



**MACQUARIE**  
University

## Macquarie University PURE Research Management System

---

This is the Accepted Manuscript version of the following article:

Lundmark, E., Krzeminska, A., & Shepherd, D. A. (2019). Images of entrepreneurship: exploring root metaphors and expanding upon them. *Entrepreneurship Theory and Practice*, 43(1), 138-170.

which has been published in final form at:

**Access to the published version:**

<https://doi.org/10.1177/1042258717734369>

Copyright © The Author(s) 2017. Version archived for private, non-commercial and no derivative uses with the permission of the author/s and according to publisher conditions. For further rights please contact the publisher.

**IMAGES OF ENTREPRENEURSHIP: EXPLORING ROOT METAPHORS AND  
EXPANDING UPON THEM**

Lundmark, E., Krzeminska, A., & Shepherd, D. (2019). Images of entrepreneurship: exploring root metaphors and expanding upon them. *Entrepreneurship: Theory and Practice*, 43(1), 138-170.]

Erik Lundmark (Corresponding Author)  
Department of Marketing and Management  
Macquarie University  
NSW 2109 Australia  
T: +61 2 9850 8479  
E-mail: Erik.lundmark@mq.edu.au

Anna Krzeminska  
UQ Business School  
Colin Clark Building, Blair Drive  
The University of Queensland  
St Lucia, QLD 4072, Australia  
T: +61 7 3346 8137  
E-mail: a.krzeminska@business.uq.edu.au

Dean A. Shepherd  
University of Notre Dame,  
Notre Dame IN  
E-mail: Dshepherd@nd.edu

**Acknowledgements:** The authors wish to thank the editor, Maw-Der Foo, and two anonymous reviewers for guidance and insightful comments. We are also grateful for feedback on previous drafts of this paper from Ted Baker, Anna Jenkins, Daniel Nyberg, Carl Rhodes, Edward Wray-Bliss, Charlene Zietsma and the participants in the ACE bootcamp.

# **IMAGES OF ENTREPRENEURSHIP: EXPLORING ROOT METAPHORS AND EXPANDING UPON THEM**

## **ABSTRACT**

Despite increasing recognition of the importance of metaphors to theory development, metaphors' influence on entrepreneurship theorizing has been largely unexplored. This is problematic because a field's metaphors shape its underlying assumptions. This study takes stock of the entrepreneurship field through its metaphors by analyzing a corpus of highly cited entrepreneurship articles. We identify and explain eight root metaphors for entrepreneurship – parenthood, mutagen, conduit of knowledge, method, mindset, networking, exploration, and politics – underpinning the mainstream of the field. We then extend and combine the metaphors to develop a research agenda for building on the metaphors and moving beyond them.

## **INTRODUCTION**

Scholars have attempted to articulate the distinctive domain of entrepreneurship (Venkataraman, 1997), assess the emergence of entrepreneurship as a field (Busenitz et al., 2003), and offer directions for future entrepreneurship research (Shepherd, 2015). Although these papers have enlightened us on the boundaries of the field, the clarity of those boundaries, and areas where these boundaries can be expanded, less scholarly attention has been given to the thought patterns upon which the field is founded. Understanding such thought patterns helps members of the field to more clearly identify, question, and perhaps move our boundaries. Indeed, while management and organization scholars have been cognizant of the foundational thought patterns underpinning their field and the roots of those thought patterns (e.g., Cornelissen, Kafouros, & Lock, 2005; Grant & Oswick, 1996; Morgan, 1980, 2006, 2016; Örténblad, Putnam, & Trehan, 2016; Oswick, Keenoy, & Grant, 2002), such reflexivity has been less apparent in entrepreneurship research. Although this minimal reflexivity may not be surprising, given the age of entrepreneurship as a field, the present time seems appropriate to reflect on the foundational thought patterns of the field, considering the high impact of entrepreneurship-dedicated journals, high student demand for entrepreneurship courses, and rapid growth of the academic entrepreneurship community.

One way to understand a field's underlying thought patterns is to investigate its root metaphors (Morgan, 1980, 2006, 2016). Such metaphors have a strong, but often unconscious and implicit, influence

on a field of research (Boxenbaum & Rouleau, 2011; Morgan, 1980, 1983). While each root metaphor elucidates some aspects of a field's focal phenomena, it obscures other aspects (Morgan, 1980, 2006) and thus provides only a partial understanding of the focal phenomena. Therefore, taking stock of a field's root metaphors can provide insight into aspects of the focal phenomena that have been elucidated and aspects that have been downplayed or ignored; explicating a field's root metaphors provides a foundation for advancing the field and extending its boundaries.

The purpose of the current study is twofold: (1) to take stock of the field by identifying and investigating its central root metaphors and (2) to use the existing metaphors as a springboard into the future by suggesting future research directions based on extensions and combinations of the metaphors, but also for moving beyond them. This study makes three primary contributions. First, research in the field of entrepreneurship has largely focused on its boundaries (Busenitz et al., 2003; Venkataraman, 1997) or on extending those boundaries (Shepherd, 2015; Shepherd & Patzelt, 2017). We complement these studies by focusing on which published research has taken root in the mainstream of our field to gain a deeper understanding of where the thought patterns came from and what they mean for our current understanding. Second, scholars have investigated how to use metaphors to theorize (Cornelissen, 2006a, 2006b; Shepherd & Sutcliffe, 2015; Weick, 1989) and they have used metaphors to explore how entrepreneurship is conceptualized outside of academia (Anderson, Drakopoulou-Dodd, & Jack, 2009; Drakopoulou-Dodd, 2002; Nicholson & Anderson, 2005). We use metaphors to take stock of the body of knowledge from a unifying framework (a set of metaphors) in order to explore overlaps, constraints, and gaps, and to identify promising future directions for the field. Third, recent claims of fragmentation of the field (e.g., Carlsson et al., 2013; Welter, Baker, Audretsch, & Gartner, 2016, p. 2) suggest that "as entrepreneurship scholars, we may be systematically closing ourselves off from seeing a useful multiplicity of perspectives on entrepreneurship and thereby hindering our ability to observe the phenomenon and develop theory in ways that offer insight and value." We do not claim to offer *the* framework for full integration, but we offer *a* framework that provides a basis for integration that is useful

for appreciating the origins of foundational constructs and theorized relationships, comparing and contrasting the roots of these impactful constructs and relationships, and thinking about the future.

### **THEORETICAL BACKGROUND**

Metaphors function through a comparison of concepts, where one is understood as the other (Morgan, 2006), but meaning is not just transferred from the source to the target domains; rather, meaning emerges through a blend of relationships between the source and the target (Cornelissen, 2006a, 2006b). The application of metaphor, therefore, involves a mapping that connects and separates the involved concepts, and it requires a pre-existing understanding of the compared domains and an understanding of the context in which the metaphor is expressed (Cornelissen, 2006a, 2006b). Thus, the use of metaphor is a creative act that offers a different way of understanding a phenomenon and challenges taken-for-granted ways of thinking (Morgan, 2006, 2016); that is, metaphors not only efficiently transfer complex ideas between two domains (Morgan, 1980, 2006), but they also help us discover new aspects of the domains and their related phenomena (Berti, 2017; Black, 1962; Cornelissen, 2006b; Fauconnier & Turner, 1998). However, metaphors can also constrain theory development and hide important relationships (Morgan, 2006; Oswick et al., 2002; Tsoukas, 1993). Therefore, it is important to be mindful of the metaphors that underpin a field of research (Morgan, 1980).

Metaphors have been established as important and constructive research tools (Boxenbaum & Rouleau, 2011; Cornelissen, 2006a; Shepherd & Sutcliffe, 2011, 2015; Weick, 1989), but entrepreneurship scholars have primarily focused on their use outside of the research community, for example, by entrepreneurs (Anderson & Warren, 2011; Clarke & Holt, 2017; Cornelissen, Clarke, & Cienki, 2012; Drakopoulou-Dodd, 2002; Hill & Levenhagen, 1995; Hyrsky, 1999; Koiranen, 1995; Pitt, 1998), students and teachers (Anderson et al., 2009; Drakopoulou-Dodd, Jack, & Anderson, 2013), and the media (Anderson & Warren, 2011; Nicholson & Anderson, 2005). With few exceptions (e.g., Anderson, 2005), studies using metaphors as a foundation for entrepreneurship theorizing have tended to

draw on biological metaphors (e.g., Cardon, Zietsma, Saporito, Matherne, & Davis, 2005; Clarke, Holt, & Blundel, 2014; Coşgel, 1996; Lundmark & Westelius, 2014).

This article studies the metaphors that underpin entrepreneurship research to take stock of the dominant thought patterns in the field. In doing so, it is important to separate surface-level metaphors, which merely embellish language, from root metaphors, which represent deeper thought patterns that characterize a research stream (Cornelissen, 2006a; Cornelissen et al., 2005; Morgan, 1980, 2006, 2011, 2016). Root metaphors capture salient and dominant thought patterns that are generative in the sense that they evoke derivative metaphors (Morgan, 2016) and a system of relationships between the source and the target domains (Cornelissen, 2006a). Because root metaphors both afford and constrain ways of thinking about the phenomenon to which they are applied, they have implications for the meaning that can be constructed when applying them (Coşgel, 1996; Morgan, 2006). Therefore, the root metaphors applied in the mainstream of our field have important implications for the basic assumptions that are consciously and/or unconsciously propagated. Explicating these root metaphors enables us to compare and contrast such assumptions and to identify the downplayed aspects of entrepreneurship; it ultimately helps us to break out of ingrained conceptualizations and experiment with alternative ways of understanding the focal phenomena (Alvesson, Hardy, & Harley, 2008; Boxenbaum & Rouleau, 2011; Morgan, 1980, 2006, 2016; Shepherd & Sutcliffe, 2011, 2015).

## **METHODOLOGY**

To uncover the metaphors underlying entrepreneurship literature, we used an interpretative method based on a corpus of entrepreneurship literature and several stages of data analysis (Cornelissen, 2006a; Gioia, Corley, & Hamilton, 2013; Weick, 1989). The first step was identifying a corpus representative of the mainstream entrepreneurship field. The second step was analyzing the corpus to inductively identify root metaphors and their underlying assumptions.

## Sampling

To identify a sample of mainstream entrepreneurship research, we compiled a list of peer-reviewed entrepreneurship journals, based on Stewart and Cotton (2013); however, we recognized that some journals on this list have a main topic other than entrepreneurship (Stewart & Cotton, 2013). Thus, we narrowed the list by excluding journals that focus on a subset of entrepreneurship, such as technological innovation, family firms, or social entrepreneurship, and journals that had an SCI impact factor below 1 (<http://www.scimagojr.com/>). This resulted in a list of seven journals: *Entrepreneurship and Regional Development*, *Entrepreneurship Theory and Practice*, *International Small Business Journal*, *Journal of Business Venturing*, *Journal of Small Business Management*, *Small Business Economics*, and *Strategic Entrepreneurship Journal*.

We used SCOPUS to identify peer-reviewed articles published in these seven journals in the period 2011–2015. This generated our base sample of 1621 articles, from which we extracted their more than 120,000 references, using BIBEXCEL (Persson, Danell, & Schneider, 2009). We used this list of references to compile a list<sup>1</sup> of the most cited sources. Our final corpus is comprised of the list's most cited peer-reviewed journal articles addressing entrepreneurship, regardless of which journal they were published in (as shown in Table 1, many of the entrepreneurship articles cited in the seven journals are published elsewhere). Deeming that 100 papers would suffice, we moved down the list until we reached our target. We reached 99 papers, each having been cited at least 34 times. Moving down to 33 citations included a further nine papers. Therefore, our final corpus contains 108 entrepreneurship articles that have each been cited at least 33 times in the sample of core entrepreneurship journals over the period 2011–2015. Thus, our corpus is comprised of entrepreneurship articles that are highly cited in contemporary mainstream specialized entrepreneurship journals.

---

<sup>1</sup> We compiled the list based on a matching algorithm that compared the first three strings of letters that contained more than two letters. This algorithm generates a large number of false positives. To remove false matches, we then manually reviewed all sources that could potentially make it into the top of our list. In total, we manually reviewed more than 13,000 references.

The papers from our corpus are marked with an asterisk (\*) in the reference list. In Figure 1 we present the descriptive information about the number of articles per year, and in Table 1 we present information regarding the number of papers per journal. While the two most well-regarded entrepreneurship journals, *Journal of Business Venturing* and *Entrepreneurship Theory and Practice*, have published the highest number of articles in our corpus, management and organization studies journals combined have published more entrepreneurship articles on our list than have entrepreneurship journals. Economics journals have published 5% of the papers on our list, and other disciplines are marginally represented.

