent economies as they aim to break the "bamboo curtain" and the "glass ceiling" (Tan 2008) and gendered perspectives on the work/life balance in the context of entrepreneurship (Eddleston and Powell 2012).

In addition, a number of influential studies have emerged in recent decades including those focusing on specific challenges women face in entrepreneurship ranging from psychological barriers such as gender stereotypes to structural barriers such as access to capital (De Bruin et al. 2007; Brush and Edelman 2000; Carter et al. 2003; Gupta et al. 2008; Sullivan and Meek 2012; Sweida and Reichard 2013). Other work has adopted critical and feminist perspectives to highlight and question gendered assumptions guiding entrepreneurship research (Ahl 2004, 2006; Ahl and Marlow 2012; Bird and Brush 2002; Bourne 2010; Brush et al. 2009; Calás et al. 2009; Clark Muntean and Ozkazanc-Pan 2015; Mirchandani 1999; Robb and Watson 2012). Thus, the field of women's entrepreneurship is becoming richer through the various different perspectives adopted by scholars ranging from microlevel psychological dimensions, to mesolevel organizational issues and macrolevel structural and societal elements.

Future research in this area can extend these lines of inquiry. However, rather than doing so in a piecemeal fashion, the emphasis should be on understanding the interdependencies across these levels and how they might create challenges unique for women entrepreneurs across differences of race, ethnicity, education and so forth. Furthermore, future work can also examine how different ecosystems foster women's entrepreneurship through multilevel analyses of all stakeholders including entrepreneurs, support organizations and policymakers (Knowlton et al. 2015; Ozkazanc-Pan et al. 2017). Doing so will allow for a deeper understanding of entrepreneurship and allow for actionable policies to redress inequities facing women engaged in business. In all, there are many opportunities for researchers to examine the intersections of gender and entrepreneurship and provide new, novel insights for the broader entrepreneurship field in the context of a globalized, interconnected world where inclusive economic development is becoming an important policy priority for many nations and supranational institutions.

In conclusion, the field of women's entrepreneurship or more broadly, gender and entrepreneurship has flourished in the last 30 years starting with the work of Bowen and Hisrich (1986). Their work provided new conversations in the field related to women's entrepreneurship and today, we see that the field has become important not only in terms of academic research but also in terms of informing broader conversations in relation to entrepreneurship and economic development. To this end, future work in this area will not only provide important contributions to the entrepreneurship field but also to those interested in supporting the growth of women's entrepreneurship by way of policy and practice changes.

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CHAPTER 7

Intending to Frame Entrepreneurship Research: Thirty Years After Bird (1988)

G. Page West III and Pat H. Dickson

Introduction

Within recent years we have witnessed an explosion in effort to answer two basic questions about the field of entrepreneurship. These include "where are we now?" and "where do we need to go?" For decades after it became a division of the Academy of Management in 1986, academics working in the field of entrepreneurship have been concerned about theory development, the legitimacy of the discipline and thus the appreciated value of their research and teaching efforts (e.g. Amit et al. 1993; Low and MacMillan 1988; Shane and Venkataraman 2000). Several recent reviews analyze entrepreneurship publication content to draw conclusions about trends in research foci over time and the status of the field in the present. These reviews tend to conclude that the field has in fact gained legitimacy. This is in part because more sophisticated research methods reveal that its boundaries have become better defined by a unique set of subdomains (Katz and Gartner 1988), precipitating substantive exchange with other academic fields (Busenitz et al. 2003, 2014; Ferreira et al. 2015; Low 2001). Each of these reviews, as well as others (Chandra 2017; Meyer et al. 2014) point out that such

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subdomains—for example, opportunities and organizing (Busenitz et al. 2003, 2014), family business and entrepreneurial leadership (Ferreira et al. 2015), or multi-level relationships (Davidsson 2016)—also represent an agenda for researchers going forward.

This volume in general, and this chapter in particular, seeks to answer another important question about the field of entrepreneurship: "how did we get here?" Not unlike the analysis of startup ventures themselves (e.g. Bamford et al. 1999; Beckman and Burton 2008; Newbert et al. 2007), here we are interested in how founding conditions within the field may have set the tone or provided guidance for subsequent academic research. Did a set of seminal articles about entrepreneurship provide this sort of imprinting guidance and direction? Do the ideas in such articles still have relevance today and can they continue to provide future guidance?

This chapter focuses on Bird's (1988) *Academy of Management Review* article titled "Implementing Entrepreneurial Ideas: The Case for Intention." Bird (2015) herself recently reviewed the contribution of her own work but with a narrow agenda focusing carefully on intentions research. Here we go broader, considering its impact across the field of entrepreneurship. We make the case that Bird at that time was intending to outline pivotal ideas that could guide further investigations about entrepreneurship. Importantly, her article critically distinguished the field of entrepreneurship from the field of strategy, addressing one part of the legitimacy issue that so occupied entrepreneurship scholars in the early days (Amit et al. 1993; Brockhaus 1987; Gartner 1989; Hisrich 1988; Hofer and Bygrave 1992; Low and MacMillan 1988; MacMillan and Katz 1992; Sexton 1988; Van de Ven 1992; VanderWerf and Brush 1989). We find that over time the emergence of subdomains in entrepreneurship research, which help define the field, reflects seminal ideas in her article. With attention to recent developments in entrepreneurship research, we argue that Bird's article continues to be highly relevant since such trends also reflect important concepts she discussed at that time.

The chapter proceeds as follows. First we provide a bibliometric analysis of Bird's article that demonstrates the impact and contributions it has had on entrepreneurship research. The data provide prima facie evidence for inclusion of this article in this volume on seminal contributions and tells a compelling story about article impact over a long period of time. Following this analysis, we briefly review seminal ideas presented in the Bird (1988) article. This includes a set of concepts and relationships that have over time—and especially more recently—drawn critical attention from entrepreneurship researchers (although often using different terminologies). We also point out how Bird especially sought to separate what entrepreneurship research is all about from the domain of strategy, in which many budding entrepreneurship scholars had received their training. Next we discuss several key concepts that have become central to the subdomains of inquiry within the field, showing how these relate to ideas put forth by Bird. We report on an interview we conducted with the author regarding her aspirations at the time she published the article and her reflections on its impact nearly 30 years hence. And finally we turn to emergent areas within entrepreneurship research in 2017 that continue to reflect ideas originally appearing in Bird.

Article Impact

The call for chapters for this volume presented an interesting challenge: "draw attention to the seminal (classic) articles [from the 1970s or 1980s] that have made a profound contribution to the development of entrepreneurship as a serious academic discipline" (Javadian 2017). This reminded us coauthors of our "comprehensive exam" questions many years ago during our own doctoral training at the Universities of Colorado and Alabama, respectively. The question prompted much thought, debate and discussion. Ultimately it led to gathering data from the Web of Science (WoS) to confirm that our initial selection of Bird (1988) was supported by the data. In this section we report the findings from our analyses.

Bibliometric data not only documents quantitative impact but can also tell a story beyond the number of direct citations of an article. Analogically, our analytical approach finds support among entrepreneurs themselves. Successful entrepreneurial startups rely on their founders early on, but as they grow over time these founders may be less involved than they were previously, or not involved at all. Yet the trajectory and impact of their early involvement is still apparent as their firms develop over time. Think Mark Zuckerberg at Facebook or Sergey Brin at Google, who are still active but around whom much larger organizations and much broader services have since developed. Impact is evident even among long-gone founders such as Bill Gates at Microsoft, Elon Musk at PayPal and Steve Jobs at Apple. Similarly in the academic world direct citations may not tell the whole story of the impact of ideas presented in a particular article. The trajectory often includes the impact arising from secondary and other citations that build upon the original ideas and concepts. Jensen and Mackling's (1976) *Journal of Financial Economics* article, for example, is widely credited for drawing attention to the concept of agency theory and the use of stock incentives in organizations. These ideas were subsequently taught in business school MBA programs in the 1980s and 1990s and led to managerial behavior contributing to financial market excesses (Khurana 2007). And yet by 1990 this article had only been directly cited about 800 times in academic journals, far too few times to have impacted the teaching of finance globally. It was secondary and others' citations of this seminal article that popularized the ideas and led to their prevalence in business school curricula. Thus in our analysis we consider not only the direct citations of Bird's work but also the extent to which the citing works—and those beyond—"tell the story" of the ideas her paper developed.

The WoS, operated by Clarivate Analytics, is the world's largest citation database. Its "core collection" comprises indexed publication data from the Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (AHCI) and the recently added Emerging Sources Citation Index (ESCI), together covering the world's top-tier international and regional journals with over 1 billion references spanning more than 100 years. To identify the most impactful articles in the field of entrepreneurship, we searched for all journal articles in business or management between 1970 and 1989 whose title contained any combination of the keywords entrepreneur*, new venture, venture creation or business creation. The results produced a list of 445 articles, and the most cited of these papers appears in Table 7.1. Bird's intentions article is the fifth most-cited paper from this 20-year period.[1] Of all 6400+ published articles similarly identified over the entire 47-year span since 1970 up to the present day, this paper is 44th in its citation count.

Bird's paper has been cited 412 times in all sources combined in the WoS database, with 394 of these citations from the "core collection." In turn, the papers citing Bird ("secondary" citations) have themselves been cited 11,680 times in the period 1988–2017. During this follow-up 30-year time period since Bird (1988), and using the same keyword search criteria, a total of 6075 papers have been published in business and management journals and have been cited a total of 154,371 times. Figure 7.1 portrays the growth of all published papers in entrepreneurship since 1991 using these search criteria, clearly showing "takeoff" for the entire field after the early 2000s. When we account for both the direct and secondary citations to the Bird intentions article, we find that combined they account for on average 9.6% of all entrepreneurship paper citations over the last 25 years. The trend line of Bird's relative impact over the most recent 15 years remains consistently in the 8–9% range.

Table 7.1 Highest-cited entrepreneurship articles, published 1970–1989

Author(s)	*Year*	*Journal*	*Web of Science Core collection citations*
Miller	1983	*Management Science*	1028
Miller and Friesen	1982	*Strategic Management Journal*	625
Gartner	1985	*Academy of Management Review*	599
Low and MacMillan	1988	*Journal of Management*	489
Bird	1988	*Academy of Management Review*	394
Brockhaus	1980	*Academy of Management Journal*	384
Cooper et al.	1988	*Journal of Business Venturing*	373
Carland et al.	1984	*Academy of Management Review*	369
Burgelman	1983	*Management Science*	330
Begley and Boyd	1987	*Journal of Business Venturing*	265
Covin and Slevin	1988	*Journal of Management Studies*	221
Mintzberg and Waters	1982	*Academy of Management Journal*	221
Stevenson and Gumpert	1985	*Harvard Business Review*	196
Louis et al.	1989	*Administrative Science Quarterly*	191
Sandberg and Hofer	1987	*Journal of Business Venturing*	185
Van de Ven et al.	1984	*Journal of Management*	174
Maidique	1980	*Sloan Management Review*	163
Jarillo	1989	*Journal of Business Venturing*	160
Hornaday and Aboud	1971	*Personnel Psychology*	145
McDougall	1989	*Journal of Business Venturing*	141

We next analyzed the content of papers citing Bird that we had identified using the search criteria. In this analysis we included the papers which have themselves been cited at least 50 times over the period 1989–2017; a total of 65 papers were included (and these represent the foundation for 84% of all the Bird secondary citations). We used the keywords list for each article presented in WoS; these keywords are supplied by the database service or in some cases capture author-supplied keywords (Ferreira et al. 2015). We supplemented the keyword list for each article by our own review of each article's abstract and content, occasionally including keywords that together we felt enhanced the accuracy of article content represented by keywords. Keywords for all articles were summarized and then categorized using five descriptive dimensions: person, cognition, organization, emergence, performance (see Table 7.2). Person-oriented work tends to reflect observable characteristics and demographics of those

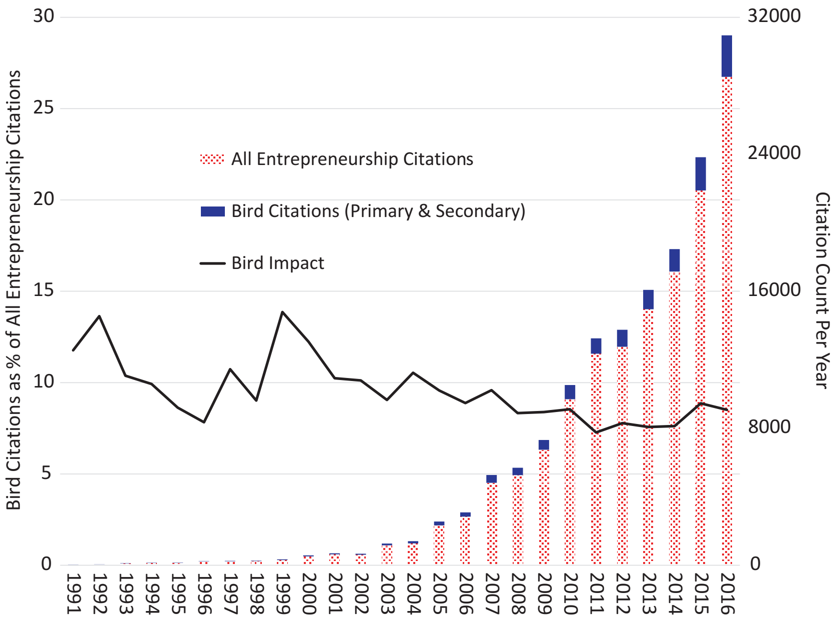

Fig. 7.1 Impact of Bird 1988 relative to entrepreneurship field

Table 7.2 Categorized keywords in papers citing Bird (1988)

Person	*Cognition*	*Organization*	*Emergence*	*Performance*
Behav[a]	Attitude	Corporate	Creation	Perform
Career	Efficacy	Decision	Growth	Success
Education	Intent	Environment	Medium	Survival
Experience	Knowledge	Judgment	Nascent	
Gender	Learning	Manage[a]	New	
Orientation	Motivation	Organiz[a]	Opportun[a]	
Owner	Perspective	Plan	Scale	
Personality	Psychology	Process	Small	
Student	Risk	Resource	Startup	
	Social	Strategy[a]		
	Temporal	Structur[a]		
	Time			

[a] Wildcard to include various forms of words beginning with this root

involved in new venture formation. Cognition work revolves around underlying psychology, attitudes, knowledge structure and thought processes that affect entrepreneurial decisions and behavior. The category organization comprises keywords having to do with firm activities related to strategy, process and the environment. The emergence category accounts for research which investigates dynamic aspects of entrepreneurship—nascence, startup, changes in size and scale, growth and pursuing new opportunities. Performance keywords appeared in research that focused on performance dimensions, such as survival and varying measures of success, as critical to the theory or empirical data collected.[2]

Using keyword categorizations there appear to be some differences over time among journals in which Bird's intentions paper was cited (Fig. 7.2). Over 30 years Bird-citing articles in *Entrepreneurship Theory and Practice* have devoted relatively more attention to the person category, while those articles appearing in *Journal of Business Venturing* have had relatively greater emphasis on emergence and performance. Not unexpectedly, major

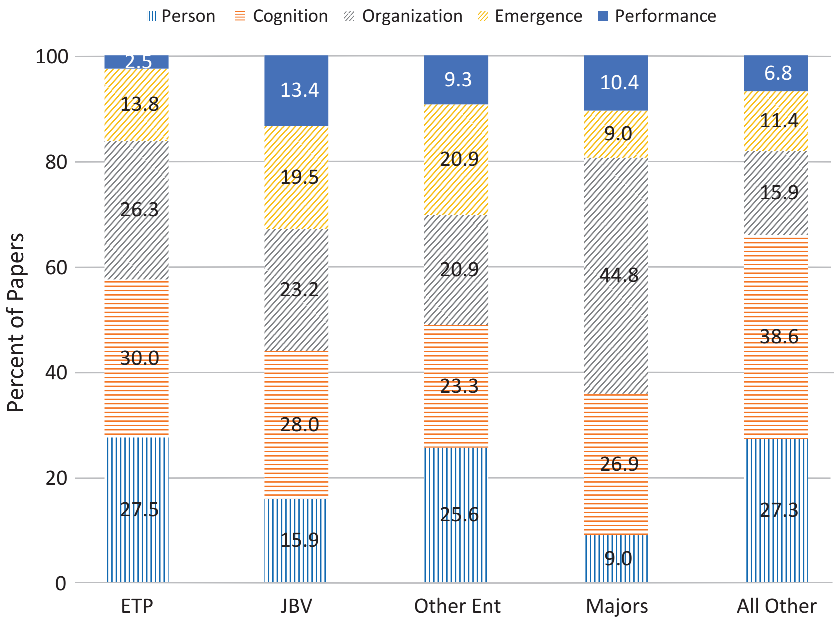

Fig. 7.2 Trends in content of papers citing Bird (1988) by journal

management journals in which Bird-citing articles appeared have tended to emphasize organization since in all likelihood that content is more aligned with their editorial mission and readership interests. And also not unexpectedly, other non-management journals (e.g. *Journal of Applied Psychology*) indicate a much stronger propensity to publish Bird-citing articles dealing with cognition.

Over time the emphasis of papers citing Bird has manifest interesting changes (Fig. 7.3). Davidsson mentions how the focus of entrepreneurship research on individuals waned in the years immediately following Gartner's (1988) "attack and some disappointing results" (2016: 20). This dynamic is reflected in Fig. 7.3, showing that person research only picked up again in the late 1990s and has blossomed in the latest five-year period. Also reflecting this trend was a greater focus on cognition research in the ten years following Bird, as researchers sought to move beyond personal characteristics to mindsets and underlying cognitive dimensions. Cognition work slipped in relative importance in the early 2000s but has

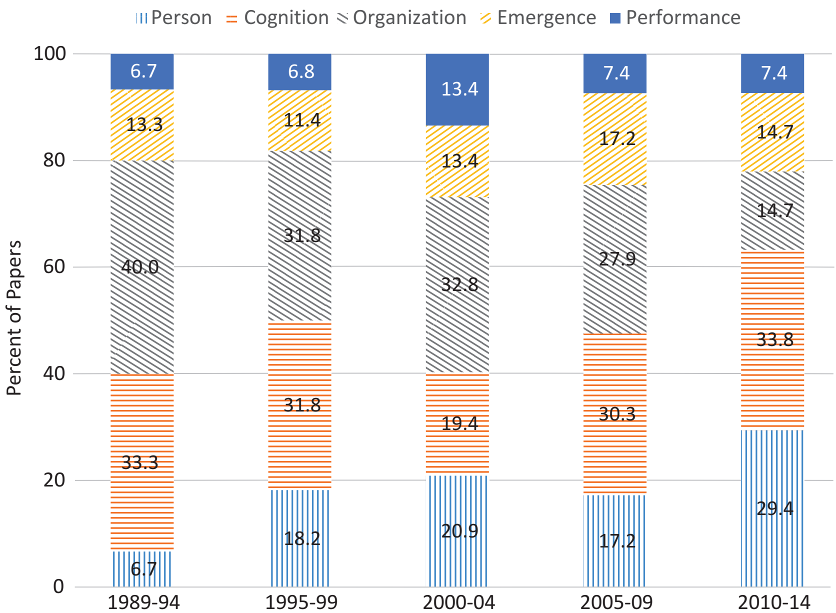

Fig. 7.3 Trends in content of papers citing Bird (1988) by years

since gained traction according to recent reviews (Gregoire et al. 2015; Mitchell et al. 2007). As person- and cognition-focused research has increased in relative importance among Bird-citing articles, work focused on organization has declined. Emergence-oriented research seems to have gained greater prominence over the last 15 years.

Finally, we sorted the articles that directly cited Bird to determine which papers are the most highly cited in each of the categories developed from our keyword analysis. Table 7.3 displays the papers in each category that

Table 7.3 Highest-cited articles citing Bird (1988), by category (Citations > 100)

Category	*Author(s)*	*Year*	*Journal*	*Citations*
Person	Krueger et al.	2000	*Journal of Business Venturing*	624
	Zhao et al.	2005	*Journal of Applied Psychology*	358
	Cope	2005	*Entrepreneurship Theory & Practice*	187
	Linan Chen	2009	*Entrepreneurship Theory & Practice*	183
	Shook et al.	2003	*Journal of Management*	140
	Crant	1996	*Journal of Small Business Management*	131
	Thompson	2009	*Entrepreneurship Theory & Practice*	103
Cognition	Krueger et al.	2000	*Journal of Business Venturing*	624
	Zhao et al.	2005	*Journal of Applied Psychology*	358
	Wilson et al.	2007	*Entrepreneurship Theory & Practice*	211
	Cope	2005	*Entrepreneurship Theory & Practice*	187
	Linan Chen	2009	*Entrepreneurship Theory & Practice*	183
	Stewart et al.	1999	*Journal of Business Venturing*	164
	Zhao et al.	2010	*Journal of Management*	157
	Wally Baum	1994	*Academy of Management Journal*	146
	Thompson	2009	*Entrepreneurship Theory & Practice*	103
Organization	Lumpkin Dess	1996	*Academy of Management Review*	1736
	Busenitz Barney	1997	*Journal of Business Venturing*	652
	Busenitz et al.	2003	*Journal of Management*	293
	Hill Levenhagen	1995	*Journal of Management*	178
	Hornsby et al.	2002	*Journal of Business Venturing*	178
	Wally Baum	1994	*Academy of Management Journal*	146
	Shook et al.	2003	*Journal of Management*	140
	Thompson	2009	*Entrepreneurship Theory & Practice*	103
Emergence	Busenitz Barney	1997	*Journal of Business Venturing*	652
	Zhao et al.	2010	*Journal of Management*	157
	McGee et al.	2009	*Entrepreneurship Theory & Practice*	125
	Barringer et al.	2005	*Journal of Business Venturing*	121
	Thompson	2009	*Entrepreneurship Theory & Practice*	103
Performance	Shook et al.	2003	*Journal of Management*	140
	Barringer et al.	2005	*Journal of Business Venturing*	121

have themselves been cited more than 100 times since publication. Two findings arise from this cut of the data. First, of the 31 papers appearing in this table 19 (61%) were published in entrepreneurship journals. This stands in marked contrast to Table 7.1's listing of the most influential articles published during the 20 years of the 1970s–1980s. During that earlier period only 5 of the top 20 papers (25%) appeared in entrepreneurship journals. It is apparent that Bird's impact has been broad, in both entrepreneurship and management publications, and that the impact is particularly strong within the entrepreneurship discipline's now more-established journals and readership base. Second, we note that five of the seven most-cited papers in the "person" category are also listed in the "cognition" category. This reflects our earlier comment (see earlier, note 2) that more recent articles focused on individuals have often cited earlier "characteristics" research and used a discussion of observable proxies as a launching point for deeper and more substantive exploration of the thought processes and decision frameworks of entrepreneurs.

The preceding brief keyword content analysis exhibits face validity with commentary provided by other researchers in their periodic reviews, as mentioned earlier. Two of the major categories we identified—person and organization—reflect categories previously identified in reviews of the field of entrepreneurship (Busenitz et al. 2003, 2014). In addition two of our categories (cognition, emergence) are indicative of aspects of Bird-citing research that are not usually called out in other reviews, but which we interpret as indicative of Bird's original intentions in her article and of important future direction for the field.

Bird's Intentionality Framework

In her seminal work Bird (1988) sets forth a behavioral framework that connects ideas with outcomes through the agency of intentionality. Bird seeks to move away from explanations of entrepreneurial action based in traits or experience- and economics-based contexts. Intentionality, as defined by Bird, is a "state of mind" that guides an individual down a unique path in the achievement of goals by directing the individual's attention. Specifically, entrepreneurial intentions guide the entrepreneur toward the creation of a new venture or value creation within existing ventures. She conceptualizes intentionality, which leads to entrepreneurial actions, as coming from the interplay between personal and social contexts and rational and intuitive thinking.

Through the agency of intentionality, Bird provides a unique foundation for later work that would address each of the dimensions revealed by the citation analysis previously discussed—person, cognition, organization, emergence and performance. In regard to the personal and cognitive basis for entrepreneurship Bird reasons that an intentions framework provides a psychological basis for understanding the behaviors associated with entrepreneurship that is not based solely in individual traits or contexts. The intentions framework provides a vehicle through which not only the individual demographics of entrepreneurs might be considered but also the underlying psychological and attitudinal characteristics.

Bird's intentionality framework addresses the organizational process by arguing that most entrepreneurs tend to be ends oriented among those who are more opportunistic in approach, as opposed to process oriented, tending to build larger and more complex organizations. She notes that it is sometimes more difficult for entrepreneurs to be strongly goal oriented as a result of the need to often proceed tentatively and with limited commitments in order to be opportunistic and tactical. Successful entrepreneurs manage this dissonance through a unique ability that Bird likens to a camera lens. She reasons that entrepreneurs are able to focus on both the minute day-to-day operational details, while at the same time zooming out to take in the big-picture details that exist in both the present and future. This complex form of ambidexterity enables the successful entrepreneur to maintain a variable strategic focus that allows the organization to be both goal directed and opportunistic.

Bird suggests that entrepreneurial emergence is driven and supported by a unique temporal tension maintained by entrepreneurs. As a result of the entrepreneurs' significant investment in the new venture and their need to control the potential outcomes of their decisions, entrepreneurs experience a greater level of temporal tension than typical organizational managers. Entrepreneurs, she concludes, are more focused on the now and the future with reflection on the past limited primarily to what is necessary to succeed in the future. Entrepreneurs also experience the passage of time differently. As a result of rapidly changing environments, entrepreneurs must make decisions quickly. They are able to do this as a result of their ability to recognize patterns more quickly than non-entrepreneurial managers through vigilance and a capacity to see beyond the present to the future. It is this ability that facilitates the pursuit of new opportunities.

The performance of the entrepreneurial venture is undergirded by the development of a posture that links the entrepreneur's values, beliefs, needs, wants and habits to the world inhabited by the entrepreneur and venture. Bird suggests that the successful entrepreneur's intentional posture is one that is characterized by alignment and attunement. A focused alignment between the entrepreneur's values, beliefs and needs and the venture, combined with an alignment between the entrepreneurial team and the venture, lead to critical synergies necessary for success. Beyond alignment, the entrepreneur's attunement to the environment of the venture and to a defined mission aligning with the values and beliefs of the entrepreneur are critical to the ability to be opportunistic while at the same time dealing quickly and effectively with setbacks.

Ultimately, Bird's purpose in proposing an intentions model was the articulation of an idiosyncratic domain for entrepreneurship research that would clearly differentiate entrepreneurship from strategic management. Additionally she sought to set forth a framework that would provide for the study of entrepreneurial founding, growth and survival in ways that could extend existing organizational theory. We elaborate on a number of the key contributions of Bird's framework for the field of entrepreneurship in the following discussion.

