Editorial

Party On! A call for entrepreneurship research that is more interactive, activity based, cognitively hot, compassionate, and prosocial ☆

It is the *Journal of Business Venturing's* (*JBV*) 30th birthday. Although the community of entrepreneurship scholars deserves to celebrate *JBV*'s achievements over the last 30 years (and congratulate the journal's parents—Ian Macmillan and S. Venkataraman), my focus is more on the future of entrepreneurship (and by extension *JBV*). A focus on entrepreneurship is both timeless and timely. On the one hand, entrepreneurship is timeless given the long-recognized importance of entrepreneurs to economies and societies (e.g., Jean Baptiste who supposedly coined the term in about 1800). On the other hand, a discussion of entrepreneurship is timely because now that the field of entrepreneurship has achieved legitimacy, it faces both opportunities and threats. It is thus timely to acknowledge the threats and think about opportunities to advance the field. A discussion of entrepreneurship is also timely because society faces a number of grand challenges (including the durability of poverty, environmental degradation [Dorado and Ventresca, 2013]), challenges well suited to entrepreneurial responses.

As a result, I firmly believe that the future of the field of entrepreneurship is bright but only if we continue to be entrepreneurial in our research. However, in many ways, remaining entrepreneurial in our research might be easier said than done. Our successes may be leading us to a competency trap (Levitt and March, 1988) that rewards in the short run playing it safe by using "accepted" theories and approaches to address increasingly narrow research questions of interest to a smaller audience. This is not to say that this type of incremental research is not important to the field; it is a criticial component. However, if incremental research begins to dominate and crowd out more transformational research, we run the very real risk that the field will stagnate and lose what is "special" about it—that is, lose that very real and widespread willingness to accept considerable novelty in questioning, theorizing, and testing to generate new and interesting insights.[1]

As I think about the field of entrepreneurship's future, my purpose in this paper is not to replace Venkataraman's (Shane and Venkataraman, 2000; Venkataraman, 1997) or others' (e.g., Busenitz et al., 2003; Carlsson et al., 2013; Davidsson, 2003; Gartner, 1990; Wiklund et al., 2011) delineation of entrepreneurship's distinctive domain with my own but, rather, to highlight potential sources of vitality for its future. This vitality will likely continually change the boundaries of what is labeled as entrepreneurship.[2]

Although research opportunities remain somewhat uncertain and many potential avenues could be explored to fuel and maintain the vitality of the field of entrepreneurship, I propose that future contributions from entrepreneurial studies will come from viewing the entrepreneurial process as one of generating and refining potential opportunities through building, engaging, and transforming communities of inquiry; as one constituted by a pattern of activities that is dynamic, recursive, and immersed in entrepreneurial practice; as one in which the head engages the heart and the heart engages the head; and as one of motivations beyond solely those of financial goals. I believe that such an approach will increase our understanding of how entrepreneurial action will meet some of the grand challenges of our time and thereby make important contributions to the field of entrepreneurship.

First, there is an established body of research on entrepreneurial cognition that has focused on an individual's beliefs about whether a situation represents an opportunity (e.g., Autio et al., 2013; Cornelissen and Clarke, 2010; Gregoire, Barr and Shepherd, 2010;

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[1] I realize that some could make the case that we have too little incremental research (e.g., calls for more replication studies), but thinking about future entrepreneurship research, I am far more concerned with "exploitation" crowding out "exploration" (consistent with March [1991]) than I am of the reverse.

[2] Therefore, as researchers perhaps, we should be less concerned with whether our current entrepreneurial work fits within published domain statements of the field because the field of entrepreneurship has likely already "moved," and our current research might have the opportunity to make a contribution by further shifting its boundaries (in retrospect).

Gregoire et al., 2010; Gruber et al., 2013; Keh et al., 2002; McMullen and Shepherd, 2006; Tang et al., 2012). Based on its cognitive psychology underpinnings, it is not surprising that most of this research focuses on individuals' attributes (Baron and Ensley, 2006; Mitchell et al., 2002; Shane, 2000; Shepherd and DeTienne, 2005) or their cognitive processes (Bryant, 2007; Busenitz and Barney, 1997; Cornelissen and Clarke, 2010; Gregoire et al., 2010) to explain how individuals notice, interpret, and/or evaluate potential opportunities. To complement this body of research and extend our understanding of entrepreneurial phenomena, future entrepreneurship can further explore a more interactive perspective of the entrepreneurial process: how a community of inquiry contributes to the refinement of a potential opportunity and changes in the entrepreneur's mind, how potential opportunities transform a community of inquiry, and the mutual adjustment between the entrepreneur's mind and the community through an evolving potential opportunity.

Second, research has substantially increased our understanding of the outcomes (Bornstein, 2004; Dean and McMullen, 2007; Foss et al., 2007; Roberts and Woods, 2005) and the antecedents of entrepreneurial action (Krueger, 2007; McMullen and Shepherd, 2006; Meek et al., 2010; Mitchell and Shepherd, 2010). Complementing this research on entrepreneurial action, scholars will make important contributions by investigating the many activities underlying a single entrepreneurial action. Specifically, following the lead of research on nascent entrepreneurship that focuses less on *the single act* of exploiting an opportunity and more on the *series of activities* involved in the emergence of a new firm (Delmar and Shane, 2004; Gartner, 1985; Lichtenstein et al., 2007), future research can focus on *activity* as the key unit of analysis. This research will help break down entrepreneurial action into its constituent activities and explore the inter-relationships between activities, the inter-relationship between an activity (or sequence of activities) and the motivation to form an opportunity belief, and the inter-relationship between an activity (or sequence of activities) and the knowledge to form an opportunity belief. In doing so, such research will begin to build a theory of the micro-foundations of entrepreneurial action.

Third, we have a good understanding of the role of cognition in performing tasks central to the entrepreneurial process, such as identifying (e.g., Ardichvili et al., 2003; Corbett, 2005; Gregoire et al., 2010), evaluating (e.g., Haynie et al., 2009; Keh et al., 2002), and acting (e.g., Autio et al., 2013; Hmieleski and Baron, 2008; McMullen and Shepherd, 2006) on potential opportunities. Furthermore, we are beginning to gain a deeper understanding of the role of emotion in an entrepreneur's cognitive processing of information for important tasks (e.g., Baron, 2008; Foo et al., 2009; Shepherd, 2003; Welpe et al., 2012). By building on the notion of hot cognition—for example, that emotions influence cognitive processing in the entrepreneurial context (Cardon et al., 2012)—future research has the opportunity to make an important contribution by exploring the opposite relationship—namely, investigating the role of entrepreneurial activity in generating emotions (both positive and negative) primarily through engaging in challenging entrepreneurial tasks. Based on (or in conjunction with) such research, future research will begin to explore the reciprocal relationship between cognitions and emotions as individuals engage in challenging entrepreneurial tasks over time.

Finally, recent developments in the field of entrepreneurship have come from scholars exploring outcomes of entrepreneurial actions that benefit others—for example, research on social entrepreneurship (e.g., Dacin et al., 2011; Dees, 1998; Mair and Marti, 2006; McMullen, 2011; Peredo and Chrisman, 2006), environmental entrepreneurship (e.g., Dean and McMullen, 2007; Meek et al., 2010; York and Venkataraman, 2010), and sustainable development (e.g., Hall et al., 2010; Shepherd and Patzelt, 2011). Substantial contributions to these streams of research are likely to come from research that builds on and extends the compassion organizing (e.g., Dutton, 2003; Dutton et al., 2006; George, 2013; Kanov et al., 2004; Lilius et al., 2008) and prosocial motivation (e.g., Batson, 1998; De Dreu, 2006; Grant, 2007, 2008; Grant and Berry, 2011; Grant and Sumanth, 2009) literatures by exploring the unique role of entrepreneurial actions and their underlying activities. That is, entrepreneurship scholars are well positioned to explore how suffering can be alleviated when individuals go beyond relying on the normal routines of well-established organizations by creating new routines within established organizations or by creating new organizations, how suffering can be alleviated in non-organizational members, and how actors in resource devastated environments can still create new ventures to alleviate others' suffering. Over and above (or in conjunction with) exploring individuals' capabilities to act entrepreneurially to alleviate others' suffering, future research will likely make important contributions by building on and extending the notion of prosocial motivation to entrepreneurs' compassionate venturing and the enhancement of the entrepreneur's well-being.

In the sections that follow, I develop each of these sources of continued vitality in more detail. However, it is important to note that they are not the only potential sources of vitality going forward. I focus on these four sources as a basis for future research for four main reasons. (1) These four potential sources are *not inconsistent* with the extant literature, which allows us to build on what has gone before but, at the same time, helps us overcome (or sidestep) current and future obstacles to existing streams of research. (2) Regardless of the definition of the field, the notions of opportunity and the actions of individuals are invariably central in entrepreneurship research discussions. The focus of this paper is consistent with these fundamentals. (3) Each perspective is grounded in rich scholarship from another field (e.g., theories, methods, statistical techniques, and so on), which enables us—through combination, recombination, and creativity—to (hopefully) extend both the entrepreneurship field and the "other" fields. (4) We know that the nature of potential opportunities is related to an individual's (or an organization's) prior knowledge, and the same principle applies to me when I think about future research opportunities. Although these themes required me to step outside my comfort zone, they are still very much related to my idiosyncratic knowledge of the psychology of entrepreneurship. There are many great research opportunities within and outside these topics.

A more interactive perspective of entrepreneurial opportunity

The dominant cognitive psychology perspective

Although there is an ongoing debate about the nature and definition of opportunities (e.g., Davidsson, 2003; Dimov, 2011; Gartner et al., 2003; McMullen et al., 2007; Short et al., 2010), it is commonly acknowledged that opportunities are uncertain ex ante (Knight, 1921) and can only be determined post hoc. Accordingly, recent research on entrepreneurial opportunities has largely focused on an

individual's beliefs about whether a situation (e.g., a change in a technology or market) represents an opportunity for someone (i.e., third-person opportunity) (e.g., Cornelissen and Clarke, 2010; Grégoire and Shepherd, 2012; Gregoire et al., 2010; Gruber et al., 2013; Shepherd and DeTienne, 2005) and/or whether it represents an opportunity for him or her personally (i.e., first-person opportunity) (e.g., Autio et al., 2013; Fitzsimmons and Douglas, 2011; Haynie et al., 2009; Keh et al., 2002; Mitchell and Shepherd, 2010; Tang et al., 2012). The formation of opportunity beliefs (first- and/or third-person opportunity beliefs) (McMullen and Shepherd, 2006) are typically explained in terms of cognitive attributes, such as prior knowledge (e.g., Shane, 2000; Shepherd and DeTienne, 2005) and expert prototypes (Baron and Ensley, 2006), and are generally explored in terms of cognitive processes, such as heuristics (Bryant, 2007; Busenitz and Barney, 1997), metaphors (Cornelissen and Clarke, 2010), and structural alignments (Grégoire and Shepherd, 2012; Gregoire et al., 2010). Given the *cognitive* nature of this research, it is not surprising that the emphasis has been on how *individuals* notice and attempt to make sense of signals of potential opportunity (with social resources sometimes playing a supporting role). I propose that this cognitive research on opportunity belief can be complemented and expanded by future research taking a more *interactive* perspective. Such future research can provide additional insights into the refinement of potential opportunities, the transformations of communities around those potential opportunities, and the mutual adjustment involving the two.