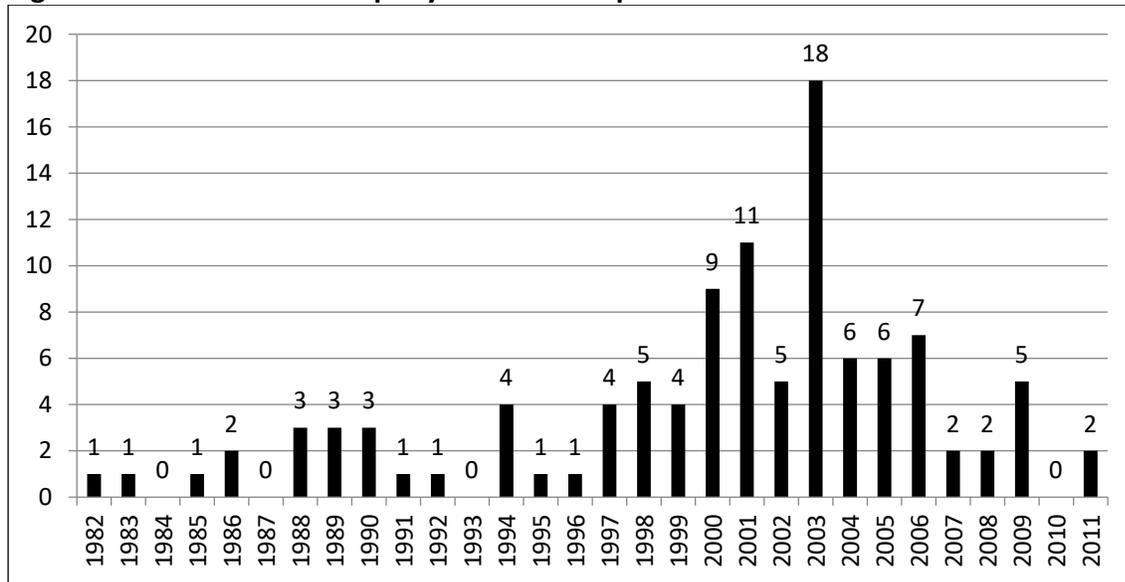
**Table 1 Number of articles per journal in the corpus**

Journal	Number of Publications	Discipline
Journal of business venturing*	22.5	Entrepreneurship
Entrepreneurship theory and practice**	16	Entrepreneurship
Academy of management review	13	Management
Strategic management journal	10	Management
Academy of management journal	7	Management
Small business economics	7	Entrepreneurship
Administrative science quarterly	4	Management
Journal of management	4	Management
Management science	4	Management
Journal of political economy*	2.5	Economics
American sociological review	2	Sociology
Journal of international business studies	2	Management
Organization science	2	Management
American economic review	1	Economics
Entrepreneurship and regional development	1	Entrepreneurship
Human resource management review	1	Management
Journal of applied psychology	1	Psychology
Journal of banking and finance	1	Finance
Journal of economic literature	1	Economics
Journal of finance	1	Finance
Journal of labor economics	1	Economics
Journal of management studies	1	Management
Regional studies	1	Cross disciplinary
Research policy	1	Cross disciplinary
Strategic entrepreneurship journal	1	Entrepreneurship

\* Baumol (1996) was originally published in Journal of political economy and then republished in Journal of business venturing. The count has been split between the journals.

\*\* Gartner (1989) was originally published in American journal of small business, which later changed name to Entrepreneurship theory and practice. The article was republished under the new journal title and is counted as a publication in Entrepreneurship theory and practice.

**Figure 1 Number of articles per year in the corpus**



Note: Articles that are republished are attributed to the year of original publication.

## **Data Analysis**

First, we read and coded all of the papers in our corpus to identify underlying conceptualizations of entrepreneurship, entrepreneurs, their ventures, and both the outcomes and causes of entrepreneurship, using the NVivo software. We started the process by selecting a subsample of ten papers from our corpus for two of the authors to read and code. We discussed these papers in detail to achieve a common understanding of the coding process. We then divided the remaining papers between the two authors for coding. To consolidate codes and ensure a consistent common understanding of themes within the papers during the coding process, the two authors proceeded with several rounds of interim validation of the coding. This was particularly important as new conceptualizations continuously emerged. This first data analysis stage resulted in approximately 500 codes, which represent the first-order concepts of the underlying conceptualizations (Gioia et al., 2013). After the coding was finalized, the lead author read all of the papers in our database and reviewed all of the codes before moving to the next stage of data analysis. While some papers clearly centered on a specific topic and offered narrow and specific conceptualizations of entrepreneurship, most papers required a deeper reading to identify the various layers of meaning expressed in the paper.

Second, we distilled the underlying metaphors in our data by aggregating first-order concepts to second-order themes and, finally, the aggregate dimensions representing eight root metaphors (Gioia et al., 2013). Each author independently sifted among the data, codes, and aggregated themes. To minimize biases, the authors performed each step of aggregation independently and then compared and debated the aggregations until a consensus was reached. In developing the aggregate set of metaphors, we consulted literature on metaphors (e.g., Cornelissen, 2006a, 2006b; Cornelissen et al., 2005; Weick, 1989) and aimed for the level of abstraction that is found in other conceptualizations of root metaphors (e.g., Morgan, 2006; Örtenblad, 2016; Putnam, Phillips, & Chapman, 1999). We intended that the explicated metaphors would, given a brief explanation, represent a coherent way of thinking about entrepreneurship that could be quickly understood, while leaving room for creative exploration and further development (Cornelissen, 2006a; Cornelissen et al., 2005; Weick, 1989).

The metaphors were thus explicated through inductive reasoning—a process in which we identified tentative metaphors and subsequently analyzed these tentative metaphors, using thought trials to explore the images that are created by their application. Consequently, our approach involved both inductive and deductive reasoning (Cornelissen, 2006a; Weick, 1989). We examined the metaphorical blend that a given metaphor's source domain creates when applied to entrepreneurship and the extent to which the metaphor gives rise to meaningful relationships between concepts in the source and target domains (Cornelissen, 2006a). For example, one tentative metaphor was 'parenthood'. If entrepreneurship is like parenthood then entrepreneurs should tend to have strong emotional bonds to their ventures, they should nurture and care for their ventures and want to see them grow; ventures should start out like vulnerable babies and go through developmental stages towards self-sufficient adulthood. We thus explored the extent to which such mappings between source and target domains made sense and the extent to which congruent mappings could be found in our corpus. In our corpus, we identified the theme 'emotional bond' that contained codes referring to 'love' and 'grief', which captured how entrepreneurs relate to their ventures. We also found that matching conceptualizations such as 'the venture

as an organism' and 'liability of newness' could be aggregated to characterize the venture as a 'vulnerable young organism'. These conceptualizations were then combined with conceptualizations such as entrepreneurship as 'facilitating growth', 'nurturing', and 'supporting' to explicate the parenthood metaphor. Closer examinations then revealed further congruent concepts and analogies, such as firm births and likening young ventures to babies.

Another tentative metaphor was 'engine'. A number of texts have used the term 'engine' for entrepreneurship, or entrepreneurship related phenomena, indicating a mechanistic conceptualization (e.g. Berger & Udell, 1998; Wennekers & Thurik, 1999; Busenitz et al., 2000; Shane & Venkataraman, 2000; Head, 2003; Ireland et al., 2003; Baker & Nelson, 2005; Wiklund & Shepherd, 2005; Austin et al. 2006; McMullen & Shepherd, 2006). However, analyzing such texts more carefully revealed that they tend not to depict entrepreneurship as a mechanistic process. In fact, many of the texts that use the engine metaphor later contrast the entrepreneurial with the mechanistic. For example, Baker and Nelson (2005, p. 356) associated bricolage with improvisation and serendipitous combinations and contrasted it with engineering, planning and routine (i.e., concepts normally associated with mechanistic systems). In most instances where entrepreneurship scholars use expressions like "engine of growth", 'engine of' can generally be replaced by 'cause of' or 'contributing factor to' with meaning intact. That is, the 'engine' metaphor is not used generatively by using the analogy of other concepts from the engine domain such as fuel, ignition or cogs. Thus engine was not deemed a root metaphor, but a surface level metaphor because it did not spawn a set of interlinked constructs that coherently capture prominent thought patterns in the field (Morgan, 1980, 2011; Cornelissen et al., 2005).

There were also a few tentative metaphors, such as emancipation and gambling, that did not have enough traction in the sample to warrant inclusion in the final set of root metaphors (for further details see the section "Limitations and how to move beyond them"). In Table 2 we present the final set of metaphors, and in Table 3 offer examples of quotes from the corpus consistent with the metaphors. As with other explicated sets of root metaphors (e.g., Morgan, 2006; Putnam, 1999), these metaphors do not

have strict boundaries and there is some overlap between them. Therefore, some thought patterns could be seen as expressions of more than one metaphor. However, we have included only metaphors for which we identified ample supporting thought patterns within our corpus. We have also found additional support outside our corpus for all identified metaphors.

Therefore, the metaphors that we have included represent noteworthy thought patterns related to entrepreneurship. These metaphors explain the way entrepreneurship and related constructs are conceptualized in the literature. They are based on what we inductively identified in our corpus and have not been chosen based on normative statements about what we think is a “good” or “apt” metaphor. Nor do they necessarily represent endorsed metaphors or even consciously adopted ones by the authors in our corpus. Academic texts are often under considerable scrutiny by peers, and therefore, the texts are likely to be produced by politically conscious language users (Alvesson & Kärreman, 2000). In addition, underlying root metaphors are often, consciously or unconsciously, made invisible in academic writing to conform to institutionalized rules for the presentation of new knowledge products (Boxenbaum & Rouleau, 2011). Furthermore, many, if not most, papers express thought patterns associated with multiple metaphors and even incongruent conceptualizations. Lastly, the fact that some scholars may have adopted metaphors in our set as a definition of entrepreneurship does not negate its metaphorical underpinnings. In fact, given that there is no agreed-upon literal meaning of entrepreneurship, a comprehensive set of root metaphors may be the best way to explicate how entrepreneurship is understood by scholars.

**Table 2 Overview of the identified root metaphors**

<b>Metaphor</b>	<b>Depiction of entrepreneurship:</b>	<b>Depiction of the entrepreneur:</b>	<b>Focuses our attention on:</b>
<b>Parenthood</b>	Dating, conceiving, nurturing, raising, protecting, loving, and grieving.	Parent, nurturer or protector.	The relationship between entrepreneur and the venture. Non-instrumental aspects of entrepreneurship.
<b>Mutagen</b>	Variation, selection, retention or struggle and survival of the fittest.	Blind or myopic non-conformist.	The function of entrepreneurship – unpredictability and selection forces.
<b>Method</b>	Making do, bricolage, effectuation or improvisation.	Implicitly depicted as a bricoleur, tinker or improviser.	The patterns in the process of entrepreneurship.
<b>Mindset</b>	Implicitly depicted as risky, competitive and uncertain; but also implies fostering of an entrepreneurial culture or orientation.	Optimistic, biased, proactive and competitively aggressive risk-taker.	The patterns in the entrepreneurs' attitudes, motivations, and ways of thinking across levels of analysis.
<b>Networking</b>	Connecting people and resources, creating ties, strengthening ties and bridging structural holes.	Networker, node, broker or bridge builder.	The structure and/or development of the relationships between entrepreneurs and others.
<b>Conduit of knowledge</b>	Absorbing, recombining and transmitting knowledge; transferring knowledge between organizations, from theory to practice and from failure to success.	Vehicles of knowledge, absorptive sponge, funnel and learner.	The function of entrepreneurship – knowledge and learning at different levels of analysis.
<b>Exploration</b>	Venturing into the unknown, pioneering, trailblazing, discovering and seizing or creating fleeting opportunities.	Explorer, trailblazer, pioneer, mountaineers and mountain builders.	The nexus between entrepreneurs and their environment. The inherent uncertainty of entrepreneurship.
<b>Politics</b>	Analyzing and aligning interests, negotiating, building trust, dealing with conflict.	Negotiator, deal maker, kingmaker, politician.	The dynamics of power and interests inherent in entrepreneurship.