Key Contributions

In this section we discuss key contributions of Bird (1988) to research in the field of entrepreneurship. We first address the impact her article had on differentiating the field of entrepreneurship from strategy and other disciplines. Then we review how the categories of research that emerged from her paper parallel important developments in the field. It is not our intention in this section to offer exhaustive reviews of the literature within each of these categories, since others have recently provided much more comprehensive reviews and commentaries (e.g. Busenitz et al. 2014; Davidsson and Wiklund 2001; de Mol et al. 2015; Ferreira et al. 2015; Marvel et al. 2016; Meyer et al. 2014; Shepherd et al. 2015; Yadav and Unni 2016). Instead, we comment in each part later on how the trajectory of ideas through these categories of work reflect what Bird explicitly or implicitly was drawing attention to. We note that a number of the papers mentioned in our review later do not specifically cite Bird herself. Yet such papers do cite the papers that did cite Bird directly. In this sense the story of Bird's impact, as argued previously, is tied more to the evolution of ideas that came from her paper than to the numeric direct citation counts.

Entrepreneurship Versus Strategy

In the early 1980s, prior to the publication of Bird's article, the field of strategic management research was heavily influenced by the contingency framework. This framework focused on the process through which organizational managers make the decisions necessary for achieving the objectives and goals of the firm (Hofer 1975). Hofer and Schendel (1978) argue that this framework embraces a definition of strategy as a process through which organizations determine how to deploy resources, considering a range of environmental factors, to achieve the objectives of the organization. Flowing from this understanding of strategic management, both the research and theories explored during this time period focused on a range of contingency variables deemed of importance. Much attention was paid to the relationship between strategy and the internal environment of the firm and in specific organizational structures (Lenz 1980), the external environment of the firm (Miller and Friesen 1983), the unique resources of the firm (Wernerfelt 1984), firm performance (Chakravarthy 1986; Miller 1988) and a range of other contingency variables (Hambrick and Lei 1985). Consistent with this view, the firm was the primary level of analysis for strategy research with several theorists also calling for research at levels more general than the individual firm (Saunders and Thompson 1980).

During this same time period, researchers and theorists in the strategy field were beginning to turn their attention to the unique nature of emerging new ventures. The frameworks applied to understanding the emergence of new firms often reflected the contingency approach focusing on structure (Minkes and Foxall 1980), interactions with the environment (Murray 1984) and resources brought to the venture by the entrepreneur (Cooper and Dunkelberg 1987). While this approach yielded important understandings regarding how ventures emerge, in 1980 the editors of the then new *Strategic Management Journal* point out one critically important difference for emerging ventures (Schendel et al. 1980). In arguing that strategic and operational management are activities that occur simultaneously within organizations, they note one important exception—a newly emerging venture. They argue that in these types of organizations these activities occur sequentially. This suggestion opens the door for the need to understand in greater depth the unique nature of new ventures.

Strategic management during the years leading up to Bird was also preoccupied with the Porterian view of industry analysis and attention to how a firm achieves a dominant position in the marketplace. The interests of strategists lay in the stability of incumbent firms existing in well-formed industries. And even as resource-based theory began to shed light on how internal sources of competitive advantage can lead to such dominant positions (Barney 1986), resource theorists explicitly stated this theory was inapplicable to new ventures and startups (Wernerfelt 1984).

There would be limited exploration of the unique differences presented by emerging ventures prior to Bird setting out her intentions framework. Bird argues that what differentiates her framework from the strategic management framework is the focus on the individual in relationship to the firm as opposed to the firm level of analysis. Bird sets forth a framework that is behavioral rather than institutional. She focuses on intentionality as a state of mind that directs attention toward both the organization's goals and the paths for achieving those goals. She addresses a psychological base for venture creation that provides a framework for understanding how the external sequential nature of the emergence of a new venture is facilitated by an internal process (internal to the entrepreneur) that often simultaneously deals with a range of the same contingency factors considered in the strategic management process. And her entire framework is couched in the sort of dynamism and anticipated change over time that was fairly foreign to many strategic management thinkers interested in preserving status quo of superior-performing firms.

Cognition and Person

In this part we focus on cognition, since as mentioned earlier the vast majority of highly cited papers in the "person" category are fundamentally oriented toward the sorts of keywords defining the "cognition" category (e.g. attitude, efficacy, intent, knowledge, etc.). We note that in the latest five-year period of our analysis, from 2010 to 2014, the combination of cognition and person articles represent over 63% of all articles in our keyword analysis dataset. The trend over time since 1989 is unmistakably an increasing presence of this type of research among those citing Bird. This trend is confirmed by Ferreira et al. (2015) in their review of all entrepreneurship research published in top management journals.

As profiled earlier in this chapter Bird develops arguments about the psychology-action connections in starting new firms. She directs our attention to "the complex relationships among entrepreneurial ideas and the consequent outcomes of those ideas" (1988: 442). Cognition research in entrepreneurship is similarly motivated. In one of the earliest reviews of entrepreneurship cognition research, Mitchell et al. argue that an underlying assumption of research addressing the basic question "how do entrepreneurs think?" is concerned with "distinctive ways of thinking and behaving" (2007: 3) or the "thinking-doing" link that is focused on new value creation. Three of four areas of research identified in this review build on ideas initially presented by Bird: heuristics-based logic, perceived connections and alertness, and effectuation.

Entrepreneurship cognition scholars are keen to identify the variables that affect the entrepreneur's decision-making under uncertainty. The use of heuristics aids entrepreneurs in making connections between market developments and new opportunities (Gaglio and Katz 2001) through information acquisition and framing (Baron 2006; West 2003). Heuristics-based decisions are associated with less structured and rational thinking and are thus often reflected in more flexible organizational designs that can accommodate the sorts of change which entrepreneurs routinely confront (Busenitz et al. 2003). Thus intentions—the combination of the rational and the intuitive—"determine the form and direction of an organization at its inception" (Bird 1988: 444).

When Bird describes the interplay between the rational and intuitive, between the decisive and tentative, between the future and present, and the zoom lens agility back and forth between detail and big picture, she is describing the sort of effectuation process later developed by Sarasvathy (2001). Here thinking and action proceed together. Where the growth-oriented entrepreneur is ends oriented, her intentions tend to be generalized such as "creating a new venture or creating new values" (Bird 1988: 443). Similarly, for Sarasvathy, "usually all the entrepreneur knows when he or she starts out is something very general, such as the desire to make lots of money or to … simply purse an interesting idea that seems worth pursuing" (2001: 244). In both formulations entrepreneurs proceed through action, and then through trial and error they are vigilant, open-minded and have the ability to learn.

One of the cognition segment papers listed in Table 7.3 is Cope's (2005) paper on entrepreneurial learning. Cope implies that Bird's entrepreneur was all about doing, not about reflexively doing. But as described just previously, for Bird nothing could be further from the case; her characterization of how the entrepreneur operates opens the door to ideas about entrepreneurial learning. In Bird's analysis, by acting and deciding in the present the entrepreneur compresses time lags which can lead to more rapid iterations between stimulus and response. This sort of iterative approach, subsequently written about by others (e.g. Argyris and Schön 1996; Corbett 2005, 2007; Gemmell et al. 2011), has often been used foundationally to discuss entrepreneurial learning.

A recent review of entrepreneurial team cognition also demonstrates foundations in Bird. In their review of this facet of cognition, de Mol et al. (2015) find that entrepreneurial team cognition emerges from complex interactions arising from the patterning of knowledge among team members that leads to similar attitudes, beliefs and interpretations. Bird also discusses how the psychological alignment concept relates to synergy that can be achieved when employees' needs, values and beliefs are similarly aligned to the entrepreneur's intentions and can thus work toward common goals.

Another recent literature review, on opportunity research (Wood and McKelvie 2015), further emphasizes ideas about cognition that are implied by Bird. Reflecting other reviews of the entrepreneurship literature (e.g. Busenitz et al. 2014), this paper describes opportunity evaluation as central to the field of entrepreneurship. Then mirroring Bird (though not citing her), Wood and McKelvie state "one's beliefs about the attractiveness of pursuing an imagined future state … are the impetus for actions taken (or not) that eventually lead to visible outcroppings of entrepreneurship" (2015: 256). Further, they claim that "what distinguishes opportunity evaluation … is the shift from cognition to actions … where they use their experience and knowledge … by constructing mental images of 'what could be'" to make decisions about what is worth pursuing. The connection between imagined future state and action is precisely what Bird writes about. And three themes emerging from their review of the "opportunity as future focused cognition" literature are those which directly parallel ideas originally found in Bird: (1) integration of dispositions, emotions, experience and situational variables (intention); (2) congruence among mental models of various stakeholders (attunement and alignment) and (3) action orientation where decisions go beyond mere business plans (strategic focus and posture).

Emergence

Prior to the mid-1980s, entrepreneurship research had as its focus the unique attributes of the individuals who choose to become entrepreneurs (Gartner 1985). These early frameworks drew on the same situational variables being explored in the strategic management literature—the individual, the organization, the environment and the process through which the entrepreneur brings into existence the new venture (Gartner 1985). The process was seen, in unison with the strategic management view, as being sequential, beginning with the recognition of an opportunity and culminating in the building of an organization capable of responding to its environment. Bird would enter into this discussion of new venture emergence by proposing entrepreneurial intentions as the mechanism through which the seemingly sequential activities necessary for the emergence of a venture are bound together in simultaneity.

Shane and Venkataraman (2000) argue that for new ventures to emerge there must exist different beliefs regarding the relative value of resources. It is this difference in belief in the value of resources in both the present and the future that lead to entrepreneurial discoveries and the emergence of organizations necessary for value creation. The intentions model, as set forth by Bird, provides a framework for understanding why entrepreneurs are able to discover unique uses and values for resources. Their ability to move quickly and capably between the present and future horizons, between tactical and strategic imperatives, and to connect their own values, beliefs and needs to the world they inhabit allows them to see opportunities and uses for resources that are just not envisioned by others.

Research on the emergence of new ventures, after Bird's writing, has focused on a range of dynamics. These dynamics include the processes through which opportunities are recognized and the birth, growth and evolution of organizations to seize these opportunities (Lichtenstein et al. 2006). A key word search of research citing Bird's intentions framework uncovers a very similar set of dynamic processes encompassing the focus of the field in recent years—opportunity, creation, startup, nascent, growth and so on. Entrepreneurial intentions are linked to the application of resources to bring about venture opportunities (Rotefoss and Kolvereid 2005), innovations that lead to creation (Oke et al. 2007), the emergence of rapid growth ventures (Barringer et al. 2005) and born-international ventures (Kundu and Katz 2003). Acknowledging the critical role of intentions to venture emergence, researchers have also sought to understand the processes through which entrepreneurial intentions are formed. This work has focused on the role of personality (Zhao et al. 2010), gender and culture (Shinnar et al. 2012) and self-efficacy (McGee et al. 2009).

Lichtenstein, Dooley and Lumpkin (2006) conceptualize emergence as deriving from three distinct forms of organizing—visioning, strategic and tactical organizing. They argue that these forms of organizing all occur simultaneously during the creation of new ventures. The intentions framework, as set forth by Bird, has proven particularly useful and enduring in framing how entrepreneurs envision new and novel uses for resources (opportunity recognition) and start and grow organizations capable of exploiting entrepreneurial opportunities through their ability to move quickly and adroitly between the forms of organizing necessary for new venture emergence.

Organization

Important to the venture creation process is not only the entrepreneur's ability to create value in applying resources in unique and novel ways as set forth by Shane and Venkataraman (2000) but also the ability of the entrepreneur to configure resources in a manner that is appropriate to achieve the goals of the entrepreneur (Zahra et al. 2006). The focus of the entrepreneurship field on the role and mode of organizing has been significant. Busenitz et al. (2014) note that of the ten most impactful articles published prior to 2009, four had mode of organizing as a central focus. In their review of entrepreneurship research published between 1985 and 2009, Busenitz et al. (2014) confirm 80 publications focusing on mode of organizing. This research accounted for 37% of published entrepreneurship research during the time period studied. Research in this domain has as its emphasis the development of strategies both tactical and operational, the acquisition and use of resources, and the development of systems and structures (Busenitz et al. 2003).

Bird envisioned the intentional process, which had at its core the entrepreneur's beliefs, values and needs, as the primary driver of the organizing process. She argues that entrepreneurs tend to be more opportunistic and tactical, resulting in organizations that can be simultaneously goal directed and opportunistic. Bird's conceptualization has been acknowledged in a wide range of work including research focusing on the differences between entrepreneurs and managers in large firms (Busenitz and Barney 1997), resource theory and entrepreneurial activities (Hill and Levenhagen 1995), and corporate management (Hornsby et al. 2002).

Looking Forward

So far we have highlighted recent research that explicitly focuses on several categories of research, historically determined through our keyword analysis, that reflect ideas or concepts originally appearing in Bird. Taking a step back it is apparent that this sort of dynamic—and the research which investigates it—also implicitly exists at the intersections of the Venn diagram appearing in recent reviews of entrepreneurship research (Busenitz et al. 2003, 2014). These are the intersections of individuals and teams, opportunities, and organizing. Whether we are discussing the "creation" view or the "discovery" view of opportunity (Alvarez and Barney 2007), either is inert without both the intentions and actions of the entrepreneur. Similarly, any sort of organizing effort cannot be fully appreciated unless and until we understand the intentions of the entrepreneur with respect to the opportunity toward which such intentions are focused. Bird holds that entrepreneurship is not about ideas or people or organizing, but about all simultaneously. Thus it seems that Bird's intent from the beginning was to orient entrepreneurship researchers' attention to the intersections among these three domains. Unfortunately, according to a recent literature review (Busenitz et al. 2014), this has not occurred. That review demonstrates that only 20% of entrepreneurship publications in major management journals, and only 14% of such publications in *Journal of Business Venturing*, address any of these intersections. "Research that focuses on a unitary dimension may be unable to contribute to an understanding of entrepreneurship phenomenon" (Busenitz et al. 2003: 298). Thus in this section we briefly speculate about three promising research trajectories in entrepreneurship research which may continue to build on Bird's seminal ideas by more directly addressing these intersections.

Reflecting the predominantly psychological underpinning of Bird's intention article, the concept of "situated cognition" has recently garnered greater attention and offers opportunity for entrepreneurship researchers. Dew et al. argue that the field of entrepreneurship, including research focused on entrepreneurial cognition, "has been dominated largely by individualistic and static conceptions of entrepreneurial cognitions … 'boxologies' [that] … fall short of capturing … dynamism and interactivity" (2015: 143). This may be because cognition research on entrepreneurs, like that targeted at so many other domains of inquiry in the field, "remains characterized by a multiplicity of theoretical approaches, foci, methodologies, variables and measures" (Gregoire et al. 2015: 126). Is there an echo in here? These are precisely the same criticisms leveled at the field in much, much earlier accounts (e.g. Busenitz et al. 2003; Low and MacMillan 1988).

Situated cognition research responds to such concerns and fundamentally builds off ideas in Bird. Just as Bird's focus on the psychological precursors to action led her to a framework that connected ideas with outcomes through agency, so too does situated cognition involve "perception and action in the context of a human body situated in a real world environment" (Dew et al. 2015: 144). In this view cognition is tied to actions and objects and is shaped by the social, cultural and physical contexts in which entrepreneurs find themselves. The core of this idea is that attention to the cognitive property alone in the mind of the entrepreneur (e.g. heuristic, anchor, frame) is insufficient to capture the dynamic of the entrepreneurial endeavor. As the contexts change, so will relevant cognitive dimensions. As entrepreneurs act, see, fail, succeed and learn, they in fact change the context and will thus change their own cognitions. The recursive nature of the process reflects the characteristics and qualities that Bird described in her model of intention-direction. While Bird acknowledges that entrepreneurs ultimately proceed down "corridors" as they move further along, the ways in which they act speak to the dimensions of situated cognition. Their temporal tension, "fast dancing" decision style, strategic zoom-lens approach and continual efforts to attune and align: all speak to the same recursive process described by situated cognition.

A balance to the idea of situated cognition are growing efforts to drill down ever more carefully into "boxed-in" cognitive characteristics of the entrepreneur. One key component of Bird's intentions model is intuition, which has recently received greater attention (Baldacchino et al. 2015). Bird's model suggests that intuition is one important element that helps to balance rational analytical thinking, leading to intentions characterized by greater freedom and expanded creativity. Such a central facet of the intentions model deserves greater attention. Baldacchino et al. note that of the 25 published papers on entrepreneurial intuition, more than half have appeared within the last ten years. Another drill-down area within the mind of the entrepreneur is presented by Krueger (2007, 2011). He advocates a constructivist approach for understanding how deep-seated beliefs underlie entrepreneurial intentions, invoking ideas from social neuroscience to make his case. Here a form of learning which results in changed entrepreneurial intentions springs from modifications to deeply embedded belief systems. In turn, he allows that such changes may be precipitated by interactions in the physical and social world. This suggests that intentions may be formed or modified by interactions at different levels. Together with situated cognition ideas, this presents a compelling agenda for future work in cognition.

Mitchell et al. point out, though, that "sensemaking is action-oriented" (2011: 774). As we commented earlier in this chapter, opportunities however identified are inert without action, since some identified opportunities are in fact never pursued (Wood and McKelvie 2015). Just as Bird sought to make the connection between ideas and actions, so too now is a movement afoot to further the "entrepreneurship as action" perspective (Gartner et al. 2016).

Social practice theory investigates the interrelations between organizations, organizing practices and the practitioners who enact them (Whittington 2006). "Entrepreneurship is ongoing practice of creatively organizing people and resources according to opportunity" (Johannisson 2011: 140). Research in this domain thus also seeks to understand how individual actions and collective action harmonize toward a set of goals. This is a more contemporary turn that builds on ideas such as enactment, bricolage, networking and other actions in which entrepreneurs engage and is broad enough to include ideas related to effectuation. We are pleased to see recent research, which extols the importance of better understanding entrepreneurial behavior as the mediator between cognitions and outcomes, including efforts to better define and catalog the nature of behaviors and how they may be accessed by researchers (e.g. Bird et al. 2012). Understanding practice may involve greater use of research methods less prevalent in published research, such as qualitative case studies and ethnographic approaches. But such research can be powerful in revealing facets not fully captured in traditional survey work and can lead to novel new theoretical speculations (e.g. Lichtenstein and Brush 2001). This notion of being willing to move beyond traditional and accepted methods is consistent with the challenge set forth by Bird in 1988 and it is still an important refrain in her challenge to researchers today (Bird 2017).

Conclusion

We conclude by stepping back to consider suggestions implied by Bird (1988) for future entrepreneurship research. We consider the temporal aspects of entrepreneurship, a continuing theme in Bird's work (e.g. Bird 1992; Bird and West 1997). The dynamic of entrepreneurship—creating something new over time—is so obvious and so central to the phenomenon. Research that cites Bird (1988) often deals with issues and dimensions captured by keywords in the category of "emergence," as founders and their new ventures continue to learn, change and grow over time. This learning and growth is directed, in Bird's view, by the vision underpinning the entrepreneur's intentions. The entrepreneur puts the vision out there and then evolves the vision over time by listening carefully to what people are echoing (Bird 2017). In her view, in order to understand how this process works over time, researchers must focus on the rhythm of actions and reactions, as do entrepreneurs. Entrepreneurs do not know when things will happen and so must focus on the rhythm, as do great musicians, to understand when it is critical and possible to improvise (Bird 2017). The iterative and interactive processes mentioned earlier reinforce the idea that to understand entrepreneurship we must watch it over time, track it over time, understand how time's passing affects the process of learning and development, modifications to intentions and leads to revised actions.

Entrepreneurship is also multi-level and multi-dimensional. This sense is at the core of Bird's article, which sought to link a chain of important concepts: psychological precursors—intentions—actions—outcomes. Reflected in more recent reviews of research in the field and of our own catalog herein of papers citing Bird, one cannot fully appreciate entrepreneurship without simultaneously accounting for persons, opportunity, organizing actions and context. Davidsson (2016) identifies this aspect of entrepreneurship in his recent review of significant developments.

Conducting and then publishing research which addresses these temporal and multi-level dynamics is a continuing challenge going forward for the field of entrepreneurship. As the field has become more legitimate, it has attracted greater interest and it has become a more competitive publishing environment. We surmise that manuscript flow has increased faster than the availability of high-quality publication outlets. Such competitive dynamics will tend to further institutionalize the sort of research that has been used in other more traditional management disciplines. As the field has moved a bit past the theory development stage into theory testing, research which takes advantage of larger datasets and is generative of power in statistical testing can encourage researchers away from longitudinal research. Traditional management research which "mixes level of analysis" is more difficult to pass muster, and so entrepreneurship researchers eager to publish stay within the bounds of what has historically received greater acceptance.

Yet we remain confident that scholars in the field of entrepreneurship can and will address these challenges. The advent of reviews and more research on situated cognition, learning, entrepreneurial behaviors and other subdomains is encouraging. These efforts speak to the general research challenges to a more holistic understanding of the entrepreneurship phenomenon and in many ways reflect the ideas originally proposed by Bird three decades ago.

One of the most enduring impacts of Bird's work is that it broke from the existing research at that time for both the strategic management and entrepreneurship fields. Her focus on the importance of considering a psychological basis for venture creation demonstrated a willingness to be entrepreneurial as a researcher by taking the risks inherent in charting a different course. From a recent interview, it is clear that this call for entrepreneurship researchers to be academic entrepreneurs is still a passion for Bird and a challenge to scholars in the field of entrepreneurship (Bird 2017).

Notes

1. A search using Google Scholar finds similar results. During this 20-year period 1980's articles were identified using the same keyword rules. Bird's article was cited 2374 times, again placing fifth on the list of identified papers.
2. There is occasionally some fuzziness between keywords and the categories to which they have been assigned. For example, some papers with a "personality" keyword springboard off previous research about observable demographic characteristics to argue for more penetrating analysis using cognition or decision-making. In this particular instance, in all cases in our article set the "personality" keyword was also accompanied by keywords within other categorizations. See discussion that follows.

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CHAPTER 8

The Rich Legacy of Covin and Slevin (1989) and Lumpkin and Dess (1996): A Constructive Critical Analysis of Their Deep Impact on Entrepreneurial Orientation Research

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The fragmented nature of entrepreneurship research is widely acknowledged (Chiles et al. 2007). Yet, in terms of fragmentation, entrepreneurship research may not be any different from other management disciplines such as strategy and organizational behavior, where scholars have long bemoaned the lack of integration within the scholarly enterprise (Kilduff and Mehra 1997; Nag et al. 2007). Fragmentation in entrepreneurship research, as is the case with other fields of academic inquiry in organizational studies, stems largely from the contested nature of our discipline.

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As Davidsson (2016) recently observed, after decades of inquiry, there is no consensual definition of entrepreneurship, and there is unlikely to be consensus on this issue in the foreseeable future. Despite such contestation, there is one area in entrepreneurship research that is fairly stable and cumulative in knowledge development: entrepreneurial orientation (EO). Indeed, the growing consensus among scholars is that EO is one of the few robust constructs in entrepreneurship and broader management research (Basso et al. 2009). Moreover, scholarship in this area has been broadening and accelerating in recent years (Gupta and Gupta 2015; Wales et al. 2013a). Notably, EO is part of the broader topic of corporate entrepreneurship, which refers to the idea that firms can behave in entrepreneurial ways that create new value (Ireland et al. 2009).

The genesis of EO research is usually traced back to Covin and Slevin (1989) and Lumpkin and Dess (1996), two highly impactful articles recently acknowledged as 'super classics' in organizational studies (Wales et al. 2013a, b). Both articles have also received the Foundational Paper Award from the entrepreneurship division of the Academy of Management (in 2009 for Lumpkin and Dess (1996) and in 2016 for Covin and Slevin (1989)), a public recognition of their contribution to entrepreneurship theory and research. While Covin and Slevin (1989) and Lumpkin and Dess (1996) may not have been the intellectual fathers of EO (that credit goes to Khandwalla (1976) and Miller (1983)), they were the first to formalize the idea of an entrepreneurially oriented firm and define the boundaries of the EO construct.

This chapter purports to revisit the seminal works of Covin and Slevin (1989) and Lumpkin and Dess (1996) to discuss their contributions to advancing our understanding of entrepreneurial phenomena, identify areas where progress has been made, and highlight gaps and omissions deserving consideration, going forward. To acknowledge our bias upfront, we admit our appreciation of the role played by these two articles in the evolution of the field. Yet, in the interest of scientific progress, we take a critical perspective in discussing ways in which they can further contribute to the continued development of entrepreneurship research.

The rest of this chapter proceeds as follows. We first provide brief summaries of Covin and Slevin (1989) and Lumpkin and Dess (1996) as a ready primer for the reader. Then, we discuss the contributions of each of the two articles to entrepreneurship research so far. We then identify certain myths relating to EO that persist despite a large body of follow-on work published after the two seminal articles. We conclude with a discussion of the potential and possible direction of EO research in future.

Revisiting Covin and Slevin (1989)

There are two major reasons why Covin and Slevin (1989) are considered a foundational contribution to EO research. First, it formally introduced the idea of an 'entrepreneurial-conservative orientation' as strategic posture, which, citing Miller (1983), they described as the "extent to which the top managers are inclined to take business-related risks, to favor change and innovation in order to obtain a competitive advantage for their firm, and to compete aggressively with other firms" (p. 77). Entrepreneurial firms, in this conception, were those where top managers demonstrated an entrepreneurial style as reflected in the strategic decisions and operating philosophy of the firm. Second, it developed a nine-item scale to assess corporate strategic posture in terms of a firm's reliance on entrepreneurial-conservative orientation, with three items each for risk-taking, innovativeness, and proactiveness. Five of these items were adopted from existing instruments (Khandwalla 1976; Miller and Friesen 1982) and four were created by Covin and Slevin (1989) as part of their scale development. Thus, Covin and Slevin (1989) introduced a new construct to the literature and offered a multi-item scale to assess the construct they proposed.

Covin and Slevin (1989) was not truly about EO, at least, not in the direct way contemporary EO articles usually are (e.g., Anderson and Eshima 2013; Gupta et al. 2016a, b). Indeed, the stated goal of Covin and Slevin (1989) was to "investigate the effective strategic responses to environmental hostility among small manufacturing firms", with the hypotheses tested on data collected from 161 small manufacturing firms that had been in business for more than five years. It was argued that environmental hostility (which is the opposite of environmental munificence; Dess and Beard (1984)) was the environmental factor most threatening to the viability and performance of small firms. The environment in which the firm operates was conceived in ideal types term: either hostile—characterized by "precarious industry settings, intense competition, harsh overwhelming business climates, and the relative lack of exploitable opportunities"—or benign described as "a safe setting for business operations due to their overall level of munificence and richness in investment and marketing opportunities" (p. 75). Surviving and growing in hostile environments was considered challenging for small firms because of their limited resource bases and relative lack of cushion to bear adverse consequences of unfavorable managerial decisions. It was argued that when operating in hostile environments, small firms would need an appropriate organizational structure and strategic posture. The authors predicted that to perform well in hostile environments, small firms had to have an organic structure and entrepreneurial strategic posture. Conversely, small firms in benign environments were expected to have better performance when they had a mechanistic structure and a conservative strategic posture. Thus, Covin and Slevin (1989) took a contingency perspective toward EO, in that they believed that firms benefit from being entrepreneurial in certain situations and from behaving conservatively in others.