An interactive perspective of the identification and refinement of a potential opportunity

Although there are a number of social perspectives that could make future contributions to our understanding of the formation of opportunity beliefs (e.g., collective cognition [Shalley and Perry-Smith, 2008; West, 2007], relational capital [Hite, 2005; Yli-Renko et al., 2001], brokerage [Burt, 2005; Stinchfield et al., 2013], crescive conditions [Dorado and Ventresca, 2013], and social structure [Sorenson and Audia, 2000]), one approach that seems to have considerable potential is thinking of a potential opportunity in terms of a *process of social interaction* (between a community and the entrepreneur) rather than solely as an *outcome of thinking* (in the mind of the entrepreneur). This is not to suggest that the mind of the individual is not important; clearly it is. However, by shifting the focus from the knowledge structure (i.e., schema [e.g., Corbett and Hmieleski, 2007; Krueger, 2003], mental models [e.g., Hill and Levenhagen, 1995; Krueger, 2007], scripts [e.g., Mitchell et al., 2000; Smith et al., 2009], or prototypes [Baron and Ensley, 2006]) to the embodiment of knowledge between an entrepreneur and a community, we will likely gain more clarity about the important role of mutual adjustment between the two, leading to a deeper understanding of how potential opportunities are developed and refined.

Specifically, while a potential opportunity can be generated through an abductive process in the mind of an individual (Swedberg, 2009), the idea for a potential opportunity is likely to be triggered by an individual's experiencing the world and must then be tested back in that context—that is, "(ideas) must be tested against the phenomena they are intended to unpack" (Prawat, 1995: 17). This testing of a potential opportunity involves subjecting it "to a community whose standards allow us to correct and revise our ideas" (Pardales and Girod, 2006: 302). A community of inquiry for a potential opportunity could represent potential stakeholders that provide feedback on the veracity of the potential opportunity (Autio et al., 2013). For example, a reality check on a potential opportunity can come in the form of a community made up of other entrepreneurs, financiers, technologists, consumers, and suppliers (Klofsten, 2005; Kloppenberg, 1989; Seixas, 1993; Wilson, 1990). Experiencing criticism from the community is likely to raise doubt in the entrepreneur's mind, which informs and motivates him or her to change the potential opportunity or abandon it. As the potential opportunity is shaped and refined, the entrepreneur further tests it against socially verifiable facts. Moreover, the community itself may be transformed as a result of interacting with the potential opportunity. When the members of a community of inquiry come together in agreement, there is belief in the potential opportunity (Autio et al., 2013).

Potential opportunity of the mind and of the world

A more interactive perspective of opportunity is consistent with pragmatism, which involves a number of key assumptions. First, there is a world independent of individuals' minds, which people can develop beliefs about (Peirce, 1955). Second, individuals (i.e., entrepreneurs, scholars, and all others) can only access the real world through the mental world (Peirce, 1955); therefore, the two are intertwined (Gergen, 1994). Finally, people strive for truth but never achieve it. What the "community of inquiry believes is the truth" is the current best opinion, which itself is provisional (Haskel, 1984; Seixas, 1993). These assumptions have implications for entrepreneurship research. While studies of opportunity have been classified as taking the perspective that opportunities are either discovered or created and that there are contexts in which creation dominates discovery and vice versa (Alvarez and Barney, 2007), an interaction perspective of opportunity offers a different path for future research (consistent with Dewey's (1939) characterization of the mind–world dualism). Under this perspective, potential opportunities involve the inter-relationship (i.e., mutual adjustment) of the mind and the world—potential opportunities are not the exclusive domain of one or the other. Indeed, Gergen (1994: 129) explained how the distinction (i.e., division and isolation) between the mind and the world creates a vexing problem: "When a real world is to be reflected by a mental world and the only means of determining the match is via the mental world, the real world will always remain opaque and the relationship between the two inexplicable." Future research can contribute to the understanding of opportunity by conceiving potential opportunities as plausible ways of thinking and talking about the world that prove useful (through action) but themselves are tentatively held and subject to revision as they enter and re-enter the environment.

Research opportunities from a more interactive perspective of entrepreneurial opportunity

Community contributing to the refinement of a potential opportunity

Consistent with this interactive view of opportunity identification and refinement, the notion of potential opportunity is not solely in the mind of its initial creator but is also grounded in a community. I believe that this notion opens up a number of interesting possibilities for future research. For example, to the extent that an opportunity does not come fully formed, the potential opportunity that is initially identified will likely change due to the social forces of a community of inquiry. What makes up a community for a particular potential opportunity? Specifically, who constitutes this community, how is it formed, how does it change over time (in composition and in mind), and why are some communities more influential in "changing" a potential opportunity than others? What are the entrepreneurs' different strategies for constructing, engaging, and learning from communities of inquiry, and why (and when) are some entrepreneurs more effective at constructing, engaging, and learning from communities of inquiry than others?

Although a potential opportunity will likely change as a result of feedback from the community, it is important to gain a deeper understanding of the nature of this feedback and the resulting changes. How dramatically does a potential opportunity change as the result of its interaction with the community, and does the amount of change decrease over time—consistent with the notion of refinement—or is there a different pattern by which it evolves over time (e.g., some form of punctuated equilibrium model in which there are periods of incremental refinement followed by radical change)? Is the change so great that the eventual opportunity has little resemblance to its original form (I certainly have research papers that have gone through such a substantial transformation during the peer review process)? Are there patterns of resistance to community-driven changes, and what influence (if any) do those have on the development, refinement, or transformation of the potential opportunity?

Potential opportunities transforming communities of inquiry

The discussion above largely suggests a unidirectional flow of information—from the community to the individual such that only the individual's mind changes from feedback about the potential opportunity. However, the community of inquiry—and more generally the external environment (i.e., the world)—is likely also changed from being exposed to the potential opportunity. That is, in the process of testing the veracity of a potential opportunity, there is a change in the creator's mind about the potential opportunity *and* a change in the world in which the potential opportunity is situated. Therefore, when it comes to understanding opportunity dynamics from a more interaction-based perspective, the research challenge is not so much to determine when or whether the potential opportunity is in the "mind" or in the "world" but to consider both sides of the interaction; the mind and the world are inextricably linked as a "functional unit" through a process of mutual adjustment (Dewey, 1939).

Future research can further explore these notions through an extension of user innovation to user entrepreneurship (Shah and Tripsas, 2007). For example, rodeo kayaking is an example of a group of individuals seeing a potential opportunity to modify their kayaks so they could do tricks like enter waves (in the river) sideways and backwards. People saw them doing these tricks and asked the riders whether they would make them one of these special kayaks. The potential opportunity for rodeo kayaks was refined to include the development of plastic hulls and center-buoyant squirt boats, which allowed "flashier tricks on steeper and more dangerous runs" and "brought media attention to the sport and a growing number of people [trying] out rodeo kayaking" (Baldwin et al., 2006: 1295). The idea of rodeo kayaking changed the way others thought about the sport and where the sport could be played (e.g., steeper rivers). The opportunity associated with rodeo kayaking originated in one individual's mind, but it was developed by a community of users, which itself was changing as a result of the development of the potential opportunity. The rodeo kayaking opportunity illustrates the notion of mutual adjustment well: the constant refinement of a potential opportunity between the mind of the creator(s) (which changed over time) and the community of users and spectators (which changed over time).

Consistent with the call above for research about how a potential opportunity changes depending on interactions with a community, future research can make an important contribution to the entrepreneurship field by generating a deeper understanding of how and why a potential opportunity transforms a community. How do changes in the nature of a potential opportunity change the community—in its composition, collective mind, collective actions, and so on? What if we challenge the implicit assumption that there is only one community or that the community is homogenous in how it is transformed by a potential opportunity? Perhaps it morphs in one direction, but maybe it bifurcates, and the entrepreneur needs to decide which branch to take (which in turn transforms the community)? Perhaps there are multiple communities, and each is transformed differently by the same potential opportunity, or maybe the potential opportunity becomes two different potential opportunities—one for each community. Of course, before a study can explore the notion of different communities or sub-communities, it will need to offer a clear definition and operationalization of a "community, or communities for a potential opportunity."

Mutual adjustment between the entrepreneur's mind and community

Future research can explore mutual adjustment—the ongoing reciprocal relationship of changes in the individual's mind and transformations of the community through the evolution of a potential opportunity. What are the mechanisms that start and perpetuate this reciprocal relationship of the individual and the community in the development and refinement of the potential opportunity? When does the process of refining a potential opportunity stop such that the individual decides to "fully exploit" the potential opportunity, or even when in "full exploitation" mode, does the potential opportunity continue to be changed (further transforming the mind of the entrepreneur and transforming the community)? Perhaps there is variance in this outcome: some entrepreneurs and some communities in some situations are always "updating," whereas this is not the case for other entrepreneurs, communities, and/or situations. Naturally, gaining a deeper understanding of starting, perpetuating, and terminating the "interaction" process of

developing a specific potential opportunity would require considerable scholarly work, yet I believe this scholarly work would greatly benefit the field.

Next steps

In Fig. 1, I offer a sketch of a more interaction-based perspective of entrepreneurial opportunities. Although there are many research opportunities possible from taking a more interaction-based perspective, I propose that important future research avenues worth exploring include (1) how experiencing the world (through actions) leads to abducting an entrepreneurial idea, (2) how an entrepreneurial idea generates action on a potential opportunity, (3) how acting on a potential opportunity informs the individual's belief (or reduces doubt), (4) how a community of inquiry verifies the potential opportunity, (5) how verification from the community of inquiry generates changes to the potential opportunity and the individual's actions for experiencing the world, (6) how changes in belief/doubt refine the potential opportunity and the decision to abandon it, and (7) how the potential opportunity transforms the community of inquiry.