**Table 3 Root metaphors for entrepreneurship – quotes from the corpus**

Metaphor	Examples from the corpus representing thought patterns consistent with the identified root
<p style="text-align: center;"><b>Parenthood</b></p>	<p>“[...] ’just as for a child, the conditions under which an organization is born and the course of its development in infancy have important consequences for its later life’ [...].” (Cooper et al., 1994, p. 372)</p> <p>“However, the newly created firm, which commonly suffers from liabilities of both newness and smallness, often lacks critical internal resources and capabilities to ensure the successful survival of the firm.” (Hite and Hesterly, 2001, p. 277)</p> <p>“Thus, the quality of embryonic technology companies [...] and the level and duration of the investment required to nurture early-stage companies elude precise delineation in ex ante evaluations.” (Shane and Stuart, 2002, p. 156)</p>
<p style="text-align: center;"><b>Mutagen</b></p>	<p>“Blind or myopic variations in creation theory are the raw materials from which selection processes cull those that are most suitable” (Alvarez and Barney, 2007, p. 15)</p> <p>“[...] those organizations that are well adapted to their environment will survive, and those that are not will die. Through this selection mechanism, the environment will determine the characteristics of populations of organizations. The essence of the argument is that chance variations in organizational forms that are adaptive are selected for whereas nonadaptive forms are selected against.” (Low and MacMillan, 1988, p. 144)</p> <p>“In the end the competitive process at the sector level selects the most successful routines and weeds out the routines which are no longer suitable. So innovation (‘mutations’) and selection are the catchwords in this approach.” (Wennekers and Thurik, 1999, p. 44)</p>
<p style="text-align: center;"><b>Method</b></p>	<p>“Clearly, traditional risk-based data collection and analysis cannot be effectively applied in the uncertain setting assumed to exist in creation theory. Instead, entrepreneurs make decisions in other ways ... they may make decisions using an inductive, iterative, and incremental process such as effectuation (Sarasvathy, 2001) or bricolage (Baker and Nelson, 2005).” (Alvarez and Barney, 2007, p. 18)</p> <p>“Many prior researchers have criticized business planning, arguing that it interferes with the efforts of firm founders to undertake more valuable actions to develop their fledgling enterprises. In this paper, we challenge this negative view of business planning, arguing that business planning is an important precursor to action in new ventures.” (Delmar and Shane, 2003, p. 1165)</p> <p>“In a nutshell, in using effectuation processes to build her firm, the entrepreneur can build several different types of firms in completely disparate industries. [...] the process of effectuation allows the entrepreneur to create one or more several possible effects irrespective of the generalized end goal with which she started.” (Sarasvathy, 2001, p.247)</p>
<p style="text-align: center;"><b>Mindset</b></p>	<p>“The concept of an [entrepreneurial orientation] to explain the mindset of firms engaged in pursuing new ventures provides a useful framework for researching entrepreneurial activity.” (Lumpkin and Dess, 2001, p. 429)</p> <p>“Entrepreneurship is a way of thinking, a way of thinking that emphasizes opportunities over threats.” (Krueger et al. 2000, p. 411)</p> <p>“To understand why entrepreneurs and managers in large organizations may vary in the extent to which they manifest biases and heuristics in their decision-making, it is important to understand the utility of non-rational decision-making. Under conditions of environmental uncertainty and complexity, biases and heuristics can be an effective and efficient guide to decision-making.” (Busenitz and Barney, 1997, p. 13).</p>
<p style="text-align: center;"><b>Networking</b></p>	<p>“If we conceive of entrepreneurs as organizers and coordinators of resources (Hébert and Link, 1989), social networking is directly connected with the very idea of an entrepreneur.” (Brüderl and Preisendörfer, 1998, p.214)</p> <p>“Focusing on social network analysis turns attention to relationships between entrepreneurs and others that provide the resources that are important in establishing a business [...] Entrepreneurs are also linked to people and organizations that interact among themselves, and these contacts can widen the availability of resources that sustain a new firm.” (Greve and Salaff, 2003, p. 2)</p> <p>“The research highlights that the entrepreneurial process is value-gathering, but process cannot be treated in the purely isolated economic sense. It is sustained by, and anchored in, the social context. [...] being embedded was clearly important.” (Jack and Anderson, 2002, p. 468)</p>

<b>Conduit of knowledge</b>	<p>“Thus, entrepreneurship serves as the mechanism by which knowledge spills over from the source by the creation of a new firm where it is commercialized.” (Audretsch and Keilbach, 2004, p. 952)</p> <p>“social interaction serves to increase the relative capacity and effectiveness of a young technology-based firm in recognizing and absorbing external knowledge from the key customer” (Yli-Renko et al., 2001, p. 591)</p> <p>“Thus, entrepreneurship contributes to economic growth by acting as a conduit through which knowledge created by incumbent firms spills over to agents who endogenously create new firm” (Acs et al. 2009)</p>
<b>Exploration</b>	<p>“Being a pioneer by anticipating and pursuing new opportunities and participating in emerging markets is a hallmark of entrepreneurship.” (Lee et al., 2001, p. 618)</p> <p>“firms engage in much scanning of the environment to discover important challenges and opportunities” (Miller, 1983, p. 775)</p> <p>“Entrepreneurship has flourished because independently minded people elected to leave secure positions in order to promote novel ideas or venture into new markets” (Lumpkin &amp; Dess, 1996, p. 140)</p>
<b>Politics</b>	<p>“As a result, collaborators risk opportunistic exploitation by their partners, including leaking proprietary knowledge to partners or otherwise losing control of important assets.” (Baum et al., 2000, p. 271)</p> <p>“We also present exploratory results based on a study of 1,141 small privately held U.S. family and non-family firms that suggest the overall agency problem in family firms could be less serious than that in non-family firms.” (Chrisman et al., 2004, p. 335)</p> <p>“Network governance can also be characterized by the reliance on ‘implicit and open-ended contracts’ that are supported by social mechanisms—such as power and influence, and the threat of ostracism and loss of reputation—rather than legal enforcement.” (Hoang and Antoncic, 2003, p. 166)</p>

## **ROOT METAPHORS IN THE ENTREPRENEURSHIP LITERATURE**

In this section, we explicate the root metaphors identified in our corpus, that is, we explain each metaphor and provide illustrative examples of research compatible with the focal metaphor.

### **Entrepreneurship as Parenthood**

The parenthood metaphor depicts entrepreneurship as developing, protecting, and nurturing one’s own fledgling venture. The metaphor directs our attention to the non-instrumental nature of the attachment between entrepreneurs and their ventures, often involving strong emotions (Baron, 1998; DeTienne, 2010), commitment (Shepherd, Patzelt, & Wolfe, 2011), and persistence (DeTienne, Shepherd, & De Castro, 2008). For example, Cardon, Wincent, Singh, & Drnovsek (2009, p. 516) suggested that, similar to parents, entrepreneurs care deeply about “nurturing, growing, and expanding the venture, once it has been created.” Shepherd (2003) suggested that, when the attachment between the entrepreneur and his or her business is broken (through business failure), the entrepreneur can feel grief, similar to the feeling

generated by the death of a loved one. Such views challenge the assumptions that entrepreneurs are mostly driven by profit maximization and extrinsic rewards, and that they rely on a rational, instrumental decision-making process.

Research in this vein has focused on early venture-formation processes, such as dating and falling in love, to theorize about the process of establishing an entrepreneurial team (Gartner, 1993); on the bonds and emotional ties that exist between entrepreneurs and their ventures (Cardon, Foo, Shepherd, & Wiklund, 2012; Wu, McMullen, Neubert, & Yi, 2008); and on the emotional struggles involved in letting the maturing venture go its own way (DeTienne, 2010; Kammerlander, 2016; Wasserman, 2003). Furthermore, the parenthood metaphor informs explorations of how the parent–venture relationship can impact the “health” of the venture. For example, research has suggested that entrepreneurs imprint their young ventures, leaving a durable influence on the ventures’ capacity to respond to future challenges (Cooper, Gimeno-Gascon, & Woo, 1994). Moreover, the nature of the parent–venture relationship can vary (across organizations and within organizations across time) in terms of the extent to which the parent makes the decisions for the venture or allows the venture considerable autonomy for making its own decisions (Covin, Garrett, Kuratko, & Shepherd, 2015; Shimizu, 2012; Wasserman, 2016).

The parenthood metaphor not only informs theory development, but it also resonates with how entrepreneurs talk about their ventures, for example, some entrepreneurs refer to their ventures as their “babies” (Cardon et al., 2005). By depicting entrepreneurs as parents, the metaphor begins to demystify the entrepreneur, providing a counterweight to the claims that entrepreneurs are a special breed by connecting entrepreneurship to people’s everyday emotional experiences.

### **Entrepreneurship as Mutagen**

The mutagen metaphor depicts entrepreneurship as a source of variation and deviation from established practice; it is, thus, an agent that gives rise to mutations in the form of innovations or new organizational forms. The metaphor directs our attention to the inherent unpredictability of the entrepreneurial process. Mutagens are agents, such as radiation or chemicals, that increase the frequency of mutations in biological

genes (Lundmark & Westelius, 2014). While the metaphorical correspondent to genes has been depicted in different ways, a prevalent view is that “firms have a kind of genetic endowment in terms of technical routines, procedures etc.” (Wennekers & Thurik, 1999, p. 44) and that innovations or new organizational forms are the result of mutations of those endowments (see Aldrich & Ruef, 2006; Nelson & Winter, 1982).

It is not clear how variations occur; however, they are assumed to increase with entrepreneurship (Lundmark & Westelius, 2014; McKelvey, 2004). The process of mutagenesis is, therefore, treated like a black box, and mutations are seen as the result of “a blind-variation – an action that emerges without any self-conscious planning or foresight” (Alvarez & Barney, 2007, p. 15). New ventures are seen as unique combinations (Gartner, 1985), based on “chance variations” that are selected for or against by the environment (Low & MacMillan, 1988, p. 144). The metaphor underpins a broad stream of evolutionary approaches to entrepreneurship research (Aldrich & Ruef, 2006), including evolutionary economics (Nelson & Winter, 1982; Winter, 2016), where it has been used to theorize about the relationship between economic growth and entrepreneurship (Audretsch & Keilbach, 2005; Wennekers & Thurik, 1999), and organizational ecology, where it has been used to theorize about how populations of organizations change over time (Hannan & Freeman, 1977).

While the metaphor has been applied primarily at the aggregate levels to explain industry-level processes in entrepreneurship research (Steyaert, 2007), it can also be applied at the micro- and meso-levels of analysis (Pennings & Wezel, 2007), in which variation, selection, and retention occur in new venture formation. The mutagen metaphor depicts entrepreneurs as boundedly rational, myopic, or even blind, in relation to the fate of their creations (Alvarez & Barney, 2007; Lundmark & Westelius, 2014). The metaphor emphasizes that entrepreneurial endeavors build on substantial previous efforts and, thus, entrepreneurship is more “like picking the fruit than planting the orchard—and orchards are often planted by processes operating far from the for-profit market economy” (Winter, 2016, p. 29).

## **Entrepreneurship as a Method**

The method metaphor specifically focuses our attention on the process of entrepreneurship; the “how” takes center stage, while the “who” and the “what” fade into the background. Specifically, this metaphor suggests that “entrepreneurship is a method, a meta-logic or procedural rationality” (Sarasvathy & Venkataraman, 2011, p. 125) and “what is most important is not who is the critical actor, but the process of entrepreneurship itself and the organizational factors which foster and impede it” (Miller, 1983, p. 770). While there is no consensus on what the entrepreneurial method is, central ideas include effectuation (Sarasvathy, 2001) and bricolage (Baker & Nelson, 2005).

First, *effectuation* involves processes that take “a set of means as given and focus on selecting between possible effects that can be created with that set of means” (Sarasvathy, 2001, p. 245). This is contrasted with causation processes that take “a particular effect as given and focus on selecting between means to create that effect.” Effectuation aims not to predict the future, but to control it through an iterative approach based on the principle of affordable loss and cocreation with stakeholders in an expanding set of alliances (Sarasvathy, 2001). Second, the concept of *bricolage* sheds light on how entrepreneurs create value from resources that others find of little value, worthless, or even a liability, by refusing to enact conventionally perceived constraints through a process that involves “serendipitous combinations of existing programs, pasted-up solutions, and failed components put to unexpected uses” (Baker & Nelson, 2005, p. 335). Bricolage has been contrasted with engineering, careful planning, and prediction (Baker & Nelson, 2005; Duymedjian & Rüling, 2010).

Central to research stemming from the entrepreneurship-as-a-method metaphor are tensions between the planned and the improvised and between the static and the dynamic. Such tensions arise in research that explores the effectiveness of business planning (Brinckmann, Grichnik, & Kapsa, 2010; Delmar & Shane, 2003) and in disputes about whether entrepreneurs generate equilibrium or disequilibrium (Eckhardt & Shane, 2003). The actor is only background in this metaphor; yet, the metaphor implicitly projects images of bricoleurs, tinkers, and improvisers.

## **Entrepreneurship as a Mindset**

The mindset metaphor depicts the essence of entrepreneurship residing in entrepreneurs' attitudes, motivations, and ways of thinking. The mindset metaphor is applicable across levels of analysis, as "[a]n entrepreneurial mindset is both an individualistic and collective phenomenon" (Ireland et al., 2003, p. 967). The collective form of the mindset is often termed *culture*, *posture*, or *orientation*. While these constructs can be seen as aggregates of people's mindsets, they are often depicted as being highly influenced by top management, leaders, or entrepreneurs. For example, Ireland, Hitt, and Sirmon (2003, pp. 970–971) claimed that "[a]n entrepreneurial culture develops in an organization where the leaders employ an entrepreneurial mindset [...] Thus, entrepreneurial culture and entrepreneurial mindset are inextricably interwoven." Overall, the mindset metaphor focuses attention on the entrepreneurial actor, whereas external processes, which are implicitly depicted as competitive, uncertain, and fraught with hidden risks, fade to the background.