To obtain data about their study, Covin and Slevin (1989) reached out to senior-most managers of single-industry firms in the Pittsburg region, requesting them to complete the research questionnaire. The nine-item EO scale was part of this questionnaire. Using only data from 161 manufacturing firms, the EO scale was factor analyzed to determine if all items loaded on a single factor. The logic was that "high loadings on a single factor would suggest that, although the items focus on different aspects of strategic posture, they are empirically related and constitute a distinct, unidimensional strategic orientation" (p. 79). It was found that all items loaded at least above 0.5 on the single factor (with average loading of 0.66), which suggested that it was appropriate to combine the nine items in one scale.

Covin and Slevin's findings were revealing and informative: First, they found that strategic posture (measured as entrepreneurial-conservative orientation, with a nine-item scale) had a significant positive interaction with environmental hostility, so that entrepreneurial firms performed better in hostile environments and conservative firms performed better in benign environments; second, they found that strategic posture had no direct effect on firm performance, with the entrepreneurial-conservative orientation measure they used explaining only about 1 percent variance in firm performance. Taken together, these two key findings reveal that Covin and Slevin (1989) presented evidence for a contingent effect of entrepreneurial strategic posture and not for its direct impact on firm performance.

Revisiting Lumpkin and Dess (1996)

The second seminal article on EO, by Lumpkin and Dess (1996), was published a few years later, by when the newly emergent field of EO had begun to grow deep roots in literature. Utilizing conceptual arguments and developing an integrative framework for exploring the EO-performance relationship, Lumpkin and Dess (1996) sought to establish two important insights: (1) the relationship between EO and performance is context dependent and (2) the dimensions of EO established in prior literature (notably Covin and Slevin 1989) are not static but may actually vary, given the firm's operating context. Borrowing ideas from strategic management, Lumpkin and Dess (1996) also distinguished between two different aspects of entrepreneurship—domain versus process—and suggested EO would necessarily have to have a process orientation since it is concerned with the methods, practices, and decision-making styles of entrepreneur-managers. At the same time, they also argued that since EO is reflective of an organization-wide effort toward creating an entrepreneurial culture facilitating the firm's new entry (either into a new market or an existing market but with a new product/service), the construct would necessarily be at the firm level.

In the early part of the paper, Lumpkin and Dess' (1996) efforts were to identify the specific dimensions of the EO construct. To do so, they were inspired by the insight from organizational researchers who suggested that the firm's strategic decisions come from a set of organizational processes. This led Lumpkin and Dess (1996) to assert: "we believe there is a fundamental set of strategy-making process (SMP) dimensions that underlies nearly all entrepreneurial processes" (p. 139). Accordingly, based on their review of literature on SMP and organizational aspects of entrepreneurial firms, the authors noted that EO seems to be constituted in five dimensions: innovativeness, risk-taking, proactiveness, competitive aggressiveness, and autonomy. In subsequent sections of the paper, Lumpkin and Dess (1996) spent considerable time in elaborating on each of these five dimensions of EO and explaining based on extant literature as to (1) why these dimensions are important to consider in a discussion of EO and (2) elaborating how adhering to each of these dimensions helps the firm become entrepreneurially oriented. Further, the authors also developed arguments in the paper to theoretically establish the relative independence of each of the five dimensions of EO.

Thereafter, in order to provide a conceptual exposition of the EO-performance relationship, Lumpkin and Dess (1996) took an expansive approach by reviewing the literature to identify key contingencies that could affect this relationship. They classified the contingency variables primarily into two categories: environmental factors (mainly, environmental and industry characteristics) and organizational factors (mainly, firm-level attributes). Thereafter, the authors examined the intricacies of the EO-performance relationship by incorporating into the model the multidimensional nature of the EO construct as well as the key contingencies, to arrive at a range of potential models of the relationship and related propositions: moderating effects, mediating effects, independent effects, and interaction effects, thus providing several insights to guide future research on the process aspects of entrepreneurship.

In the final part of the paper, Lumpkin and Dess (1996) devoted their attention to highlighting the potential implications of their paper on future research and practice. In answering the question as to what makes a firm entrepreneurial, they suggested any firm that engages in “an effective combination of autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness is entrepreneurial” (p. 162). Because these dimensions are organizational characteristics, Lumpkin and Dess (1996) asserted that the EO construct represents the “process aspect” of entrepreneurship. They suggested that future researchers consider to what extent possession of such organizational characteristics enable a firm to pursue an opportunity through new entry, as well as allow it to maintain a competitive position and high performance in the industry it is a part of. Lastly, in attempting to answer the question as to whether a firm can cease to be entrepreneurial, Lumpkin and Dess (1996) took an intriguing position: In their view, while it is definitely possible for a firm to remain entrepreneurial over its entire life cycle, it loses the entrepreneurial edge when it becomes overly passive, so much so that it no longer embraces any one or more of the five EO dimensions. At the same time, the authors suggested that the firm’s efforts at maintaining a high level of organizational readiness in each of these five dimensions also should take into account the market environment and industry the firm is placed in, thus arguing for a contingency perspective toward EO.

Assessing the Impact of the Seminal Papers

At this stage, it seems reasonable to ask what kind of impact Covin and Slevin (1989) and Lumpkin and Dess (1996) have had on the literature. One objective way to measure article impact is by citations, which is indicative of the numbers of published papers that directly draw on insights from the focal article. Using Web of Science, we find 1138 citations for Covin and Slevin (1989) and 1791 citations for Lumpkin and Dess (1996) by the end of April 2017. This translates to about 44 citations per year for Covin and Slevin (1989) and 85 citations per year for Lumpkin and Dess

(1996), an impressive record indeed! Wales et al. (2013a) used citation data to recognize both Covin and Slevin (1989) and Lumpkin and Dess (1996) as 'super classics' in the field.

There are, however, also other subjective ways to assess impact. Each year, the Entrepreneurship Division of the Academy of Management honors one article as a foundational paper. The goal of this award is to recognize papers that have had a lasting and positive impact on scholarship in entrepreneurial studies. The formal description for the award is:

> The Foundational Paper Award recognizes a published paper that has significantly and positively changed the conversation in the field of entrepreneurship research. For example, such a paper may have applied a concept or theory in entrepreneurship research in an especially meaningful way, or empirically investigated an important question in a novel way to better reveal the truth, or in any way changed the boundaries of the domain. To be eligible for this award, the author must be living. Generally, too, foundational papers will have been published for at least 10 years.

Notably, both the seminal EO articles discussed here have been recipients of the Foundational Paper Award, with Lumpkin and Dess (1996) receiving it in 2009 and then Covin and Slevin (1989) receiving it later in 2016. The award recognized that these two articles were profoundly influential and classic contribution to entrepreneurship inquiry that served as a legacy for future scholarly work in the area.

Gupta and Dutta (2016) identified three phases of EO research: introduction, growth, and maturity. In their model, the growth phase started with Mintzberg (1973), moved forward through Khandwalla (1976) and Miller (1983), and concluded with the publication of Covin and Slevin (1989) and Lumpkin and Dess (1996). In effect, Covin and Slevin (1989) and Lumpkin and Dess (1996) built on the few previous works pertaining to firm-level entrepreneurship and laid down a framework that was to inform entrepreneurship research over the next few decades through growth and maturity. Since then, a large body of articles has accumulated on the topic of EO. In fact, it is hard to get a precise count of how many EO articles have been published until now because of the variety and range of scholarly outlets where EO research is published. Rauch, Wiklund, Lumpkin, and Frese (2009) identified 51 articles for their meta-analytic review of the EO-performance literature. Gupta and Wales (2017) perused 119 empirical EO journal articles from 1986 to 2011, a 25-year period.

Wales et al. (2013a) based their incisive synthesis of the EO literature on 158 empirical journal articles. Clearly, there are now hundreds of EO papers in print, and we can speculate that there must be hundreds more at various stages in the research pipeline.

Thus, from both an objective and subjective perspective, Covin and Slevin (1989) and Lumpkin and Dess (1996) have had a profound impact on the field so far. If past performance is a good predictor of future performance, one can reasonably expect Covin and Slevin (1989) and Lumpkin and Dess (1996) to continue to be impactful going forward.

From revisiting the two original seminal articles and gauging their impact on the field, we now shift our focus to delving into the common claims, assumptions, and misconceptions about EO research that Covin and Slevin (1989) and Lumpkin and Dess (1996) help us question and address. Several scholars have recognized the existence of beliefs and practices in organizational research that are often passed on as 'received doctrines' in the field (Aguinis et al. 2011: p. 307; Lance and Vandenburg 2009: p. 1). It is in this spirit that we provide a critical exploration of three myths or misunderstandings common in the EO literature. Because our focus here is on the enduring value of Covin and Slevin (1989) and Lumpkin and Dess (1996), it is helpful to consider the myths that persist in EO scholarship as the field that rapidly took off and developed, based on the foundation laid by these two seminal papers.

Myth #1: The Nature of EO-Performance Relation Is Clear and Well Established

Firm performance is the most common dependent variable in EO research. Indeed, as Gupta and Wales (2017: p. 52) suggested, there "is general agreement among researchers and practitioners that the value of EO to a firm is ultimately judged by its contribution to organizational performance". For most researchers in this area, EO has a significant positive impact on firm performance. As Anderson and Eshima (2013: p. 413) noted, "After more than thirty years of scholarly inquiry, it is generally accepted that firms that behave entrepreneurially perform better than those firms that are more conservative". Similarly, Wiklund and Shepherd (2005: p. 73) observed that "those businesses that adopt a more entrepreneurial strategic orientation perform better". The perception that EO is positively linked to performance is so common that most papers in this area no longer theorize or empirically examine the direct relationship between EO and performance (e.g., De Clercq et al. 2010). Yet, there are several reasons to question the existence of a universally positive EO-performance link.

First, there is growing evidence that EO can sometimes result in inferior performance (Gupta and Gupta 2015). For example, Tang, Tang, Marino, Zhang, and Li (2008) found that, in China (the second most-often sampled country in EO research; Wales et al. 2013a, b), EO had a curvilinear inverted U-shaped relationship with firm performance so that beyond a certain point, increase in EO decreased performance. Notably, they found the same pattern of effect with both perceptual and objective measures of firm performance. While these scholars were careful to say that their results were China-specific and theorized based on the Chinese institutional environment, Wales, Patel, Parida, and Kreiser (2013a, b) found a similar inverted U-shaped relation between EO and performance (measured objectively as annual operating profit) in Swedish small firms. Su, Xie, and Li (2011) also revealed a curvilinear inverted U-shaped relation between EO and firm performance in Chinese new ventures (though they found a direct linear effect for established firms). Tang and Tang (2012) also examined the EO-performance relation in China and found an inverted U-shaped relation. Thus, it seems there may be a too-much-of-a-good-thing (TMGT) effect for EO. Antonakis, House, and Simontin (2017: p. 1003) credit the American sex symbol Mae West with popularizing the idea that "too much of a good thing can be wonderful". Yet, TMGT effects are widespread in the social sciences (Pierce and Aguinis 2013). If TMGT characterizes EO, then it is possible that EO can also be associated with performance decrements. Indeed, Wiklund and Shepherd (2011: p. 937) find a strong positive association between EO and firm failure, noting that "our finding … is at odds with the implicit assumption of the vast majority of previous EO studies". Matsuno, Mentzer, and Ozsomer (2002) went even a step further when they argued that by itself, EO would negatively influence firm performance.

Second, some evidence suggests that EO may not be significantly related to firm performance at all. Stam and Elfring (2008) found no evidence for a direct EO-performance relation with both subjective and objective indicators of firm performance in a sample of Dutch open source software firms. Using a sample from the Midwest United States, Runyan, Droge, and Swinney (2008) found no relation between EO and firm performance in 'older' firms. Baker and Sinkula (2009) too did not find a significant performance impact for EO in a sample of California-based for-profit ventures. Distinguishing between five measures of firm performance (profitability, growth, and overall performance), Andersen (2010) revealed no support for a significant positive EO-relation in a sample of manufacturing firms in Sweden (third most sampled country in the EO literature; Wales et al. 2013a, b). Messersmith and Wales (2013) failed to find support for their conjecture that EO would be positively associated with sales growth in young high-technology firms. Finally, Gupta, Mortal, and Yang (2016b) examined the value creation potential of EO in a five-country sample and found no link between EO and firm performance measured in terms of shareholder value. Taken together, these studies point toward a growing body of scholarship that shows no evidence for the direct performance impact of EO.

Third, Andersen (2010) identified five 'core' references that are often cited in the extant literature to support a positive EO-performance relation: Zahra (1991), Smart and Conant (1994), Zahra and Covin (1995), Wiklund (1999), and Wiklund and Shepherd (2005). Only two of these papers used objective performance measures (Zahra 1991; Zahra and Covin 1995) but with corporate entrepreneurship as the predictor, and not EO. Smart and Conant (1994) developed their own six-item scale to assess EO but most items in this scale are usually not used in EO research. Andersen's (2010: p. 309) critical analysis of the core references cited in support of a positive EO-performance relation led him to conclude that "the notion of a positive EO-performance relationship can be questioned …, [so that] more care should be taken when generalizing the results of core references and scholars ought to have a more cautious approach when stating that there is a general correlation between EO and performance".

It is clear from the earlier discussion that the nature of the EO-performance relation is far from established. Indeed, the idea of a direct significant positive relation between EO and performance conflicts with Covin and Slevin's (1989) theorizing and evidence regarding the performance effects of EO. Recall that Covin and Slevin (1989) explicitly modeled the EO-performance relationship in contingency terms, with EO good for performance in some situations, but not as good in other circumstances. Lumpkin and Dess (1996) believed that EO could be associated with superior performance but only when firm performance was conceived in terms of new entry. None of the EO studies we discussed earlier measured performance in terms of new entry. In all, while it may be true that "there is increasing scholarly agreement that firms possessing an entrepreneurial strategic posture perform better than those firms that are more conservatively managed" (Anderson and Eshima 2013: p. 414), it is also a fact that there is increasing scholarly agreement that entrepreneurially oriented firms do not always perform better than conservatively oriented firms. Furthermore, the notion of a positive linear EO-performance relationship is supported neither by Covin and Slevin (1989) nor by Lumpkin and Dess (1996), both of which actually call for a more complex understanding of the performance consequences of EO.

Myth #2: There Is High Agreement on the Dimensions of EO

A common, but erroneous, belief among EO scholars is that there is a high level of consensus on the dimensions of EO. As we noted earlier, there are two dominant perspectives on EO dimensions: the Covin and Slevin (1989) three-pronged gestalt view and the Lumpkin and Dess (1996) five-dimensional disaggregated view. The two predominant conceptions of EO are believed to co-exist in the literature with each perspective lending unique insights (cf. Covin and Lumpkin 2011; Miller 2011; Wales 2016). EO scholars are generally encouraged to adopt one of these perspectives and then follow it in their scholarship. While there is debate and disagreement on the relative merits of the two perspectives, the consensus in the academic literature is that "future research seeking to add to the knowledge base on EO should include the three core dimensions of EO offered by Miller/Covin and Slevin (1989) and incorporated within the work of Lumpkin and Dess (1996)". In other words, risk-taking, innovativeness, and proactiveness are essential dimensions of EO, and autonomy and competitive aggressiveness may be added to the EO mix depending on whether one is following the Covin and Slevin (1989) approach or the Lumpkin and Dess (1996). Beyond this (relatively minor) disagreement about the conceptual viability of autonomy and competitive aggressiveness as part of the EO domain, the dimensionality issue in EO research is seemingly settled. Indeed, Covin, Green, and Slevin (1989) encouraged researchers that "knowledge creation around the construct of EO should accelerate if the conversation within the literature shifts from the dimensionality debate to other theoretically substantive issues".

Our reading of the EO literature is that dimensionality and the interrelationships between the dimensions is a key theoretically substantive issue that has gone relatively unnoticed in the extant body of knowledge. Furthermore, we believe the seminal papers by Covin and Slevin (1989) and Lumpkin and Dess (1996) support our position that researchers need to give more, not less, consideration to better understanding the dimensionality of EO. We explain our position below:

First, the three seemingly core dimensions of EO, and the two that were added later, are not derived systematically from either deduction (i.e., recognizing patterns in the established literature) or induction (i.e., through deep immersion in empirical information) approaches, the two most common techniques for theory building in the social sciences (Shah and Corley 2006). Because the existing EO dimensions are neither directly based on sound theory nor good data, many researchers have freely examined more or less dimensions and still call their construct EO (George and Marino 2011). For example, Richard, Barnett, Dwyer, and Chadwick (2004) conceived EO in terms of only two dimensions (risk-taking and innovativeness) and eliminated the third dimension of proactiveness from the mix. Interestingly, Miller and Friesen (1982: p. 5) had also spotlighted risk-taking and innovativeness as the dimensions relevant to entrepreneurship when they described entrepreneurial firms as those “that innovate boldly and regularly while taking considerable risks in their product-market strategies”. In a similar vein, Avlonitis and Salavou (2007) defined EO in terms of risk-taking and proactiveness but did not consider innovativeness to be part of EO. Indeed, it is quite common in the literature to see researchers delete or add dimensions (e.g., futurity; Rauch et al. 2009) without considering the potential implications for building cumulative knowledge on the domain of the focal construct of EO.

Second, Gupta and Gupta (2015: p. 114) argued that current conception(s) of EO reflect “only the values rooted in popular American history, described in folklore, literature, symbols, media, and polemics produced over three centuries, celebrating the domination and conquest of the unchartered frontier by enterprising actors who took great risks in the face of seemingly insurmountable challenges and achieved windfall profits and explosive growth at prodigious speeds”. The emphasis on risk-taking, proactiveness, and innovativeness, coupled with autonomy and competitive aggressiveness, seems awfully similar to the North American philosophy of ‘rugged frontiersmen’. Furthermore, all these entrepreneurial qualities are quite masculine in orientation (Ahl 2006). There is no sound explanation for why entrepreneurial qualities like networking and nurturing should not be part of the EO construct. Given the increasing rate of entrepreneurship among women (Kelley et al. 2015), should there not be at least some quintessentially feminine qualities included in the conceptual domain of EO? Furthermore, reports of high rates of entrepreneurship outside of North America (Herrington and Kew 2017) raise the intriguing question of why the EO construct does not incorporate qualities considered desirable or important in other cultures. Redefining the domain of EO to make it more gender-neutral or less ethnocentric should resonate with Miller (2011) who called for exciting research that asks novel questions about EO.

Third, the vast majority of EO literature combines the EO dimensions in an additive fashion (Wales et al. 2013a, b). EO is viewed as a sum of its various sub-dimensions, so that the extent to which a firm is entrepreneurial is determined by adding up the different sub-dimensions (Slevin and Terjesen 2011). In Kuratko's (2007: p. 4) words, "the degree of [EO] can be thought of as an additive function of the … three entrepreneurial dimensions; that is, degree of innovativeness + degree of risk-taking + degree of proactiveness". This additive view of EO may not, however, be consistent with Miller's (1983) original conception of an "entrepreneurial" firm as one that is "concurrently risk-taking, innovative, and proactive". Covin et al. (2006) recognize this when they contend that Miller (1983) "chose to not label firms as entrepreneurial unless they were simultaneously risk taking, innovative, and proactive". The additive view of EO that dominates the extant literature is in contrast to Miller's understanding of 'entrepreneurial' firms because in the additive view a firm can be entrepreneurial even when it is zero on one dimension, which is explicitly ruled out in Miller's (1983) original conceptualization. To address this issue, Slevin and Terjesen (2011) raise the possibility of a multiplicative view of EO, so that each sub-dimension is required in order for a firm to be considered entrepreneurial. Unfortunately, little theoretical or empirical work has been done so far on a multiplicative view of EO (but see Gupta and Gupta (2015) for some conceptual foray into this area). Going beyond both the additive and multiple views, Gupta (2015) raises the intriguing possibility that the various EO dimensions are inter-related in a geometric manner. Their theorization conceives EO in terms of interlocking rings of its constituent elements, linked in such a way that the movements of any one of them (e.g., proactiveness) are constrained by the others (e.g., innovativeness or risk-taking). To our knowledge, the alternative conceptualizations of EO—multiplicative or geometric—have not gained much traction in the literature so far, most likely because of the entrenchment and ease of the additive view.

So, where does all this leave us with the issue of dimensionality in EO? As a number of researchers have already noted (e.g., Basso et al. 2009; Covin et al. 2006; Gupta and Gupta 2015; Wales et al. 2013a, b), while Covin and Slevin (1989) and Lumpkin and Dess (1996) have both discussed and elaborated on the EO concept, their divergent conceptions are associated with two very different ways of looking at EO. Covin and Slevin (1989) adopt a gestalt view of EO, so that, for a firm to be entrepreneurial, it has to be concurrently taking risk, innovative, and proactive. Lumpkin and Dess (1996) advocate for a disaggregated perspective, so that a firm can be entrepreneurial as long as it emphasizes one or more of the five entrepreneurial elements (innovativeness, proactivity, risk-taking, competitive aggressiveness, and autonomy). Yet, a closer look at the relevant literature suggests the possibility of other configurations of EO: for example, a firm can be entrepreneurial even without one of the core EO dimensions (e.g., Richard et al. 2004) or that EO may have other facets in other countries or in minority-owned firms (Gupta and Gupta 2015) or that EO may actually be a multiplicative or geometric model (Gupta 2015; Slevin and Terjesen 2011). Several unexplored or underexplored possibilities exist when it comes to understanding EO and its dimensionality, which need to be examined in future inquiry.

Myth #3: Measurement of EO Is Well Understood

It is a common belief that the measurement of EO is well understood and generally agreed upon. This erroneous belief can be attributed at least in part to the dominance of Covin and Slevin's (1989) scale to measure EO of the firm (note to the reader: this instrument is also sometimes called the Miller/Covin and Slevin scale; Covin and Wales 2011). Rauch et al. (2009) note that half of the studies reviewed for their meta-analysis employed the Covin and Slevin (1989) scale, with the remaining using some sort of modified version. The Covin and Slevin (1989) scale is so popular in the EO literature that even researchers employing an alternative instrument to assess EO make a deliberate effort to show the convergence of their scale with Covin and Slevin (1989) measure (e.g., Engelen et al. 2015; Gupta and Batra 2016). When Brown, Davidsson, and Wiklund

(2001) developed a new scale to assess Stevenson's (1983) conceptualization of EO, they too examined its convergent validity with the Covin and Slevin (1989) scale.

Rauch et al. (2009) observed three popular modifications to the Covin and Slevin (1989) scale: (1) addition of items reflecting other 'entrepreneurial' dimensions, such as futurity or competitive aggressiveness, (2) variation in the numbers of items tapping into EO (ranging from 6 to 11), even when the same three dimensions were used, and (3) converting the original forced-choice scale into a Likert-type instrument. The problem with adding or deleting items from an established scale is that, while it may maintain an illusion of cumulative knowledge development (Basso et al. 2009), it is actually akin to using different scales to measure the same construct. Researchers need to remember that total scale information is a function of the number of items in a scale (Hinkin 1995), so that when they add new items to an existing scale or delete items from an established scale, they are also changing the information that scale taps into. As for the tendency to use Likert-type scales instead of the original forced-choice scale, it may be useful to briefly compare the relative merits of each. Forced-choice scales were originally designed to avoid acquiescent response bias, which refers to the tendency to respond affirmatively to questions (Toner 1987). Unfortunately, forced-choice scales create a problem of their own: the 'donkey vote' effect, which is the tendency to agree with whatever option is presented first (Ray 1990: p. 397). To our knowledge, there has been no systematic examination of whether the forced-choice version of the Covin and Slevin (1989) scale is vulnerable to donkey voting, or if its Likert-type revision is biased by the yea-saying effect.

There is another notable issue with the Covin and Slevin (1989) scale. Over the years, a number of scholars have noted that the Covin and Slevin (1989) instrument taps a mix of past behaviors and current attitudes, making it difficult to determine what type of construct the scale really assesses (Brown et al. 2001; Gupta and Gupta 2015; Wiklund 1999). This confusion is not limited to just Covin and Slevin (1989) as evident from Lumpkin and Dess' (1996) definition of EO: processes, structures, and/or behaviors that are entrepreneurial in nature (Lyon et al. 2000). Covin and Wales (2011: p. 677) focus on the 'decision-making' aspect of EO when they note that "EO has generally been conceived of as an organizational decision-making proclivity favoring entrepreneurial activities". For

Covin et al. (2006: p. 57), EO captures "preferences, beliefs, and behaviors as expressed among a firm's top-level managers". Thus, the seeming consistency of the EO construct obscures the definitional variations in the extant body of work in this area. From a scale-development perspective, it is very difficult, if not impossible, for any one scale to reliably capture such varied aspects of entrepreneurship as beliefs, preferences, attitudes, behaviors, structures, processes, and decisions.

Lyon et al. (2000) identified three distinct ways of measuring EO: managerial perceptions, firm behavior, and resource allocation. Interestingly, at the time, the empirical EO literature was based only on data collected about managerial perceptions via survey questionnaires. Since then, EO research has made some advances in assessing EO through tapping into firm behavior and resource allocation. In terms of EO as firm behavior, Short and colleagues introduced the use of computer-aided textual analysis (CATA) for capturing EO from management's letters to shareholders (Short et al. 2009; Short et al. 2010). Subsequent studies adopted their CATA-based approach to assess EO in initial public offering (IPO) firms (Mousa et al. 2015), new entrepreneurs seeking crowdfunding (Moss et al. 2014), and large corporations internationally (Gupta et al. 2016b), among others. Concerns with CATA (for more on this, see Gupta and Gupta 2015; McKenny et al. 2016) led researchers to seek alternative methods to tap into EO as firm behavior. Gupta and colleagues introduced psychometric assessment of textual information (PATI) to capture EO from letters to shareholders using human raters (e.g., Dutta et al. 2016; Gupta et al. 2015; Gupta et al. 2014). In terms of resource allocation, to our knowledge, there is only one journal article that articulates how archival data can be used to capture EO from the company's financial reports (Miller and LeBreton-Miller 2011). However, we are not aware of any other published study that has assessed EO as resource allocation. While the idea that EO can be assessed in multiple ways is appealing, researchers have yet to establish convergent validity between alternative approaches to establish that all of them tap into the same underlying construct, even when it manifests in different ways.

To summarize, there is considerable confusion and disagreement regarding the measurement of EO. As the earlier discussion shows, researchers disagree about which dimensions to measure, what items to use to measure them, and how exactly to measure them. Covin and Slevin (1989) never claimed to have figured out the one best way to assess EO and did not conduct a rigorous assessment of their nine-item instrument. Lumpkin and Dess (1996) did not delve into measurement issues, but in a subsequent paper, expressed openness to multiple ways of tapping into the same underlying construct of EO (see Lyon et al. 2000). There remain several aspects of EO measurement that are shrouded in mystery, and future research would do well to consider them for further investigations.