Entrepreneurship that is more activity based

Toward a theory of the micro-foundations of entrepreneurial action

Entrepreneurial action continues to be of considerable interest to researchers (Autio et al., 2013; Brettel et al., 2012; McKelvie et al., 2011; Meek et al., 2010; Mitchell and Shepherd, 2010). Entrepreneurial action refers to "behavior in response to a judgmental decision under uncertainty about a possible opportunity for profit" (McMullen and Shepherd, 2006: 134). These actions can generate economic gains and losses for the entrepreneur (Foss et al., 2007; Klein, 2008), preserve (Dean and McMullen, 2007) and/or destroy the natural environment (Dorfman and Dorfman, 1993; Tietenberg, 2000), preserve (Bornstein, 2004; Roberts and Woods, 2005) and/or destroy the culture of communities (Schuler et al., 1998), and create (Bornstein, 2004; Dacin et al., 2011) and/or destroy (Khan et al., 2007) value for society. As illustrated by these studies, there can be a variety of outcomes or consequences of entrepreneurial action to pursue a potential opportunity.

Although scholars are understandably interested in the ultimate outcomes of entrepreneurial action (as discussed above), those interested in nascent entrepreneurship focus less on *the single* act of exploiting an opportunity and more on the *series of actions* involved in the emergence of a new firm (Delmar and Shane, 2004; Gartner, 1985; Lichtenstein et al., 2007). Indeed, nascent entrepreneurs engage in a number of activities, including those that make their businesses more tangible to others, such as, for example, they look for facilities and equipment, seek and receive financial support, form a legal entity, organize a team, purchase facilities and equipment, and devote full time to the business (Carter et al., 1996: 151). However, there is more work to be done in understanding the "why" underlying these activities of organizational emergence as well as the nature of the inter-relationship between these activities.
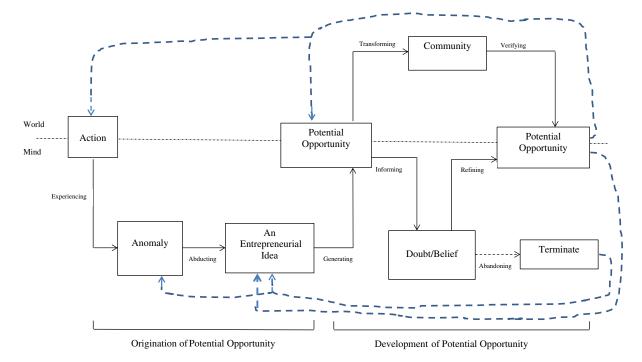

Fig. 1. A sketch of a more interaction-based perspective of entrepreneurial opportunities.

A continuation of this line of thinking is to acknowledge that entrepreneurial action can be thought of as a dynamic, highly iterative process of engaging activities and experiences that inform and are informed by a potential opportunity. From the perspective of *entrepreneuring* as a series of activities as part of the entrepreneurial process, *activity* is the key unit of analysis. In this light, research could explore key activities and their outcomes to provide an understanding of the micro-foundations of entrepreneurial action. Without an understanding of the micro-foundations of entrepreneurial action, the picture of the entrepreneurial process is more linear, coarse grained, and detached from everyday life, providing little insight into the practice of entrepreneurship. Rather, with an emphasis on activities, the picture of the entrepreneurial process is one that is more dynamic, fine grained, and immersed.

As detailed above in my call for a more interaction-based perspective to entrepreneurship research, the refinement of a potential opportunity generates (and reflects) changes in the originator's mind and changes to its community. These changes are the result of a series of inter-related activities. For example, to the extent that interaction with the community of inquiry leads to or maintains some level of doubt over the veracity of the entrepreneurial idea—experienced as not knowing (Locke et al., 2008)—this irritant motivates further inquiry. Inquiry represents the "activity of resolving genuine doubt in order to arrive at stable beliefs" (Locke et al., 2008: 908). That is, doubt motivates activities that inform (through changes in the individual's mind) the refinement of the entrepreneurial idea. Doubt can be considered "nothing less than an opportunity to reenter the present" (Shanley, 2005: viii) to help move toward a more fertile idea (Paavola, 2004).

Future research on the micro-foundations of entrepreneurial action

Breaking down entrepreneurial action into constituent activities

I propose that future research exploring the many activities that constitute entrepreneurial action will make a substantial contribution to the field of entrepreneurship because it will provide the basis for theorizing and testing micro-foundation models of entrepreneurial action. For example, Lumpkin and Dess (1996: 136) noted that the "essential act of entrepreneurship is new entry. New entry can be accomplished by entering new or established markets with new or existing goods or services. New entry is the act of launching a new venture, either by a start-up firm, through an existing firm, or via internal corporate venturing." To complement this research on new entry, future research can focus on the series of activities that lead to new entry, activities that originate from a guess and activities that refine and transform a potential opportunity toward the exploitation of the believed opportunity (including, in some cases, the activities associated with the creation of a new organization). Future research can explore the finer-grained activities that make up broader notions of entrepreneurial action and the links between these activities. Such research would offer the basis for an important contribution to the field because although there has been some recognition that a potential opportunity may change over time (e.g., Dimov, 2007; McMullen and Dimov, 2013; Sarasvathy, 2001), there has been little investigation of the activities involved in these changes. The emphasis has been either on a somewhat fully formed entrepreneurial idea (with only minor changes, if any at all [Gruber et al., 2013]) or on a mindset as an antecedent to these activities (e.g., effectual logic [Sarasvathy, 2001]). For example, Shane investigated eight individuals who had discovered different opportunities to exploit a common technology (three dimensional printing process). The implicit assumption was that opportunities are recognized in a more or less fully formed state, a state ready for exploitation. That is, when an entrepreneur describes *the* opportunity, this single description applies to both what is initially recognized and what is assessed (Gruber et al., 2013).

Future research can complement our understanding of whether or not to exploit a focal potential opportunity by exploring the activities involved from the origination of a potential opportunity, its continuous evaluation and refinement, and its eventual exploitation. This perspective recognizes that a potential opportunity begins as a guess that is only held tentatively yet still guides subsequent activities. These activities refine and transform the initial entrepreneurial idea. Rather than the potential entrepreneurial opportunity changing infrequently and/or minimally, I suspect that in many cases, an entrepreneurial idea is likely to change frequently and substantially. An important way to understand these changes in a potential opportunity is to focus on the activities that combine to shape the potential opportunity and the entrepreneur's (and the community's) belief in it. The individual's (and the community's) doubts and beliefs are likely to have important implications for these activities (and therefore to a theory of the micro-foundations of entrepreneurial action), to which we now turn.

Role of opportunity doubt and belief in entrepreneurial activities

There are likely activities stimulated by doubt as well as activities related to belief. What are the activities stimulated by doubt: what is activated to resolve doubt, to what effect, and how does the nature of these activities change as doubt is resolved to form a first-person opportunity belief? Are some activities more likely to "reverse" a belief by re-inserting doubt (and perhaps further refinement of the potential opportunity), and why are some individuals more likely to engage in these activities than others? This perspective draws attention to the many different activities involved in the entrepreneurial process: there are activities in probing an uncertain environment (Brown and Eisenhardt, 1997; McGrath, 1999), activities in combining and recombining resources to generate potential opportunities (Baker and Nelson, 2005; Baker et al., 2003), activities that engage the community and respond to that engagement (Chandra and Coviello, 2010; Haefliger et al., 2010; Shah and Tripsas, 2007), activities to test the veracity of an opportunity conjecture (Shane and Eckhardt, 2003; Shepherd et al., 2012), activities in exploiting the potential opportunity through the emergence of a new organization (Carter et al., 1996; Davidsson and Honig, 2003; Lichtenstein et al., 2007), and so on. As indicated by the citations above, entrepreneurship scholars have made important progress in exploring some of these activities, but in many ways, they have only touched the tip of the iceberg; there is still much to do.
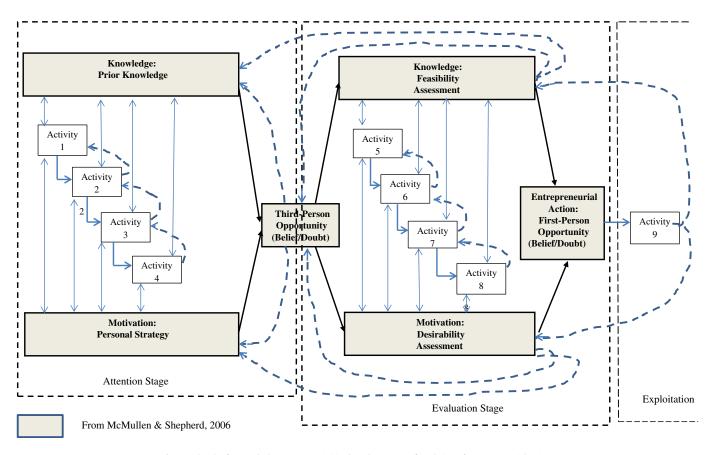
Fig. 2. A sketch of research that is more activities based as a micro-foundation of entrepreneurial action.

Next steps

In Fig. 2, I present some of the important aspects of the above discussion to provide a sketch of a more activity-based perspective underlying entrepreneurial action. The figure builds on the basic model of entrepreneurial action (McMullen and Shepherd, 2006), and research on the activities that underlie the formation of opportunity beliefs holds the promise of building toward a theory of the micro-foundations of entrepreneurial action. Although there are many research opportunities possible from taking a more activity-based perspective, I propose that important future research avenues worth exploring include (1) which activities lead to the identification of what is believed (or doubted) to be an opportunity (third- and/or first-person opportunity), (2) how and why an individual's prior knowledge impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (3) how and why the nature of an individual's motivation impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (4) how the inter-relationship between activities contribute to an opportunity belief (third- and/or first-person opportunity), (5) how and why specific activities influence an individual's prior knowledge and motivation (which in turn can influence subsequent activities), (6) how and why changed knowledge in the evaluation stage impacts knowledge in the attention stage for the identification of subsequent potential third-person opportunities, and (7) how and why the changed motivation of the evaluation stage impacts motivation in the attention stage for the identification of subsequent third-person opportunities.

Entrepreneurship that is more cognitively hot

Entrepreneurial cognition and the effect of emotion on these cognitive processes

For a considerable time, researchers have believed that individuals' cognitive abilities are an important driver of entrepreneurial action (for reviews, see Gregoire et al., 2011; Mitchell et al., 2002). It appears that individuals are more capable of navigating aspects of the entrepreneurial process (i.e., recognition, evaluation, and action) when they have considerable knowledge (Davidsson and Honig, 2003; Shane, 2000), have access to information (Fiet, 2007; Hoang and Antoncic, 2003), rapidly make decisions (Eisenhardt, 1989; Forbes, 2005), and are cognitively flexible (Haynie et al., 2010). More recently, researchers have investigated how positive emotions facilitate the entrepreneurial process (Baron, 2008; Cardon et al., 2009) and how negative emotions obstruct it (Shepherd, 2003; Shepherd et al., 2011). As an extension of this research, there are substantial opportunities to explore the influence of the interacting relationships between emotion and cognition to enhance the vitality of entrepreneurship research.