It is suggested that, at the national level, entrepreneurial cultures are "high in individualism, low in uncertainty avoidance, low in power-distance, and high in masculinity" (Hayton, George, & Zahra, 2002, p. 34). Ireland et al. (2003, p. 968) claimed that, at the societal level, "[e]vidence suggests that an entrepreneurial mindset may support the growth of an entire economy (e.g., Sweden's economy) as well as the growth of individual firms." The mindset at the organizational level is typically associated with an entrepreneurial orientation, which is characterized by risk-taking propensity, proactiveness, innovativeness, and competitive aggressiveness (e.g., Covin, Green, & Slevin, 2006; Covin & Slevin, 1991; Lee, Lee, & Pennings, 2001; Lumpkin & Dess, 1996, 2001; Miller, 1983). At the organizational level, there is a broad consensus that an entrepreneurial orientation has a "universal positive influence" on firm performance (Wiklund & Shepherd, 2005, p. 84; see also Rauch, Wiklund, Lumpkin, & Frese, 2009).

The mindset at the individual level is characterized by confidence, optimism, and a heuristic, not always rational, approach to decision-making (e.g., Baron, 1998, 2004; Hmieleski & Baron, 2009; Simon,

Houghton, & Aquino, 2000). In addition, entrepreneurs are depicted as action-oriented people (McMullen & Shepherd, 2006) who do not become paralyzed by analysis, but who connect the dots (Baron & Ensley, 2006; Bird, 1988; Ireland et al., 2003) and make decisions quickly (Bakker & Shepherd, 2017; Eisenhardt, 1989). The metaphor also suggests that entrepreneurs tend to rely on heuristics and, thus, are prone to certain biases. For example, Hmieleski and Baron (2009) claimed that entrepreneurs tend to be highly optimistic, but that optimism was associated with lower new venture performance. Similarly, Simon et al. (2000) argued that entrepreneurs engage in risky ventures, not because they seek risk, but because they are biased against detecting risk.

### **Entrepreneurship as Networking**

The networking metaphor suggests that, in essence, entrepreneurship is a social, interpersonal activity (Brüderl & Preisendörfer, 1998); entrepreneurs and their ventures are depicted as being situated or embedded in networks. “Entrepreneurship, in this view is boundary spanning, and connecting, a phenomenon of relatedness” (Anderson, Drakopoulou-Dodd & Jack, 2012, p. 962). Entrepreneurs connect people and organizations, but also material and technological elements (Korsgaard, 2011). Beyond people, entrepreneurs “connect; sometimes technologies, sometimes ideas, sometimes places and products” (Anderson, Drakopoulou-Dodd & Jack, 2012, p. 962). The network constitutes “the very origin of the venture” (Johannisson, 1995, p. 217). However, studies relying on the metaphor have largely adopted an instrumental perspective, suggesting “that entrepreneurs would be well advised to develop and promote networks of all sorts” (Davidsson & Honig, 2003, p. 303) and that “networking is a powerful *tool* for the entrepreneur” (Oviatt & McDougall, 2005, p. 544; emphasis added).

An underlying assumption in this stream of research is that entrepreneurs spend substantial time shaping their networks (Hoang & Antoncic, 2003), which can positively impact access to both financial capital (Shane & Cable, 2002) and information (Yli-Renko, Autio, & Sapienza, 2001), and can facilitate organizational emergence (Davidsson & Honig, 2003), survival (Baum, Calabrese, & Silverman, 2000; Brüderl & Preisendörfer, 1998), internationalization (Oviatt & McDougall, 2005), and growth (Lee et al.,

2001). Networks are often described in terms of nodes, ties, bridges, structural holes, network centrality, and brokerage (Hoang & Antoncic, 2003). Studies that view networks as instruments tend to depict entrepreneurs as agentic networkers who manage their networks to achieve success, assuming “an atomistic, rational calculation or a proactive ability to intentionally create, adapt, and control a specific network structure” (Hite & Hesterly, 2001, p. 281).

Other studies highlight that entrepreneurs are often constrained by their networks (Hite & Hesterly, 2001; Jack & Anderson, 2003; Welter, 2011) and that pre-existing ties, rather than instrumentally developed ties, are drawn upon in venture creation processes (Ruef, Aldrich, & Carter, 2003). Although the entrepreneur may make use of the network, he or she is also subtly influenced and shaped by it (Aldrich & Cliff, 2003). Thus, networks both afford and constrain entrepreneurial agency (Aldrich & Zimmer, 1986; Korsgaard, 2011).

### **Entrepreneurship as a Conduit of Knowledge**

The conduit-of-knowledge metaphor depicts entrepreneurship as a channel by which knowledge is transmitted from originators, such as universities or inventors, to application in practice by end users; entrepreneurship is a conduit that connects theoretical and applied knowledge (Audretsch, 2007). From this point of view, entrepreneurs can liberate knowledge from organizations unwilling to commercialize it (Audretsch & Keilbach, 2004; Wennekers & Thurik, 1999). Entrepreneurs channel knowledge from research to start-up, from one organization to another (Klepper, 2002; Sørensen & Fassiotto, 2011), and from failures to future successes (Shepherd, 2003; Shepherd, Patzelt & Wolfe, 2011). Because entrepreneurship requires knowledge from different domains, such as technological knowledge, market knowledge, and knowledge of business startup, entrepreneurs must funnel such knowledge into their ventures (Qian & Acs, 2013).

The efficacy of the knowledge conduit depends on the ability of entrepreneurs and organizations to absorb knowledge and apply it in practice (Cohen & Levinthal, 1990; Qian & Acs, 2013). The metaphor directs our attention to how knowledge is absorbed and transmitted, which involves several

learning processes. The metaphor connects to a rich set of theorizing about knowledge absorption and transmission, from the individual level (Baron & Ensley, 2006; McGrath, 1999; Shepherd, 2003), through increasingly collective entities, such as groups and organizations (Covin et al., 2006; McGrath, 1999; Yli-Renko et al., 2001; Zahra, Ireland, & Hitt, 2000), and ultimately, to the aggregate industry or societal levels (Audretsch & Keilbach, 2004; McGrath, 1999). Thus, the metaphor depicts entrepreneurs and their ventures as vehicles of knowledge, absorptive sponges, funnels, and learners.

In addition to the capacity of entrepreneurs and their ventures, other factors influence the flow of knowledge through the conduit. For example, strong intellectual property rights may prevent knowledge from flowing freely (Acs, Braunerhjelm, Audretsch, & Carlsson, 2009), and geographical distance can reduce knowledge flows, as “intellectual breakthroughs must cross hallways and streets more easily than oceans and continents” (Glaeser, Kallal, Scheinkman, & Shleifer, 1992, p. 1127). Yet knowledge is conducted with less friction if the source and target share a similar frame of reference (Cohen & Levinthal, 1990). Therefore, entrepreneurship tends to cluster in particular geographic locations focused on specific knowledge domains, where people move frequently between organizations (Audretsch, 2007; Glaeser et al., 1992; Saxenian, 1990 ).

### **Entrepreneurship as Exploration**

The exploration metaphor emphasizes that entrepreneurship resembles venturing into the unknown, where challenges and dangers, but also hidden treasures, may await. Such journeys may lead to unexpected places. For example, Sarasvathy (2001, p. 262) likened entrepreneurial initiatives to exploration and claimed that “voyages to India effectually end up in the Americas”; and Stam and Elfring (2008, p. 101) claimed that “highly entrepreneurial firms [...] venture into uncharted territories.” While entrepreneurs may explore geographically (Oviatt & McDougall, 1994, 2005), they may also explore “opportunity space” (Shane & Venkataraman, 2000, p. 223) or the “organizational landscape” (Ruef et al., 2003, p. 196). Sometimes, exploration entails a purposeful search (Bakker & Shepherd, 2017; Fiet,

2007) or serendipitous discovery (Kirzner, 1997; Shane, 2000); however, it may also entail trailblazing (Shepherd & Patzelt, 2017) that changes the economic landscape (Reynolds et al., 2005).

While the idea of exploring a landscape implies a relatively fixed space, the idea of opportunity space indicates a moving target – entrepreneurs “seize unexpected opportunities” (Bird 1988, p. 451). The opportunity is an unexploited, but fleeting “future situation which is deemed desirable and feasible” (Stevenson & Jarillo, 1990, p. 22), and it arises when “new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production” (Shane & Venkataraman, 2000, p. 220). Following Shane and Venkataraman (2000), one stream of entrepreneurship literature conceptualizes opportunities as objective phenomena that need to be discovered. In contrast, another stream conceptualizes opportunities as social constructions that do not exist independently of the entrepreneur (Alvarez & Barney, 2007).

The exploration metaphor focuses our attention on the interplay between entrepreneurs and the landscape they explore (Bakker & Shepherd, 2017; Shane & Venkataraman, 2000). Entrepreneurs have been likened to mountaineers, discovering and climbing mountains, and to mountain builders who create the mountains to be conquered (Alvarez & Barney, 2007). The metaphor thus portrays entrepreneurs as explorers who venture into the unknown, trailblazers leading the way through the thicket, or clairvoyants who see further in space and time. For example, Bird (1988, p. 447) claimed that “entrepreneurs see the continuity between the here-and-now and what will be tomorrow, next month, and years from now.” Thus, they have the “ability to see beyond the present.”

### **Entrepreneurship as Politics**

This metaphor depicts entrepreneurship as a political process in which stakeholders with different interests collaborate, compete, negotiate, and struggle for resources. The metaphor directs our attention to governance, power, conflict, and opportunism in the pursuit of entrepreneurial endeavors. Because entrepreneurs organize, they depend on other people; therefore, “if organizations are seen as political entities [...] then organizational activities and outcomes are determined by the dynamics of internal

coalitions” (Brüderl, Preisendörfer, & Ziegler, 1992, p. 228). This metaphor emphasizes not only that conflicts are inevitable, but also that they can be beneficial. For example, Eisenhardt and Shoonhoven (1990, p. 509) suggested that “conflict among team members was essential to effective top-management-team performance” and “conflictual top-management teams seemed better able to husband resources and exploit opportunities.”

The politics metaphor is particularly salient in the family-business-related entrepreneurship literature, in which entrepreneurs tend to be portrayed as principals in a principal–agent relationship. A central theme in this literature is the extent of the alignment of interests and agency costs in family firms, compared to nonfamily firms (Carney, 2005; Chrisman, Chua, & Litz, 2004; Chua, Chrisman, & Sharma, 1999; Schulze, Lubatkin, & Dino, 2003a, 2003b; Schulze, Lubatkin, Dino, & Buchholz, 2001). On one hand, kinship “tempers self-interest—and the conflict it can cause—by fostering loyalty and commitment to the family and the firm” (Schulze et al., 2003a, p. 180). On the other hand, “we would expect sibling partners to have the incentive to engage in various political maneuvers, like vote swapping and ‘hostage taking,’ actions that might cause a series of compromises, ill-will, and second-best decisions about growth, investments in new technology, and so on” (Schulze et al., 2003a, pp. 184-185). In addition, Carney (2005, p. 250) suggested that “heirs to large family fortunes are less likely to fund innovative ventures, more likely to entrench their management, and more likely to seek to preserve their wealth through political lobbying.”

The politics metaphor depicts entrepreneurs as deal makers and kingmakers (Carney, 2005) who need to secure succession and maintain control through a dominant coalition (Chua et al., 1999). Social competence is important in securing financing and attracting employees; in fact, sometimes entrepreneurs need to use flattery and display friendliness that may not be sincere (Baron & Markman, 2003). Consequently, while politics is inevitable because entrepreneurs depend on others, conflicts and political maneuvering can be detrimental. For example, some suggest that “dysfunctional organizational politics often doom corporate entrepreneurial activities” (Zahra & Covin, 1995, p. 46). Politics is also relevant at

the societal level, where it determines “the rules of the game” (Baumol, 1996). However, new ventures can also engage in “[l]obbying for changes in existing regulations” to help themselves and/or society (Zimmerman & Zeitz, 2002, p. 424). Therefore, entrepreneurship is a political process and it depends on political processes.

## DISCUSSION

This article has identified eight root metaphors underpinning mainstream entrepreneurship articles. Our claim is that the metaphors capture central, but varying and sometimes contradictory, thought patterns in the mainstream entrepreneurship literature (see Table 2). Although many researchers rely on a mixture of different root metaphors, few researchers use the full spectrum of metaphors or reflect on their underlying meaning. For example, an entrepreneurship scholar focusing on family firms may be more prone to highlight the close emotional bond between venture and entrepreneur (consistent with the parenthood metaphor) or to stress internal power struggles (consistent with the politics metaphor), compared to a scholar studying the relationship between entrepreneurship and economic growth, who may be more prone to stress thought patterns related to the functioning of entrepreneurship at the societal level (consistent with the mutagen or conduit-of-knowledge metaphors). Each scholar thus relies on an incomplete set of metaphors and may not be taking advantage of the multiplicity of perspectives the field harbors (Welter et al., 2016).