Conclusion

In this chapter, our intent has been twofold: (1) to recognize and elucidate the seminal contribution of Covin and Slevin (1989) and Lumpkin and Dess (1996) in helping establish EO as a field of scholarly endeavor and (2) to indicate some of the paradoxes and inconclusive ideas still persisting in the field, recognizing which can hopefully help cast new light on the path future EO research should take.

Taking a critically constructive look at Covin and Slevin (1989) and Lumpkin and Dess (1996) and the follow-up body of research, there is no doubt that at this time EO has established itself as a dominant field of research among the community of scholars studying entrepreneurship. Despite the differences in the positioning and theoretical arguments, together these two papers helped establish the singularly important concept that entrepreneurial firms operate with a strategic orientation (EO) that has certain distinct characteristics. Even though there was a divergence between Covin and Slevin (1989) and Lumpkin and Dess (1996) on the approaches either set of authors took on EO—gestalt versus disaggregated—their work inspired other researchers to take up EO as a significant field of research inquiry. This is borne out by the fact that the two papers have received over 4800 and 7900 citations, respectively (per Google Scholar).

Yet, at this time EO research is at the crossroads. As we have discussed in our critical analysis of prevailing myths in the EO literature, several questions persist about the construct, including about its theoretical basis (myths 1 and 2) as well as its measurement (myths 2 and 3). It is still not clear whether EO operates as a gestalt or as a disaggregated set of dimensions, as also whether the dimensions are completely independent of each other or have overlaps (see our discussion of myth 2 earlier). Similarly, it is still unclear as to whether EO-performance relationship is monotonically increasing or curvilinear (see our discussion of myth 1 earlier). Outside the United States, research on EO is gaining traction only now. As such, many questions remain unanswered about how EO operates and is influenced by specific national, institutional, and cultural contexts. Similarly not much is known yet as to how the nature of EO changes over the firm's life cycle, going from a new venture to a large corporate, as well as what the differences between EO within a new venture versus that in a large firm are, if any. To conclude, it would be safe to say that since Covin and Slevin (1989) and Lumpkin and Dess (1996), significant progress has been made with regard to research on EO. Yet gaps remain. Newer and additional research questions about the phenomenon, especially in contexts outside the United States, have been emerging all the time, which, despite the field's mature stage (Gupta and Dutta 2016), makes it a fruitful domain of continued research in the foreseeable future. We exhort researchers to take up one or more of these unanswered questions in their further investigation of EO. As we mentioned in the early part of our chapter, despite certain limitations, EO has played a critical role in establishing entrepreneurship as a dominant field of research inquiry, across multiple contexts (new ventures, small and medium-sized enterprises (SMEs), and large corporates) and levels (founders, teams, and organizations). We are hopeful if future researchers continue to take inspiration from the early body of work on EO such as Covin and Slevin (1989) and Lumpkin and Dess (1996), utilizing their insights to investigate unanswered questions about the construct, the field stands to benefit immensely.

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CHAPTER 9

William Baumol's "Entrepreneurship: Productive, Unproductive, and Destructive"

Matthew McCaffrey

Introduction

In 1990, William J. Baumol published his landmark article "Entrepreneurship: Productive, Unproductive, and Destructive." The paper is notable for the way it extended previous economic thinking on the relationship between entrepreneurship and institutions, and in doing so, inspired a vibrant research agenda in entrepreneurship (and other disciplines) that has persisted for almost a generation. Since its original publication, the paper has been cited several thousand times, one testament of many to its influence across the social sciences and management disciplines.[1] After more than a quarter-century, it is valuable to reflect on the original article and its impact.

This chapter offers a retrospective account of Baumol's contribution in light of its influence on economics and entrepreneurship studies. The first section describes the core arguments of his original paper. The second section then discusses its impact on the entrepreneurship discipline. Following this, the third section explores some criticisms of Baumol and explains how addressing these criticisms can provide paths forward for

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entrepreneurship studies that do justice to Baumol's work while at the same time integrating it into important emerging research. The fourth section then considers the policy implications of Baumol's work. The final short section concludes.

Entrepreneurship, Profit, and the Rules of the Game

Baumol explains that "Entrepreneurship: Productive, Unproductive, and Destructive" is intended to provide an "enhanced understanding and extension of the (nonmathematical) theory of entrepreneurship in general" (1990, p. 896).[2] The theoretical framework Baumol builds upon is Schumpeterian in that it takes innovative activity to be the defining characteristic of entrepreneurship (Baumol 1990, pp. 896–897; Schumpeter 1934, 1942). Importantly, however, Baumol extends Schumpeter's theory by distinguishing several previously unnoticed or under-theorized types of entrepreneurship: productive, unproductive, and destructive.[3] This categorization implies a more nuanced view of profit-seeking and the social forces that drive it. In particular, disaggregating entrepreneurship allows Baumol to explore new answers to vital questions about economic growth, its historical development, and the policies that support or hinder it.

Baumol contends that entrepreneurs are generally motivated by the pursuit of profit rather than the desire to be inventive or innovative as such. Their motivation crystalizes in the economic system through the search for rewards such as monetary profit and increased social status. However, there are many ways to earn pecuniary and social rewards, and as a result, there exist different kinds of entrepreneurial action, each with unique implications for productivity and growth. The main purpose of Baumol's argument is to define these actions and explain their role in economic development.

The key problem Baumol identifies is the belief that economic growth is determined mainly by the quantity of entrepreneurship in society. Contrary to this view, he argues that entrepreneurship exists in one form or another in practically every society. Therefore, what matters for economic growth and policy is not the absolute amount of entrepreneurial talent in society but *how it is allocated among competing uses*.[4] Vitally, "entrepreneurship" includes behaviors that do not increase physical production or provide social benefits; rather, entrepreneurial ability is distributed among various productive, unproductive, and destructive activities depending on their relative payoffs. The latter types of entrepreneurship include rent-seeking, organized crime, and often, the expansion of warfare and bureaucracy.[5] Such activities may prove profitable to entrepreneurs, but unlike ordinary commerce, they do not improve the welfare of society at large. Importantly, the structure of payoffs affects not just the direction of talent but also *which individuals will become entrepreneurs*, as not everyone will be equally able to pursue each type of entrepreneurship.

Given these underlying premises, if we want to understand economic growth we need to know what determines the relative payoffs to different forms of entrepreneurship, as this will explain how entrepreneurial talent is distributed throughout society. Baumol's answer is that payoffs are set by the institutional environment, that is, by the "rules of the game." These rules "change dramatically from one time and place to another," as do the payoffs attached to them, and also entrepreneurs' responses. Institutions thus help to explain "historic slowdowns or great leaps in economic growth," which often occur when payoffs change significantly. A related proposition holds that institutions also strongly influence the level of innovation and the diffusion of new technology in human societies.

Baumol's thesis is intuitive—even obvious—once expressed (Boettke and Piano 2016). Yet it offers invaluable insight into historical cases of economic growth and decline as driven by entrepreneurial action. His article may be more than 25 years old, but the productive, unproductive, and destructive entrepreneurship that it describes have been shaping economic life for closer to twenty-five centuries. This point is illustrated through Baumol's historical case studies, which focus on societies that encouraged unproductive entrepreneurship. For example, ancient Rome endorsed practically every means of acquiring wealth *except* commerce, to which it attached a social stigma. Similarly, in medieval China fame and fortune (and social mobility) were typically acquired through success in the government bureaucracy. Parallel results are also found in Europe in the early Middle Ages, when military entrepreneurship was highly rewarded. Eventually, with the emergence of modern markets, warfare was replaced by more conventional rent-seeking, and unproductive entrepreneurship thus continued to exist throughout the industrial revolution. In other eras, industrial expansion and innovation were directly and indirectly discouraged by predatory state policies that increased the likelihood of unproductive and destructive entrepreneurship.

Support for productive entrepreneurship waxed and waned throughout the Middle Ages and the Renaissance. Over time though, institutional barriers to market entrepreneurship were eliminated in the West, for instance, during the late Middle Ages, and especially during the industrial period. Not only did the monetary payoffs to market success increase, but commercial and industrial achievement became increasingly socially acceptable as well, and eventually even desirable (McCloskey 2010). Nevertheless, unproductive and destructive entrepreneurship persist in contemporary economies, often taking the form of rent-seeking and bureaucracy-building. These actions are encouraged by the network of legal rules and regulations that remunerate unproductive and destructive behavior, especially institutions that allow entrepreneurs to use the legal system to stifle their competitors.

The Influence of Baumol's Argument on Entrepreneurship Research

Baumol's argument was originally intended as a contribution to economics, which, he has long argued, unfairly downplays or neglects the role of the entrepreneur (Baumol 1968, 2006). However, his paper has enjoyed its greatest impact within the entrepreneurship discipline in management studies (Boettke and Piano 2016). With that in mind, the current section discusses the place of Baumol's theory in the entrepreneurship literature, and its influence since its initial publication. This influence varies by discipline and topic. For example, while many studies invoke Baumol's research, it has been common in development economics to reduce unproductive entrepreneurship to rent-seeking and include it without further attention alongside conventional accounts of political entrepreneurship. There is thus a need to discuss more explicitly how the literature has incorporated Baumol's insights.

Baumol's article appeared during a period when social scientists were becoming deeply interested in the problem of embedded agency (Granovetter 1985). In fact, Baumol's argument essentially claims that entrepreneurship is a socially embedded phenomenon. Specifically, entrepreneurs are embedded in the institutional environment (especially the legal environment), which shapes their decision processes by providing vital monetary and non-monetary incentives. Shortly after their publication, Baumol's propositions were supported by Murphy, Shleifer, and Vishny (1991), who had independently developed a theory similar to Baumol's (1990, p. 894). These economists showed that the distribution of talent in an economy is indeed partly determined by relative payoffs.

Since 1990, Baumol's paper—often cited in conjunction with Murphy, Shleifer, and Vishny's—has been a standard reference on the role of politics in economic development. The timing of its publication was also ideal in that it provided a foundation for then-emerging literature on economic growth in post-socialist countries (e.g. Tyson et al. 1994; Ageev et al. 1995). Moreover, recognizing the importance of institutions is now vital for any account of the relationship between entrepreneurship and economic growth (Wennekers and Thurik 1999). This is one of the enduring contributions of the paper: establishing a framework for the study of transitioning and developing nations.

In some ways though, it might seem strange that entrepreneurship researchers have adopted Baumol's arguments without much dispute. After all, his tripartite distinction undermines a fundamental assumption of most theories of entrepreneurship, namely, that entrepreneurship is always beneficial (McMullen and Shepherd 2006). Yet Baumol's work has also been integrated into many core concepts of contemporary entrepreneurship theory. For example, Eckhardt and Shane (2003) identified the choice between productive and unproductive entrepreneurship as one major source of entrepreneurial opportunity. Baumol's distinction is thereby incorporated into the opportunity construct, now generally recognized as the defining concept of entrepreneurship.[6] It is safe to say then that entrepreneurship research now regards Baumol's theory as correct, and even foundational.[7] In fact, Per Davidsson refers to the article as "one of the most important papers of all time in the entrepreneurship literature" (Davidsson 2016, p. 14n1).

Yet although many studies refer to Baumol's research to support their findings, or point out that their results are compatible with his, few have sought to test his theory empirically. This is likely because, as mentioned earlier, his conclusions are straightforward and intuitive. The first researchers to explicitly test Baumol's model were Bowen and De Clercq (2008), who were followed shortly after by Sobel (2008).[8] These studies showed that differences in institutional quality among countries and among US states, respectively, help to explain differences in entrepreneurial productivity.

Other research continues to find support for Baumol's main conclusions within and across countries, and with respect to both the quality and quantity of entrepreneurship. For example, Aidis, Estrin, and Mickiewicz (2008) showed that poor institutional support undermines entrepreneurship in Russia, favoring politically connected "insiders" rather than innovative "outsiders." Hall et al. (2012) demonstrate that misguided public policies in Brazil lead to destructive entrepreneurship, especially when those policies were directed exclusively toward increasing traditional economic performance indicators. At the same time, Levie and Autio (2008) found that institutional conditions are an important determinant of the broader choice between entrepreneurial and non-entrepreneurial activity. Unsurprisingly, welfare states such as Sweden—which offers poor incentives for innovative effort—have failed to produce a productive entrepreneurial culture in Baumol's sense (Henrekson 2005). Combining the quantity and quality approaches, Stenholm, Acs, and Wuebker (2013) found country-level evidence of the influence of institutional arrangements on both the rate and type of entrepreneurial activity.

Criticism: Productive, Unproductive, and Destructive

Although influential, Baumol's article is not without its critics. Appropriately, these can be divided into three basic groups: unproductive, destructive, and productive. Unproductive criticisms misinterpret Baumol's contribution and thus fail to properly address it, leading to theoretical dead-ends. Destructive criticisms directly confront Baumol's arguments in order to disprove or emend them. Productive criticism emphasizes ways in which Baumol's work can be refined and developed in new directions. In this section, I address the unproductive, destructive, and productive literatures in that order.

Unproductive Criticism

Baumol's theory has been subject to misconceptions. The most important relate to his view of entrepreneurial motivation. Baumol's paper begins with a quote from Eric Hobsbawm stating that the private enterprise economic system features an automatic bias toward profit. The implication, on which Baumol builds his paper, is that entrepreneurs attempt to earn profit in whatever ways they can, which sometimes include crime or other activities that are not beneficial to society; hence, unproductive and destructive entrepreneurship. However, this key claim is sometimes misconstrued. In particular, Baumol has been interpreted as claiming that entrepreneurs are motivated largely or entirely by monetary profits. For example, Shepherd and DeTienne (2005, p. 94) group Baumol's work with research that "relies on financial reward as the primary motivator for involvement in entrepreneurship." For them, Baumol's discussion of rewards and payoffs refers to monetary gains (though they also hint at other extrinsic motivations). Similarly, Westlund and Bolton (2003, p. 100) suggest that Baumol does not include non-pecuniary income in his model. And Reynolds (1997, p. 461) even makes the inexplicable claim that Baumol believes entrepreneurs are "driven, amoral economic sociopaths wreaking havoc on society."[9]

These criticisms overlook a key point that is repeated several times in Baumol's paper: the rewards determined by the rules of the game come in many different forms, only one of which is wealth. Baumol also emphasizes the importance of non-financial benefits such as power and prestige (1990, pp. 897–898). To the extent Baumol focuses on profit, he uses an inclusive definition allowing for non-pecuniary goals.[10] In fact, some research has even used Baumol's theory to explain how non-monetary "emotional value" influences entrepreneurs' valuations of their companies (Zellweger and Astrachan 2008). Baumol's list of motivations is not exhaustive, but it is also not narrowly pecuniary.

Another unproductive reading of Baumol involves the consequences of entrepreneurial action. DeTienne, Shepherd, and De Castro (2008) and Ucbasaran et al. (2013) mention Baumol's work as an account of persistence among under-performing firms. In this reading, unproductive entrepreneurship is an alternative label for failed business ventures that somehow avoid elimination by market selection mechanisms. How such firms persist is certainly worth researching, but it should be clear that Baumol's work does not explain success or failure as such. Instead, his purpose is to highlight the social and economic implications of a shift in the allocation of talent. In fact, as explained later in the subsection on productive criticism, Baumol's theory does not really allow for the idea of business failure.

It is worth noting that none of these misinterpretations should be taken as an evidence of poor scholarship. It is only natural that after a long period of time, the contributions of a canonical source have become blurred and open to misreading. In fact, this is one reason why collections such as this book are useful—to recall the foundations of our research so that we can use them as "productively" as possible.

Destructive Criticism

Few researchers deny Baumol's basic claim that relative rewards play a role in directing entrepreneurs' interests. Instead, criticisms tend to focus on errors of omission rather than commission (as seen later in the subsection on productive criticism). However, there are some examples of the latter, including a few studies focused on questioning Baumol's core distinction between the three kinds of entrepreneurship. Davidsson (2016, pp. 13–14), for example, argues that entrepreneurship can be defined as a socially beneficial activity. As a result, unproductive or destructive activities simply fall outside the scope of entrepreneurial behavior. Classic definitions of entrepreneurship, including the "Austrian" theory of Ludwig von Mises (1998 [1949]), likewise tend to treat entrepreneurship as a socially beneficial function performed within the context of a market economy. For this broad group of theories, unproductive and destructive activities are important, but not entrepreneurial.

The earliest full-length (destructive) criticism of Baumol identified for this review is Davidson and Ekelund (1994), which disputes Baumol's claim that rent-seeking should be classified as unproductive, and questions the very notion of unproductive entrepreneurship. Their key claim is that Baumol's typology relies on static analysis. In other words, the prevailing rules of the game determine the criteria for productive efficiency *only for a particular moment in time* and *only in light of a predetermined goal such as the growth of physical output*. The rules therefore also define unproductive or destructive activities, which are explained as divergences from efficient production.

As a result, all three types of entrepreneurship are defined with respect to a given (static) set of institutional rules and goals. Baumol's approach thus assumes away the evolutionary nature of economic and social behavior. Institutions and normative standards change, and with them, the criteria for productivity. Entrepreneurship that is unproductive under one set of institutions can become productive under another. Therefore to define an activity such as rent-seeking as inherently unproductive overlooks value creation across time and institutional contexts. In fact, applying static standards over time might invoke the "nirvana fallacy" of comparing an ideal state with an existing but necessarily imperfect one, rather than comparing real, changing institutional alternatives (Demsetz 1969). Several other studies have suggested similar criticisms, though Davidson and Ekelund's original contribution is not usually cited (e.g. Douhan and Henrekson 2010; Lucas and Fuller 2017).

Davidson and Ekelund (1994) effectively highlight a potential flaw in Baumol's reasoning. However, they also appear to assume that different types of entrepreneurship can only be defined using static analysis. In that sense, their work is not a criticism of Baumol's distinction as such but of the way economic standards of welfare are understood in positive and normative terms. If Baumol's theory can be set on a dynamic foundation, this criticism would become irrelevant. As it happens, Davidson and Ekelund do provide some hints about the kind of theoretical framework that could replace Baumol's: a theory that views the market as an uncertain process that unfolds over time and which does not then need to resort to static and unrealistic comparisons. This dynamic view is explored further in the section on productive criticism.

Destructive criticisms of Baumol's typology extend beyond the distinction between productive and unproductive activity. A separate research strand questions the value of the distinction between unproductive and destructive entrepreneurship. Critics point out that these categories are often confused or conflated because Baumol's original argument does not actually define destructive entrepreneurship. Instead, its meaning must be inferred by comparison to unproductive activity (Desai and Acs 2007). The conventional interpretation is that unproductive entrepreneurship has no net effect on productivity (i.e. it is purely redistributive), while destructive entrepreneurship has a net negative effect. In their effort to flesh out this distinction, Desai and Acs (2007) define destructive entrepreneurship as rent-destroying activity.[11]

However, in practice, the unproductive-destructive distinction breaks down. The reason is that unproductive activities still carry an opportunity cost of foregone productivity and should therefore be treated as a net negative influence on productivity.[12] Unproductive and destructive activities can thus be collapsed into the same category (Douhan and Henrekson 2010). This approach is often adopted in the literature, which mainly focuses on unproductive activities like rent-seeking. And although their exact reasoning is sometimes unstated, many studies imply that there is little difference between unproductive and destructive entrepreneurship (e.g. Sobel 2008; Coyne et al. 2010). This destructive criticism is important for clarifying Baumol's exact contribution, but it does not completely undermine it: there is still analytical and practical value in the unproductive-destructive distinction.

Productive Criticism

A third and final group of researchers use criticism as a way to build on Baumol's central thesis and extend it in novel ways, including some that might have surprised him. These criticisms are "productive," however, in that they open up new areas of inquiry in entrepreneurship. The productive approach involves altering Baumol's assumptions and using these different starting points to follow his general argument in new directions.

One such approach is explored in each of the following two subsections, which are therefore also explanations of the kind of "future research directions" that Baumol's work can help to illuminate.

(1) Institutional Entrepreneurship

A series of studies argue that Baumol's analysis, although fundamentally correct, only tells a part of the story. One of the most important challenges of this type derives from the literature on "institutional entrepreneurship." Baumol's original argument assumes that the institutional framework is determined exogenously. Yet a growing number of entrepreneurship researchers argue that this view ignores the opposite possibility: that entrepreneurship can itself influence the institutional setup. Economists started to make this point soon after the appearance of Baumol's paper. Acemoglu (1995), for instance, developed a model to discuss trade-offs between productive and unproductive entrepreneurship. In his view, reward structures can be determined endogenously because the extent of past unproductive behavior is actually a determinant of present relative rewards. An important implication of Acemoglu's model is that societies can become trapped in a rent-seeking equilibrium that they are powerless to alter. A literature on institutional entrepreneurship has more recently adopted a similar line of reasoning.

In order to complement the exogenous approach, entrepreneurship researchers have begun to explore the implications for theory and practice of endogenous institutional development. In particular, a literature on institutional entrepreneurship has developed around Baumol's typology that seeks to explain how entrepreneurs act to change "the rules of the game." This research program was spearheaded mainly by Douhan and Henrekson (2010), who took an important step toward expanding Baumol's classification. They argued that the choice between productive and unproductive entrepreneurship is only one decision that entrepreneurs make with respect to the institutional environment.

The key insight of the institutional entrepreneurship literature is that entrepreneurs are not passive or helpless in regard to institutions. They can be "institution makers" as well as "institution-takers." As opposed to a binary choice between productive and unproductive action, entrepreneurs choose across three different types of institutional behavior: abiding, evading, and altering (Henrekson and Sanandaji 2011). *Abiding* entrepreneurship occurs within the constraints of existing institutions, *evasive* entrepreneurship circumvents institutions, and *altering* entrepreneurship works to actively change the institutional framework. Each of these three forms of entrepreneurship can be productive or unproductive. The range of possible entrepreneurial actions is thus expanded from two to six.

The expanded typology helps to clarify that entrepreneurs are not simply at the mercy of unfavorable institutions. Furthermore, if entrepreneurs can evade or alter institutions in productive ways, then the short- and long-run welfare implications of poor policies might be less dire, because entrepreneurs can both mitigate and eliminate serious threats to productive wealth creation. At the same time, however, *un*productive evasion and altering often pose a greater threat to society than conventional examples of abiding unproductive activity such as rent-seeking, because "unproductive institutional equilibrium" is a possibility. It is likewise plausible that there are limits to the effectiveness of altering entrepreneurship, especially when it comes to transforming fundamental institutions like cultural norms, which change infrequently (Williamson 2000; Bylund and McCaffrey 2017).

In addition, further work remains to be done to explore the cause-and-effect relationships between different types of entrepreneurship. For example, if entrepreneurs alter political institutions, say by removing stifling regulations, how does this affect the relative payoffs to abiding and evading actions, or the rewards to further altering? Policy questions also become more convoluted. What if a seemingly poorly designed policy encourages evasive entrepreneurship but also inspires technological breakthroughs that are integrated into abiding entrepreneurship and are responsible for widespread social benefits? Again, the question of how to benchmark the welfare analysis of entrepreneurial action arises.

Baumol hinted that institutions affect both the kind of entrepreneurial activity and the composition of the entrepreneurial class. Expanding Baumol's typology further highlights the need to ask whether individual entrepreneurs are equally skilled in all institutional contexts (Engelhardt 2012), and whether there are significant costs involved in switching between abiding, altering, and evading (Bylund and McCaffrey 2017). In addition to questions about its composition, it is also important to acknowledge changes in the quantity of entrepreneurship. Baumol originally chose to hold the quantity of entrepreneurship constant so as to make his point about its allocation more clearly. Yet it appears undeniable that institutions affect the number of entrepreneurs as well as how they focus their attention.

(2) Alternative Theoretical Foundations: Uncertainty, Judgment, and Institutions

The future influence of Baumol's work in entrepreneurship will be largely determined by its compatibility with prevailing, possibly competing, theories of the entrepreneurial process. To bring Baumol's theory up to date, this subsection explores how his key insights can be retained without using the Schumpeterian, innovation-based framework on which it has so far been based. In fact, a major advantage of Baumol's argument is that its value for researchers does not depend on any particular theory of entrepreneurship. Instead, it can be reformulated so as to fit a variety of theoretical frameworks, one of which is discussed below.

Schumpeter's innovator-entrepreneur has been the most influential theory of entrepreneurship within the mainstream economic community. The reason is likely that, although Schumpeter emphasized the disequilibrium caused by entrepreneurs, his essential theory revolves around the problem of how to explain economic development starting from a modified Walrasian general equilibrium (Schumpeter 1934; Rothbard 1987). This framing made it far easier to adapt Schumpeter's theory to conventional models than some of its competitors. In any case, Baumol takes Schumpeter as a starting point, especially with regard to the definition of entrepreneurship as a creative, innovative activity in the pursuit of wealth, power, and prestige (Baumol 1990, pp. 897–898, 909).

This approach is open to several productive criticisms. The most important problem with Baumol's theory is that it takes no account of *uncertainty*. Schumpeter's writings also neglected this problem (Rothbard 1987; McCaffrey 2009), so it is no surprise that Baumol would pass over it as well. Yet it is vital for a working definition of entrepreneurship, because without uncertainty, there is no possibility of entrepreneurial *failure*. And without failure, we must assume that entrepreneurs automatically shape their behavior according to the rules of the game, achieve their goals, and obtain the highest relative rewards. Yet the entrepreneurial environment—whether productive, unproductive, or destructive—is filled with uncertainty. Rent-seekers can waste money lobbying for legislation that is never passed, a Mafioso can mistakenly appraise the future demand for illicit substances, and courtiers can spend small fortunes seeking patronage that never materializes. This means entrepreneurs must constantly hazard scarce resources while working toward a perceived benefit, whether productive or not. In fact, in the past unproductive or destructive entrepreneurs used complex arrangements of heterogeneous physical and social capital to pursue their goals. The possibility of failure is an ever-present threat to entrepreneurs of all types, and any realistic theory of the allocation of entrepreneurial talent must take this fact into account. Theorists from Richard Cantillon (2001 (1755)) to Frank Knight (1933 (1921)), as well as many contemporary researchers, have argued similarly (e.g. McMullen and Shepherd 2006; Foss and Klein 2012).

Uncertainty is a constant barrier to entrepreneurial success, and the difficulty of bearing uncertainty explains why failure among entrepreneurs is so common and why the quantity of entrepreneurs is so low compared to more conventional professions. Assuming away uncertainty thus supports Baumol's further assumption that the supply of talent is constant. Yet once the unpredictable future is allowed to play a role, some important assumptions must be relaxed. Uncertainty is also relevant in light of the expanded typology discussed in the institutional entrepreneurship literature. To take one example, it is quite possible that failure in one type of entrepreneurship, especially abiding entrepreneurship, can lead to (productive or unproductive) ventures of another type. But the welfare outcomes for entrepreneurs and society more generally are not guaranteed in advance: they are only revealed through the unfolding of time.