Future research on the role of entrepreneurial activity in emotions

Although, as a field, entrepreneurship is gaining a deeper understanding of the impact of emotions on entrepreneurial cognition, we know little about the reverse—the role of entrepreneurial cognition on emotions—and as a result, there is lack of sufficient understanding of the reciprocal relationship between the two. Entrepreneurial scholars who develop new theoretical perspectives to deepen the understanding of cognitive–emotion processes and examine them empirically have the potential to make important contributions to the field.

Entrepreneurial activities generating positive emotions

An important implication from positive psychology research for entrepreneurship is that the generation of positive emotions is of critical importance for individuals as they adjust and progress in their lives (Fredrickson, 1998, 2001; Seligman and Csikszentmihalyi, 2000; Seligman et al., 2005). However, because extant research has focused primarily on the outcomes of positive emotions (e.g., Baron, 2008; Brundin et al., 2008; Cardon et al., 2009; Grichnik et al., 2010), we know little about how positive emotions are generated in the entrepreneurial context. Given that the benefits of positive emotions are likely to be particularly influential in the entrepreneurial context (Baron, 2008; Cardon et al., 2012), it becomes important to gain a deeper understanding of how individuals generate positive emotions and how these positive emotions influence subsequent cognitions, emotions, and activities within the entrepreneurial process. Furthermore, although entrepreneurs are often categorized by their emotions (e.g., highly passionate) (Cardon et al., 2005, 2009) or their cognitive abilities (Alvarez and Busenitz, 2001; Ardichvili et al., 2003; Corbett, 2005; Ucbasaran et al., 2008) and these differences are used to explain entrepreneurial action and performance, there is an opportunity to complement these *between*-individual differences to investigate *within*-individual variance—namely, how cognitive processing and emotions change over time throughout the entrepreneurial process (for a good example, see Foo et al., 2009).

Challenging entrepreneurial tasks and the generation of positive emotions

Environmental changes can signal potential opportunities (Dutton and Duncan, 1987; Grégoire and Shepherd, 2012; Shane, 2000). For entrepreneurial action to happen, however, the individual first needs to attend to signals of such changes (Dutton, 1993; Shepherd et al., 2007; Tripsas and Gavetti, 2000) and then identify them as implying a potential opportunity (Ardichvili et al., 2003; Gaglio and Katz, 2001; Gregoire et al., 2010; Ucbasaran et al., 2008). Recognizing a potential opportunity is an important yet challenging task. Opportunities are rarely self-evident (like finding $20 on the pavement); they require connecting a new means of supply with an existing yet sometimes latent market demand, an emerging market demand with an existing means of supply, or a new market demand with a new means of supply (Sarasvathy et al., 2010). For the individual, this represents a cognitive process "to make sense of signals of change (e.g., new information about new conditions) to form beliefs regarding whether or not enacting a course of action could

lead to net benefits (for instance, in terms of profit, growth, competitive jockeying and/or other forms of individual or organizational gains)" (Gregoire et al., 2010: 415) for someone who is willing and able. For example, the cognitive processes of structural alignment have been found to be used in the formation of opportunity beliefs (Gregoire et al., 2010) and, while cognitively demanding (Blanchette and Dunbar, 2001; Catrambone and Holyoak, 1989; Holland et al., 1986; Keane et al., 1994), can lead to *mental leaps* (Holyoak and Thagard, 1995). Interestingly, however, successfully completing cognitively demanding tasks is likely to generate positive emotions (Blood and Zatorre, 2001; Russell, 2003; Russell and Milne, 1997). Seen in this light, numerous interesting research questions on the role of emotions arise. Do entrepreneurs believe that progress in identifying potential opportunities is a challenging task, and if they do, does this generate positive emotions? What types of positive emotions arise, and how do these positive emotions influence subsequent cognitions and activities?

According to research in the positive psychology tradition, positive emotions enhance an individual's performance at cognitive tasks, and positive emotions have been found to broaden individuals' scope of attention (Derryberry and Tucker, 2006; Fredrickson and Branigan, 2005; Isen and Daubman, 1984); enhance receptivity to new information (Estrada et al., 1997); facilitate cognitive processes that are more creative (Isen et al., 1987) and flexible (Baumann and Kuhl, 2005; Isen and Daubman, 1984); and generate more physical, intellectual, and social resources (Fredrickson, 2000), including creating new relationships and strengthening existing relationships (Fredrickson et al., 2008; Waugh and Fredrickson, 2006).

To the extent that positive emotions generated from making progress on a challenging entrepreneurial task increase an individual's scope of attention, cognition, and (access to) resources, how do these impact subsequent activities in the entrepreneurial process? Does initial progress create a positive spiral of positive emotions and subsequent progress through the mechanisms of increased scope of attention, cognitive flexibility, and social resources? What are the conditions that start this spiral? For example, perhaps individuals need to meet a threshold level of challenge before generating positive emotions. What is that threshold, how does it differ across individuals, and does it change for an individual for different entrepreneurial tasks? What are the conditions that perpetuate this spiral? Perhaps the threshold of challenge to generate positive emotions needs to increase with each subsequent task, for example, to overcome habituation effects (Ashforth and Kreiner, 2002; Belschak et al., 2006) and to stimulate an emotional reaction. However, does the generation of positive emotions present limitations, such as escalation of commitment, unwillingness to listen to community input, and so on?

It is also important to understand what factors stop this spiral of positive emotions and entrepreneurial progress. There could be factors that obstruct progress—for example, a surprise, such as a negative environmental jolt, bad luck, or another task that requires urgent attention, cognition, and other resources—and/or factors that diminish or eliminate the generation of positive emotions—for example, other events (work or non-work related) that generate negative emotions that take precedence over positive emotions in cognitive processing, such as a serious injury at work, the loss of a loved one, or marital problems. The reverse is also possible: non-work-related events that generate positive emotions (e.g., marital bliss, sports team success, positive recreational experiences, and so on) may help undo negative emotions at work and thereby enhance progress on entrepreneurial tasks.

A reciprocal relationship between challenging entrepreneurial tasks and positive emotions

Future research can offer a more fine-grained understanding of the inter-relationship between progress and positive emotions by exploring how different positive emotions (e.g., curiosity versus happiness) differentially impact the mechanisms of progress (e.g., impact the ability to structurally align new means of supply with potential markets). Perhaps some positive emotions (e.g., curiosity) have a greater impact on individuals' scope of attention than on the other mechanisms (e.g., creativity and the building of social resources). As an additional example, there could be another set of reciprocal relationships. As positive emotions generate a greater scope of attention, does this scope of attention have a positive impact on cognitive processes (e.g., creativity, flexibility, and the generation of diverse alternatives) and on individuals' access to social resources? There are rich research opportunities to explore the inter-relationships between progress in entrepreneurial tasks and positive emotions and the inter-relationships between the attentional, cognitive, and resource mechanisms generated by positive emotions in progress on tasks within the entrepreneurial process.

Challenging entrepreneurial tasks and the generation of negative emotions

Although making progress on a challenging task is likely to generate positive emotions, entrepreneurs may not always feel that they are making progress (Kim et al., 2015; Kuratko et al., 2014). What are the emotional consequences of this lack of progress? It could be that positive emotions are not generated, so the advantages of positive emotions in the form of a broadened scope of attention, greater creativity, and enhanced access to social resources for successfully engaging the entrepreneurial task are not available. It could also be that experiencing high levels of some positive emotions might have negative performance implications. However, or in addition to, my colleagues and I have observed that a lack of progress on an entrepreneurial task appears to generate negative emotions (Shepherd et al., 2014), which likely decreases the scope of attention, diminishes cognitive flexibility and creativity, and socially isolates the individual (Fredrickson, 2001; Fredrickson et al., 2000; Shepherd et al., 2011). Such a situation may trigger a negative spiral whereby the lack of progress would generate negative emotions that then obstruct progress, which generates further negative emotions and so on. As much as entrepreneurship scholars are motivated to understand success (and therefore focus on the positive spirals of positive emotions), it seems important to study the other side of the same coin—failure to progress on an important entrepreneurial task—for instance, by exploring the inter-relationship between negative emotions and attentional scope, creativity, and social resources. Are there instances when some negative emotions or specific levels of negative emotions facilitate progress on an entrepreneurship task? If negative emotions facilitate entrepreneurial progress, what are the mechanisms underlying this relationship (i.e., the "how" and the "why"), and under what conditions do they operate? For example, perhaps at least some negative emotions are necessary to draw an entrepreneur's attention to the focal task and do something about it, but how much attention is

sufficient; how much is too much; and assuming heterogeneity among individuals, why is a specific level of negative emotion functional for some but dysfunctional for others?

Although it has been argued that positive emotions "undo" negative emotions (Fredrickson, 2001; Fredrickson et al., 2000), research has found that people can simultaneously experience both high positive and high negative emotions. What is the effect of this ambivalence on the cognitions required of the current entrepreneurial task and its impact on subsequent tasks and activities? For example, entrepreneurs may exit their businesses for various reasons, including as the result of successfully achieving their goals (e.g., selling their business for a large capital gain). Although a successful exit may generate positive emotions, these are likely intertwined with negative emotions associated with terminating the relationship with their businesses and their employees. Similarly, exiting a failing business is likely to generate feelings of grief, yet these feelings might coincide with feelings of relief that the end has finally arrived. To what extent do entrepreneurial events create high positive and high negative emotions, how do these evolve independently and conjointly over time, and are some entrepreneurs able to maximize the benefits of both high positive and negative emotions while minimizing their costs?

Next steps

In Fig. 3, I present a sketch of a more cognitively hot perspective of entrepreneurship. Although there are many research opportunities possible from taking a more cognitively hot perspective, I propose that important future research avenues worth exploring include (1) how cognitive functioning impacts progress on a challenging entrepreneurial task; (2) how and why progress on a challenging task generates positive and/or negative emotional reactions, and how the level of those reactions are affected; (3) how and why emotional reactions to progress on an entrepreneurial task impact continued cognitive functioning on that task and/or other tasks; (4) how emotional reactions to progress on an entrepreneurial task impact the choice to undertake challenging tasks, and (5) over and above progress on a challenging task, what other factors (work and non-work based) generate positive and/or negative emotional reactions, and what effect do they have on the entrepreneurial process?