The metaphorical conceptualizations explicated in this article provide a tool for breaking out of tacit assumptions (Alvesson et al., 2008) and for connecting with the broader research community through helping researchers understand how their research fits or contrasts with accepted images and conceptualizations (Cornelissen, 2006b; Shepherd & Sutcliffe, 2011). The metaphors can be used to explore what entrepreneurship is like or can be like. While each of us have different metaphors that we more readily adopt, we believe that each of the explicated metaphors highlights important aspects of the phenomenon while downplaying others. Thus, the explicated metaphors offer an overview of the dominant thought patterns in the literature, but they also help us identify avenues for future research. It is

important that entrepreneurship scholars engage with the metaphors to explore how they present entrepreneurship from different angles. In this section, we first discuss different ways of using the metaphors to explore future research directions, we then illustrate such use for each of the metaphors and thus provide a research agenda. Lastly, we move on to discuss the limitations of this study and how we as a community can move beyond existing conceptualizations to explore new paradigms.

### **Ways of exploring and extending the metaphors**

The metaphors explicated in this paper can be used to reframe entrepreneurship to evoke images that can be further explored and vetted through thought trials (Cornelissen, 2006a; Shepherd & Sutcliffe, 2015; Weick, 1989). Based on the previous literature on metaphors, we suggest four ways of exploring and extending metaphors. The first and perhaps most obvious way to use metaphors is to examine the imagery that each of them evokes and investigate whether such images are promising and whether they are sufficiently used in the existing literature (Morgan, 1980). For example, the politics metaphor suggests a number of conflicts inherent in entrepreneurship – are any of these conflicts important, yet underexplored? The second way to explore the metaphors is to combine them. While the mixing of metaphors can evoke contradictions rendering them unsuitable as rhetoric or poetic expressions, such combinations can also generate new and potentially creative and fruitful images (Baldauf, 2003). By combining and juxtaposing metaphors we can assess and evaluate their commonalities, which may reveal bridges between them, and contradictions which may reveal downplayed aspects of the involved metaphors (Shepherd & Sutcliffe, 2011). For example, what interesting images of entrepreneurship arise if we investigate the politics of parenthood? The third potentially fruitful way of using the metaphors is to explore inherent tensions through contextual variation, either focusing on changes in the source or target domains or on how interpretation may vary between interpreters (i.e. where a focal metaphor can give rise to varying even conflicting images, see Cornelissen, 2006b). For example, what can we learn from exploring the inherent tensions between networks as fishing nets and spider webs? The fourth way is to deliberately explore the reverse, the absurd or the paradoxical (McCabe, 2016; Oswick, Keenoy, &

Grant, 2002; Smith & Lewis, 2011). For example, could we learn something about entrepreneurship by examining seeming paradoxes, such as slack bricolage and causal effectuation, or the reverse, such as negative knowledge flows? In the following subsections we use these four ways of exploring the metaphors to illustrate how each of them can generate suggestions for future research and challenge taken for granted views in the field. The purpose of this exploration is twofold; to provide a research agenda based on the explicated metaphors and to illustrate how scholars can explore these metaphors further.

***Future Generations: Extending the Parenthood Metaphor.*** Research building on the parenthood metaphor has largely cast the family as a functional unit, but even in the best of families, issues arise that might provide additional insights into entrepreneurship. Bound in the notion of family is a set of expectations, obligations, and roles; while the individuals may grow and change, a static family structure can lead to disconnects, tension, and many forms of conflict. Thus, parenthood and politics metaphors can be combined to evoke fruitful analogies and questions. Why are some families mired in conflict, whereas others are almost free of conflict? What are the sources of tensions between an entrepreneur and the venture (his or her child) and between a venture's stakeholders (members of the broader family)? How are these tensions influenced by changes, such as the development of the venture (from baby, to child, to adolescent, to adult) or the addition or loss of stakeholders (e.g., birth of a sibling, marriage, or death)? How do portfolio entrepreneurs divide their attention between their ventures (children)? For example, an entrepreneur may allocate considerable attention to a new potential opportunity or venture (a new baby) and insufficient attention to an existing venture, to the latter's detriment, perhaps sparking feelings of neglect and a desire to rebel to regain attention. Although there have been some studies of attention (e.g., entrepreneurial alertness Kirzner, 2009, and guided and bottom-up attention, Shepherd, McMullen, & Jennings, 2007; Shepherd, McMullen, & Ocasio, 2017), the scope of entrepreneurial attention has not received sufficient scholarly attention. As suggested by the combination of the parenthood and politics metaphors, attention is likely linked to both internal and external conflicts.

Furthermore, the source domain has changed and we now readily think of a variety of family constellations. Exploring these contextual changes raises questions about the emerging roles and relationships in the sharing economy. As the proverb has it—it takes a village to raise a child—how does that apply to ventures? For example, how does the parenthood metaphor apply to crowd funded ventures? Does the financial relationship between venture and owner matter to the emotional bonds between them, or is the time they spend together more important? By focusing on the changing expectations and meanings of parenthood we can evoke new images of entrepreneur-venture relationships.

*New Mutations: Extending the Mutagen Metaphor.* The mutagen metaphor suggests that entrepreneurship creates variations that are good and/or bad, however, the metaphor has largely been applied with the implicit assumption that undesirable elements are weeded out. Therefore, it is assumed that the variations created by entrepreneurs create value for society, at least on average (Corbett, 2016). However, entrepreneurship can be unproductive or even destructive to a society (Baumol, 1996) or the natural environment (Shepherd, Patzelt & Baron, 2013); how are such variations selected and retained? And are these processes different for variations that are constructive to a society or to nature? How can we increase the weeding out of destructive mutations?

To date, the mutagen metaphor has primarily been applied at the aggregate levels; however, it is also possible to apply it at the micro- and meso-levels of analysis (Pennings & Wezel, 2007; Steyaert, 2007). Thus, this metaphor can be combined with the method metaphor to evoke images of an entrepreneurial method that spans levels of analysis. At the micro level, entrepreneurs can engage in thought experiments (i.e., abstract hypothetical scenarios; Folger & Turillo, 1999; Weick, 1989) or simulations (i.e., models of the operations of real-world processes, systems, or events; Davis, Eisenhardt, & Bingham, 2007) to generate potential venture ideas as part of the process of artificial selection (see also Shepherd & Suddaby, 2017). Ventures are then formed through actions and feedback rather than planning and execution (Sarasvathy, 2001). At the meso-level, entrepreneurial ventures apply deliberate experimentation (Burgelman & Grove, 2007) and at the aggregate level macro mechanisms decide what

is retained or discarded. Thus, there may be something inherently entrepreneurial about variations and artificial selection that spans entrepreneurial processes from the micro-, through the meso-, to the macro-level, like a fractal. Such combinations of the mutagen and the method metaphors provide the opportunity to make future contributions to our understanding of entrepreneurship and it raises questions about how experiments are generated and eventually selected at each level of analysis. By exploring the downplayed aspects of this metaphor and by combining it with the method metaphor and span the levels of analysis, this metaphor can extend our understanding of entrepreneurship.

***New Methods: Extending the Method Metaphor.*** Over the last decade or so, we have seen an increased focus on the method of entrepreneurship, and recent debates over the effectiveness of different methods have become heated, which indicates the need for future research. Perhaps the search for *the* entrepreneurial method is misguided, but more development of mid-range theories, covering a range of entrepreneurial methods and their boundary conditions is needed. While there are inherent tensions between improvisation and experimentation on one hand and planning and prediction on the other, new ventures tend to contain elements of both. Thus, we need to explore boundary conditions through questions such as, under what conditions does planning represent the most effective method, and under what conditions is a more improvised method (e.g., bricolage) more effective?

We also need to explore the combination of two or more methods that may represent a new method—the process of combining (moving between) two subprocesses. Blending may be a means of combining two methods whereby the resultant method is different than simply the sum of its subprocesses. For example, big data has opened up new possibilities to predict and to identify opportunities. However, rather than replacing improvisation and bricolage, will big data highlight new avenues for method blending? Thus, beyond distinguishing between business planning and the business plan, between formal and informal business planning, and between the benefits of the planning process and the plan as outcome (Brinckmann et al., 2010), we need to look at the blending of different methods. In doing so, future research can specifically explore apparent paradoxes to advance our understanding of the entrepreneurial

method. Can a method involve improvised planning, planned improvisation, slack bricolage, causal effectuation, effectual causation, and so on? These “pairs” currently represent paradoxes, and paradoxes are great places from which to create new theories (Smith & Lewis, 2011). Exploring seeming paradoxes may spur further research on entrepreneurial methods.

***Future Mindsets: Extending the Mindset Metaphor.*** The mindset metaphor harbors inherent tensions between the characteristics stereotypically associated with masculinity and femininity. Research on entrepreneurship as a mindset needs to recognize that empirical findings about the entrepreneurial mindset depend on the people who are studied. Current depictions of the entrepreneurial character have been critiqued for being gendered, largely representing male stereotypes (Ahl, 2006). It is, thus, important not only to be mindful of the gender compositions of the samples we are studying, but to be open to the idea that there may be a number of mindsets that can be viewed as entrepreneurial.

It is also fruitful to explore how the mindset metaphor combines with other root metaphors. For example, the mindset metaphor depicts entrepreneurs as biased and proactive risk-takers; the parenthood metaphor would also suggest a certain mindset with associated biases, but those biases would stem from the relationship with the venture, rather than pre-existing dispositions or “in the mind.” This creates a tension in the way we investigate entrepreneurial mindsets. Is the parenthood mindset part of the entrepreneurial mindset? Or is it a separate aspect of how entrepreneurs think? If the latter, do the two mindsets influence each other? Would the parental mindset reinforce or weaken particular aspects of the entrepreneurial mindset? For example, parents are generally not willing to take risks with regard to their offspring’s health. Is there a political mindset, and if so, how does it relate to the entrepreneurial one? It may be fruitful to classify different types of entrepreneurial mindsets or different interaction effects between a core entrepreneurial mindset and mindsets associated with specific contexts, such as nurturing, protecting, politicking, networking, and collaborating. By exploring this metaphor’s inherent tensions and by combining it with other metaphors new questions and perspectives emerge.

*Links to the future: Extending the Networking Metaphor.* While there is an inherent tension between viewing networks as tools (fishing nets) and constraints (spider webs), the constraining effects are understudied (Hoang & Yi, 2015). Therefore, it is important to study not only how entrepreneurs shape their networks, but also how networks influence the entrepreneur and both afford and constrain entrepreneurial action. Such research could examine the multiplexity of network ties, that is, the multilayered nature of network links (e.g., kinship, friendship, and business ties), as well as different types of exchanges (e.g., emotional support, advice, or other types of resource provision). Acknowledging the multiplexity of network ties offers avenues for exploring both the benefits of networks and the social constraints and obligations that they entail. For example, strong friendship ties may provide trust and emotional support, but they may also impede instrumental business exchanges. We also need to study how ties deteriorate and become dysfunctional. Do dysfunctional ties affect (or infect) other ties, and how do entrepreneurs effectively “manage” the tie—when and how do they try to resurrect or terminate a tie? To what effect? By exploring the bidirectional and multiplex relationship between network structure and venture performance, future research has the opportunity to track different venture trajectories, including virtuous spirals and detrimental spirals—are there methods for starting, perpetuating, and ending these spirals and how do such spirals affect the mindsets of the involved actors?

It is important that future research explain how ties are added to the network (and the nature of those ties), why ties are subtracted from the network (and the nature of those ties), and why and how some ties transform (e.g., a weak tie becomes a strong tie or how ties turn dysfunctional). Indeed, ties can be transformed through the concerted intentional networking of the entrepreneur, but the tie may evolve for other reasons. For example, a weak tie may provide access to a third-party resource provider on an ongoing basis; the frequency of the contact builds trust, and the tie becomes more social and less instrumental. By exploring the inherent tensions in this metaphor and extending the less researched aspects we can progress our understanding of entrepreneurship.

*Changing the Flow: Extending the Conduit-of-Knowledge Metaphor.* The conduit metaphor has elucidated how entrepreneurship can transmit knowledge between theory and practice, between stakeholders and the emerging organization, and between failures and future ventures. However, there seems to be a tacit and potentially inaccurate assumption that what is learned in one context is beneficial or at least not detrimental in other contexts. Thus, while it is clear that entrepreneurs learn from both successes and failures, there is reason to question whether such learning is necessarily beneficial to new venture performance. For example, Nielsen and Sarasvathy (2017) showed that entrepreneurs whose ventures disband are more likely to re-enter into venture formation; their resulting ventures are, however, more likely to disband, compared to ventures started by people without previous start-up experience. We can make sense of such puzzling results by combining the conduit metaphor with the parenthood metaphor and thus reframe what is learned and transferred. For example, the first venture (child) seems to be (on average) more successful than later ventures (their younger siblings) (Coad, 2017). If entrepreneurship is like parenthood, then entrepreneurs may learn, but such learning may not always translate into improvements in instrumental measures of success, such as earnings or the life span of their ventures (children).

We can also explore the reverse or paradoxical; we can ask whether it is meaningful to talk about negative knowledge? Does previous experience lead to superstitious or inaccurate learning? For example, accurate intuition tends to develop in contexts in which a person faces similar problems repeatedly and receives immediate and unequivocal feedback (Kahneman, 2011). What aspects of entrepreneurship would provide the foundation for such intuition? And what aspects would be prone to result in intuition that is more misleading than helpful? Can knowledge from one context be harmful in a new one? Or is it possible that entrepreneurial learning may cause inattention, which Coad (2017) suggested, using the analogy that most car accidents happen on familiar routes? Thus, by exploring the reverse—negative knowledge—in entrepreneurial learning and mobility, we can explore unexpected patterns and extend our knowledge of entrepreneurship.