Uncertainty leads naturally to a discussion of entrepreneurial *action*. It is true that entrepreneurs are not passive with respect to institutions and that they have some ability to choose how to respond to institutional constraints. Likewise, they are not passive recipients of rewards and punishments but actively play a role in determining what they are and whether they are successfully captured. Specifically, entrepreneurs make *judgments* about the future state of the world (Foss and Klein 2012). They do not compare certain rewards available to them in the present; instead, they compare uncertain future returns that they believe will result from various courses of action available in the present.

This insight is missing from Baumol's analysis, which focuses on the simple choice between productive, unproductive, and destructive action and takes success in that choice as given. But all resource allocation, including the allocation of entrepreneurial talent, involves a degree of uncertainty, and is thus prone to error and failure. This in turn hints at an important question already mentioned earlier: error or failure *compared to what*?[13] That is, what benchmark should researchers use to distinguish between productive and unproductive entrepreneurship and to establish success in these categories, or in others? Answering these questions requires looking beyond the equilibrium-focused theory of Schumpeter to alternative frameworks that explain entrepreneurship as part of a larger market process.

The most important example of such a theory, and the one that most effectively resolves Baumol's difficulties, is the "Austrian" approach advanced by economists like Ludwig von Mises (who, along with Frank Knight, was Schumpeter's leading contemporary in entrepreneurship theory).[14] In Mises's view, understanding the productivity and welfare implications of entrepreneurship is not a matter of comparing real-world outcomes to a hypothetical equilibrium state. Instead, entrepreneurial decision-making is a forward-looking attempt to anticipate consumer demand (Salerno 1993). Entrepreneurs bid for and combine heterogeneous capital goods that they devote to production over time (Foss et al. 2007). Only when the final output appears on the market do entrepreneurs discover if their judgments about the prices of the factors of production were correct. If they are, entrepreneurs earn profits and demonstrate productivity in the sense of accurately assessing consumers' valuations of the factors. If not, entrepreneurs earn losses and are eventually eliminated from the market, thereby signaling errors in their appraisal of the value of the factors and thus the unproductive or destructive use of scarce resources (Mises 1998 [1949], 2008 [1951]).

Once it is "embedded" in this theory, Baumol's typology becomes a way to evaluate entrepreneurs' decisions in terms of their practical outcomes for consumers rather in relation to an abstract and unrealistic definition of resource allocation under ideal conditions, that is, to an equilibrium state. The judgment-based theory thus reflects the entrepreneurial selection mechanism of the market process. In doing so, it meets the challenge posed by Baumol's evolutionary critics (Davidson and Ekelund 1994). Specifically, unproductive entrepreneurship is a systematic waste of resources (especially capital goods) and a corresponding failure of entrepreneurs to satisfy the most urgent wants of consumers.

The choice between types of entrepreneurship is influenced by relative payoffs, as Baumol suggests. However, the adapted theory presented here reveals at least two ways entrepreneurship can become unproductive. The first, as Baumol recognizes, occurs when entrepreneurs anticipate that the rewards to good judgment in unproductive activities will be greater than in the productive marketplace. They therefore make a choice to pursue activities that they know will be unproductive, for example, when they consume resources through "political entrepreneurship" (McCaffrey and Salerno 2011).

However, unproductive entrepreneurship does not have to be the result of a conscious choice. It can also occur when low-quality institutions interfere with entrepreneurs' decision-making processes and distort their judgments (McCaffrey 2015).[15] The most important example is interference with traditional market entrepreneurship through the price system via policies such as price controls. Money prices are the indispensable means for market entrepreneurs to compare different production plans and forecast the future value of present decisions. Without a working price system, as in the case of a socialist economy, there is no way for profit-seeking entrepreneurs to accurately assess the costs and benefits of alternative uses of scarce resources and determine which will benefit consumers most (Salerno 1990a, b, 1993). There is no "economic calculation" (Mises 1990), and the inevitable outcome is "planned chaos" and the systematic destruction of social value. This extreme case highlights the importance of "good" economic policy in reducing the payoffs to and likelihood of unproductive entrepreneurship, which is the topic of the next section.

Entrepreneurship and Public Policy

Researchers have long been interested in the role of public policy in fostering innovative, entrepreneurial societies. Yet while it is now generally recognized that poor institutions and misguided policies can have disastrous effects on entrepreneurial behavior, disagreement persists about the ability of policy to encourage entrepreneurship, innovation, and growth. Baumol's argument is intended to fill this gap by exploring the policy implications of Schumpeterian entrepreneurship, which Baumol claims are basically non-existent (Baumol 1990, pp. 896–897). The vital policy implication of Baumol's theory is that while "the spirit of entrepreneurship" cannot be controlled, the rules of the game "can be observed, described, and, with luck, modified and improved" (Baumol 1990, p. 894). We now explore several ways in which this might happen.

If Baumol's hypotheses are correct, it follows that a productive entrepreneurial public policy will be one that changes relative rewards so as to support productive activity. In general, "the proper way to encourage entrepreneurship is to create conditions that make entrepreneurial pursuit of self-interest accord with societal wealth creation" (Davidsson and Wiklund 2001). This in turn means either increasing the returns to productive entrepreneurship or decreasing the returns to unproductive entrepreneurship. A large number of researchers focus on the second option, arguing that, in practice,

> rather than focusing on expanding government programs like subsidized loans, workforce education, or programs aimed at increasing "entrepreneurial inputs" as a way to foster entrepreneurship, the better path is through institutional reform that constrains or minimizes government's role, lowering the return to unproductive entrepreneurship. Government programs too often encourage entrepreneurial individuals to devote effort toward figuring out how to obtain the transfers, rather than devoting those efforts toward satisfying consumers and creating wealth. (Sobel 2008, p. 653)

Prior to Baumol, policymakers focused mainly on subsidizing entrepreneurial inputs such as educational programs or venture capital markets (Sobel 2008). By taking the rules of the game into account, Baumol helped show that this approach is likely to fail: in the context of low-quality institutions, even the best of intentions will inevitably be diverted to unproductive activity.

As argued earlier, the market is an uncertain process that constantly unfolds in real time. It is already extraordinarily difficult for entrepreneurs to master this process, and it is far more challenging for policymakers, as outsiders, to so. When it comes to designing policy, one size does not fit all (Minniti 2008), and policymakers must therefore exercise extreme caution. In fact, Davidson and Ekelund (1994, p. 172) even argue that discretionary regulation to promote productive entrepreneurship is equivalent to putting the fox in the hen house. For this reason, researchers often stress the importance of allowing entrepreneurs to explore the market as they see fit, and of removing policies that distort their decision processes or create barriers to entry (Clark and Lee 2006).[16] The practical implication is that state regulation of entrepreneurial activity should be minimized. Furthermore, formal institutions like property rights, contract enforcement, and the rule of law provide vital foundations for productive entrepreneurship. This conclusion fits with the extant literature on economic freedom and entrepreneurial behavior (e.g. Bjørnskov and Foss 2012; McMullen et al. 2008). However, regulatory policy and economic freedom remain underexplored areas in the entrepreneurship literature (Bradley and Klein 2016).

In addition, informal institutions are also relevant for applying Baumol's typology. Specifically, Desai and Acs (2007) observe that the policy implications of Baumol's theory tend to be studied with regard to developed nations. In such countries it is reasonable to focus on the choice between productive and unproductive entrepreneurship, because truly destructive activity like organized crime tends to be limited. However, developing nations often face a more complex choice between unproductive and destructive entrepreneurship. In particular, they can feature a vastly different mix of formal and informal institutions, a mixture that influences the allocation of talent. Yet especially in post-conflict societies or countries where informal institutions like corrupt local authorities are embedded in the rules of exchange, productive entrepreneurship may not be seen as a viable option (Desai and Acs 2007). In this context, reforms to encourage formal (e.g. taxable), productive business entrepreneurship are unlikely to be successful, as they can overlook the true choices entrepreneurs face. It is therefore vital to consider the effects of policy on formal and informal institutions alike.

Moreover, it is not enough that policymakers know what the rules of the game should be: they must also know how to change existing rules, which is likely to be a costly and time-consuming process. Here, Baumol's arguments provide no guiding insight (Kalantaridis 2014). As a result, the question of exactly how entrepreneurs can transform institutions also remains an important topic for future research (Henrekson and Sanandaji 2011).[17]

Conclusion

Although entrepreneurship continues to be downplayed in economic research, it is thriving as an independent discipline, in no small part due to the contributions of scholars like William Baumol. As I have shown, Baumol's "Entrepreneurship: Productive, Unproductive, and Destructive" provides a foundation for a wide range of research ventures in entrepreneurship theory, history, and policy. Yet perhaps the greatest tribute current scholars can pay Baumol is to carefully criticize and expand upon his arguments. After Baumol, it is no longer possible for entrepreneurship research to treat entrepreneurial action as if it occurred in an institutional vacuum. Nevertheless, there is still wide scope for his theory to be broadened and applied, as the problems he raises hint at a wide range of future research questions. For example, how do institutions affect entrepreneurs' judgments about the uncertain future? How do they influence their cognitive processes in addition to their economic calculations? How do the rules of the game affect entrepreneurs' decisions to simply exit from entrepreneurial action rather than reallocate their talents among different types of action? To what extent does institutional change create entirely new forms of profit-seeking? What role do institutions play in determining the rules of the game for non-traditional forms of entrepreneurship and profit-seeking, such as social entrepreneurship? To what extent do institutions encourage trade-offs between traditional for-profit venturing and prosocial or compassionate venturing? Likewise, can entrepreneurial action explain the emergence of institutions more likely to encourage prosocial or compassionate venturing? How does entrepreneurs' access to a functioning price system (or lack thereof) influence their behavior with regard to political institutions? And how does the presence of uncertainty in the institutional environment affect each of the earlier questions? These inquiries reflect only a few ways Baumol's contribution can continue to add value to entrepreneurship studies.

Ultimately, Baumol's paper has made an impressive start by explaining a simple yet profound idea that invites further inquiry, as opposed to settling the relevant issues once and for all. It is for this reason it has enjoyed continuous attention from scholars in many disciplines. Of course, entrepreneurship research is entrepreneurial in its own right and offers its own uncertainties and pitfalls. But by tackling these problems head on, using our own good judgment to guide our inquiry, we can ensure this venture will continue to be productive.

Notes

1. To take another example, Baumol's paper was republished in 1996 in the *Journal of Business Venturing*—the flagship journal of the entrepreneurship discipline—a sign of its enduring influence outside strictly economic circles. More recently, it has been the subject of a special issue of the *Journal of Entrepreneurship and Public Policy* (2016) celebrating the 25th anniversary of its original publication in the *Journal of Political Economy*.
2. Baumol supports his argument with several historical case studies, though he clarifies that these are for illustrative purposes, and are not intended to make a contribution to economic history (1990, p. 895).
3. Although Schumpeter does hint at the question of the allocation of scientific talent (1986 [1954], p. 490).
4. Jean-Baptiste Say, a founder of entrepreneurship theory writing almost two centuries before Baumol, also took the view that the entrepreneurship appears in every society in which production occurs, regardless of its specific forms of social organization. Similarly, for Say's entrepreneur, innovation was an incidental choice influenced by the institutional framework (Hoselitz 1960, pp. 252–254, 257n55). Baumol's view of entrepreneurship as a universal feature of society is also reminiscent of Ludwig von Mises's argument that all human action contains an entrepreneurial element (Mises 1998 [1949], pp. 286–291).

5. Frank Fetter, an American economist and entrepreneurship theorist of the early twentieth century, also argued that the relative payoffs to different profit-seeking activities could lead entrepreneurs away from productive entrepreneurship and into rent-seeking or criminal behavior (Fetter 1915, pp. 367–368). Bhagwati (1982) too emphasized the importance of "Directly Unproductive, Profit-seeking (DUP) activities," of which rent-seeking is one example.
6. For criticisms of this view, cf. Klein and Foss (2008) and Davidsson (2015).
7. See, however, the various critical discussions in the following section.
8. Interest in explicitly testing Baumol's theory was largely motivated by a 2008 special issue of the *Journal of Business Venturing* on the economics of entrepreneurship.
9. In light of Baumol's examples, this description is more appropriate for historical rulers, bureaucrats, and other political figures who created and administered the rules of the game, rather than entrepreneurs. Davidson and Ekelund (1994, p. 277) make a similar point when they argue that regulation is the most likely source of unproductive entrepreneurship.
10. Baumol and Strom (2007) also make this point. Baumol's broader definition of profit hints at the idea, pioneered by Fetter and Mises, that all human action involves the pursuit of subjective benefits, also known as "psychic profit" (Fetter 1915, pp. 27–29; Mises 1998 [1949], pp. 286–288).
11. Desai and Acs (2007) recognize, as Davidson and Ekelund (1994) do, that how we define entrepreneurial productivity depends on the context in which it occurs. Different contexts carry different welfare implications for different people, and for different time periods.
12. Furthermore, the administrative process of wealth redistribution consumes resources, thus ensuring a net loss.
13. This is also a key question posed by Lucas and Fuller (2017).
14. Baumol does not mention Mises's work when discussing the relationship between Austrian views and his own (Baumol 2003).
15. The selection process of the market normally limits the ability of any particular entrepreneur to waste resources systematically for any significant period of time.
16. Padilla and Cachanosky (2016) argue that regulation can actually produce "indirectly unproductive entrepreneurship." That is, regulations increase the costs of entrepreneurial behavior, opening the way for other entrepreneurs to profit by reducing those costs. The welfare implications of this secondary, "artificial" entrepreneurship are unclear, but it is possible they might undermine the need for evasive entrepreneurship.
17. For overviews of recent work and proposals for future research concerning the relationships between entrepreneurs, institutions, and public policy, cf. Bradley and Klein (2016) and Bjørnskov and Foss (2016).

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CHAPTER 10

The Entrepreneurial 'Mindset': Entrepreneurial Intentions from the Entrepreneurial Event to Neuroentrepreneurship

Gabi Kaffka and Norris Krueger

Born or Made?

In the early days of entrepreneurship, we were plagued by research that lacked strong theoretical grounding. Our curiosity took us in remarkable directions as we explored fascinating questions about entrepreneurship and entrepreneurs. However, too often we produced striking results that were ad hoc and not replicable. As the 1980s were ending, use of even the basics of social psychology was scarce. The one academic domain that we did call upon was personality psychology. Unfortunately, personality psychology had long since gone into eclipse, and, moreover, we often had deployed it unskillfully. In particular, we had committed ourselves to an essentially trait-based model of entrepreneurs.

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Why? Because we shared the romantic (and intuitively 'obvious') notion that entrepreneurs are somehow magical, we assumed that entrepreneurs are special people with unique properties. On the other hand, psychology had progressed with growing recognition that these seemingly fixed traits are much more malleable and highly situational. That is, entrepreneurship is a function of both person and situation.

In retrospect, applying formal models of behavioral intentions was an excellent leverage point. Social psychology offered what appeared to be a solid conceptual framework along with robust empirical tools and considerable statistical power. Meanwhile, one of our field's founders, Albert Shapero, had independently formulated his model of the "entrepreneurial event" (Shapero 1982). He argued that a credible opportunity was driven by perceptions of desirability and feasibility. Similarly, the dominant intentions model (the theory of planned behavior, in short: TPB) was driven by perceptions of personal and social desirability and of controllability (feasibility).

Given the similarities of the models, it was less difficult to sell TPB to reviewers. However, the very first attempt (Krueger 1989) took three years to get empirical results published (Krueger 1993) and nearly four years for a conceptual article (Krueger and Carsrud 1993). Both articles continue to be cited along with a follow-up that expanded the model to organizational settings (Krueger and Brazeal 1994).

Despite the immediate, wide embrace of this fairly basic model from social psychology, acceptance of deep theory and rigorous methods from psychology by entrepreneurship scholars took some time. But ultimately, those scholars started adopting tools from social and eventually cognitive psychology. The increase in entrepreneurial intention (EI) research during the 1980s and 1990s coincides with the introduction of contributions from the field of psychology (Fayolle and Liñán 2014). Ever since then, the concept of EIs is recognized to be important for our understanding of entrepreneurial behavior (Shane and Venkataraman 2000; Fitzsimmons and Douglas 2011). EIs affect entrepreneurial behavior and, subsequently, venture development and growth (Bird 1988) and they are among the most researched phenomena in the field of entrepreneurship (Liñán and Fayolle 2015; Gupta et al. 2016).

But as we delved more deeply into human thinking, we slowly realized that we also need to dive more deeply than intentions; we needed to understand "what lies beneath" (Krueger 2007). Insights into the development of EIs facilitate our understanding of how entrepreneurial cognition and, ultimately, how the entrepreneurial mindset develops (Krueger 2007). Therefore, the more we study intentions, the more we need to look deeper at where intent actually arises.

The EI literature is huge (as of this writing, Google Scholar lists over 1260 articles with that phrase in the publication title and more than 16,000 overall), and it is the rare scholar who is not familiar who has little or no familiarity. However, the trajectory of the topic is often overlooked. From whence do intentions arise? We will use this opportunity to explore some research where intentions research not only opened the door but also reciprocates by contributing to future intentions research.

In this chapter, we first describe the most influential modeling and application of this concept in the entrepreneurship literature. Then, we demonstrate how this concept has affected entrepreneurship studies throughout the last 30 years. In addition, we point to the links with current studies that are relevant for understanding entrepreneurial opportunity identification, development and exploitation. Then we zoom in on a specific promising future research alley, namely the role of entrepreneurship education in shaping EI, which we discuss from a sense-making perspective.

Psychological Foundation of Opportunity Development

Intentions as an intellectual topic is millennia old (e.g., Socrates). However, it was Al Shapero (e.g., Shapero & Sokol 1982) who brought us a well-developed conceptual model of how entrepreneurial intent evolves in his model of the entrepreneurial event. He focused on how intent reflects a significant and actionable opportunity. The term 'entrepreneurial intentions' emerged in the late 1980s. In turn, the emergence of EI is linked to an increasing focus on psychological and cognitive aspects of entrepreneurship.

Perhaps the seminal article is from Bird (1988) for whom the intentional (entrepreneurial) process begins with a person's needs, values, wants, habits and beliefs. By pointing out the influence of psychological processes in entrepreneurship, Bird's study lay the groundwork for a cognitive approach to the study of entrepreneurship. Bird (1988) points out that a person's intentions and actions are structured by rational, analytic and cause-and-effect-oriented thinking, while intuitive, holistic and contextual thinking frame intentions and actions. Bird makes a clear distinction between EIs and concepts such as goal setting and the manager's intentions in established firms. By doing so, she helped establish EI as a separate field of research with its own theoretical framework which numerous later studies built upon (Gupta et al. 2016). In those later studies, EIs are seen as a function of psychological variables, such as perceptions of desirability, feasibility or behavioral control; however they differ with regard to conceptual modeling as well as empirical application in the field of entrepreneurship.

According to Bird (1988), intentionality draws on two important variables: alignment and attunement. Alignment and attunement can result in more effective entrepreneurial action and, subsequently, more effective new ventures. Alignment involves the configuration of parts in a way that they are contributing to a single purpose and direction. Alignment thus expresses intentionality because it makes the "many inner voices that reflect different and conflicting needs, values, memories and wishes agree on one direction" (Bird 1988: p. 449). Conflict in values can slow, stop or divert action; therefore for entrepreneurs, aligning individuals on the entrepreneurial team and the early staff can be an important and difficult leadership task (Bird 1988).

Attunement relates to one's readiness to send and receive information, influence or meaning from other sources; it requires vigilance, open-mindedness, extroversion and the ability to learn from mistakes (Bird 1988). Attunement draws on the personal values and beliefs of the entrepreneur and the impact those values and beliefs have on the entrepreneur's organizing capabilities. Forms of attunement are found in the entrepreneur's networking with external team members such as bankers, venture capitalists, lawyers, accountants and consultants in order to gain key resources for the new venture (Bird 1988). As we see later, this becomes particularly important as we move concretely to see "what lies beneath".

The Theory of Planned Behavior

A first rigorous and empirically testable conceptualization of EIs appeared in 1989 in Krueger's dissertation, which included the full model prescribed in the theory of planned behavior plus variables that captured Shapero's constructs.[1] The first empirical test was published in early 1993, followed by Krueger and Carsrud's (1993) intentions model based on the theory of planned behavior. As with the dissertation, the authors drew on (Ajzen & Fishbein's 1980) model of behavioral intentions which specifies three distinct attitudinal antecedents of intention, each drawn from existing theory and prior evidence: personal attitude toward outcomes of the behavior, perceived social norms—both together reflect perceived desirability of performing the behavior—and perceived behavioral control (Krueger and Carsrud 1993). We see here how EIs are conceptualized and made measurable not only in terms of cognitive and psychological attributes but also in terms of the entrepreneurs' perceptions of, or consideration for, the social context.

Krueger and Carsrud (1993) opened a new alley for EIs research with an article explaining the potential for theory and research from the theory of planned behavior. Research that drew on Krueger and Carsrud's work or generally used the theory of planned behavior in studies of the formation, effect and modeling of EIs increased after the introduction of Ajzen and Fishbein's psychological approach to entrepreneurship by Krueger & Carsrud in 1993 and the first empirical study (Krueger 1993). Lars Kolvereid and his colleagues have also built an impressive array of entrepreneurship studies using the full-blown TPB model. Liñán has created his own version of the model with a widely used questionnaire, his Entrepreneurial Intentions Questionnaire (EIQ) (Fig. 10.1).

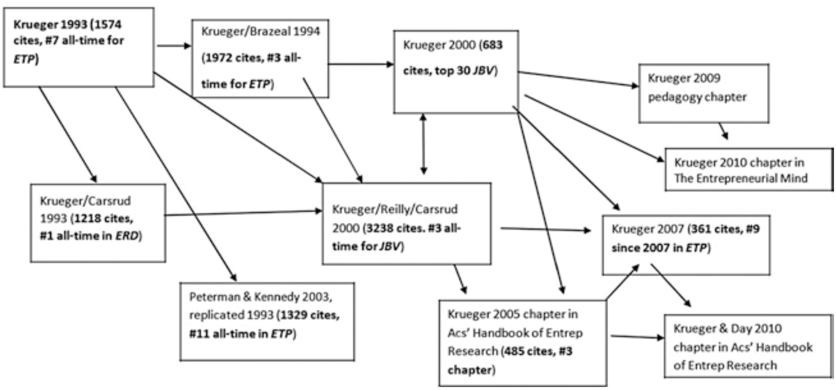

Fig. 10.1 Offers a flow chart of research on intentions by Krueger and colleagues

Quantifying the Impact of Intentions Research

The importance of the concept of EIs is reflected in its application in entrepreneurship studies, in particular during the 1990s and after the number of studies on entrepreneurial grew explosively.

Consider these recent statistics from Google Scholar: The number of citations for "entrepreneurial intentions" and "entrepreneurship".

	Before 1993	After 1993	Growth
Entrepreneurial Intentions	112	~13,500,120X	

(Entrepreneurship research overall only grew 3.7X. That is, intentions research has grown more than 30 times as fast as entrepreneurship research in general.)

We also see a nine-fold increase in entrepreneurial cognition research relative to entrepreneurship in general, although it accelerated considerably after 1993, suggesting EI research was at least a catalyzing factor for research there.

The longevity of Krueger and Carsrud's (1993) work is striking and continues to represent the most-cited work on this topic. The original 1993 article in *Entrepreneurship Theory & Practice* (ETP) remains the seventh-most cited article in that journal. The 1994 Krueger and Brazeal article is the third-most cited ever in *ETP*. The 2000 article by Krueger, Reilly and Carsrud has over 3000 citations and is the third-most cited article ever in the *Journal of Business Venturing*. And the 1993 Krueger and Carsrud's work appears to be the #1 most-cited article published in *Entrepreneurship & Regional Development*. All of these have 1000 or more citations.

However, the authors are proudest of the research they have inspired, especially where research has focused on deeper issues. In specific, Krueger has argued that intent may be so easy to conceptualize and measure, but it is only the starting point.

A decade ago, the author and others proposed trying to blow up the intentions model (n.b. to surprising anxiety by colleagues who loved the model). A group of leading intentions scholars pooled their data and tested whether the intentions model was explained better by its purported antecedents or whether it was actually the other way around. As the results showed, once intent became the driving variable, adjusted r-squared went up (Brannback et al. 2007).

Why? Maybe TPB should be a reflective model rather than a formative model. Or, if one asked a philosopher or a cognitive scientist like Bratman (1987), they would point out that the TPB model is a static snapshot of a highly dynamic process (Brannback et al. 2007; Krueger 2017).

Why and How the Ideas Therein Are Still Relevant to the Field

Where is this trajectory of research into EIs leading us? We suggest that if intentionality has an important role in entrepreneurship, as the increase in research suggests, we need to know about the factors that affect it.

In a recent book chapter (2017) Krueger asked if research into EIs was growing or just getting bigger. In other words: Of all those literally thousands of papers that touch on intent, how many are really breaking new ground? The short answer is "Not enough" but those that are suggest a bright future. Here are recent examples of those that do break new ground.

We offer a sampling of intriguing research that have begun to address deeper issues, including some that look at negative influences. For example, Cesinger et al. (2011) look at entrepreneurship's 'dark side' (the so-called Dark Triad, narcissism, Machiavellianism and psychopathy). What is particularly interesting here is that this fits Krueger's (2007) call that drawing from developmental psychology will be productive. Adam (2015) examines the role of commitment in the EI-behavior link, by applying the commitment theory of Meyer and Allen (1987, 1991), another area of social psychology that has been woefully neglected. The goal of the study is to assess to what extent, and how, commitment helps them to enact their intentions. The study shows that commitment has a positive impact on entrepreneurial behavior when the approach is motivated by the inner self. However when the project is motivated by external reasons, it seems to have no or even negative impacts on the entrepreneurial process. The results also show that it does not matter if the intended entrepreneur is emotionally attached to entrepreneurship as a career or to his project itself, and neither does being committed to both entrepreneurship and the project increase the probability to create a company.

The aforementioned studies yield insights into the wide array of psychological topics (in entrepreneurship) to which the concept of EI can contribute. Most important, any intent represents the direction and purpose of the action (e.g., Bratman 1987). EIs relate not only to the entrepreneur's decision or disposition to become or be an entrepreneur but also to day-to-day intentions that the entrepreneur formulates. Entrepreneurial intentionality is linked to everyday decision-making about direction and purpose of the entrepreneur's goal-oriented behavior. Intentionality is linked to mindfulness about assumed—perceived—desirability and feasibility of a directed and purposeful idea for action. All of this suggests the future is bright for not only intentions research but even more so for research that opens new doors.