Entrepreneurship research that it is more compassionate and prosocial

Heterogeneous motivations to investigate entrepreneurially generated "gains"

People are heterogeneous in their motivations for engaging in the entrepreneurial process. These motivations are an important consideration in determining the appropriateness of a study's outcomes. For example, to a greater or lesser extent, people want to "do good." Entrepreneurship scholars are no exception. By liberally interpreting the notion of "gain," scholars have pursued research
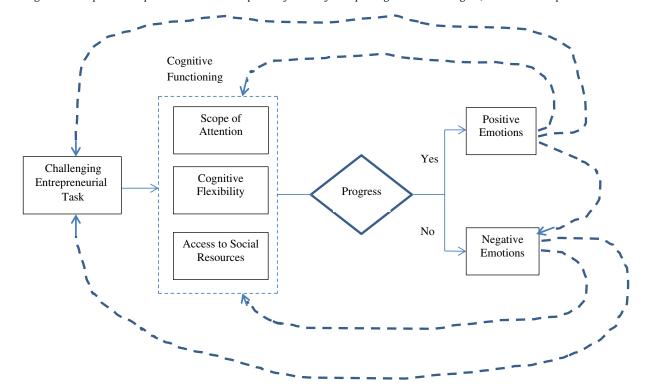

Fig. 3. A sketch of a more cognitively hot perspective of the entrepreneurial process gain for non-organizational others.

that provides a deeper understanding of how individuals and communities can be helped by entrepreneurial action (e.g., Dacin et al., 2011; Dees, 1998; Mair and Marti, 2006; McMullen, 2011; Peredo and Chrisman, 2006). Those more interested in the natural environment have explored why some entrepreneurs generate technologies and products that preserve the natural environment (Dean and McMullen, 2007; Meek et al., 2010; York and Venkataraman, 2010) while some entrepreneurs decide to pursue opportunities that harm nature (Shepherd et al., 2013). As social and sustainable entrepreneurship research expands, we will find new ways in which entrepreneurial action *helps* and also *hurts* people, communities, and nature. Consistent with my comments above about the distinctive domain of entrepreneurship, I submit that even if discussions of definitions of "social entrepreneurship," "sustainable entrepreneurship," and "environmental entrepreneurship" are interesting, it is important that these discussions not turn into an endless debate that constrains or kills interesting research because a specific study does not fit into a pre-determined category of "sustainable" or "social" or "environmental" entrepreneurship. That is, by remaining open minded about boundaries, especially boundaries of topics within the field of entrepreneurship, we provide the conditions for contributions that can expand our understanding of entrepreneurial phenomena.

Compassion organizing

To date, the positive psychology perspective has increased our understanding of how to alleviate people's suffering (e.g., Dutton, 2003; Dutton et al., 2006, 2014; George, 2013; Kanov et al., 2004; Lilius et al., 2008). *Compassion organizing* is "a collective response to a particular incident of human suffering that entails the coordination of individual compassion" and acknowledges that the same structures and routines used for an organization's normal work can be redirected to alleviate a member's suffering (Dutton et al., 2006: 62). Suffering refers to "the experience of pain or loss that evokes a form of anguish that threatens an individual's sense of meaning about his or her personal existence" (Dutton et al., 2006: 60; see also Sutcliffe and Vogus, 2003) and can result from a number of different causes, including personal tragedies, work-related events, and disasters (Frost, 2003; Rynes et al., 2012). Organizations are able to respond compassionately because through existing relationships with organizational members, they are able to collectively *recognize* a member's suffering, *feel* that member's pain, and are in position to *respond* by redirecting existing procedures and processes to alleviate that member's suffering (Dutton et al., 2006; Kanov et al., 2004; Rynes et al., 2012).

There are research opportunities for scholars to build on and extend positive organizational scholarship to gain a deeper understanding of how entrepreneurial actions can alleviate human suffering. Given that most of the research on compassion organizing has been generated by scholars from a positive *organizational* perspective, it is not surprising that the research on compassion organizing largely assumes the existence of a firm and focuses on the use of the firm's "normal" routines for responding to one (or more) of its members' pain (e.g., Dutton et al., 2006). Entrepreneurship scholars are well equipped to explore compassion organizing beyond the assumptions of an existing organization and explore actions not limited by existing routines. This is an important extension because the situations that generate human suffering may be radically different from an established organization's normal course of activities. Furthermore and although compassion organizing refers to alleviating *human* suffering, entrepreneurship scholars (and perhaps compassion organizing scholars) will hopefully take a broader view and consider suffering in terms of humans, animals, communities, the natural environment, and so on. By doing so, entrepreneurship scholars could make an important contribution to the understanding of alleviating suffering (broadly defined for the field but specifically defined in a single study) and, at the same time, extend the boundaries of both entrepreneurship and positive organizational psychology.

Future research on entrepreneurial action alleviating the suffering of others

Beyond the "normal" routines of established organizations

Although there are conditions in which the adaption of an established organization's normal structures and routines can be highly effective at alleviating a member's suffering (Dutton et al., 2006; Kanov et al., 2004), some events may not only cause human suffering but may also disable or obstruct an organization from using its "normal" routines for most tasks, including helping to alleviate its members' suffering (Drabek and McEntire, 2003; Majchrzak et al., 2007). Under these challenging conditions in which established organizations' normal routines are not sufficient for alleviating suffering, entrepreneurship scholars can generate new insights into the alleviation of suffering through studying the creation of new ventures within established organizations and/or through the creation of new independent organizations (e.g., Miller et al., 2012; Shepherd and Williams, 2014). For example, future research can begin to address some of the following questions: What are the constraints that disable or obstruct an organization's normal routines from alleviating human suffering? Why do some create new ventures to alleviate human suffering and others do not? Why do some create a new venture within an established firm while others create a new organization? Why are the objectives of some ventures focused exclusively on alleviating suffering while others are focused on multiple objectives (e.g., profit and alleviating suffering), and how does this influence effectiveness (although I realize the challenges in operationalizing effectiveness in this context)? Why are some entrepreneurial activities and, ultimately, actions more effective at alleviating suffering than others?

Alleviating the suffering of non-organizational members

Prior research has explored how organizations may be effective at responding to their organizational members' suffering (Dutton et al., 2006: 59; see also Dutton et al., 2014; Gittell et al., 2006; Powley, 2009; Rynes et al., 2012) because members of the same organization are more likely to *notice* a colleague's pain (Powley, 2009), have empathy for their colleague who is suffering (Lilius et al., 2011), and are proximal enough to act to alleviate that suffering (Dutton et al., 2006). Entrepreneurship scholars can explore suffering

beyond existing organizational boundaries, specifically how new ventures (within established organizations or newly created independent organizations) are rapidly (and what seems spontaneously) created to alleviate suffering. Why are some (individuals, groups, or organizations) able to notice and understand others' (i.e., those outside an organization's boundaries) suffering while some are not, and why do some who notice others' suffering create new ventures to alleviate that suffering while some notice yet do not act? What additional levels of community (beyond organizational membership) influence compassionate responses and in what way? Following a suffering-inducing event, how are communities defined, created, and led, and what role does entrepreneurial action (and its underlying activities) play in this process?

Spontaneous venturing to alleviate others' suffering

Although the entrepreneurship literature has theorized and found that the emergence of a new organization takes time (Katz and Gartner, 1988; Liao et al., 2005; Reynolds and Miller, 1992), there is evidence that new ventures can be created almost spontaneously (only hours or days after an event that causes human suffering) (Shepherd and Williams, 2014). How is the process of new venture creation expedited so quickly—that is, how is the potential opportunity to alleviate suffering refined, what are the activities involved in spontaneously creating a new venture to alleviate suffering, which (if any) organizational emergence activities are "skipped" or modified, and how are interactions between the entrepreneur and the various communities (e.g., victims and suppliers) facilitated and processed under such extreme conditions? Not only can this research advance understanding of how entrepreneurial action can alleviate others' suffering, but it might also provide a great context to be able to explore the activities of organizational emergence because the time required to follow and track those activities is substantially reduced. (However, I also acknowledge the difficulties of researching ventures created almost spontaneously in the aftermath of a surprising event—the researcher might have to find him- or herself in the midst of the human suffering to capture these activities.) If scholars can find a way to investigate these spontaneous ventures, what can be learned from these extreme contexts that informs our understanding of emergence in more traditional settings? Are there "spontaneous acts" in other settings that precede subsequent activity? What form do these acts take? Are they designed to be temporary or simply probe-like actions designed to explore and get instant feedback? What motivates these actions, and what are the desired outcomes? Does government have a role to play in fostering compassion venturing, and what form might that role take?

Resourcefulness for compassionate responding

Current conceptions of compassion emphasize how the fortunate aid the less fortunate (Dutton et al., 2006). Entrepreneurship scholars have the opportunity to build on the body of knowledge on resourcefulness, such as bricolage (Baker and Nelson, 2005), effectuation (Sarasvathy, 2001), improvisation (Baker et al., 2003; Hmieleski and Corbett, 2008), identity (Powell and Baker, 2014), entrepreneurial management (Bradley et al., 2011; Stevenson and Jarillo, 1990), and knowledge corridors (Fiet, 2007; Fiet and Samuelsson, 2000; Hayek, 1945), to understand how resources are acquired, assembled, and recombined in ways that effectively alleviate a specific form of suffering. Future research can explore how entrepreneurial actions enable the less fortunate—those who are themselves suffering—to help the unfortunate—others who are suffering. Why are some individuals who are themselves facing high adversity able to act entrepreneurially to alleviate others' suffering while some individuals are unable to do so? On the one hand, locals are often in the best position to act because they are already close to the region of adversity (i.e., Bui and Sebastian, 2011; Quarantelli, 1993; Sebastian and Bui, 2009) and have knowledge about the cause of suffering and how to alleviate it given their insight into the people involved and the local conditions (Sebastian and Bui, 2009; Shepherd and Williams, 2014; Waugh and Streib, 2006). However, these locals may also be suffering. What is the impact of alleviating others' suffering on the well-being of the entrepreneurial actor him- or herself? Does this action result in further risks that could undermine recovery (e.g., failure of a venture)? Could entrepreneurial action be a form of coping that results in a form of recovery?

Prosocial motivation to act entrepreneurially to alleviate others' suffering

People not only need to be *able* to act to alleviate others' suffering, but they also need to be *motivated* to do so. What motivates people to act entrepreneurially to alleviate others' suffering? I believe that explorations to address this question will build on the prosocial motivation literature. *Prosocial motivation* is defined as the desire to expend effort based on a concern for helping or contributing to other people (Batson, 1998; De Dreu, 2006; Grant, 2007, 2008; Grant and Berry, 2011; Grant and Sumanth, 2009) and can serve multiple goals for those being helped (Batson et al., 2008). As explained by Grant (2008: 49), prosocial motivation is "a more temporary psychological state, [and it] involves a momentary focus on the goal of protecting and promoting the welfare of other people." The notion of prosocial motivation appears to be a particularly relevant yet under-researched antecedent to the entrepreneurial actions that alleviate others' suffering (important exceptions include Renko (2013) and Miller et al. (2012)).