*Further Explorations: Extending the Exploration Metaphor.* The exploration metaphor harbors inherent tensions between images of finding something that already existed (e.g., an explorer finds a “new” continent, an astronomer finds a “new” planet, and a gold digger finds “new” gold), and images of creating something new (e.g., a chemist explores combinations of molecules to create a treatment for disease or a chef explores combinations of food to create a new dish). Thus, the spectrum of imagery evoked by this metaphor corresponds to a spectrum of views in the debate about discovery and creation (cf. Alvarez & Barney, 2007; Davidsson, 2015; 2016; Dimov, 2011; Korsgaard, Berglund, Thrane, & Blenker, 2016; Ramoglou & Tsang, 2016; Suddaby, Bruton, & Si, 2015). While there are underlying philosophical and ontological issues in this debate, we believe that the field can make strong progress if we do not become preoccupied with attempts to reconcile the irreconcilable, or determine the superiority of one view over the other, but keep an open mind, and embrace, rather than quash, different perspectives.

The metaphor evokes questions such as, what are the differences and similarities between different types of exploration. What are the spheres that entrepreneurs explore? What triggers and sustains exploration? What are the roles of purposeful search and serendipity? We can also combine this metaphor with the mindset metaphor and ask questions such as, from the perspective of exploration as a deliberate and purposeful process, what are the roles of the belief that they will find something valuable (extrinsic motivation) and the process itself, the journey (intrinsic motivation); and do these types of motivation co-exist or crowd each other out? What is the role of prosocial motivation? Interestingly, the research about compassion venturing suggests that, when ventures are created immediately in the aftermath of a disaster to alleviate victims’ suffering (Shepherd & Williams, 2014; Williams & Shepherd, 2016), exploration and exploitation occur simultaneously. Future research can further explore this apparent spontaneous venturing to learn more about what appears to be a rather unique form of exploration (or, perhaps, an instance of discovery without exploration). We may also reverse the question and ask if there is a role for

anti-social motives in entrepreneurship<sup>2</sup>? By exploring the metaphors inherent tensions and combining it with the mindset metaphor we can extend our understanding of entrepreneurship.

***Future Movements: Extending the Politics Metaphor.*** The politics metaphor suggests that entrepreneurship likely involves a range of conflicts that arise from differences in interests, for example, investor–entrepreneur conflicts (e.g., Cable & Shane, 1997; Higashide & Birley, 2002), board conflicts (e.g., Forbes, Korsgaard, & Sapienza, 2010), and entrepreneur–incubator conflicts (e.g., Mcadam & Marlow, 2007). However, conflicts between entrepreneurs and parties commonly in a position weaker than theirs have received little attention, such as the inherent conflict between entrepreneurs and their employees and between entrepreneurs and their customers. While such conflict may relate to a specific firm or even a specific dyadic relationship between entrepreneur and employee, the potential divergence in interests cuts across levels of analysis.

The metaphor also evokes additional images that have not been fully explored. There is an underlying assumption that entrepreneurship creates growth and jobs (Perren & Jennings, 2005); therefore, what is good for the entrepreneur is good for the employee or the unemployed. Entrepreneurship research has prescribed policies, such as “deregulation, privatization and labor market flexibility” (Audretsch & Thurnik, 2001, p. 269) or implied that high taxes may turn entrepreneurs into criminals (Baumol, 1996). On the other hand, recent research has raised concerns that inequality is increasing in many rich and highly developed countries and that policies that have been implemented on the basis of incentivizing entrepreneurship may have contributed to an inequality of both means and opportunities (Piketty, 2014). An important question for future research is how politics, both at the micro- and macro-levels, influences the quantity and quality of entrepreneurial activity. In addition, how does it influence the broader society, inequality, and environmental sustainability? Such research could focus on

---

<sup>2</sup> Interestingly, a search 2017-08-25 using SCOPUS returned 1590 sources with “social entrepreneurship” in the title, abstract or keywords, but none with “anti-social entrepreneurship”, “antisocial entrepreneurship” or “anti social entrepreneurship” in these fields.

identifying common interests and win–win situations, but also on the divergence of interests between existing entrepreneurs, potential entrepreneurs, employees, customers, and other stakeholders. If we are currently building an entrepreneurial society (Audretsch, 2009), we need to better understand the political issues inherently involved with entrepreneurship at the individual, organizational, and societal levels. By investigating the under-researched aspects of this metaphor we can extend our understanding of entrepreneurship.

### **Limitations and How to Move Beyond Them**

It is important to note that the articles in the corpus that we used are not a random sample from entrepreneurship journals, but a sample of the most cited articles. The citations are from core entrepreneurship journals; therefore, they represent the ideas that we, as a research community, “retell.” These papers were subject to several screening mechanisms. The researchers identified research questions deemed interesting, important, fundable, answerable, publishable, and so forth. The research process produced results, and the subsequent papers went through framing, writing, rewriting, editorial screening, and several rounds of reviews. Then the papers were recognized by peers, who cited them. Therefore, the papers in our corpus represent more than the ideas of their authors; they represent ideas integrated in the mainstream of entrepreneurship research.

The papers, and thus, the identified metaphors in our corpus were almost exclusively positioned in what Morgan (1980) labeled the functionalist paradigm. The functionalist paradigm is based on assumptions that society has a concrete and objective existence and it strives for an objective and value-free social science, based on replicable methods that produce useful empirical knowledge. In striving to be value free, the paradigm tends to adopt ontological constructs provided by its surrounding society and to accept its *modus operandi*. Because the metaphors are rooted in the functionalist paradigm, the research directions that they evoke are also largely confined to the functionalist paradigm. This is a limitation; thus, future research should explore metaphors represented outside the mainstream literature, and perhaps,

deliberately develop or seek to identify metaphors stemming from other paradigms. By presenting what is in the current mainstream literature, this paper constitutes a foundation for exploring alternatives.

In the studied corpus, two perceptible thought patterns break with the mainstream functionalist paradigm. The first pattern concerns research that broadly fits under the umbrella term *entrepreneurship*. Such research argues that entrepreneurship is relational and, thus, strives to break with methodological individualism; it is interpretative, social constructivist, practice-based, and potentially radical. In our corpus, one paper clearly falls into this category (Steyart, 2007). While the prevalence of this stream was insufficient to merit inclusion as a dominant thought pattern, we believe not only that this stream of research is important, but that it constitutes the basis for a radical humanist perspective on entrepreneurship (Morgan, 1980). It also serves as a foundation for conceptualizing entrepreneurship as emancipation (Rindova, 2009). The second stream that breaks with the functionalist paradigm involves research focusing on the subordination and discrimination of women and minority groups in the domain of entrepreneurship. Such research focuses both on the social construction of gender, ethnicity, and sexual orientation, and the structural discrimination that follows. In our corpus, this stream is represented by only one paper (Ahl, 2006). This research can potentially form the basis for a radical structuralist perspective on entrepreneurship (Morgan, 1980).

We also identified evidence that entrepreneurship was viewed as gambling, a metaphor that fits within the functionalist paradigm. The gambling metaphor highlights that entrepreneurs bet capital (their own or others') and hard work in a risky or even uncertain game. For example, Brüderl et al. (1992, p. 237) referred to "a group of 'professional gamblers' who have long histories of business registrations, often with two or more simultaneous business allowances, and who open and close enterprises frequently." There are also analogies between entrepreneurship and a game; for example, Lévesque and Minniti (2006, p. 177) claimed that "it is a known empirical fact that new firm creation tends to be a young man's game." The gambling metaphor is also central in Knight's (1921) work, which is foundational in entrepreneurship studies (for recent work that applies the gambling metaphor, see Coad, Frankish, Roberts, & Storey 2013).

While we claim that the identified root metaphors capture central thought patterns in the mainstream entrepreneurship literature, we do not claim to have yet exhausted the mainstream or that the mainstream has exhausted the usefulness of current metaphors or the set of possible metaphors. Indeed, a set of root metaphors well suited to facilitate reflexivity must strike a balance between exposing how we think about entrepreneurship and how we could think about it in other fruitful ways. Thus, future research could develop counter metaphors to challenge cherished beliefs and spur further theory development (Cornelissen, 2006a; Morgan, 1980; Weick, 1989). Such research may aim to identify additional promising streams of research that are only marginally represented in the mainstream or, specifically, study metaphors underpinning entrepreneurship literature outside the mainstream, by, for example, studying papers presented at conferences or published in books or working paper series. Furthermore, scholars may study corpuses from neighboring fields, such as social entrepreneurship or family-firm-based research. Thus, future research should go beyond identifying metaphors in the mainstream literature and explore what could be in the literature. Such developments may originate in a deep familiarity with the phenomenon, or they may originate in explorations of the relevance of root metaphors from other disciplines or neighboring fields used for generating and informing entrepreneurship research.

Lastly, because metaphors are useful pedagogical tools (Morgan, 2006), future research should investigate how metaphors for entrepreneurship both facilitate and constrain entrepreneurship learning and teaching. This could involve studying the explicit use of metaphors by teachers and authors of educational texts, but also the implicit use of metaphors, by, for example, inductively analyzing a corpus of entrepreneurship textbooks to gain insights into metaphors that are presented to learners, the extent to which these metaphors converge or diverge from those found in texts directed at scholars, and the social values that are explicitly and implicitly promoted.

## **CONCLUSION**

This article has taken important steps toward explicating the root metaphors that underpin mainstream entrepreneurship research. In doing so, it has taken stock of the dominant thought patterns in the field and identified avenues for future research. We believe that the study of root metaphors in entrepreneurship theorizing has the potential to elucidate many of the important issues that our field is concerned with, by highlighting and juxtaposing basic assumptions that often remain obscure in academic discourse. Although this article provides a toolbox to facilitate reflexivity and guide future research, we believe that an important contribution may be that it inspires further studies of the metaphors that underpin, or should underpin, entrepreneurship research. Such research has the potential not only to extend and improve the toolbox, but also to increase our understanding of the multifaceted phenomenon of entrepreneurship.

## REFERENCES

- \*Indicates that the source is included in the studied corpus.
- \*Acs, Z.J., Braunerhjelm, P., Audretsch, D.B., & Carlsson, B. (2009). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 32(1), 15–30.
- \*Ahl, H. (2006). Why research on women entrepreneurs needs new directions. *Entrepreneurship Theory and Practice*, 30(5), 595-621.
- Aldrich, H. & Zimmer, C. (1986). Entrepreneurship through social networks. In D. Sexton & R. Smilor (Eds.). *The art and science of entrepreneurship* (pp. 3–23). Cambridge, MA: Ballinger.
- \*Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18(5), 573-596.
- \*Aldrich, H. E., & Fiol, C. M. (1994). Fools rush in? The institutional context of industry creation. *Academy of Management Review*, 19(4), 645-670.
- Aldrich, H. E. & Ruef, M. (2006). *Organizations evolving* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.
- \*Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 11-26.
- \*Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 27(6), 755-775.
- Alvesson, M., Hardy, C., & Harley, B. (2008). Reflecting on reflexivity: Reflexive textual practices in organization and management theory. *Journal of Management Studies*, 45(3), 480-501.
- Alvesson, M. & Kärreman, D. (2000). Varieties of discourse: On the study of organizations through discourse analysis. *Human Relations*, 53(9), 1125–49.
- Anderson, A., Drakopoulou-Dodd, S., & Jack, S. (2009). Aggressors; winners; victims and outsiders: European schools' social construction of the entrepreneur. *International Small Business Journal*, 27(1), 126-136.
- Anderson, A. R. (2005). Enacted metaphor: The theatricality of the entrepreneurial process. *International Small Business Journal*, 23(6), 587-603.
- Anderson, A. R., Drakopoulou-Dodd, S., & Jack, S. L. (2012). Entrepreneurship as connecting: Some implications for theorising and practice. *Management Decision*, 50(5), 958-971.
- Anderson, A. R., & Warren, L. (2011). The entrepreneur as hero and jester: Enacting the entrepreneurial discourse. *International Small Business Journal*, 29(6), 589-609.
- \*Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123.
- Audretsch, D. B. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63-78.
- Audretsch, D. B. (2009). The entrepreneurial society. *Journal of Technology Transfer*, 34(3), 245-254.
- \*Audretsch, D. B. & Keilbach, M. (2004). Entrepreneurship capital and economic performance. *Regional Studies*, 38(8), 949-959.
- Audretsch, D.B. & Keilbach, M. (2005). The mobility of economic agents as conduits of knowledge spillovers. In D. Fornahl, C. Zellner, & D.B. Audretsch (Eds.), *The role of labour mobility and informal networks for knowledge transfer* (pp. 8–26). Boston, MA: Springer.
- Audretsch, D. B., & Thurik, A. R. (2001). What's new about the new economy? Sources of growth in the managed and entrepreneurial economies. *Industrial and corporate change*, 10(1), 267-315.
- \*Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice*, 30(1), 1-22.
- \*Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909-924.
- \*Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50(3), 329-366.