We continue to see study after study that blindly applies the intentions model to yet another population. However, we are finally starting to see that scholars are explicitly considering the potential impact of, for example, culture. The GUESSS research project (Sieger et al. 2011; http://www.guesssurvey.org) now reaches more than 20 countries, and the Global Entrepreneurship Monitor (GEM) collects data in over 60. (In fact, the GEM team in Spain collected data from 17 different regions within Spain, finding intriguing differences.) And if we delve further and further into 'what lies beneath' intentions, we find ourselves moving in several useful directions.

Changing Intent to Changing the Mindset?

Perhaps the most striking direction of EI research is also the most valuable for policymakers and for educators: entrepreneurship education. Is the point of entrepreneurship education to raise the learners' intent toward entrepreneurship? Not necessarily. Do we want to make entrepreneurship more credible long term (more desirable and more feasible) or raise intent in the near term (meaning: do we want to raise the intent of learners who simply are not ready)? If the former, we really do need to move away from intent per se and move toward nurturing an entrepreneurial mindset, focusing on changing deep beliefs that ultimately anchor entrepreneurial thinking (Krueger 2007, 2015).

We now hear claims from educators that we are no longer teaching ***about*** entrepreneurship, we are now teaching them to ***do*** entrepreneurship (thinking and action). While as of this writing, such education is rarer than we claim and it is hard to assess whether the learning approaches are effective. This calls for four interrelated strategic directions.

First, measuring changes in intent is unlikely to be a productive dependent variable, even though the vast majority of impact studies use exactly that (Nabi et al. 2017). We are in need of much more comprehensive metrics (Lackeus 2015), including those that address explicitly the entrepreneurial mindset. Where are our rigorous tests of the mindset? Progress is being made but needs to accelerate (Krueger 2015; Penaluna and Penaluna 2015).

Second, as Krueger (2007) pointed out, it is the rare entrepreneurship scholar who has even a limited familiarity with developmental psychology. It is as alien to us as cognitive psychology was before Baron (e.g., 2004). Studying how humans actually learn would also have immense benefits for students. The number of university-level entrepreneurship educators with even the slightest acquaintance with professional educator training is nearly zero. Maybe it is time? And maybe research will be the excuse? Imagine what more we could do with a solid ground in learning theories that we seem to use in classrooms already (Robinson et al. 2016).

Third, diving deep will inevitably take us to truly fundamental cognitive science, even neuroscience (Krueger and Welpe 2014; Day et al. 2017). One nascent example of using cognitive science is the new social ontology model (McBride et al. 2013). This direction is profoundly promising but, again, rarely a part of any entrepreneurship scholar's training.

Finally, going 'wide' is just as important. There is so much in social and cognitive psychology that have not seen widespread adoption in our field, even when it is used productively in other management domains. Let us take a long look at how that is already providing valuable insights. It also provides enormous implications for entrepreneurship education. (And embracing those intentions is a dynamic process.)

Confirmatory Bias and Intentionality of Feedback

The study of EIs is inextricably intertwined with the study entrepreneurial cognition. To answer the question of what is forming EIs, we therefore need to dig deeper by looking at sociocognitive structures. Entrepreneurial cognition relates to interpretative and decision-making processes involved in opportunity identification and development. And EIs are rooted in interpretative (cognitive) processes of what is acceptable practice by relevant others; for example from what Shepherd and Patzelt (2017) call the entrepreneur's 'community of inquiry'. In particular, perceptions of social norms—as part of the perceived desirability, which is an antecedent to EIs—require information exchange with third parties who provide information about the legitimacy of an entrepreneurial opportunity.

Through feedback processes, stakeholders provide an entrepreneur with intersubjective knowledge crucial for successful business opportunity development (Venkataraman et al. 2012). Feedback is important for opportunity recognition and development (e.g., Ozgen and Baron 2007), and it is therefore crucial that entrepreneurs are open to new information and knowledge received during that feedback. Intentionality about feedback occurrences helps entrepreneurs to avoid the so-called confirmation bias.

In their everyday cognitive activity, entrepreneurs are prone to various cognitive biases in their information searching and receiving behavior.

Mitchell et al. (2008) show that the confirmation bias negatively affects the openness to new ideas during entrepreneurs' opportunity identification and pursuit: "[P]*erceptions are influenced and possibilities are limited when new information is interpreted such that preconceptions are confirmed and learning is suppressed. […] For instance, where behavior is selected from a narrow range of path dependently acquired routines as opposed to assessing all possible choices (e.g., Miller 2007), the level of achievable expertise may be limited*" (Mitchell et al. 2008: p. 228). In other words, the confirmation bias jeopardizes learning because the entrepreneur tends to overlook evidence which opposes his beliefs or assumptions.

The confirmation bias is relevant in the context of entrepreneurial opportunity development because it causes people to reject information that might indicate that their current assumptions are incorrect, whereas they readily accept information with positive connotations (McGrath 1999). In other words entrepreneurs-to-be might shy away from negative or harsh feedback which proves a liability for opportunity development. Because entrepreneurs are not always or not equally willing to accept feedback even from relevant stakeholders, it remains a riveting question how entrepreneurship educators can teach (aspiring) entrepreneurs to be *intentional* about negative feedback—both about being receptive to it and being responsive to it.

This intentional and co-creational approach to feedback engagement by the entrepreneur has been recognized in existing entrepreneurship literature. Fisher (2012), for example, evaluates the behaviors underlying the theories of effectuation, causation and bricolage. He finds that intentional engagement with stakeholders is seen to be crucial in achieving the intended goal—opportunity exploitation—in all three theories (Fisher 2012).

Feedback intentionality is reflected in the entrepreneurs' efforts to align relevant stakeholders, and attune relevant information with their own values and beliefs about the entrepreneurial opportunity. For entrepreneurs, aligning individuals on the entrepreneurial team and early staff is an important and difficult leadership task, just as is the entrepreneur's networking with external team members such as bankers and venture capitalists. Similarly, the entrepreneur needs to engage in networking with lawyers, accountants and consultants, in order to gain key resources for the new venture (Bird 1988).

Developing the Entrepreneurial Mindset: Seeking Feedback Intentionally …

Intentionality about feedback can be observed in entrepreneurial sense-making processes. Sense-making reflects a concern with the acquisition and processing of information in order to establish "a manageable level of uncertainty" (Vlaar et al. 2008). For research on the dynamic properties of EIs, we propose to combine insights from studies on EIs with the sense-making perspective on entrepreneurial cognitive development and conceptualize the entrepreneurial mindset in terms of intentional feedback cycles.

Sense-making consists of interpretative processes about what counts in a situation and why. It consists of bracketing, labeling and categorization activities. It is by conceptual distinction that any perception or impression is made meaningful (Weick et al. 2005), and sense-making enables actors to make pieces of information meaningful by discerning them, ordering them according to their value and usefulness and subsequently arranging them in relation to other pieces of information.

Sense-giving has also been broadly researched in organizational and entrepreneurship studies. It "*consists of acts by which individuals attempt to alter and influence the way others think and act; concerns activities by which stakeholders frame and disseminate visions and beliefs to others so as to increase their understanding and support; may include offering descriptions and explanations, providing signals, constructing credible and consistent narratives, and projecting images through stories, slogans, metaphors, and artifacts*" (Vlaar et al. 2008: p. 240). Sense-giving helps the entrepreneur to convey his opportunity—and propositions—to stakeholders, by means of language to persuade their stakeholders.

While entrepreneurial sense-making and sense-giving have been fruitfully researched in a large number of studies (Hill and Levenhagen 1995; Weick 2005; Clarke and Holt 2010; Cornelissen et al. 2012; Weick 2012), they are interlinked with the less well-researched and less applied concepts of sense-demanding and sense-breaking.

Sense-breaking is a process in which someone's understanding is disrupted by contradictory evidence or values provided by others in the process of sense-making (Vlaar et al. 2008; Pratt 2000). Sense-breaking, according to Vlaar et al. (2008), is a process "*used to question existing understandings of others*" (p. 241) and which involves "*the reframing of previously held conceptions and redirecting [...] attention and search for solutions*" (idem).

Sense-demanding is associated with efforts by individuals to acquire and process information, in order to establish 'a manageable level of uncertainty'. To improve the quality of information upon which they base their decisions, individuals seek as much relevant information as possible (Vlaar et al. 2008). By sense-demanding, the entrepreneur actively and purposefully seeks feedback on his or her opportunity which manifests in information, knowledge or other forms of (im) material support for the preparation and/or exploitation of that opportunity.

We propose that the four interrelated processes of sense-making, sense-giving, sense-demanding and sense-breaking offer a valuable analytical tool in studying the cognitive nature of EIs.

The conceptualization of feedback loops in terms of sense-giving, sense-demanding and sense-breaking occurrences yield a more dynamic analysis of the bidirectional effect of EIs. We know since Bird that intentions are the mediator between attitude and actions, but perhaps intentional feedback loops also affect the antecedents of our intentions, such as deeper beliefs (Krueger 2007). Krueger (2009) already recognized that the dynamic factors of EIs, sense-giving, sense-demanding and in particular sense-breaking, can be used as analytical tools to examine the development of EIs. In this conceptualization, sense-giving reflects alignment activities while sense-demanding helps with the entrepreneur's alignment and attunement activities (see Fig. 10.2).

Below we describe in more detail the way that sense-breaking is shaped by and shapes EIs.

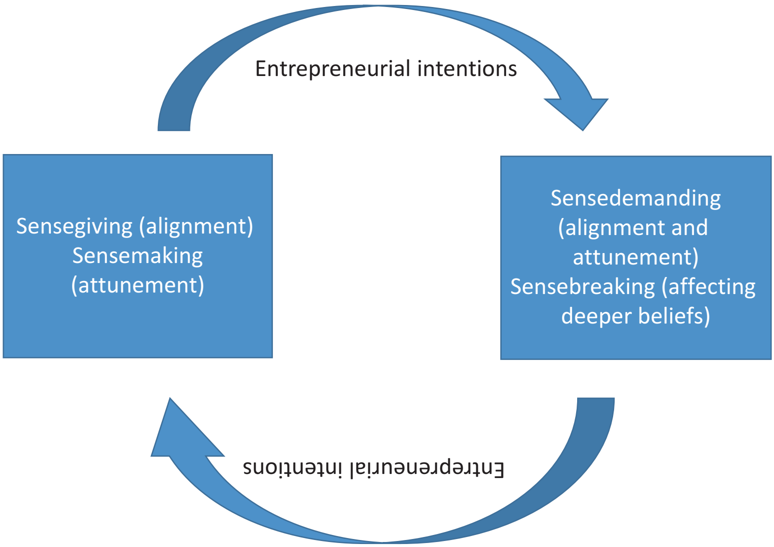

Fig. 10.2 Entrepreneurial intentions: a dynamic, bidirectional model using the sense-making perspective

… and Letting Feedback Shape Entrepreneurial Intentions

Entrepreneurs engage in feedback not only within the managerial team but also with other relevant stakeholders, for example investors and first customers (Clarke 2011; Cornelissen and Clarke 2010; Zott and Huy 2007; Santos and Eisenhardt 2005). In their pursuit for resources, all these parties are potential sources of sense-breaking. Three mechanisms of sense-breaking can be distinguished: redirecting, reframing and questioning.

Redirecting is associated with changes in one's business model and strategy as well as associated tactics (Kaffka 2017). Redirecting instances shape EIs regarding the 'what' and 'how' of opportunity development and exploitation (Kaffka 2017).

Questioning is the most direct form of negative critical feedback and is associated with direct criticism of an entrepreneur's existing assumptions regarding the entrepreneurial opportunity. Questioning occurrences can contribute to more awareness among entrepreneurs about what third parties see as erroneous or faulty in the way the entrepreneur legitimizes his or her venture idea.

Reframing complements questioning in the sense that it helps to not only critically examine one's own assumptions but is linked to challenging what Krueger (2007) describe as 'deep assumptions' the entrepreneur's taken-for-granted understanding and values regarding the opportunity they are developing. Reframing occurrences lead to an identity and attitude development among entrepreneurs because it encourages a change in the existing perspective, way of thinking and subsequent revaluations (Kaffka 2017).

Awareness of the different mechanisms of sense-breaking—and their effect on novel sense-making—provides entrepreneurs with a deeper command of the direction and purpose of feedback which is sought. We posit that entrepreneurship educators, but also trainers in incubation/acceleration programs, can make entrepreneurs more aware of the effects of sense-breaking as a tool to avoid the confirmation. For example, higher education institutions (HEIs) could host events at science parks and incubators, have entrepreneurs talk about their business idea and all the while engage in interaction that entails occurrences of sense-breaking activities, stimulate reflection on one's own values and assumptions and thereby create a more critical and open mind.

The link between EIs, the change in deeper beliefs and sense-breaking mechanisms is that certain deep beliefs or assumptions can be reframed which in turn affects the entrepreneur's intentions.

Entrepreneurial Intentions and Entrepreneurship Education

Rauch and Hulsink (2015) find that entrepreneurship education has a positive effect on attitudes, perceived behavioral control and the intention to become an entrepreneur. This shows that entrepreneurship education affects the personal attributes involved in following one's entrepreneurial intent. The authors also find that entrepreneurship education increasingly often involves context-oriented learning, such action-based or project-based learning (Rauch and Hulsink 2015) geared toward learning by doing.

Nabi et al. (2017) show that experiential learning—or learning by doing—affects EIs more than other types of learning. They undertook a systematic review of a range of entrepreneurship education impacts in higher education and observe that programs which have a more experiential pedagogical nature show impact at higher levels of EIs (actual start-ups and socio-economic impact), as opposed to more supply, supply-demand

and demand-oriented programs. The latter focus more upon basic or lower levels of the authors' framework.

How can entrepreneurial education—which encompasses both entrepreneurship education and the development of entrepreneurial skills in the broadest way—contribute to stimulating a change in intentions into the direction of more willingness to or openness for entrepreneurial activity? Or more generally: what gets people to change or pivot their intentions? The question of how entrepreneurs react to negative feedback or barriers—and the impact of that reaction on their cognition or behavior—has been posed by Krueger (2009) who related perceived barriers to deeply held beliefs in which EIs are anchored. We know that the pedagogical tools that transformational educators use are based on changing deeper beliefs, or at least on raising awareness for and challenging one's deeper beliefs. Practice seems to be clear on it: If we are going to change minds—which then are more ready and open for negative feedback—how are we are going to do that?

Experiential Learning, Feedback Loops, Sense-Breaking: And Entrepreneurial Intentions

Since learning by doing invariably involves feedback loops, these can be intentionally used in order to avoid the confirmation bias. Indeed, we see that entrepreneurship education increasingly encourages this type of learning by drawing on experiential learning activities, for example, ideas from the lean start-up method (Nabi et al. 2017). That demonstrates the role of intentionality in feedback engagement—and associated sense-breaking occurrences—in entrepreneurship education.

Characteristically the widespread lean start-up method encourages entrepreneurs to seek feedback from relevant stakeholders to improve or adapt their proposed business model (Blank 2006). The sense-making perspective offers conceptual tools for the analysis and measure of everyday intentions which reflect the entrepreneurial intentionality.

In particular, sense-breaking leads the entrepreneur to change his perspective and formulate new intentions. Sense-breaking is like a cognitive push we feel, that even 'hurts' (as we hear our articulated thoughts not being confirmed but being redirected, reframed or even questioned). Sense-breaking does so by challenging existing assumptions (Pratt 2000; Vlaar et al. 2008), making entrepreneurs realize logical holes in their arguments, broadening their perspective and triggering new or different focus.

Subsequently the entrepreneurial idea can be improved, or new ideas can arise via critical feedback in the form of sense-breaking. In this way, sense-breaking facilitates the adding of new or different 'dots' when 'connecting the dots' for the realization of a viable business opportunity.

Considering those developments in entrepreneurship education, we suggest that the sense-making perspective offers valuable insights into the conceptualization of EIs and how to teach, learn and measure them in entrepreneurship education.

Conclusion

Science Is Hard

The trajectory of research—and application—that EI has taken us is far from over. Not only did it help bring serious social psychology research into the forefront of entrepreneurship, it continues to drive us in what is already valuable directions (and marvelous insights into entrepreneurial learning). In our efforts to understand 'what lies beneath' intentions, we see great value in ever-deepening theoretical and methodological opportunities. But these are not as simple as, say, TPB. Whether it is neuroscience or social ontology or even the sense-making perspective—with its related concept of sense-breaking—the bar is being raised. However, we have shared a most useful example that demonstrates how useful going deeper can be (and already is).

The sense-making perspective offers an angle for examining the role of EIs in entrepreneurship education. Sense-demanding and sense-breaking helps to conceptualize the dynamic nature of EIs. By engaging in feedback processes, stakeholders provide intersubjective knowledge to business opportunity development (Venkataraman et al. 2012) and are potential sources of sense-demanding, sense-breaking and sense-giving.

By introducing learning that is 'rich' in sense-breaking occurrences, entrepreneurship educators can help to counter biases in how aspiring entrepreneurs receive feedback and shape EIs. *This design of* entrepreneurship education maximizes interaction opportunities with stakeholders and subsequent feedback occurrences. And those intentional interactions in turn shape EIs.

As we argued, an intentional stance toward seeking (negative) feedback—and associated sense-breaking occurrences—helps to avoid the confirmation bias. The entrepreneur's engagement with stakeholders to 'sell' their idea—how novice or maladroit that engagement may be—shapes an entrepreneurial mindset which benefits from intentionality regarding feedback that is sought and how this feedback is processed. Sense-making processes shape entrepreneurial/intentional actions such as seeking and receiving feedback, which in turn shape EIs.

We propose that by teaching entrepreneurship students how to seek and receive feedback intentionally, they can effectively combat the confirmation bias and discuss how the sense-making dimensions are tied to elements of attunement and alignment. The engagement in feedback loops inherent to problem-based learning explains why that type of learning impacts EIs; contributes to shaping EIs and perhaps, even the 'deeper' beliefs that underlie those intentions.

Recent educational models which emphasize 'learning by doing' fit clearly and illustrate the importance of feedback loops. In general, HEIs, and other educational facilities, have increasingly leveraged more experiential forms of learning such as problem-based learning (PBL).[2] Programs that stimulate experiential learning appear to have a higher chance of leading to the realization of new ventures (Nabi et al. 2016). In experiential or problem-based learning in entrepreneurship, interactions are specifically encouraged because they help to shape the opportunity, for example, interaction with and associated feedback from leading customers or in the beginning stage from friends and family.

Another aspect of intentional feedback is their merit in developing so-called twenty-first-century skills. The Organisation for Economic Co-operation and Development (OECD) defines twenty-first-century skills as skills for innovation, such as technical skills including disciplinary know-what and know-how; creativity skills such as curiosity, critical thinking, problem-solving and making connections; and social and behavioral skills such as interest, engagement, self-directed learning, self-confidence, organizational and communication competences, (cross-cultural) collaboration, teamwork and leadership.[3] To develop most if not all of these skills necessitate engagement in feedback loops, for example with teachers and peers. Those skills are also reminiscent of skills which also play a role in entrepreneurship education. The scope of these skills suggests that more problem-based learning could be more appropriate in shaping an entrepreneurial mindset and associated twenty-first-century skills.

What Lies Beneath Entrepreneurial Intentions?

Possibly nothing less than the future of entrepreneurship research! A bold claim to be sure, but as we look more deeply into the underpinnings of entrepreneurial thinking and action, we are discovering powerful new ways to understand entrepreneurs and entrepreneurship. We are discovering new research tools. We are even headed toward becoming better educators.

And as we do, we are beginning to open doors outside of the entrepreneurship field. What can others learn from the rigorous studies of entrepreneurs? It is clear that much of the most innovative work on intentions in general is from our field, and the new methods like Fuzzy Set Qualitative Choice Analysis & Electro Encephalo Graph (fsQCA and EEG) play a key role. Science IS hard but the trajectory of research on EIs proves that the rewards are well worth it. Join us!

Notes

1. We would also note that Per Davidsson attempted to develop a model of entrepreneurial intentions from first principles (1995); he found the same antecedents.
2. OECD. 2014. Promoting Skills for Innovation.
3. OECD. 2014. Promoting Skills for Education. Link: http://repositorio.minedu.gob.pe/bitstream/handle/123456789/2482/Promoting%20Skills%20for%20Innovation%20in%20Higher%20Education%20A%20Literature%20Review%20on%20the%20Efectiveness%20of%20Problem-Based%20Learning%20and%20of%20Teaching%20Behaviours.pdf?sequence=1

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CHAPTER 11

Fool's Gold or Gold Rush? An Entrepreneurial Dilemma

Sumeet Malik and Chandrika Rathee

Introduction

Entrepreneurship researchers realize and study the hardships faced by the entrepreneurs. The hurdles faced by entrepreneurs in emerging industries are unique and, many would argue, immense, since such founders do not have any exemplars to follow that have paved the path for them. The above entrepreneurial hurdles have not gone unnoticed by organization and entrepreneurship scholars. Population ecology theorists have stressed on the selection processes that determine the industry survival, growth, and mortality. Institutional theorists have stressed the institutional pressures that dominate organizations' fate. Two decades ago, both institutional and ecological theorists would have dismissed an entrepreneurial quest in emerging industries as one for fool's gold. Noting this, Aldrich and Fiol commented, 'founders of new ventures appear to be fools for they are navigating, at best, in an institutional vacuum of indifferent munificence, and

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at worst, in a hostile environment impervious to individual action' (1994, p. 645). However, is entrepreneurship in emerging industries a quest for fool's gold or is it a gold rush?

The answer Aldrich and Fiol proposed in their seminal paper titled 'Fools Rush in? The Institutional Context of Industry Creation lies in acquisition of legitimacy that mitigates the liabilities of newness of entrepreneurs in emerging industries. Of course, legitimacy is not the only factor in a new industry's success, and Aldrich and Fiol were quick to accept it in their paper. However, as time stood witness, scholars realized its importance and legitimacy theory now has a sizeable literature. In this chapter, we study various strands of research in legitimacy literature that have emerged since the study (1994) by proposing a comprehensive framework consisting of two dimensions—*Locus of Control* and *Degree of Conflict*. This framework not only helps us chart the tremendous impact Aldrich and Fiol's study had on the entrepreneurship field but also looks at theoretical questions that are still under-researched or ignored.

The chapter is organized as follows: first, we give the background that explains the theoretical foundations of Aldrich and Fiol's study. We, then, summarize the novel ideas of the study, follow it up with the developments of the ideas proposed in entrepreneurship research, and conclude with relevance and future directions of research based on insights from the study.

Institutional Forces

Institutional theorists have long stressed the institutional pressures that plague organizations. The concept of institutionalization has been theorized in various ways by scholars beginning from the years it started taking roots. Selznick stated that to institutionalize 'is to infuse with value beyond the technical requirements of the task at hand' (1957, p. 17). He viewed institutionalization as a process that happened to organizations over time. The scholars after Selznick looked at how the process of institutionalization occurs, something that Selznick did not explain. Berger and Luckmann (1967) defined institutionalism as constraints that develop in the form of a social order based on a shared social reality which, in turn, is a human construction that is created in social interaction. Zucker (1977, p. 728) in his seminal work asserted that

> Institutionalization is both a process and a property variable. It is the process by which individual actors transmit what is socially defined as real and, at the same time, at any point in the process the meaning of an act can be defined as more or less a taken-for-granted part of this social reality. Institutionalized acts, then, must be perceived as both objective and exterior.

Meyer and Rowan (1977) also theorized along similar lines by stating that 'institutionalization involves the processes by which social processes, obligations, or actualities come to take on a rule-like status in social thought and action' (p. 341). All these definitions of institutionalization underlined construction of organizational structures through a social process.

Soon, scholars theorized more 'explicitly about the variety of types of processes that might cause an organization to change its structure in ways that make it conform to—become isomorphic with—an institutional pattern' (Scott 1987). DiMaggio and Powell (1983) distinguished among coercive, mimetic, and normative processes leading to conformity. 'Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations in the society with in which organizations function' (p. 150). Mimetic isomorphism occurs when there is uncertainty due to organizational technologies, goal ambiguity, or symbolic environment uncertainty. Normative isomorphism stems primarily from professionalism—'as the collective struggle of members of an occupation to define the conditions and the methods of their work, to control "the production of producers", and to establish a cognitive base and legitimation for their occupational autonomy' (p. 152).

Not just institutional processes, scholars also started to theorize about belief systems found in the modern societies and resultant institutional sources. Meyer and Rowan (1977), for example, conceptualized 'rational myths' or 'rationalized institutional elements'. They gave examples of public opinion, educational systems, laws, courts, professions, ideologies, regulatory structures, awards and prizes, certification and accreditation bodies, and governmental endorsements and requirements that underlined diversity of institutional forces.

Research Toward Legitimacy Theory

Ecological theorists, who were studying the conditions under which the organizations emerge, grow, and die, found empirical evidence of lower founding and higher disbanding rates among small industries (Hannan and Freeman 1989). Using nineteenth-century historical data on the Argentine and Irish Press, Delacroix and Carroll (1983) showed lower birth rates and higher death rates of organizations when industries were small. There were similar findings in US National labor unions, wine industry, and semiconductor industry (for a detailed review, see Singh and Lumsden (1990)).

To explain these findings, ecological theorists borrowed a lot from institutional theory and based their argument on 'liabilities of newness'—a concept first proposed by Stinchcombe (1965), who argued that the liabilities were both internal and external to the organization. Young organizations have to learn to become social actors and that requires a significant time and effort. The resource acquisition process for entrepreneurs thus becomes susceptible to liabilities of newness since clients and other stakeholders prefer well-established organizations. These liabilities can be attenuated by what organizational theorists started calling legitimacy.

However, economists were not that impressed by legitimacy arguments. Aldrich and Fiol (1994) recognized it in their study—'The focus of economic theories of industry creation has been on the risks and economic trade-offs that characterize new industry entry decisions, and they have given little weight to the social context within which those decisions are embedded' (p. 646). The authors go on to state that Klepper and Graddy's (1990) study strongly suggests that there are other forces than purely economic in the growth of an industry. Some industries went from origin to stability in only 2 years while others took more than 50 years. According to them, this huge variation is due to the liabilities of newness and entrepreneurs' struggle with legitimacy. It is on this premise that Aldrich and Fiol build their study of legitimacy-building strategies for entrepreneurs in emerging industries to collectively reshape institutional environment.