Future research can investigate the role of prosocial motivation vis-à-vis other forms of motivation in compassionate venturing. For example, although prosocial motivation may make up for a lack of intrinsic motivation to create a new venture to alleviate others' suffering, what is the long-term effect of this motivational state? Does success in the alleviation of suffering begin to create intrinsic motivation for the entrepreneurial tasks of compassion venturing, or does the lack of intrinsic motivation wear the actor down, thereby undermining the effect of prosocial motivation? If it does wear the actor down, what implications does this have for the duration or evolution of compassion-oriented ventures? Do individuals need to shift to other types of motivators for ventures to continue? It is likely also important to explore the downside or limitations of prosocial motivation in compassionate venturing. Given that prosocially motivated individuals are likely to see work as a means of achieving the ends of benefiting others (Grant, 2007, 2008), are there downsides to an "ends-justifies-the-means" approach to the alleviation of human suffering? Perhaps there are unattended consequences of cutting corners to alleviate the suffering of a group of individuals: perhaps it comes at the expense of another group of

individuals' suffering, maybe it thwarts a larger (and perhaps more effective) effort to alleviate suffering, and/or perhaps it is effective in the short run but detrimental in the long run. It could be less about whether it is good or bad to ignore constraints and more about which constraints are ignored and which are abided by. Future research can also explore how potential resource providers come to notice, assess, and act toward those who are prosocially motivated to alleviate the suffering of others. Are outsiders drawn to prosocially motivated entrepreneurial actors trying to alleviate the suffering of others? How is prosocial motivation signaled to and perceived by outsiders?

Next steps

In Fig. 4, I present some of the important aspects of the above discussion to provide a sketch of entrepreneurship research that is more compassionate and prosocial. Although there are many research opportunities possible from taking a more compassionate and prosocial perspective, I propose that important future research avenues worth exploring include (1) how and why knowledge of others' suffering impacts the formation of (third- and/or first-person) opportunity beliefs to "do good," (2) how and why prosocial motivation impacts the formation of (third- and/or first-person) opportunity beliefs to "do good," (3) what the nature of entrepreneurial actions that exploit a potential opportunity to do good is, (4) how and why different entrepreneurial actions alleviate different forms of others' suffering, (5) how and why different entrepreneurial actions sustain different societal benefits, (6) how entrepreneurial action to alleviate suffering and/or enhance sustainability impacts the entrepreneurial individual him- or herself, (7) how and why progress in the entrepreneurial process (in terms of gains for others, the entrepreneur, and/or sustainability) impacts the entrepreneur's knowledge (in particular, knowledge of suffering) and the entrepreneur's motivation (in particular, prosocial motivation and its interactions with intrinsic and extrinsic motivation) to form subsequent (third and/or first-person) opportunity beliefs, (8) what other entrepreneurial activities impact the effectiveness of compassionate and sustainable venturing, and (9) what other forms of suffering compassion venturing can help alleviate.

Discussion and conclusion

Across a number of fields, there is a tendency to narrowly focus on dominant principles and themes that have the effect of homogenizing knowledge creation (in the literature) about a pluralistic world (Glynn and Dacin, 2000). Specifically, Kuhn (2012) categorized fields of study by the extent to which they have developed paradigms—"shared theoretical structures and methodological approaches about which there is a high level of consensus" (Cole, 1983: 112). The more developed a paradigm, the less uncertainty over the production of knowledge and the less fragmentation, both of which are believed to facilitate a field's growth (Pfeffer, 1993). That is, consensus over fundamental assumptions (of the nature of "knowledge [ontology], the nature of knowledge about those phenomena [epistemology], and the nature of ways of studying those phenomena [methodology]" [Gioia and Pitre, 1990]) can lead to greater accumulation of knowledge (Pfeffer, 1993). Building on these notions, Davidsson (2003) lamented that entrepreneurship research has sometimes suffered from a proliferation of studies articulated on the basis of different fundamental principles and assumptions—a situation that has led to the slow accumulation of knowledge in the field.

Although there is a lot of merit to the arguments for knowledge accumulation, the "paradigm-development" approach appears to value parsimony and consistency over richness and variety. In doing so, it can produce an overly narrow view (Burrell and Morgan, 1979), especially for the rich nature that makes up entrepreneurial phenomena. Indeed, as scholars, we need to remain alert to the complexities of the phenomena we hope to study, which can be aided by taking a multiplicity of perspectives to generate a variety of interpretations (Glynn and Dacin, 2000). Indeed, the "paradigm mentality simultaneously proliferates and polarizes perspectives, often inhibiting discourse across paradigms, biasing theorists against opposing explanations and fostering development of provincial theories" (Schultz and Hatch, 1996) with the goal of winning the paradigm war. In such situations, there is a crowding out of the more exploratory by the more exploitive.

Implications for entrepreneurial scholars

The abovementioned crowding out can occur at the individual scholar level when one believes that there is an opportunity to capitalize on the legitimacy and popularity of the field to focus attention on making many incremental contributions by, for example, offering an additional moderator to a long list of moderators of an established main effect relationship. Perhaps this appears to be a wise research strategy for an individual scholar (and it does make a contribution to the literature), but if most scholars pursue this strategy and this strategy is rewarded, then we head to the "crowding out effect" that I am most concerned about.

Although I can understand why some scholars, particularly junior scholars, might pursue this strategy, there are two cautionary observations and a challenge. First, the greatest risk in trying to publish research in high-quality journals is implementing a research strategy that is conservative in nature. Just as more entrepreneurial organizations have greater variance in outcomes (McGrath, 1999), entrepreneurial scholars likely face high variance in research outcomes. That is, some projects are going to "bomb," whereas others have the potential of being "home runs" (i.e., really capture the attention of editors, reviewers, and audiences). Scholars developing their new research projects look to such entrepreneurial papers to build their own stories. The published papers of entrepreneurial scholars are likely to have a more positive impact on the development of the field and other fields than are the papers of less entrepreneurial scholars (although entrepreneurial scholars are likely to face more project failures).

Second, scholars can use a portfolio approach to their research projects. Not every research project needs to be radical nor should every project be "safe." As entrepreneurial researchers, we can create a portfolio of working projects, with one or two being studies we
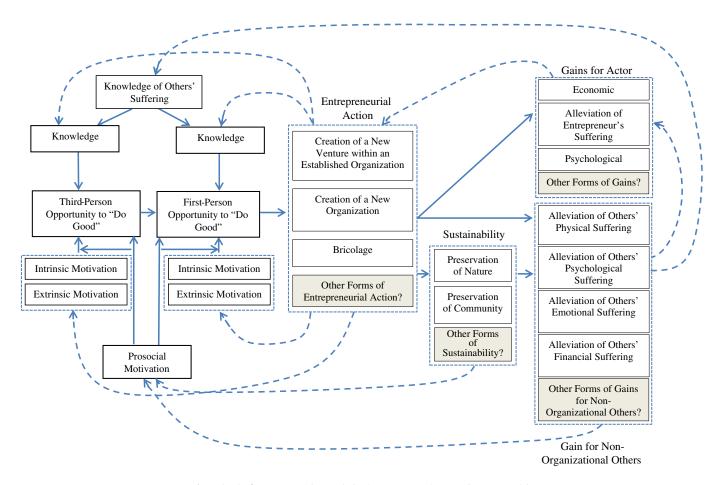
Fig. 4. Sketch of entrepreneurial research that is more compassionate and more prosocial.

think are "out there" (i.e., are strange, quirky, and/or challenge the status quo). This is consistent with a real options reasoning approach by which organizations "manage" the uncertainty surrounding potential opportunities (McGrath, 1999).

Third, the challenge is to expand the range of research questions, theories, and methods. I propose that entrepreneurial scholars will look to the "flipside" of dominant streams of research. For example, entrepreneurship scholars believe in the benefits of entrepreneurial action, so they largely study those benefits. However, investigating benefits might provide only half the picture; perhaps different research questions and theories are needed to understand the costs of entrepreneurial action. For example, why do some use entrepreneurial action to destroy value, exploit the vulnerable, and/or harm nature? Why do some who engage in entrepreneurial action suffer physically, psychologically, and/or emotionally? Is there a motivation that is the opposite to prosocial motivation? That is, while some entrepreneurs can have low prosocial motivation, how do we capture the motivation of people who desire to expend effort to harm or diminish other people or the natural environment?

New research questions, theories, and topics expand the range of methods and vice versa. In the past, to expand the range of methods, entrepreneurial scholars have taken methodological advancements in other fields and applied them to the entrepreneurial context. However, just like borrowing theories for the entrepreneurial context, using methods from other disciplines will require some adaptation, and these adaptations themselves may represent a contribution back to the original source. There is also an opportunity to engage in bricolage by looking at the methods at hand and combining them in a way that opens up new grounds for theorizing and empirical testing. For example, Holger, Marcus, and I tried to do this by combining three basic methodological approaches—a conjoint study, an experimental manipulation, and a "intercepts-only" model—to enable us to "get at" an issue that was otherwise difficult to test (Shepherd et al., 2011).

Finally, I want to apply the opportunities for future entrepreneurship research (stated above) as a challenge to the way scholars engage in research—namely, to not only study entrepreneurial phenomena but engage in entrepreneurial research. Future scholarship will engage in entrepreneurial research by (1) *thinking entrepreneurially*—reflected in an open mind toward new topics, methods, and ways of doing things rather than focused on one "right" or "traditional" approach; (2) *thinking about interactions*, such that ideas become more plausible as they undergo changes in light of interactions with communities of inquiry (e.g., colleagues, reviewers, editors, and so on) rather than the sole domain of our individual creativity; (3) *thinking about the series of activities* that make up one's research action by focusing more on the activities engaged in developing a paper—the micro-foundations of research (which we can control)—and less on the outcomes of a single project or career milestone; (4) *generating cognitive heat* by opening ourselves up to (or otherwise stimulating) emotional reactions to progress on challenging research activities and using these emotions to energize and inform subsequent activities rather than relying on a "cold" calculative approach to research; and (5) *prosocially acting to organize compassion venturing* by choosing topics to gain a deeper understanding of entrepreneurial actors who make constructive and/or destructive contributions to society and to help develop scholars who want to make a difference and/or are less fortunate than ourselves.

Implications for entrepreneurial journals

Crowding out can also occur through the journal review process, whereby editors and reviewers become more conservative and more concerned with an error of commission (i.e., accepting a paper that diminishes the journal's legitimacy) than with an error of omission (i.e., rejecting a paper that could be highly impactful). Therefore, they begin to play it safe; they are more likely to accept papers that fit the mold and are "done well" despite doubts about the "size" of the contribution. Although this conservative approach by scholars and journals may pay off in the short run, it likely creates a stagnant field with rigid boundaries, narrow questions, and turf battles. If this happens in entrepreneurship, we, as a community of entrepreneurship scholars, become the antipathy of what we study.