- Bakker, R. M., & Shepherd, D. A. (2017). Pull the plug or take the plunge: Multiple opportunities and the speed of venturing decisions in the Australian mining industry. *Academy of Management Journal*, 60(1), 130-155.
- Baldauf, C. J. (2003). On the mixing of conceptual metaphors. In C. Zelinsky-Wibbelt (Eds.), *Text, Context, Concepts* (pp.47-63). Berlin: de Gruyter.
- \*Baron, R. A. (1998). Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, 13(4), 275-294.
- \*Baron, R. A. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing*, 19(2), 221-239.
- \*Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33(2), 328-340.
- \*Baron, R. A., & Ensley, M. D. (2006). Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. *Management Science*, 52(9), 1331-1344.
- \*Baron, R. A., & Markman, G. D. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18(1), 41-60.
- \*Baum, J. A., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21(3), 267-294.
- \*Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, 89(4), 587.
- \*Baum, J. R., Locke, E. A., & Smith, K. G. (2001). A multidimensional model of venture growth. *Academy of Management Journal*, 44(2), 292-303.
- \*Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Business Venturing*, 11(1), 3-22.
- \*Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6), 613-673.
- Berti, M. (2017). *Elgar Introduction to Organizational Discourse Analysis*. Northampton, MA: Edward Elgar Publishing.
- \*Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442-453.
- \*Birley, S. (1986). The role of networks in the entrepreneurial process. *Journal of Business Venturing*, 1(1), 107-117.
- Black, M. (1962). *Models and metaphors*. Ithaca, NY: Cornell University Press.
- \*Blanchflower, D. G., & Oswald, A. J. (1998). What makes an entrepreneur? *Journal of Labor Economics*, 16(1), 26-60.
- \*Bosma, N., Van Praag, M., Thurik, R., & De Wit, G. (2004). The value of human and social capital investments for the business performance of startups. *Small Business Economics*, 23(3), 227-236.
- Boxenbaum, E. & Rouleau, L. (2011). New knowledge products as bricolage: Metaphors and scripts in organizational theory. *Academy of Management Review*, 36(2), 272-296.
- Brinckmann, J., Grichnik, D., & Kapsa, D. (2010). Should entrepreneurs plan or just storm the castle? A meta-analysis on contextual factors impacting the business planning-performance relationship in small firms. *Journal of Business Venturing*, 25(1), 24-40.
- \*Brüderl, J., & Preisendörfer, P. (1998). Network support and the success of newly founded business. *Small Business Economics*, 10(3), 213-225.
- \*Brüderl, J., Preisendörfer, P., & Ziegler, R. (1992). Survival chances of newly founded business organizations. *American Sociological Review*, 57(2), 227-242.
- Burgelman, R. A., & Grove, A. S. (2007). Let chaos reign, then rein in chaos—repeatedly: Managing strategic dynamics for corporate longevity. *Strategic management journal*, 28(10), 965-979.

- \*Busenitz, L. W., & Barney, J. B. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*, 12(1), 9-30.
- \*Busenitz, L. W., Gomez, C., & Spencer, J. W. (2000). Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management Journal*, 43(5), 994-1003.
- Busenitz, L. W., West III, G. P., Shepherd, D., Nelson, T., Chandler, G. N., & Zacharakis, A. (2003). Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*, 29(3), 285-308.
- Cable, D. M. & Shane, S. (1997). A prisoner's dilemma approach to entrepreneur-venture capitalist relationships. *Academy of Management Review*, 22(1), 142-176.
- Cardon, M. S., Foo, M. D., Shepherd, D., & Wiklund, J. (2012). Exploring the heart: Entrepreneurial emotion is a hot topic. *Entrepreneurship Theory and Practice*, 36(1), 1-10.
- \*Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511-532.
- Cardon, M. S., Zietsma, C., Saporito, P., Matherne, B. P., & Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing* 20(1), 23-45.
- Carlsson, B., Braunerhjelm, P., McKelvey, M., Olofsson, C., Persson, L., & Ylinenpää, H. (2013). The evolving domain of entrepreneurship research. *Small Business Economics*, 41(4), 913-930.
- \*Carney, M. (2005). Corporate governance and competitive advantage in family-controlled firms. *Entrepreneurship Theory and Practice*, 29(3), 249-265.
- \*Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.
- \*Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354.
- \*Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39.
- Clarke, J., Holt, R., & Blundel, R. (2014). Re-imagining the growth process: (Co)-evolving metaphorical representations of entrepreneurial growth. *Entrepreneurship & Regional Development*, 26(3-4), 234-256.
- Clarke, J., & Holt, R. (2017). Imagery of ad-venture: Understanding entrepreneurial identity through metaphor and drawing. *Journal of Business Venturing*, 32(5), 476-497.
- Coad, A. (2017). Commentary: Kristian Nielsen and Saras D. Sarasvathy Entitled, "A Market for Lemons in Serial Entrepreneurship?". *Academy of Management Discoveries*, 3(1), 101-103.
- Coad, A., Frankish, J., Roberts, R. G., & Storey, D. J. (2013). Growth paths and survival chances: An application of gambler's ruin theory. *Journal of Business Venturing*, 28(5), 615-632.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 128-152.
- \*Colombo, M. G., & Grilli, L. (2005). Founders' human capital and the growth of new technology-based firms: A competence-based view. *Research Policy*, 34(6), 795-816.
- \*Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing*, 9(5), 371-395.
- Corbett, A. (2016). Social entrepreneurship as a norm? *Journal of Management Studies*, 53(4), 608-609.
- Cornelissen, J. P. (2006a). Making sense of theory construction: Metaphor and disciplined imagination. *Organization Studies*, 27(11), 1579-1597.
- Cornelissen, J. P. (2006b). Metaphor and the dynamics of knowledge in organization theory: A case study of the organizational identity metaphor. *Journal of Management Studies*, 43(4), 683-709.

- Cornelissen, J. P., Clarke, J. S., & Cienki, A. (2012). Sensegiving in entrepreneurial contexts: The use of metaphors in speech and gesture to gain and sustain support for novel business ventures. *International Small Business Journal*, 30(3), 213-241.
- Cornelissen, J. P., Kafourous, M. & Lock, A. R. (2005). Metaphorical images of organization: How organizational researchers develop and select organizational metaphors. *Human Relations*, 58(12), 1545-1578.
- Coşgel, M. M. (1996). Metaphors, stories, and the entrepreneur in economics. *History of Political Economy*, 28(1), 57-76.
- Covin, J. G., Garrett, R. P., Kuratko, D. F., & Shepherd, D. A. (2015). Value proposition evolution and the performance of internal corporate ventures. *Journal of Business Venturing*, 30(5), 749-774.
- \*Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. *Entrepreneurship Theory and Practice*, 30(1), 57-81.
- \*Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- \*Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-25.
- Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, 30(5), 674-695.
- Davidsson, P. (2016). Entrepreneurial opportunities as propensities: Do Ramoglou & Tsang move the field forward? *Journal of Business Venturing Insights*. <http://doi.org/10.1016/j.jbvi.2016.02.002>
- \*Davidsson, P., & Honig, B. (2003). The role of human and social capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(12), 301-331.
- \*Davidsson, P., & Wiklund, J. (2001). Levels of analysis in entrepreneurship research: Current research practice and suggestions for the future. *Entrepreneurship Theory and Practice*, 25(4), 81-100.
- Davis, J. P., Eisenhardt, K. M., & Bingham, C. B. (2007). Developing theory through simulation methods. *Academy of Management Review*, 32(2), 480-499.
- \*Delmar, F., Davidsson, P., & Gartner, W. B. (2003). Arriving at the high-growth firm. *Journal of Business Venturing*, 18(2), 189-216.
- \*Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165-1185.
- DeTienne, D. R. (2010). Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, 25(2), 203-215.
- DeTienne, D. R., Shepherd, D. A., & De Castro, J. O. (2008). The fallacy of “only the strong survive”: The effects of extrinsic motivation on the persistence decisions for under-performing firms. *Journal of Business Venturing*, 23(5), 528-546.
- Dimov, D. (2011). Grappling with the unbearable elusiveness of entrepreneurial opportunities. *Entrepreneurship Theory and Practice*, 35(1), 57-81.
- Drakopoulou-Dodd, S. (2002). Metaphors and meaning: A grounded cultural model of US entrepreneurship. *Journal of Business Venturing*, 17(5), 519-535.
- Drakopoulou-Dodd, S., Jack, S., & Anderson, A. R. (2013). From admiration to abhorrence: The contentious appeal of entrepreneurship across Europe. *Entrepreneurship & Regional Development*, 25(1-2), 69-89.
- Duymedjian, R., & Ruling, C. C. (2010). Towards a foundation of bricolage in organization and management theory. *Organization Studies*, 31(2), 133-151.
- \*Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333-349.
- Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32(3), 543-576.

- \*Eisenhardt, K. M., & Schoonhoven, C. B. (1990). Organizational growth: Linking founding team, strategy, environment, and growth among U.S. semiconductor ventures, 1978-1988. *Administrative Science Quarterly*, 35(3), 504-529.
- \*Evans, D. S., & Jovanovic, B. (1989). An estimated model of entrepreneurial choice under liquidity constraints. *The Journal of Political Economy*, 808-827.
- \*Evans, D. S., & Leighton, L. S. (1989). Some empirical aspects of entrepreneurship. *The American Economic Review*, 79(3), 519-535.
- Fauconnier, G. & Turner, M. (1998). Conceptual integration networks. *Cognitive Science*, 22(2), 133–187.
- Fiet, J. O. (2007). A prescriptive analysis of search and discovery. *Journal of Management Studies*, 44(4), 592-611.
- Folger, R., & Turillo, C. J. (1999). Theorizing as the thickness of thin abstraction. *Academy of Management Review*, 24(4), 742-758.
- Forbes, D. P., Korsgaard, M.A., & Sapienza, H. J. (2010). Financing decisions as a source of conflict in venture boards. *Journal of Business Venturing*, 25(6), 579-592.
- \*Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696-706.
- \*Gartner, W. B. (1989). Who is an entrepreneur? Is the wrong question. *Entrepreneurship Theory and Practice*, 13(4), 47–68.
- Gartner, W. B. (1993). Words lead to deeds: Towards an organizational emergence vocabulary. *Journal of Business Venturing*, 8(3), 231-239.
- \*Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42(4), 750-783.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31.
- Glaeser, E. L., Kallal, H. D., Scheinkman, J. A., & Shleifer, A. (1992). Growth in cities. *Journal of Political Economy*, 100(6), 1126-1152.
- Grant, D., & Osrick, C. (Eds.). (1996). *Metaphor and organizations*. London: Sage.
- \*Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28(1), 1-22.
- \*Hamilton, B. H. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political Economy*, 108(3), 604-631.
- Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American Journal of Sociology*, 82(5), 929-964.
- \*Hayton, J. C., George, G., & Zahra, S. A. (2002). National culture and entrepreneurship: A review of behavioral research. *Entrepreneurship Theory and Practice*, 26(4), 33-53.
- \*Headd, B. (2003). Redefining business success: Distinguishing between closure and failure. *Small Business Economics*, 21(1), 51-61.
- Higashide, H., & Birley, S. (2002). The consequences of conflict between the venture capitalist and the entrepreneurial team in the United Kingdom from the perspective of the venture capitalist. *Journal of Business Venturing*, 17(1), 59-81.
- Hill, R.C. & Levenhagen, M. (1995). Metaphors and mental models: Sensemaking and sensegiving in innovative and entrepreneurial activities. *Journal of Management*, 21(6), 1057–1074.
- \*Hite, J. M., & Hesterly, W. S. (2001). The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal*, 22(3), 275-286.
- \*Hmieleski, K. M., & Baron, R. A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal*, 52(3), 473-488.