Fools Rush in?: Main Ideas

Aldrich and Fiol accepted that legitimacy was not the only factor that may influence the growth of an emerging industry, and economic factors such as state of the economy, the latent demand for goods and services, competition, and skills of the entrepreneurs play important roles too. However, legitimacy had been largely ignored by organizational scholars until that point, and the authors were the first ones to theorize about it. They labeled legitimacy in two related senses—*Cognitive* and *Sociopolitical*

> *Cognitive legitimation* refers to the spread of knowledge about a new venture. … The highest form of cognitive legitimation is achieved when a new product, process, or service is taken for granted. … From a producer's point of view, cognitive legitimation means that new entrants to an industry are likely to copy an existing organizational form, rather than experiment with a new one. From a consumer's point of view, cognitive legitimation means that people are knowledgeable users of the product or service.
>
> *Sociopolitical legitimation* refers to the process by which key stakeholders, the general public, key opinion leaders, or government officials accept a venture as appropriate and right, given existing norms and laws. One can measure sociopolitical legitimation by assessing public acceptance of an industry, government subsidies to the industry, or the public prestige of its leaders. (p. 648)

The authors were pioneers in defining legitimacy and speculating strategies to acquire legitimacy that collectively evolve industry and institutional environments. Over time, various scholars following Aldrich and Fiol's work did an immense amount of work and, today, legitimacy theory is considered to stand on its own. The Entrepreneurship Division of Academy of Management, in 2009, recognized the contribution of Aldrich and Fiol's paper while conferring the IDEA foundational paper award and described it as 'representative of a classic and highly influential contribution to entrepreneurship research that serves as a legacy for scholarly work in the field'.

Aldrich and Fiol state that their arguments follow institutional constructionists and, thus, suggest the strategies entrepreneurs can employ to alter institutional environments in their favor. Social contexts, they say, create windows of opportunities for entrepreneurs to renegotiate established meanings. They propose four levels of social context as 'progressively broadened sites within which founding entrepreneurs build trust, reliability, reputation, and, finally, institutional legitimacy' (p. 649). Table 11.1 summarizes the strategies suggested by authors to reshape the industry and institutional environments.

Table 11.1 Entrepreneurial strategies to promote new industry development

Level of analysis	*Type of legitimacy*	
	Cognitive	*Sociopolitical*
Organizational	Develop knowledge base via symbolic language and behaviors	Develop trust in the new activity by maintaining internally consistent stories
Intra-industry	Develop knowledge base by encouraging convergence around a dominant design	Develop perceptions of reliability by mobilizing to take collective action
Inter-industry	Develop knowledge base by promoting activity through third-party actors	Develop reputation of a new activity as a reality by negotiating and compromising with other industries
Institutional	Develop knowledge base by creating linkages with established educational curricula	Develop legitimacy by organizing collective marketing and lobbying efforts

Building on existing literature on trust, the authors theorize that trust acts as the lubricant that smoothens the way throughout the legitimacy-building process. The less information potential stakeholders have of the entrepreneurial venture, the more trust is needed to build a relationship with the entrepreneurs. 'The social process of gaining legitimacy is shaped by the interpersonal processes of achieving trust in the organizing process' (p. 650). In established industries, entrepreneurs already have role models who have gained cognitive and sociopolitical legitimacy. However, entrepreneurs in the new industry are working in a vacuum, and thus, authors propose strategies, starting from organizational level and work their way up to the institutional level.

At the organizational level, authors suggest that founders who utilize encompassing symbolic language and behaviors will gain cognitive legitimacy more quickly, and founders who communicate internally consistent stories regarding their activity will gain sociopolitical legitimacy quickly. At the intra-industry level, they propose that industries in which founders encourage convergence around a dominant product/service will gain cognitive legitimacy more quickly, and industries in which founders mobilize to take collective action will gain sociopolitical legitimacy quickly. At the inter-industry level, they propose that industries in which founding firms promote their new activity through third-party actors will gain cognitive legitimacy more quickly, and industries in which firms negotiate and compromise with other industries will gain sociopolitical approval faster than others. Finally, at the institutional level, they propose that industries that create linkages with established educational curricula will gain cognitive legitimacy more quickly, and industries that organize collective marketing and lobbying efforts will gain sociopolitical approval faster than others.

Legitimacy Theory Since 'Fools Rush in?'

The problem of legitimacy highlighted by Aldrich and Fiol (1994) was embraced by organizational scholars and delved into detail in following years and the seminal piece inspired a fresh wave of scholarly interest in the problem of legitimacy faced by organizations. Suchman (1995) synthesized the diverse literature on legitimacy from two dimensions—*Strategic and Institutional*. Strategic tradition, from which Aldrich and Fiol argued, adopts a social constructivist approach and 'emphasizes the ways in which organizations instrumentally manipulate and deploy evocative symbols in order to garner societal support' (p. 572). The institutional tradition, on the other hand, takes the 30,000-feet view when they theorize that the legitimacy pressures from institutions are beyond the control of a single organization. Suchman's definition of legitimacy is also often quoted: 'Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (1995, p. 574). Although Suchman also proposed three kinds of legitimacy—Pragmatic, Moral (Normative), and Cognitive—his typology was not wholeheartedly endorsed by scholars.

The dominant typology that caught on with theorists was given by Scott (1995) and is Cognitive, Normative, and Regulative. Scott (1995) further segregated the sociopolitical legitimacy proposed by Aldrich and Fiol (1994) into normative and regulative legitimacy. He identified regulative systems, normative systems, and cultural-cognitive systems as the three pillars of institutions.

> The three pillars elicit three related but distinguishable bases of legitimacy. The regulatory emphasis is on conformity to rules: Legitimate organizations are those established by and operating in accordance with relevant legal or

> quasi-legal requirements. A normative conception stresses a deeper, moral base for assessing legitimacy. Normative controls are much more likely to be internalized than are regulative controls; and the incentives for conformity are, hence, likely to include intrinsic as well as extrinsic rewards. A cultural-cognitive view stresses the legitimacy that comes from adopting a common frame of reference or definition of the situation. To adopt an orthodox structure or identity to relate to a specific situation is to seek the legitimacy that comes from cognitive consistency. The cultural-cognitive mode is the 'deepest' level because it rests on preconscious, taken-for-granted understandings. (p. 60)

Zimmerman and Zeitz (2002), in their theoretical piece, further theorized on strategies to acquire legitimacy. They identified four distinctive strategies—Conformance (following the rules), Selection (locating in a favorable environment), Manipulation (innovation and/or a substantial departure from prior practice), and Creation (creation of the social context-rules, norms, values, and beliefs). More recently, Überbacher (2014) reviewed the most impactful literature on legitimacy from 1986 to 2012 and synthesized them into five distinct perspectives: an institutional perspective, a cultural entrepreneurship perspective, an ecological perspective, an impression management perspective, and a social movement perspective.

Theoretical Framework: Legitimacy Studies

As is evident, legitimacy acquisition helps entrepreneurs dull the institutional pressures, but sometimes it is acquired at a considerable trade-off. This conflict stays with entrepreneurs throughout and the most successful ones learn how to manage it. Since the institutional-entrepreneurial conflict is central to all legitimacy studies, we build our framework using it as a foundation. For this chapter, we broadly classify the extant work by entrepreneurship and legitimacy scholars into two dimensions—Locus of Control and Degree of Conflict. The Locus of Control is defined as the location where legitimacy is primarily controlled while Degree of Conflict gives us a scale of conflict for legitimacy acquisition. The Locus of Control has two poles as Suchman (1995) theorized—*Strategic* and *Institutional*. In Strategic legitimacy studies, 'legitimacy is considered as an operational resource that organizations extract—often competitively—from their cultural environments and that they employ in pursuit of their goals' (p. 576).

Institutional legitimacy considers legitimacy as a set of constitutive beliefs that external institutions construct. At the middle of these two poles, where both kinds of legitimacy forces interact, is *Interactional Legitimacy* in which legitimacy is through a negotiation process by entrepreneurs and external institutions. Our Locus of Control dimension does not claim absolutes at the extremes, that is, even at corners of the framework there is existence of opposite poles. If the Locus of Control is institutional, it does not mean that strategic forces are absent but only weaker. The advantage of such a broad classification is that it helps us include more recent, and more importantly, all strands of literature in legitimacy and institutional theory.

The first quadrant of the table includes studies in which strategic action by managers and entrepreneurs leads to legitimacy acquisition. One example of such studies is *Cultural Entrepreneurship*. Aldrich and Fiol (1994) theorized about managing symbolic language and stories by entrepreneurs to gain legitimacy. A fair amount of work has been put in by scholars in that direction since sometimes stories are all entrepreneurs have to reduce the uncertainty associated with their ventures. Lounsbury and Glynn (2001) proposed that 'stories function to identify and legitimate new ventures, thus mediating between extant stocks of entrepreneurial resources and subsequent capital acquisition and wealth creation' (p. 546), defining the process as c*ultural entrepreneurship*. The authors also borrowed from organizational identity literature to theorize that entrepreneurial storytelling leads to identity construction that gains the firm's legitimacy. The authors propose that 'there are two basic means by which the content of entrepreneurial stories shape and legitimate the identity of the entrepreneurial enterprise: (1) by emphasizing the distinctiveness of the new venture through a focus on identifying its unique characteristics, and (2) by stressing the normative appropriateness of the new venture by identifying its symbolic congruence with similar organizational forms and ideologies' (p. 551). Other studies in this area include legitimacy acquisition through the management of symbols and impressions or sometimes not seeking formal legitimacy from legal institutions and operating in 'informal economy' (Webb et al. 2009).

The second quadrant of the table includes studies that explore the high conflict between entrepreneurs and institutions because of the strategies followed by the former. This includes studies on *Institutional Entrepreneurship*—'activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones' (Maguire et al. 2004, p. 657) as well as studies on creation of new industries that are in alignment with Schumpeter's (1934) 'Creative destruction'.

The third quadrant of the table includes studies that explore the conforming behavior of the firms without putting up too much resistance to institutional forces. A typical example would be institutions certifying entrepreneurs, leading to entrepreneurial growth (e.g. Sine et al. 2007). The fourth quadrant of the table includes phenomena where the battle between institutional forces and strategic forces is bloody (isomorphic) and costly for entrepreneurs. It is usually true for highly regulated industries such as pharmaceuticals, biotech, and so on, which leaves little leeway for being entrepreneurial or for firms indulging in costly corporate social responsibility (CSR) to attenuate liabilities of newness (Wang and Bansal 2012).

Finally, the middle area of the table includes research that sees legitimacy acquisition as an interactional process. Scholars have only recently tried to study these interactions, and one of its major strands is *Legitimate Distinctiveness (LD)* regarding entrepreneurial identities that 'consist of legitimizing claims that align the entrepreneurial endeavor with expectations arising from institutionalized conventions and consist of distinctiveness claims that distance it from such institutionalized conventions in ways that are meaningful' (Navis and Glynn 2011, p. 480).

For the review on legitimacy, we searched with keywords 'legitimacy', 'institutional theory', and phenomenon-driven legitimacy keywords such as 'cultural entrepreneurship' from the nine most reputed management and entrepreneurship journals—*Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Strategic Management Journal*, *Journal of Management*, *Journal of Management Studies*, *Journal of Business Venturing*, *Entrepreneurship Theory and Practice*, and *Strategic Entrepreneurship Journal*. With such broad keywords, we then read the abstracts and introductions of the articles to determine if their main research question had legitimacy dilemma involved. This left us with a more manageable number—169. Once we had our framework, we selected one or two exemplar studies from each section of the Table 11.2 to discuss. Only when we found a stream that is under-researched or new, we broadened our search to all peer-reviewed journals. Our aim was to give an extensive but by no means an exhaustive overview of legitimacy studies since Aldrich and Fiol's article.

Table 11.2 Legitimacy framework

Locus of Control	Degree of Conflict: Low	Degree of Conflict: High
Strategic	**I** Cultural Entrepreneurship Symbolic Legitimacy and Impression Management Legitimacy through Social Networks Informal Economy Lounsbury & Glynn, 2001; Martens et al., 2007; Pollack et al., 2012; Pollock & Rindova, 2003; Parhankangas & Renko, 2017 Williamson, 2000; Stuart et al., 1999; Stuart, 2000; Pollock & Gulati, 2007; Pollock, 2004; Hallen, 2008; Cohen & Dean, 2005; Zott et al., 2007 Webb et al., 2009	**II** Institutional Entrepreneurship Category Emergence and Creation Garud, Jain, & Kumaraswamy, 2002; Greenwood et al., 2002; Hillman & Hitt, 1999 Durand & Khaire, 2017; Navis & Glynn, 2010; Khaire & Wadhwani, 2010; Weber, Heinze, & DeSoucey, 2008
Institutional	**III** Regulative Legitimacy Coercive Isomorphism Sine et al., 2007; Deephouse & Carter, 2005	**IV** Legitimacy through considerable spending Highly Regulated Industries Institutional Logics Wang & Bansal, 2012; Rao, 1994 Thornton and Ocasio, 1999; Thornton, 2002; Greve & Zhang, 2017

Interactional Legitimacy

Legitimate Distinctiveness
'Shades of Grey' in Informal economy

Navis & Glynn, 2011; Voronov et al., 2013
Illia & Zamparini, 2016
De Castro et al., 2014

Quadrant I

Cultural Entrepreneurship

O'Connor (2002) proposed typologies of stories that entrepreneurs tell to gain legitimacy and introduced the term 'narrative competence'—'an entrepreneur's ability to locate and adjust a taken position relative to distinct but interconnected plot lines in which the communicator and relevant organization figure as primary, secondary, and minor characters' (p. 37). In other words, successful entrepreneurs not only just tell stories in which they are the central characters or 'heroes' but also in which they are minor characters.

Martens, Jennings, and Jennings (2007) analyzed all 1996–2000 initial public offering prospectuses in three high-tech industries to see effective storytelling facilitating external resource acquisition. They argued that narratives help potential sources (1) to comprehend entrepreneurial firm's identity by giving information about tangible and intangible capital, (2) to understand 'the nature and potential value of a firm's proposed means of exploiting entrepreneurial opportunities', and (3) 'by connecting to broader contextual narratives in such a way that the proposed endeavor appears original and distinctive—yet not so far-fetched that its soundness is questionable' (p. 1108).

Pollack, Rutherford, and Nagy (2012), coding data from televised pitches on 'Shark Tank' and 'Dragon's Den', concluded that cognitive legitimacy mediates the relationship between entrepreneurs' preparedness behavior and the amount of funding received. They argued that the behavior of pitching is critical for entrepreneurs to overcome liabilities of newness since 'objective organizational performance measures that can demonstrate to potential investors that a venture is a viable investment option are generally not available' (p. 916). Pollock and Rindova (2003) studied media legitimization effects in the market for initial public offerings. Analyzing volume and tenor of media provided information, they argued that publicly available information not only reflects initial public offerings' (IPOs) legitimacy but also adds to their legitimacy and influences investor behavior.

More recently, the legitimacy of entrepreneurial ventures is also being studied in the context of crowdsourcing. Parhankangas and Renko (2017) studied linguistic style and crowdfunding success among social and commercial entrepreneurs.

Symbolic Legitimacy, Impression Management, and Social Networks Legitimacy

Williamson and his colleagues (2000, 2002) theorized about organizational recruitment practices by aligning them with institutional norms in case of small businesses. Borrowing from previous literature, they introduced the term 'employer legitimacy', which is a generalized perception held by job applicants that an organization is a desirable, proper, and appropriate employer.

Stuart, Ha Hoang, and Hybels (1999) showed high-status partners provided legitimacy to venture capital (VC)-backed biotechnology firms, which went to IPO faster and earned greater valuations at IPO than those that did not have these high-status connections. Pollock and Gulati (2007) studied the legitimacy afforded by alliance partners on IT firms that went public during the internet boom from the mid- to the late 1990s. The research, focused on the legitimacy by high-status actors such as prominent underwriters and VCs, has found positive results because high-status actors are believed to be capable evaluators, and they only associate with entrepreneurs that show potential (Stuart 2000; Stuart et al. 1999). High-status actors also signal audiences that the entrepreneurs possess high quality that merits association (Pollock 2004; Pollock and Gulati 2007).

There also has been research on the pursuit of Strategic legitimacy by entrepreneurs through their management of social networks. Hallen (2008) showed the legitimization of new organizations through personal interaction and signaling accomplishments to potential VCs. Zott and Quy Nguyen Huy (2007), in an inductive field study of British ventures, theorized about four types of symbolic actions that help legitimization: conveying the entrepreneur's credibility, professional organizing, organizational achievement, and the quality of stakeholder relationships. Vissa (2011) used matching theory to show that entrepreneurs gain legitimacy by expanding their networks.

Informal Economy

Webb et al. (2009), in their study, look at the informal economy, as it is both theoretically and practically important because a significant amount of economic activity takes place in the informal sector. They propose that difference in legality and legitimacy between formal institutions and informal institutions create three segments in the economy—the formal economy (legal and legitimate), the renegade economy (illegal and illegitimate), and the informal economy (illegal and legitimate). They further propose that formal and informal institutions send different signals about the acceptability of certain means and/or ends for entrepreneurial activities, labeling the differences as institutional incongruence.

Webb et al. (2009) make five propositions in their theoretical piece often using Napster as an example to elucidate them. They propose that Institutional Incongruence (differences in institutional boundary conditions when formal and informal institutions send different signals about the acceptability of entrepreneurial activities) strengthens the relationship between entrepreneurial alertness and opportunity recognition in the informal economy. Also, weak enforcement of formal laws and regulations of the land enhances the relationship between opportunity recognition and opportunity exploitation in the informal economy. They also propose that collective identity, in the informal economy, positively moderates the relationships between alertness and opportunity recognition and between opportunity recognition and its exploitation. Finally, they also propose that the probability of successful transition from informal to formal economy is greater for the ventures exploiting illegal yet legitimate means although ventures exploiting illegal yet legitimate ends feel the pressure more to transition.

Quadrant II

Institutional Entrepreneurship

Aldrich and Fiol (1994) theorized about acquiring legitimacy through intra-industry processes by structuring the immediate environment. 'A lack of standard designs, for example, may block the diffusion of knowledge and understanding, thus constraining the new activities' (p. 653). Garud, Jain, and Kumaraswamy (2002, b) in their qualitative study of Sun Microsystems found the processes and challenges it faced when it sponsored Java as technological standard. They were right in stating that 'acts of institutional entrepreneurship are becoming increasingly important as new technologies break open taken-for-granted assumptions that constitute the institutional "black box"' (p. 197). Greenwood, Hinings, and Suddaby (2002) show how Canadian accounting firms, working together, changed the boundaries of their field. Over a 20-year period (1977–1997), the firms went from just delivering accounting services and as professional partnerships to multi-disciplinary practices that included financial advisory, management consulting, and legal services. This jurisdictional shift also received an authoritative endorsement from existing institutions such as Canadian Institute of Chartered Accountants (CICA).

Hillman and Hitt (1999) study the specific decisions corporates make when formulating their political strategy and explore firm and institutional variables that affect these decisions. In their extensive study, authors propose various strategies for firms in a decision tree-like model.

The other studies in this area of the table include about industry creation and emergence. Durand and Khaire (2017), in their in-depth review, theorize on the differences between category creation and emergence. According to them, 'categories emerge when the existing classification system and categorical structure of markets do not sufficiently account for material novelties sponsored by innovators' (p. 88). They offer minivans (combining truck and car features) and smartphones (combining camera, personal digital assistant, etc. with a mobile phone) as examples of this classification. The authors define category creation as 'a situation where a new category consists in redesigning cognitive boundaries around a subset of elements within a preexisting category system' (p. 88). The examples they offer are modern Indian art and functional food because these categories were created from within the modern art and food industries, respectively, to benefit the firms that initiated and strategically pursued cognitive rearrangement. The initiatives for new industry formation by entrepreneurs such as satellite radio players (Navis and Glynn 2010), modern Indian art auction houses (Khaire and Wadhwani 2010), and grass-fed meat and dairy producers (Weber et al. 2008) fall into this area of studies.

Quadrant III

Regulative and Coercive Legitimacy

Sociopolitical regulatory legitimacy (Aldrich and Fiol 1994), also known as regulative legitimacy (Scott 1995), is acquired from rules, regulations, standards, and expectations that are created by governments, credentialing associations, and professional bodies. Lack of regulative legitimacy can cause sanctions, and thus, the isomorphism type to the firms and entrepreneurs is coercive (DiMaggio and Powell 1983). Sine et al. (2007) in their study of start-ups in emergent independent power sector found that certifications, which they defined as a formal acknowledgment by central institutional actors that a start-up meets particular standards, increased their likelihood of transitioning to begin operations. Deephouse and Carter (2005) found that the commercial banks, conforming more by making their strategies resemble the conventional strategies in the banking industry, achieve higher regulative legitimacy.

Quadrant IV

The lower right corner of the Table 11.2 is for studies that have a high degree of conflict between firms and institutions and the result is more conforming behavior by entrepreneurs/firms. It is true for contexts where firms have to do a lot to acquire legitimacy. Rao (1994) studied American Automobile Industry in its infant years (1895–192) and found that victories in certification contests of reliability and speed (since at the turn of twentieth century automobile rating agencies were absent) legitimized organizations and bettered their chances of survival. More recently, Wang and Bansal (2012) found that legitimizing effect of CSR activities which further the social good, and are not required by law, can be expensive in terms of sharing of scarce resources, distracting managers, and creating agency problems. They found that the ventures that have a long-term orientation can derive net positive economic returns from these costly CSR activities.

Institutional Logic

The concept of institutional logic has its roots in the field of sociology referring to higher-order belief systems shaping cognition and action. Introduced by Alford and Friedland (1985), the term 'institutional logic' was coined to describe the different practices and belief systems of capitalism, state bureaucracy, and political democracy. Later, integrating the structural, normative, and symbolic dimensions of institutions, Thornton and Ocasio (1999) defined institutional logics as 'the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality' (p. 804). Thornton (2002) explored the inherent conflict between the logic of profession and the logic of market in higher education publishing from 1958 to 1990. More recently, Greve and Zhang (2017) studied how firms chose between institutional logics of capitalism and socialism in Mergers and Acquisitions (M&A) decisions during China's economic transition.

Interactional Legitimacy

Capturing the struggle of entrepreneurs in striking a balance between institutional pressures and strategic drives, Interactional Legitimacy is gained by entrepreneurs as an outcome of the negotiation process with the key institutions. Interactional Legitimacy is different from institutional entrepreneurship because the aim in the latter is to change or create new institutions while in the former is to strike a deal with them. LD is one type of Interactional Legitimacy in which firms negotiate their distinctiveness with institutional isomorphism. Navis and Glynn (2011) incorporated sensemaking, categorization, and organizational identity theory to propose how entrepreneurs acquire LD to influence investor judgments. Voronov, De Clercq, and Hinings (2013) conducted a qualitative study of Ontario wine industry on how entrepreneurs sought local distinctiveness in a global institutional framework. Illia and Zamparini (2016) studied rural hotels in Segovia, Spain, to see how they built LD through a process of historical bricolage—recombining historical narratives about social, cultural, or natural resources available.

Another example of Interactional Legitimacy is how informal firms navigate between macro (national and regulatory) and meso (communities of practice) institutional environment. De Castro, Khavul, and Bruton (2014) studying informal entrepreneurs in the Dominican Republic found that at each stage of growth, entrepreneurs weighed the benefits of formalization versus its cost and launched their firms on to the path of formalization with an increase in their wealth. Thus, informal economy was not black and white as it was theorized previously to be but had shades of gray in which informal entrepreneurs negotiated with formal macroinstitutions.

Discussion and Future Research

Although Aldrich and Fiol (1994) focused on the legitimacy acquisition strategies for entrepreneurs in new industries, it soon became evident that legitimacy was important for all organizations. The work by scholars to take Aldrich and Fiol's legacy and to give it legitimacy as a theory on its own is evidence of its prominence. With this chapter, we have tried to map the entire legitimacy theory landscape, which underlines the struggles that organizations face throughout their lifespan and not just in their infancy. However, this is not to say that all our questions pertaining to legitimacy are answered. On the contrary, many unexplored areas require our attention.

As is quite evident from Table 11.2, the Interactional Legitimacy area is relatively new and, we think, shows the most promise for future research in legitimacy. Interactional Legitimacy is particularly interesting because entrepreneurs and institutions negotiate for their respective interests. New organizations such as Uber and Airbnb are continually negotiating with various institutions by redefining their business structures and organizational identities to acquire cognitive, normative, and regulative legitimacy.

There is also a growing interest in the informal economy as these firms constitute anywhere from 40 to 60 percent of the gross domestic product (GDP) of the emerging economies and 10 to 20 percent of the developed economies according to various estimates (Webb et al. 2009; De Castro et al. 2014). More studies with longitudinal data will help us understand how and when informal entrepreneurs formalize whole or parts of their businesses. Studies in both LD and informal entrepreneurship will highlight the contrast in the negotiating process between entrepreneurs and institutions. For example, entrepreneurs may choose to conform more in the beginning to gain legitimacy but follow distinctive strategies later while informal actors might stay away from regulative institutions till they reach a certain wealth threshold.

Interactional Legitimacy is not the only one that we think is of interest to entrepreneurship scholars. The right-side areas of Table 11.2, with a high degree of conflict between institutions and organizations, also open much scope for new and groundbreaking research. As emerging economies rise in prominence, it sets up the stage for conflicts between institutional logics and organizations. New industry creating or emerging mechanisms, because of innovative entrepreneurs, is another exciting area of research because digital technologies, with their converging and generative (Yoo et al. 2012) characteristics, are redefining the industry and institutional boundaries or sometimes completely disrupting them.

The issue of left censored data that Aldrich and Fiol raised still nags our research models. Since successful organizations and industries are documented more and, therefore, studied more, it leaves us with the selection bias to which the authors allude in their paper. The advice of authors to be aware of selection bias against industries with truncated histories and more focus toward business and economic histories at the level of ´eras and epochs´ still holds.

Conclusion

The question Aldrich and Fiol (1994) asked more than 23 years ago kicked up many ideas that entrepreneurship scholars pursued with enthusiasm. In the last two decades, entrepreneurship research has achieved legitimacy on its own and seminal pieces such as 'Fools Rush in?' have played a major role in getting attention of scholars toward arguably the most fascinating creatures of the capitalist world—entrepreneurs. In this chapter, we summarized the major strands of research in legitimacy since Aldrich and Fiol's (1994) study by giving a comprehensive framework along with exemplars that make it easier for scholars to follow the various themes and look at some prospective research questions.

Entrepreneurs carrying out 'new combinations', as Schumpeter theorized, are expected by the society to solve its numerous problems such as environmental pollution, energy needs, and income inequality. Entrepreneurial endeavors, in turn, rear new questions and dilemmas that give researchers an opportunity to do our bit. Legitimacy, whether negotiated the hard way or earned by conforming to institutional pressures, is one such entrepreneurial dilemma that needs continued attention of scholars.

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CHAPTER 12

Entrepreneurial Opportunities as the Heart of Entrepreneurship Research: A Reflection on Venkataraman (1997)

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Introduction

In 1997, Venkataraman published a piece in *Advances in Entrepreneurship, Firm Emergence and Growth* that attempted to clarify the distinctive domain of entrepreneurship within the broader body of business research and academic literature. This paper served as a precursor and provided some of the key intellectual arguments for Shane and Venkataraman's (2000) often cited *Academy of Management Review* article, which argued for similar boundaries around the field of entrepreneurship. In reflecting on the 1997 paper, there is little question that it has been influential in shaping entrepreneurship research over the last two decades. As of July 2017, it has been cited over 3000 times based on Google Scholar. By making a case that the study of entrepreneurship should focus on "opportunities," he helped distinguish

Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. *Advances in entrepreneurship, firm emergence and growth*, *3*(1), 119–138.