Conclusion

On the thirtieth anniversary of the creation of *JBV*, I offer a challenge (to myself and anyone who will listen) for future research to establish a richer, more comprehensive understanding of entrepreneurial phenomena. To achieve this richness and comprehensiveness scholars (and journals) will need to continue to keep an open mind that there is not one correct approach or one correct answer and embrace multiple perspectives, including those from different paradigms and of multi-paradigms. Indeed, there appears to be recognition of a "post-paradigm war" approach to the development of fields of knowledge (Romani et al., 2011)—a multi-paradigm perspective (e.g., Gioia and Pitre, 1990)—that is focused on a more comprehensive understanding of the phenomena. This more comprehensive understanding of entrepreneurial phenomena will come from researchers who have at least some entrepreneurial projects (i.e., with highly uncertain outcomes) in their pipeline; from researchers who expand the range of research questions, the possible outcomes of their entrepreneurial research, and the choice and combination of research methods; and from researchers who do not get caught up in endless debates about the boundaries of the field or its sub-fields or about whether one lens (theoretical or philosophical) is better than another. Although there are many exciting research opportunities to advance understanding of entrepreneurial phenomena, I focused on four avenues and offered a subset of potential questions within each avenue. Specifically, I believe the vitality of the field of entrepreneurship will be maintained and knowledge advanced through research on potential opportunities as a unit of social interaction between and mutual adjustment of the entrepreneur's mind and a community of inquiry in the world; research on the antecedents, outcomes, and inter-relationships of the activities of entrepreneurial practice as a micro-foundation of entrepreneurial action; research on the reciprocal relationships of cognition and emotion that are created, perpetuated, and terminated while one is engaged in the entrepreneurial process; and research on the motivations and capabilities for creating new ventures (i.e., new organizations or new ventures in established organizations) that help others and/or preserve the natural environment.

References

Alvarez, S.A., Barney, J.B., 2007. Discovery and creation: alternative theories of entrepreneurial action. Strateg. Entrep. J. 1, 11–26.
Alvarez, S.A., Busenitz, L.W., 2001. The entrepreneurship of resource-based theory. J. Manag. 27, 755–775.
Ardichvili, A., Cardozo, R., Ray, S., 2003. A theory of entrepreneurial opportunity identification and development. J. Bus. Ventur. 18, 105–123.
Ashforth, B.E., Kreiner, G.E., 2002. Normalizing emotion in organizations: making the extraordinary seem ordinary. Hum. Resour. Manag. Rev. 12, 215–235.
Autio, E., Dahlander, L, Frederiksen, L., 2013. Information exposure, opportunity evaluation, and entrepreneurial action: an investigation of an online user community. Acad. Manag. J. 56, 1348–1371.
Baker, T., Nelson, R.E., 2005. Creating something from nothing: resource construction through entrepreneurial bricolage. Adm. Sci. Q. 50, 329–366.
Baker, T., Miner, A.S., Eesley, D.T., 2003. Improvising firms: bricolage, account giving and improvisational competencies in the founding process. Res. Policy 32, 255–276.
Baldwin, C., Hienerth, C., Von Hippel, E., 2006. How user innovations become commercial products: a theoretical investigation and case study. Res. Policy 35, 1291–1313.
Baron, R.A., 2008. The role of affect in the entrepreneurial process. Acad. Manag. Rev. 33, 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. Manag. Sci. 52, 1331–1344.
Batson, C., 1998. Altruism and prosocial behavior. The Handbook of Social Psychology. 2 p. 282.
Batson, C.D., Ahmad, N., Powell, A.A., Stocks, E., Shah, J., Gardner, W., 2008. Prosocial motivation. Handbook of Motivation Sciencepp. 135–149.
Baumann, N., Kuhl, J., 2005. Positive affect and flexibility: overcoming the precedence of global over local processing of visual information. Motiv. Emot. 29, 123–134.
Belschak, F., Verbeke, W., Bagozzi, R.P., 2006. Coping with sales call anxiety: the role of sale perseverance and task concentration strategies. J. Acad. Mark. Sci. 34, 403–418.
Blanchette, I., Dunbar, K., 2001. Analogy use in naturalistic settings: the influence of audience, emotion, and goals. Mem. Cogn. 29, 730–735.
Blood, A.J., Zatorre, R.J., 2001. Intensely pleasurable responses to music correlate with activity in brain regions implicated in reward and emotion. Proc. Natl. Acad. Sci. 98, 11818–11823.
Bornstein, D., 2004. How to Change the World: Social Entrepreneurs and the Power of New Ideas. Oxford University Press.
Bradley, S.W., Wiklund, J., Shepherd, D.A., 2011. Swinging a double-edged sword: the effect of slack on entrepreneurial management and growth. J. Bus. Ventur. 26, 537–554.
Brettel, M., Mauer, R., Engelen, A., Küpper, D., 2012. Corporate effectuation: entrepreneurial action and its impact on R&D project performance. J. Bus. Ventur. 27, 167–184.
Brown, S.L., Eisenhardt, K.M., 1997. The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations. Adm. Sci. Q. 42, 1–34.
Brundin, E., Patzelt, H., Shepherd, D.A., 2008. Managers' emotional displays and employees' willingness to act entrepreneurially. J. Bus. Ventur. 23, 221–243.
Bruner, J.S., Austin, G.A., 1986. A Study of Thinking. Transaction Publishers.
Bryant, P., 2007. Self-regulation and decision heuristics in entrepreneurial opportunity evaluation and exploitation. Manag. Decis. 45, 732–748.
Bui, T.X., Sebastian, I., 2011. Beyond rationality: information design for supporting emergent groups in emergency response. Supporting Real Time Decision-making. Springer, pp. 159–179.
Burrell, G., Morgan, G., 1979. Sociological Paradigms and Organisational Analysis (Vol. 248). Heinemann, London.
Burt, R.S., 2005. Brokerage and Closure: An Introduction to Social Capital. Oxford University Press.
Busenitz, L.W., Barney, J.B., 1997. Differences between entrepreneurs and managers in large organizations: biases and heuristics in strategic decision-making. J. Bus. Ventur. 12, 9–30.
Busenitz, L.W., West, G.P., Shepherd, D., Nelson, T., Chandler, G.N., Zacharakis, A., 2003. Entrepreneurship research in emergence: past trends and future directions. J. Manag. 29, 285–308.
Cardon, M.S., Zietsma, C., Saparito, P., Matherne, B.P., Davis, C., 2005. A tale of passion: new insights into entrepreneurship from a parenthood metaphor. J. Bus. Ventur. 20, 23–45.
Cardon, M.S., Wincent, J., Singh, J., Drnovsek, M., 2009. The nature and experience of entrepreneurial passion. Acad. Manag. Rev. 34, 511–532.
Cardon, M.S., Foo, M.D., Shepherd, D., Wiklund, J., 2012. Exploring the heart: entrepreneurial emotion is a hot topic. Enterp. Theory Pract. 36, 1–10.
Carlsson, B., Braunerhjelm, P., McKelvey, M., Olofsson, C., Persson, L., Ylinenpää, H., 2013. The evolving domain of entrepreneurship research. Small Bus. Econ. 41, 913–930.
Carter, N.M., Gartner, W.B., Reynolds, P.D., 1996. Exploring start-up event sequences. J. Bus. Ventur. 11, 151–166.
Catrambone, R., Holyoak, K.J., 1989. Overcoming contextual limitations on problem-solving transfer. J. Exp. Psychol. Learn. Mem. Cogn. 15, 1147.
Chandra, Y., Coviello, N., 2010. Broadening the concept of international entrepreneurship: 'Consumers as international entrepreneurs'. J. World Bus. 45, 228–236.
Cole, S., 1983. The hierarchy of the sciences? Am. J. Sociol. 111–139.
Corbett, A.C., 2005. Experiential learning within the process of opportunity identification and exploitation. Enterp. Theory Pract. 29, 473–491.
Corbett, A.C., Hmieleski, K.M., 2007. The conflicting cognitions of corporate entrepreneurs. Enterp. Theory Pract. 31, 103–121.
Cornelissen, J.P., Clarke, J.S., 2010. Imagining and rationalizing opportunities: inductive reasoning and the creation and justification of new ventures. Acad. Manag. Rev. 35, 539–557.
Dacin, M.T., Dacin, P.A., Tracey, P., 2011. Social entrepreneurship: a critique and future directions. Organ. Sci. 22, 1203–1213.
Davidsson, P., 2003. The domain of entrepreneurship research: some suggestions. Advances in Entrepreneurship, Firm Emergence and Growth. 6 pp. 315–372.
Davidsson, P., Honig, B., 2003. The role of social and human capital among nascent entrepreneurs. J. Bus. Ventur. 18, 301–331.
De Dreu, C.K., 2006. When too little or too much hurts: evidence for a curvilinear relationship between task conflict and innovation in teams. J. Manag. 32, 83–107.
Dean, T.J., McMullen, J.S., 2007. Toward a theory of sustainable entrepreneurship: reducing environmental degradation through entrepreneurial action. J. Bus. Ventur. 22, 50–76.
Dees, J.G., 1998. The Meaning of Social Entrepreneurship.
Delmar, F., Shane, S., 2004. Legitimating first: organizing activities and the survival of new ventures. J. Bus. Ventur. 19, 385–410.
Derryberry, D., Tucker, D., 2006. Motivation, self-regulation, and self-organization. Dev. Psychopathol. 2, 502–532.
Dewey, J., 1939. Theory of Valuation. International encyclopedia of unified science.
Dimov, D., 2007. Beyond the single-person, single-insight attribution in understanding entrepreneurial opportunities. Enterp. Theory Pract. 31, 713–731.
Dimov, D., 2011. Grappling with the unbearable elusiveness of entrepreneurial opportunities. Enterp. Theory Pract. 35, 57–81.
Dorfman, R., Dorfman, N.S., 1993. Economics of the Environment: Selected Readings. WW Norton & Company.
Dorado, S., Ventresca, M.J., 2013. Crescive entrepreneurship in complex social problems: Institutional conditions for entrepreneurial engagement. J. Bus. Ventur. 28 (1), 69–82.
Drabek, T.E., McEntire, D.A., 2003. Emergent phenomena and the sociology of disaster: lessons, trends and opportunities from the research literature. Disaster Prev. Manag. 12, 97–112.
Dutton, J.E., 1993. Interpretations on automatic: a different view of strategic issue diagnosis. J. Manag. Stud. 30, 339–357.
Dutton, J.E., 2003. Breathing life into organizational studies. J. Manag. Inq. 12, 5–19.
Dutton, J.E., Duncan, R.B., 1987. The creation of momentum for change through the process of strategic issue diagnosis. Strateg. Manag. J. 8, 279–295.
Dutton, J.E., Worline, M.C., Frost, P.J., Lilius, J., 2006. Explaining compassion organizing. Adm. Sci. Q. 51, 59–96.
Dutton, J.E., Workman, K.M., Hardin, A.E., 2014. Compassion at work. Annual Review of Organizational Psychology and Organizational Behavior. 1, pp. 277–304.
Eisenhardt, K.M., 1989. Making fast strategic decisions in high-velocity environments. Acad. Manag. J. 32, 543–576.