- \*Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165-187.
- Hoang, H. & Yi, A. (2015). Network-based research in entrepreneurship: A decade in review. *Foundations and Trends in Entrepreneurship*, 11(1), 1-54.
- Hyrsky, K. (1999). Entrepreneurial metaphors and concepts: An exploratory study. *International Small Business Journal*, 18(1), 13–34.
- \*Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of Management*, 29(6), 963-989.
- \*Jack, S. L., & Anderson, A. R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of Business Venturing*, 17(5), 467-487.
- Johannisson, B. (1995). Paradigms and entrepreneurial networks—some methodological challenges. *Entrepreneurship & Regional Development*, 7(3), 215-232.
- Kahneman, D. (2011). *Thinking, fast and slow*. London, UK: Penguin Books.
- Kammerlander, N. (2016). ‘I want this firm to be in good hands’: Emotional pricing of resigning entrepreneurs. *International Small Business Journal*, 34(2), 189-214.
- \*Kirzner, I. M. (1997). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature*, 35(1), 60-85.
- Kirzner, I. M. (2009). The alert and creative entrepreneur: A clarification. *Small Business Economics*, 32(2), 145-152.
- Klepper, S. (2002). The capabilities of new firms and the evolution of the US automobile industry. *Industrial and Corporate Change*, 11(4), 645-666.
- Knight, F. H. (1921/2002). *Risk, uncertainty and profit*. Washington, DC: Beard Books.
- \*Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124-141.
- Koironen, M. (1995). North-European metaphors of “entrepreneurship” and “an entrepreneur.” In W.D. Bygrave, S. Birley, N.C. Churchill, E. Gatewood, F. Hoy, R.H. Kecley, & W.E. Wetzel (Eds.), *Frontiers of entrepreneurship research* (pp. 203–216). Wellesley, MA: P&R Publications.
- Korsgaard, S. (2011). Entrepreneurship as translation: Understanding entrepreneurial opportunities through actor-network theory. *Entrepreneurship & Regional Development*, 23(7-8), 661-680.
- Korsgaard, S., Berglund, H., Thrane, C., & Blenker, P. (2016). A tale of two Kirznars: Time, uncertainty, and the "nature" of opportunities. *Entrepreneurship Theory and Practice*, 40(4), 867-889.
- \*Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411-432.
- \*Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: A study on technology-based ventures. *Strategic Management Journal*, 22(6-7), 615-640.
- \*Levesque, M., & Minniti, M. (2006). The effect of aging on entrepreneurial behavior. *Journal of Business Venturing*, 21(2), 177-194.
- \*Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6-7), 545-564.
- \*Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139-161.
- \*Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, 21(1), 135-172.
- \*Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429-451.
- Lundmark, E., & Westelius, A. (2014). Entrepreneurship as elixir and mutagen. *Entrepreneurship Theory and Practice*, 38(3), 575-600.

- Mcadam, M. & Marlow, S. (2007). Building futures or stealing secrets? Entrepreneurial cooperation and conflict within business incubators. *International Small Business Journal*, 25(4), 361-382.
- McCabe, D. (2016). 'Curiouser and curiouser!': Organizations as Wonderland—a metaphorical alternative to the rational model. *Human Relations*, 69(4), 945–973.
- \*McGrath, R. G. (1999). Falling forward: Real options reasoning and entrepreneurial failure. *Academy of Management Review*, 24(1), 13-30.
- McKelvey, B. (2004). Toward a complexity science of entrepreneurship. *Journal of Business Venturing*, 19(3), 313-341.
- \*McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132-152.
- \*Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- \*Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Morgan, G. (1980). Paradigms, metaphors, and puzzle solving in organization theory. *Administrative Science Quarterly*, 25(4), 605-622.
- Morgan, G. (1983). More on metaphor: Why we cannot control tropes in administrative science. *Administrative Science Quarterly*, 28(4), 601-607.
- Morgan, G. (2006). *Images of organization*. (updated ed.) Thousand Oaks, CA: Sage.
- Morgan, G. (2011). Reflections on images of organization and its implications for organization and environment. *Organization and Environment*, 24(4), 459–478.
- Morgan, G. (2016). Commentary: Beyond Morgan's eight metaphors. *Human Relations*, 69(4), 1029-1042.
- \*Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51-75.
- Nelson, R.R. & Winter, S.G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Harvard University Press.
- Nicholson, L. & Anderson, A. R. (2005). News and nuances of the entrepreneurial myth and metaphor: Linguistic games in entrepreneurial sense-making and sense-giving. *Entrepreneurship Theory and Practice*, 29(2), 153–172.
- Nielsen, K., & Sarasvathy, S. D. (2016). A market for lemons in serial entrepreneurship? Exploring type I and type II errors in the restart decision. *Academy of Management Discoveries*, 2(3), 247-271.
- Örtenblad, A., Putnam, L. L., & Trehan, K. (2016). Beyond Morgan's eight metaphors: Adding to and developing organization theory. *Human Relations*, 69(4), 875-889.
- Oswick, C., Keenoy, T., & Grant, D. (2002). Note: Metaphor and analogical reasoning in organization theory: Beyond orthodoxy. *Academy of Management Review*, 27(2), 294-303.
- \*Oviatt, B. M., & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1), 45-64.
- \*Oviatt, B. M., & McDougall, P. P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5), 537-554.
- Pennings, J. M., & Wezel, F. C. (2007). *Human capital, inter-firm mobility and organizational evolution*. Cheltenham, UK: Edward Elgar Publishing.
- Perren, L., & Jennings, P. L. (2005). Government discourses on entrepreneurship: Issues of legitimization, subjugation, and power. *Entrepreneurship Theory and Practice*, 29(2), 173-184.
- Persson, O., Danell, R., & Schneider, J.W. (2009). How to use Bibexcel for various types of bibliometric analysis. In F. Åström, R. Danell, B. Larsen, & J. Wiborg-Schneider (Eds.), *Celebrating scholarly communication studies: A festschrift for Olle Persson at his 60th birthday* (pp. 9–24). Aalborg, Copenhagen, Umeå and Sydney: International Society for Scientometrics and Informetrics.

- \*Petersen, M. A., & Rajan, R. G. (1994). The benefits of lending relationships: Evidence from small business data. *The Journal of Finance*, 49(1), 3-37.
- Piketty, T., (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.
- Pitt, M. (1998). A tale of two gladiators: 'Reading' entrepreneurs as texts. *Organization Studies*, 19(3), 387-414.
- Putnam, L. L., Phillips, N., & Chapman, P. (1999). Metaphors of communication and organization. In S. Clegg, C. Hardy, & W. R. Nord (Eds.). *Managing organizations: Current issues* (pp. 125-158). London: Sage Publications.
- Qian, H., & Acs, Z. J. (2013). An absorptive capacity theory of knowledge spillover entrepreneurship. *Small Business Economics*, 40(2), 185-197.
- Ramoglou, S., & Tsang, E. W. (2016). A realist perspective of entrepreneurship: Opportunities as propensities. *Academy of Management Review*, 41(3), 410-434.
- \*Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761-787.
- \*Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., Lopez-Garcia, P., & Chin, N. (2005). Global entrepreneurship monitor: Data collection design and implementation 1998-2003. *Small Business Economics*, 24(3), 205-231.
- Rindova, V., Barry, D., & Ketchen, D. J. (2009). Entrepreneurship as emancipation. *Academy of Management Review*, 34(3), 477-491.
- \*Ruef, M., Aldrich, H. E., & Carter, N. M. (2003). The structure of founding teams: Homophily, strong ties, and isolation among US entrepreneurs. *American Sociological Review*, 68(2), 195-222.
- \*Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914-933.
- \*Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243-263.
- Sarasvathy, S. D., & Venkataraman, S. (2011). Entrepreneurship as method: Open questions for an entrepreneurial future. *Entrepreneurship Theory and Practice*, 35(1), 113-135.
- Saxenian, A. (1990). Regional networks and the resurgence of Silicon Valley. *California Management Review*, 33(1), 89-112.
- \*Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003a). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal*, 46(2), 179-194.
- \*Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003b). Toward a theory of agency and altruism in family firms. *Journal of Business Venturing*, 18(4), 473-490.
- \*Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, 12(2), 99-116.
- \*Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11(4), 448-469.
- \*Shane, S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. *Small Business Economics*, 33(2), 141-149.
- \*Shane, S., & Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science*, 48(3), 364-381.
- \*Shane, S., Locke, E. A., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resource Management Review*, 13(2), 257-279.
- \*Shane, S., & Stuart, T. (2002). Organizational endowments and the performance of university start-ups. *Management Science*, 48(1), 154-170.

- \*Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
- Shimizu, K. (2012). Risks of corporate entrepreneurship: Autonomy and agency issues. *Organization Science*, 23(1), 194-206.
- \*Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of Management Review*, 28(2), 318-328.
- Shepherd, D. A. (2015). Party on! A call for entrepreneurship research that is more interactive, activity based, cognitively hot, compassionate, and prosocial. *Journal of Business Venturing*, 30(4), 489-507.
- Shepherd, D. A., McMullen, J. S., & Jennings, P. D. (2007). The formation of opportunity beliefs: Overcoming ignorance and reducing doubt. *Strategic Entrepreneurship Journal*, 1(1 - 2), 75-95.
- Shepherd, D. A., McMullen, J. S., & Ocasio, W. (2017). Is that an opportunity? An attention model of top managers' opportunity beliefs for strategic action. *Strategic Management Journal*, 38(3), 626-644.
- Shepherd, D.A. & Patzelt, H. (2017). *Trailblazing in entrepreneurship: Creating new paths for understanding the field*. Cham, Switzerland: Springer International Publishing.
- Shepherd, D. A., Patzelt, H., & Wolfe, M. (2011). Moving forward from project failure: Negative emotions, affective commitment, and learning from the experience. *Academy of Management Journal*, 54(6), 1229-1259.
- Shepherd, D. A., & Suddaby, R. (2017). Theory building: A review and integration. *Journal of Management*, 43(1), 59-86.
- Shepherd, D. A. & Sutcliffe, K. M. (2011). Inductive top-down theorizing: A source of new theories of organization. *Academy of Management Review*, 36(2), 361-380.
- Shepherd, D. A., & Sutcliffe, K. M. (2015). The use of anthropomorphizing as a tool for generating organizational theories. *Academy of Management Annals*, 9(1), 97-142.
- Shepherd, D. A., & Williams, T. A. (2014). Local venturing as compassion organizing in the aftermath of a natural disaster: The role of localness and community in reducing suffering. *Journal of Management Studies*, 51(6), 952-994.
- \*Simon, M., Houghton, S. M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing*, 15(2), 113-134.
- \*Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4), 339-358.
- Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2), 381-403.
- Sørensen, J. B., & Fassiotto, M. A. (2011). Organizations as fonts of entrepreneurship. *Organization Science*, 22(5), 1322-1331.
- \*Stam, W., & Elfring, T. (2008). Entrepreneurial orientation and new venture performance: The moderating role of intra-and extraindustry social capital. *Academy of Management Journal*, 51(1), 97-111.
- \*Stevenson, H. H., & Jarillo, J. C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, 11, 17-27.
- Stewart, A., & Cotton, J. (2013). Making sense of entrepreneurship journals: Journal rankings and policy choices. *International Journal of Entrepreneurial Behavior & Research*, 19(3), 303-323.
- \*Steyaert, C. (2007). 'Entrepreneurship' as a conceptual attractor? A review of process theories in 20 years of entrepreneurship studies. *Entrepreneurship and Regional Development*, 19(6), 453-477.
- \*Stuart, T. E., Hoang, H., & Hybels, R. C. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly*, 44(2), 315-349.
- Suddaby, R., Bruton, G. D., & Si, S. X. (2015). Entrepreneurship through a qualitative lens: Insights on the construction and/or discovery of entrepreneurial opportunity. *Journal of Business Venturing*, 30(1), 1-10.

- Tsoukas, H. (1993). Analogical reasoning and knowledge generation in organization theory. *Organization Studies*, 14(3), 323-346.
- \*Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341-358.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. Katz & R. Brockhaus (Eds.), *Advances in entrepreneurship, firm emergence, and growth*, 3(1), 119-138. Greenwich, CT: JAI Press.
- von Hippel, E. (1976). The dominant role of users in the scientific instrument innovation process. *Research Policy*, 5(3), 212-239.
- Wasserman, N. (2003). Founder-CEO succession and the paradox of entrepreneurial success. *Organization Science*, 14(2), 149-172.
- Wasserman, N. (2016). The throne vs. the kingdom: Founder control and value creation in startups. *Strategic Management Journal*. doi: 10.1002/smj.2478
- , K. E. (1989). Theory construction as disciplined imagination. *Academy of Management Review* 14(4), 516-531.
- \*Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship Theory and Practice*, 35(1), 165-184.
- Welter, F., Baker, T., Audretsch, D. B., & Gartner, W. B. (2016). Everyday entrepreneurship—A call for entrepreneurship research to embrace entrepreneurial diversity. *Entrepreneurship Theory and Practice*. doi:10.1111/etap.12258
- \*Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1), 27-55.
- \*Wiklund, J., & Shepherd, D. (2003a). Aspiring for, and achieving growth: The moderating role of resources and opportunities. *Journal of Management Studies*, 40(8), 1919-1941.
- \*Wiklund, J., & Shepherd, D. (2003b). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-1314.
- \*Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71-91.
- Williams, T. A., & Shepherd, D. A. (2016). Building resilience or providing sustenance: Different paths of emergent ventures in the aftermath of the Haiti earthquake. *Academy of Management Journal*, 59(6), 2069-2102.
- Winter, S. G. (2016). The place of entrepreneurship in “The economics that might have been.” *Small Business Economics*, 47(1), 15-34.
- Wu, C., McMullen, J. S., Neubert, M. J., & Yi, X. (2008). The influence of leader regulatory focus on employee creativity. *Journal of Business Venturing*, 23(5), 587-602.
- \*Yli-Renko, H., Autio, E., & Sapienza, H. J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal*, 22(6-7), 587-613.
- \*Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10(1), 43-58.
- \*Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, 28(4), 363-381.
- \*Zahra, S. A., Ireland, R. D., & Hitt, M. A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43(5), 925-950.
- \*Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27(3), 414-431.