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the domain of entrepreneurship from other fields of study within business schools. Perhaps just as remarkable is that the arguments in the paper are just as relevant today and continue to guide researchers.

Venkataraman's (1997) article began with the observation that entrepreneurship research, at the time, had failed to identify the distinctive domain of entrepreneurship as a field of research. Citing Gartner (1988), Venkataraman pointed out the inconclusive and conflicting results that had come from the focus on the individual entrepreneur within traditional entrepreneurship research. He offered a new focus for the field of entrepreneurship as being about the understanding of how opportunities are "discovered, created, and exploited, by whom, and with what consequences" (p. 120). It is this argument and difference with previous research that qualifies the paper as a classic. He introduced opportunities as the central issue of entrepreneurship and identified the boundaries of entrepreneurship as a distinctive domain of research by explaining the processes evolving around opportunities. In fact, Venkataraman's article was one of the first to more fully explain the role of opportunities in the entrepreneurial process. Venkataraman made the case that opportunities and the process of opportunity identification were the heart of understanding entrepreneurship. That is, understanding the sources of opportunity, and how and why certain individuals are able to discover and exploit opportunities, while others cannot or do not, are the central questions for scholars in the field of entrepreneurship.

In this chapter, we reflect upon the contribution of this classic to the field of entrepreneurship. First, we review the opportunity research that appeared before Venkataraman. Then, we summarize the core ideas in the article and review some of the research built upon Venkataraman's argument. Finally, we discuss how future research can continue to build on the insights from the article and in ways that continue to resonate in the field.

Background of Opportunity Research

Before Venkataraman's publication, different scholars offered varying opinions of opportunities. According to Casson (1982), opportunities are those circumstances in which raw materials, goods, services, and organizing methods can be sold at a higher price than their cost of production. Kirzner (1979) argued that entrepreneurial opportunities exist primarily because different people have different opinions about the relative value of resources that can be transformed into a different state. Drucker (1985) believed that innovative opportunities originate from unexpected success or failure, external events, incongruity between reality and perceptions, changes in industry structure or market structure, demographic changes, changes in moods or meanings, and the dissemination of new knowledge. Hulbert, Brown, and Adams (1997) defined business opportunity as the chance to meet an unsatisfied need where there is sufficient demand to make meeting that need worthwhile. They argued that sources of opportunity exist when there is a change in political, economic, social, or technological environments. They identified factors that may create such opportunities as changes in a need, the way in which a need is currently being satisfied, the cost of supply, and the economics of supply. Thus, analyzing the marketplace and the business environment can lead to new opportunities; however, the mere existence of new opportunities is not sufficient, because such opportunities must first be recognized (Hulbert et al. 1997).

Research on the process of opportunity identification can be traced back to Schumpeter's (1934) work on creative destruction. While Schumpeter did not address opportunities directly, his emphasis on creative spirit contributed to the characterization of entrepreneurs as individuals who discover and exploit opportunities (Gaglio 1997). Following such a view, Long and McMullan (1984) defined a framework that explained the process of opportunity identification through creative insights gleaned from factors that individual entrepreneurs can control (e.g. education, experience) and those they cannot control (e.g. the economy, social values). Kirzner (1979), on the other hand, viewed opportunity identification as entrepreneurial alertness and believed that opportunity identification directs the market toward equilibrium. Herron and Sapienza (1992) took a different approach by associating opportunity identification with motivation to search. Christensen et al. (1994) defined opportunity recognition as identifying the possibility for new profit potential though the formation of a new venture or the improvement of an existing venture. The problem within the literature is that there is a lack of consensus. These differing views explained different aspects of opportunity identification but did not address it as a process (Gaglio 1997).

Summary of the Classic

Venkataraman's paper (1997) presented opportunity identification as the central process of entrepreneurship. He pointed out that most markets are inefficient which creates opportunities for those entrepreneurs who want to move markets to equilibrium. He referred to this as the "weak premise of entrepreneurship" (p. 121). This is consistent with the work of Kirzner (1979) that argued that certain individuals had profit-making insights and alertness to market inefficiencies that led to opportunities. The "strong premise of entrepreneurship" (p. 121) was related to the process of creative destruction (Schumpeter 1934). This view holds that states of market equilibrium are often disrupted by innovations and technologies which destroy existing markets and create all new markets (e.g. typewriters vs. word processing software on computers). With the full spectrum of opportunities being from slight market changes to move toward equilibrium versus creative destruction and the creation of all new markets for new innovations, Venkataraman pointed out that, "few scholars have begun to investigate the process by which knowledge is converted to commercial venture" (p. 124).

Venkataraman acknowledged that while opportunities exist in different forms, what is crucial to understand is how opportunities are discovered and exploited. His view was that the process differs for different people because individuals are different and hold different amounts of useful knowledge. These differences, as he argued, impact individuals' intentions to exploit opportunities, as well as the exploitation process. Such arguments not only contributed to opportunity research but also drew attention to cognitive and behavioral research in entrepreneurship, which were underexplored at the time. Venkataraman argued that in the process of bringing knowledge to commercial venture, cognitive conditions, incentives and creative processing matters, and the interaction of such factors not only influence the exploitation of opportunities but also the success of the exploitation process.

To Venkataraman, the creation of entrepreneurship from non-existent markets depends on individuals' risk-taking capabilities. He believed that individual differences in understanding statistical generalities impacted the decision to become an entrepreneur. This argument was consistent with Gartner's (1985) suggestion to view entrepreneurs through their behaviors and not their traits.

Venkataraman also highlighted the importance of access to resources and argued that converting knowledge to successful enterprise requires access to resources, which are not always reliably available. Accordingly, successful creation of an enterprise relies not only on an individual's ability to overcome adverse selection and moral hazard problems but also on the ability to secure resources (Venkataraman 1997). While not explicitly discussing social network theory, he touched on elements of social networks with his discussion of the need to develop trust and trustful relationships for different aspects of venture creation. To this end, Venkataraman highlighted the importance of financial investors and business angels, as well as customers (early and late adopters) to a successful venture creation process.

After clarifying how entrepreneurship is created from non-existent markets, Venkataraman discussed the mode of organization and argued that there is the need to understand why a particular mode is optimal under given circumstances. He acknowledged that while several theories deal with choice of mode from cost, market power, and resources perspectives, choice of mode needs to be understood based on all these perspectives as such factors often conflict with each other. Venkataraman then moves on to discuss the performance of ventures and believed that relative performance is not a sufficient measure of success in entrepreneurship since profits must first cover opportunity cost and lack of liquidity of investment. Instead Venkataraman introduced a model of performance, which took several entrepreneurship-related factors such as opportunity cost, risk, uncertainty, and liquidity premiums into consideration. Rather, he argued that the relevant performance benchmarks for studying entrepreneurship were the absolute level of economic performance (total profit) and the social contribution of the venture. The latter can be considered as the number of people an entrepreneur helps and touches on social entrepreneurship which has become a topic with increased interest in recent years.

In sum, Venkataraman's work not only reframed the understating of entrepreneurship through the lens of opportunities but also touched on several other concepts related to the process of entrepreneurship including cognitions, investor and customer relationships, choice of mode, risk-taking, trust, resources, social networks, and performance measures—including social benefits. His work offered a solid theoretical structure for the study of entrepreneurship, which integrated concepts from several disciplines including psychology, sociology, economics, marketing, and ethics.

Research Following Venkataraman

Since the publication of the article, there has been a decisive shift toward the study of opportunities and opportunity identification and significant new knowledge has been gained. Before Venkataraman's work, many believed that opportunity recognition was the result of systematic search or careful strategic planning (e.g. Vesper 1980; Timmons 1990). However, scholars now know that formal search for an idea is not the only method of opportunity recognition for all entrepreneurs (e.g. Hills 1996). As Hills and Singh (2004) argue, the process of identifying an opportunity can be either systematic, that is, the entrepreneur decides to start a business and then searches for a business idea, or it can be informal, in which the business is started after a need is determined. Sarasvathy's (2001) concept of effectuation has become a significant branch within the body of entrepreneurship research.

While Venkataraman clarified the definition of entrepreneurship and the role opportunities play in entrepreneurship research, a clear understanding of opportunity was still missing from the literature. Shane and Venkataraman (2000) used Casson's (1982) definition of opportunity, which differs from Venkataraman's (1997) definition. This led to some debate between Singh (2001) and Shane and Venkataraman (2001). Singh (2001) pointed out that since Casson's (1982) definition required financial profit to be achieved, it dismissed the possibility that opportunities may exist but not be executed on correctly. Singh (2001) offered a definition for entrepreneurial opportunity as "a feasible, profit-seeking, potential venture that provides an innovative new product or service to the market, improves on an existing product/service, or imitates profitable product/service in a less-than-saturated market."

More recently, Hansen, Shrader, and Monllor (2011) conducted an exhaustive review of nearly two decades worth of definitions of entrepreneurial opportunity and opportunity-related processes. Based on the 56 articles they examined from 6 leading entrepreneurship journals, they found dozens of different definitions and 25 distinct conceptual elements. They were able to distill these down to six overarching conceptual definitions in an effort to reduce the highly fragmented nature of the opportunity construct definitions within the literature. More work is still needed, but there has been progress in refining the definition of opportunity.

Beyond definitional issues, with respect to actual research on the process of opportunity recognition, just as Venkataraman drew from different academic fields, research has proceeded through different lenses. Eckhardt and Shane (2003) extended and elaborated in more detail the role of opportunities in the entrepreneurial process. In particular, their article explained the importance of examining entrepreneurship through a disequilibrium framework that focuses on entrepreneurial opportunities. Furthermore, Gaglio and Katz (2001) analyzed opportunity identification through a psychological lens and argued that opportunity alertness directs the opportunity identification process.

Social cognitive theory helps to explain the process of opportunity recognition (Ardichvili et al. 2003; DeKoning 1999; Ozgen 2003). From the cognitive perspective, Baron (2004, 2006) defined opportunity as a perceived means of generating economic value that has not previously been exploited and is not currently being exploited by others. As demonstrated in the works of Baron (2006), Baron and Ensley (2006), and Ozgen (2003), researchers are increasingly exploring the cognitive influences on opportunity recognition. Grégoire et al. (2010) also developed a model of opportunity recognition as a cognitive process of structural alignment and analyzed the think-aloud verbalizations of entrepreneurs as they try to recognize opportunities. In addition, Arenius and Clercq (2005) explained the role of networks and social ties in opportunity recognition, and Singh (2000) further clarified the process of opportunity recognition though social networks.

Based on Bhave's (1994) process model of venture creation, it appears that many entrepreneurs recognize two different types of opportunities—those that are internally stimulated and those that are externally stimulated. An externally stimulated opportunity is one where the decision to start a venture precedes opportunity recognition. The individual decides to become an entrepreneur and searches for an opportunity to proceed with. Those who pursue internally stimulated opportunity recognition first see a market disequilibria and work to solve the identified unmet market need. The individual may not have been actively attempting to create a new venture, but the opportunity presented itself and led to a new entrepreneurial firm. Using Panel Study of Entrepreneurial Dynamics (PSED) data, Singh and Hills (2003) found significant differences between nascent entrepreneurs pursuing the different types of opportunities with respect to the financial potential of their opportunities, their motivations for founding new ventures, and their expectations for success. The authors reported that those entrepreneurs whose opportunities were internally stimulated had higher net worth and higher educational attainment levels. In addition, Singh and Hills (2003) found that those who pursued internally stimulated opportunities anticipated significantly greater revenues for their ventures than those who pursued externally stimulated opportunities. These findings suggest a difference in the types and quality of the opportunities recognized and pursued by entrepreneurs based on the process used to recognize their opportunities. Singh and Hills (2003) speculated that higher levels of education gave individuals better analytical skills to allow them to identify more lucrative unfilled market needs. The higher net worth of those who pursued internally stimulated opportunities may have afforded those individuals the ability to execute on more attractive and financially promising opportunities.

In an extension to Singh and Hills' (2003) research, Singh, Knox, and Crump (2008) explored and found significant differences between black and white nascent entrepreneurs within the PSED with respect to recognizing internally stimulated opportunities versus externally stimulated opportunities. They were interested in better understanding the reasons for the diminished rate of black entrepreneurship relative to their white counterparts. Singh, et al. (2008) found that black nascent entrepreneurs were significantly more likely to pursue externally stimulated opportunities than white nascent entrepreneurs. The authors speculated that whites may be pulled toward entrepreneurship by opportunities they wish to pursue and blacks may be pushed toward entrepreneurship due to real or perceived inequities in the labor market. Whatever the cause, the difference in the type of opportunity resulted in black nascent entrepreneurs pursuing lower projected revenue opportunities than white nascent entrepreneurs. Interestingly, there were no differences in educational attainment between black and white nascent entrepreneurs, but regression results provided other insights into the nature of the differences between black and white nascent entrepreneurs. Controlling for age, education, and net worth, choosing to pursue externally stimulated opportunities resulted in lower projected revenue ventures. When race was added to the regression model, there was no difference in projected revenues. The significant difference in the projected new venture revenues (which could indicate the quality of the opportunities) pursued by black and white nascent entrepreneurs could be explained by the different ages of the two groups, the significant difference in net worth, and the opportunity recognition process chosen. Unsurprisingly, Singh, Knox, and Crump (2008) called for further study of the opportunity recognition processes of black entrepreneurs and research that assists scholars in understanding nonfinancial factors that may be impacting black entrepreneurship.

There has also been a body of research focused on identifying antecedents of opportunity recognition. Examples include Corbett (2005) who highlighted the importance of learning within the process of opportunity identification and Shepherd and DeTienne (2005) who explained the role potential financial reward and prior knowledge play in the opportunity identification process. In addition, Ucbasaran et al. (2008) explained the role human capital plays in opportunity recognition process and Ozgen and Baron (2007) found that mentors, informal industry networks, and participation in professional forums positively influence opportunity recognition. Opportunity recognition has also been identified as a factor moderating different relationships in entrepreneurial activity. One example includes Wiklund and Shepherd (2003), who argued that opportunities along with resources moderate the relationship between growth intentions and actual growth.

Additionally, some studies have been devoted to understanding opportunity recognition as a theory. Examples include Shane (2003), who summarizes the three main theories of opportunity recognition. Neoclassical equilibrium theories assume that it is possible for everyone to recognize all entrepreneurial opportunities since these are equally obvious to everyone. Equilibrium theories also propose that the basic attributes of people, as opposed to information about opportunities, play a decisive role in determining who will become an entrepreneur. According to psychological theories, people's fundamental attributes determine not only who becomes an entrepreneur but also that the entrepreneurship process depends on their ability and willingness to take action. Finally, Austrian theories propose that not everyone is able to recognize all entrepreneurial opportunities. Based on these theories, the entrepreneurial process depends on factors (attributes of opportunities) other than people's ability and willingness to take action (Shane 2003).

Alvarez and Barney (2007) go in a similar but slightly different direction. They used Venkataraman's argument and further described two distinctive theories of discovery and creation theory. They argue that discovery theory is focused on formation and exploitation of opportunities while creation theory is focused on the enactment process.

Ardichvili et al. (2003) extended Venkataraman's work by developing a theory of the opportunity identification process which considered entrepreneurs' personality traits, social networks, and prior knowledge as antecedents of entrepreneurial alertness to business opportunities. They argued that entrepreneurial alertness is a necessary condition for recognition, development, and evaluation of opportunities.

Research on opportunities has also attempted to explain the role of opportunity and opportunity recognition in different contexts playing different roles. For example, Zahra et al. (2005) discussed international opportunity recognition and examined how entrepreneurs recognize and exploit opportunities in international markets. Park (2005) used a qualitative approach to introduce an integrative model of opportunity recognition in high-tech start-ups. Bhagavatula et al. (2010) explained how the social and human capital of entrepreneurs influence their ability to recognize opportunities and mobilize resources in India. Sambasivan et al. (2009) argued that opportunity recognition mediates the relationship between managerial skills and venture performance in Malaysia. McCline et al. (2000) examined opportunity recognition in the context of the health-care industry, highlighting the importance of the industry variable in the success or failure of entrepreneurial ventures.

Moreover, gender differences may have an impact on the opportunity recognition process. Farr-Wharton and Brunetto (2007) found that the experience of trust in women's networking contributes to their opportunity recognition. De Bruin et al. (2007) argue that self-perceptions of women may restrict their possibility to recognize opportunities. Anna et al. (2000) believe that such restrictions lead to certain forms of female entrepreneurship. De Bruin et al. (2007) also believe that lower normative support results in a lower level of opportunity recognition for women and lower rates of female entrepreneurs. Research has also looked at the impact of gender stereotypes on opportunity recognition. Using stereotype threat theory, Gupta, Goktan, and Guney (2014) examined the gender differences in evaluation of opportunities and Gupta, Turban, and Pareek (2013) found that opportunity recognition is influenced by the content of stereotype (masculine vs. feminine) and the manner in which stereotype information is presented (subtle vs. blatant).

Finally, besides opportunities, other aspects of Venkataraman's article have been used in subsequent research. McGrath (1999) used Venkataraman's argument on uncertainty to explain the role of entrepreneurial failure in wealth creation. Shane and Stuart (2002) touched upon Venkataraman's point of view on investor relationships to explain how resource endowments affect the likelihood that new venture attract venture capital financing. Shane and Cable (2002) also used Venkataraman's argument on investors to explain the effects of network ties on venture finance decisions. Aldrich and Cliff (2003) used Venkataraman's argument on idiosyncratic knowledge to discuss family embeddedness perspective in new venture creation process.

Future Research

Entrepreneurship as a field of research and study has taken more firm shape as researchers have focused more effort on opportunities and opportunity recognition processes—the distinctive domain of entrepreneurship scholarship as argued by Venkataraman (1997). As discussed in this reflective chapter on the impacts of Venkataraman's (1997) work, research has come a long way and branched out in many directions, much as he argued for. As a result, we have a better understanding of sources of opportunities, how entrepreneurs recognize them, and how they execute on them. The process is better understood today and as a result, we know more about entrepreneurship than ever.

While much research has been devoted to understanding the antecedents of opportunity recognition, less attention has been given to the outcomes of opportunity recognition. It is possible that different moderators or mediators such as entrepreneur-related factors (e.g. personality, family background) and context-related factors (e.g. culture, economy) impact the process of opportunity recognition and may have performance implications. In addition, the majority of research on opportunity recognition has been related to venture creation rather than venture growth. It is possible that the recognition of venture growth opportunities requires different skills, support, and infrastructure than recognition of venture creation opportunities, and we would suggest it as an area for future research.

Research on opportunity and opportunity recognition has come a long way since Venkataraman's (1997) publication. That said, much work remains. As the population of the country ages, the nation becomes more racially diverse, greater numbers of women entrepreneurs found firms, and there are likely to be differing and changing opportunity identification processes. Further studies through the different lenses and differing contexts of individual entrepreneurs are needed.

Conclusion

In his seminal article, Venkataraman (1997) clarified the role of entrepreneurial opportunities in entrepreneurship research. The article also offered a framework to identify the boundaries of entrepreneurship as a distinctive domain of research by explaining the processes evolving around opportunities. Venkataraman's work not only reframed the understating of entrepreneurship through the lens of opportunities but also touched on several other concepts related to the process of entrepreneurship including cognitions, investor and customer relationships, choice of mode, risk-taking, trust, resources, social networks, and performance measures. While a great amount of research has been built upon Venkataraman's work, there is room for future research. We still need to understand the outcomes of opportunity recognition as well as the moderators and mediators related to opportunity recognition process. Opportunity recognition in terms of venture growth needs to be further analyzed and we need to better understand the role of context in opportunity identification processes.

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CHAPTER 13

Conclusion

Dev K. Dutta and Golshan Javadian

As we look back at this project on assessing the impact of foundational articles in entrepreneurship research as well as their continual relevance, we, as editors, are pleased that much ground was covered in this endeavor. The contributing authors traced back the origins of several key areas of entrepreneurship research, including entrepreneurial orientation, entrepreneurial intentions, entrepreneurial opportunity and entrepreneurial personality. In addition, the book also covered the foundation of research on women entrepreneurs, urban entrepreneurship and the impact of environment on venture creation, entrepreneurial orientation and entrepreneurial personality. The chapters not only highlighted the contribution of classic articles to the field of entrepreneurship but also suggested how future research could embrace these insights and extend them to understand new research problems and contexts. Some of the chapters, such as the ones devoted to Pennings (1982) and on Aldrich and Fiol (1994), proposed novel ideas and concepts to remedy the gap in the literature in the discussed area of research. Others, such as the one on entrepreneurial ori-

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entation, reflecting on Covin and Slevin (1989) and Lumpkin and Dess (1996), dealt with certain myths that emerged about the construct following the publication of these two seminal papers. Yet others, such as the chapter on Baumol (1990), examined the policy implications of Baumol's (1990) work, in addition to examining the impact of the work on subsequent research on entrepreneurship.

One interesting trend that we observed in the chapters was the preference for chapters on entrepreneurial orientation and entrepreneurial intentions. In total, three entrepreneurial orientation classics and three entrepreneurial intention seminal pieces were discussed. Both of these topics have received a great deal of attention since their classics were published and they continue to be important research areas for entrepreneurship scholars. At the same time, we note that no classic was discussed on the topic of social networks and international entrepreneurship, two other key entrepreneurship research areas. Birley's (1985) article on the role of network in entrepreneurial process or Dubini and Aldrich's (1991) article on personal and extended networks can be considered as the classics in social network research. Oviatt and McDougall's (1994) work on international new ventures may be a classic in this field. We left it to the contributing authors to identify favorite classic article(s) to develop their chapter on, which would then go through the normal double-blind review process, before being finalized for the book. So, it is possible that classic articles on social networks and international entrepreneurship got left out simply as an outcome of author preferences for topics. Or, it could be that work on these fields is still emerging and the early articles are yet to achieve the status of a seminal paper at the same level as some of the other papers discussed in this book have already accomplished.

Examining further, we notice a couple of other interesting trends as far as the selection of seminal papers by the chapter authors is concerned. The classics selected tended to be either seminal theoretical contributions in the field or those that were concerned with definition and measurement of constructs, mainly from a positivist methodological standpoint. As has already been discussed elsewhere, in its efforts to define itself as a "good science" (Bygrave and Hofer 1991: p. 13), entrepreneurship as a field of research inquiry has tended to gravitate toward a positivistic philosophical paradigm. Alternate philosophical paradigms embraced by entrepreneurship scholars have been few and far between (Bruyat and Julien 2000; Kirkwod and Campbell-Hunt 2007; Leitch et al. 2010). We hope that a future book will be able to identify seminal works in entrepreneurship coming from a non-positivistic philosophical paradigm and be able to assess the impact of these works on the general body of entrepreneurship scholarship.

For the present work, the chapter authors come from different parts of the world, including the United States, United Kingdom, India and Canada and also from different stages of academic life. Among the contributing authors, we have senior scholars with years of entrepreneurship research experience as well as doctoral students. We were pleasantly surprised by the deep level of understanding the doctoral student authors demonstrated as far as the classics in entrepreneurship research is concerned.

We hope that scholars and readers of entrepreneurship research, across countries and disciplines, will agree the articles covered in this book can be considered "truly foundational" in entrepreneurship. At the same time, given the still young nature of the discipline we acknowledge that classic articles are not limited to those published before 2000. As entrepreneurship research matures, scholars continue to publish articles that significantly impact the development of the field. Discussions among the editorial team reflected that many considered Shane and Venkataraman (2000), Alvarez and Busenitz (2001), Sarasvathy (2001), Chiles, Bluedorn and Gupta (2007) and Cardon, Wincent, Singh and Drnovesk (2009) as relatively recent contributions that have had a substantive influence on the trajectory of entrepreneurship research. As such, future efforts may be targeted toward more recent contributions that have had a seminal impact on entrepreneurship research.

Finally, we would like to acknowledge the contributions of a number of people who made this work possible. We appreciate the efforts and patience of the contributing authors in working through the myriad revisions the reviewers asked them for. We are grateful to Alka Gupta, Kaustav Saha and Lu Zuo for helping us with reviewing the chapters when we were short on reviewers. This book would not even have started without the encouragement of Marcus Ballenger of Palgrave USA, who was supportive of our ideas from the start. Marcus kept us on track with constant reminders about deadlines and diligently worked with us to make sure this volume would see the light of day. The staff at Palgrave USA has been fun to work with, and we thank them for their efficient services throughout the project.

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Erratum to: Foundational Research in Entrepreneurship Studies

Golshan Javadian, Vishal K. Gupta, Dev K. Dutta, Grace Chun Guo, Arturo E. Osorio, and Banu Ozkazanc-Pan

Erratum to:

G. Javadian et al. (eds.), *Foundational Research in Entrepreneurship Studies*, https://doi.org/10.1007/978-3-319-73528-3

Erratum to book for the following reasons:

1. Dr. Per Davidsson's name is included at the end of the Afterword which was missing previously.
2. Dr. Per Davidsson's name is included in the Table of Contents below 'Afterword'.
3. Removed Portsmouth from the affiliation of the Editor Prof. Dev K. Dutta.

The updated original online version of this book can be found at https://doi.org/10.1007/978-3-319-73528-3

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Afterword

The editors of this book have chosen an interesting formula. They did not merely select and reprint a collection of classics, which would arguably have been an easy but perhaps not a particularly productive choice. Neither have they followed the example of reprinting a selection of classics accompanied with the editors' own commentary, a route which would have added some connection to later developments, albeit consistently filtered through the same individuals' particular interests, experiences, opinions, and frames of reference. Instead, the volume consists entirely of an elaborate commentary of a set of classics—trusting that we have access to these classics anyway—with different author teams engaging with each classic article. As a result, there is much more room for linking the classics to subsequent developments and to do so through many different lenses rather than just those of the editors. The result is enlightening and enriching!

Knowing the history of one's field of research is important in order not to fall victim to myths and for the ability to take the right strides forward. The selection of classics for this volume effectively kills one myth, namely that all the early entrepreneurship research was about the personality of the individual entrepreneur. In fact, the selected articles focus on individual, firm, and environmental or societal levels in almost equal measure. The selection also triggers reflection on what makes a classic. Some selected works have managed to achieve this status based on the novelty and importance of the ideas they suggest, despite these ideas being very difficult to test formally. Others may have achieved classic status based on triggering a

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large following of empirical work, possibly because their central ideas are comparatively easy to convert to empirical designs. As noted in the commentary, however, the ensuing work may misrepresent the depth and richness of their triggering classics. Studying the foundational works first-hand, guided by initiated commentary as exemplified by the chapters in this book, is an important safeguard against unnecessary reinventions and propagation of misconceptions and a route to making meaningful scholarly contributions. It may be a route less travelled and one requiring some extra effort, but the payoff may be all the greater for it.

Per Davidsson

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[1] Note: Page numbers followed by 'n' refer to notes.

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