Estrada, C.A., Isen, A.M., Young, M.J., 1997. Positive affect facilitates integration of information and decreases anchoring in reasoning among physicians. Organ. Behav. Hum. Decis. Process. 72, 117–135.

Fiet, J.O., 2007. A prescriptive analysis of search and discovery. J. Manag. Stud. 44, 592–611.

Fiet, J.O., Samuelsson, M., 2000. Knowledge-based competencies as a platform for firm formation. Front. Entrep. Res. 166–178.

Fitzsimmons, J.R., Douglas, E.J., 2011. Interaction between feasibility and desirability in the formation of entrepreneurial intentions. J. Bus. Ventur. 26, 431–440.

Foo, M.-D., Uy, M.A., Baron, R.A., 2009. How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. J. Appl. Psychol. 94, 1086.

Forbes, D.P., 2005. Are some entrepreneurs more overconfident than others? J. Bus. Ventur. 20, 623–640.

Foss, K., Foss, N.J., Klein, P.G., Klein, S.K., 2007. The entrepreneurial organization of heterogeneous capital. J. Manag. Stud. 44, 1165–1186.

Fredrickson, B.L., 1998. What good are positive emotions? Rev. Gen. Psychol. 2, 300.

Fredrickson, B.L., 2000. Cultivating positive emotions to optimize health and well-being. Prev. Treat. 3, 1a.

Fredrickson, B.L., 2001. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. Am. Psychol. 56, 218.

Fredrickson, B.L., Branigan, C., 2005. Positive emotions broaden the scope of attention and thought-action repertoires. Cogn. Emot. 19, 313–332.

Fredrickson, B.L., Mancuso, R.A., Branigan, C., Tugade, M.M., 2000. The undoing effect of positive emotions. Motiv. Emot. 24, 237–258.

Fredrickson, B.L., Cohn, M.A., Coffey, K.A., Pek, J., Finkel, S.M., 2008. Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. J. Pers. Soc. Psychol. 95, 1045.

Frost, P.J., 2003. Toxic Emotions at Work: How Compassionate Managers Handle Pain and Conflict. Harvard Business School Publishing, Boston, MA.

Gaglio, C.M., Katz, J.A., 2001. The psychological basis of opportunity identification: entrepreneurial alertness. Small Bus. Econ. 16, 95–111.

Gartner, W.B., 1985. A conceptual framework for describing the phenomenon of new venture creation. Acad. Manag. Rev. 10, 696–706.

Gartner, W.B., 1990. What are we talking about when we talk about entrepreneurship? J. Bus. Ventur. 5, 15–28.

Gartner, W.B., Carter, N.M., Hills, G.E., 2003. The language of opportunity. In: Steyaert, C., Hjorth, D. (Eds.), New Movements in Entrepreneurship. Edward Elgar Publishing Limited, pp. 103–124.

George, J.M., 2013. Compassion and capitalism implications for organizational studies. J. Manag. 0149206313490028.

Gergen, K.J., 1994. Realities and Relationships: Soundings in Social Construction. Harvard University Press, Cambridge, MA.

Gioia, D.A., Pitre, E., 1990. Multiparadigm perspectives on theory building. Acad. Manag. Rev. 15 (4), 584–602.

Gittell, J.H., Cameron, K., Lim, S., Rivas, V., 2006. Relationships, layoffs, and organizational resilience airline industry responses to September 11. J. Appl. Behav. Sci. 42, 300–329.

Glynn, M.A., Dacin, M.T., 2000. Pluralism and the problem of variety. Acad. Manag. Rev. 25 (4), 726–734.

Grant, A.M., 2007. Relational job design and the motivation to make a prosocial difference. Acad. Manag. Rev. 32, 393–417.

Grant, A.M., 2008. Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. J. Appl. Psychol. 93, 48.

Grant, A.M., Berry, J.W., 2011. The necessity of others is the mother of invention: intrinsic and prosocial motivations, perspective taking, and creativity. Acad. Manag. J. 54, 73–96.

Grant, A.M., Sumanth, J.J., 2009. Mission possible? The performance of prosocially motivated employees depends on manager trustworthiness. J. Appl. Psychol. 94, 927.

Grégoire, D.A., Shepherd, D.A., 2012. Technology-market combinations and the identification of entrepreneurial opportunities: an investigation of the opportunity-individual nexus. Acad. Manag. J. 55, 753–785.

Gregoire, D.A., Barr, P.S., Shepherd, D.A., 2010. Cognitive processes of opportunity recognition: the role of structural alignment. Organ. Sci. 21, 413–431.

Gregoire, D.A., Corbett, A.C., McMullen, J.S., 2011. The cognitive perspective in entrepreneurship: an agenda for future research. J. Manag. Stud. 48, 1443–1477.

Grichnik, D., Smeja, A., Welpe, I., 2010. The importance of being emotional: how do emotions affect entrepreneurial opportunity evaluation and exploitation? J. Econ. Behav. Organ. 76, 15–29.

Gruber, M., MacMillan, I.C., Thompson, J.D., 2013. Escaping the prior knowledge corridor: what shapes the number and variety of market opportunities identified before market entry of technology start-ups? Organ. Sci. 24, 280–300.

Haefliger, S., Jäger, P., Von Krogh, G., 2010. Under the radar: industry entry by user entrepreneurs. Res. Policy 39, 1198–1213.

Hall, J.K., Daneke, G.A., Lenox, M.J., 2010. Sustainable development and entrepreneurship: past contributions and future directions. J. Bus. Ventur. 25, 439–448.

Haskel, T., 1984. Professionalism versus capitalism: R. H. Tawney, Emile Durkheim, and C. S. Pierce on the disinterestedness of professional communities. In: Haskel, T. (Ed.), The Authority of Experts: Studies in History and Theory. Indiana University Press, Bloomington, IN, pp. 180–225.

Hayek, F.A., 1945. The use of knowledge in society. Am. Econ. Rev. 519–530.

Haynie, J.M., Shepherd, D.A., McMullen, J.S., 2009. An opportunity for me? The role of resources in opportunity evaluation decisions. J. Manag. Stud. 46, 337–361.

Haynie, J.M., Shepherd, D., Mosakowski, E., Earley, P.C., 2010. A situated metacognitive model of the entrepreneurial mindset. J. Bus. Ventur. 25, 217–229.

Hill, R.C., Levenhagen, M., 1995. Metaphors and mental models: sensemaking and sensegiving in innovative and entrepreneurial activities. J. Manag. 21, 1057–1074.

Hite, J.M., 2005. Evolutionary processes and paths of relationally embedded network ties in emerging entrepreneurial firms. Enterp. Theory Pract. 29, 113–144.

Hmieleski, K.M., Baron, R.A., 2008. Regulatory focus and new venture performance: a study of entrepreneurial opportunity exploitation under conditions of risk versus uncertainty. Strateg. Entrep. J. 2, 285–299.

Hmieleski, K.M., Corbett, A.C., 2008. The contrasting interaction effects of improvisational behavior with entrepreneurial self-efficacy on new venture performance and entrepreneur work satisfaction. J. Bus. Ventur. 23, 482–496.

Hoang, H., Antoncic, B., 2003. Network-based research in entrepreneurship: a critical review. J. Bus. Ventur. 18, 165–187.

Holland, J., Holyoak, K., Nisbett, R., Thagard, P., 1986. Process of Inference, Learning, and Discovery. MIT Press, Cambridge.

Holyoak, K.J., Thagard, P., 1995. Mental Leaps. MIT Press, Cambridge, MA.

Isen, A.M., Daubman, K.A., 1984. The influence of affect on categorization. J. Pers. Soc. Psychol. 47, 1206.

Isen, A.M., Daubman, K.A., Nowicki, G.P., 1987. Positive affect facilitates creative problem solving. J. Pers. Soc. Psychol. 52, 1122.

Kanov, J.M., Maitlis, S., Worline, M.C., Dutton, J.E., Frost, P.J., Lilius, J.M., 2004. Compassion in organizational life. Am. Behav. Sci. 47, 808–827.

Katz, J., Gartner, W.B., 1988. Properties of emerging organizations. Acad. Manag. Rev. 13, 429–441.

Keane, M.T., Ledgeway, T., Duff, S., 1994. Constraints on analogical mapping: a comparison of three models. Cogn. Sci. 18, 387–438.

Keh, H.T., Foo, M.D., Lim, B.C., 2002. Opportunity evaluation under risky conditions: the cognitive processes of entrepreneurs. Enterp. Theory Pract. 27, 125–148.

Khan, F.R., Munir, K.A., Willmott, H., 2007. A dark side of institutional entrepreneurship: soccer balls, child labour and postcolonial impoverishment. Organ. Stud. 28, 1055–1077.

Kim, P.H., Longest, K.C., Lippmann, S., 2015. The tortoise versus the hare: progress and business viability differences between conventional and leisure-based founders. J. Bus. Ventur. 30 (2), 185–204.

Klein, P.G., 2008. Opportunity discovery, entrepreneurial action, and economic organization. Strateg. Entrep. J. 2, 175–190.

Klofsten, M., 2005. New venture ideas: an analysis of their origin and early development. Tech. Anal. Strat. Manag. 17, 105–119.

Kloppenberg, J.T., 1989. Objectivity and Historicism: A Century of American Historical Writing. JSTOR.

Knight, F.H., 1921. Risk, Uncertainty and Profit. Hart, Schaffner and Marx, New York.

Krueger Jr., N.F., 2003. The cognitive psychology of entrepreneurship. Handbook of Entrepreneurship Research. Springer, US, pp. 105–140.

Krueger, N.F., 2007. What lies beneath? The experiential essence of entrepreneurial thinking. Enterp. Theory Pract. 31, 123–138.

Kuhn, T.S., 2012. The Structure of Scientific Revolutions. University of Chicago press.

Kuratko, D.F., Hornsby, J.S., Covin, J.G., 2014. Diagnosing a firm's internal environment for corporate entrepreneurship. Bus. Horiz. 57, 37–47.

Levitt, B., March, J.G., 1988. Organizational learning. Annu. Rev. Sociol. 14, 319–340.

Liao, J., Welsch, H., Tan, W.-L., 2005. Venture gestation paths of nascent entrepreneurs: exploring the temporal patterns. J. High Technol. Manag. Res. 16, 1–22.

Lichtenstein, B.B., Carter, N.M., Dooley, K.J., Gartner, W.B., 2007. Complexity dynamics of nascent entrepreneurship. J. Bus. Ventur. 22, 236–261.

Lilius, J.M., Worline, M.C., Maitlis, S., Kanov, J., Dutton, J.E., Frost, P., 2008. The contours and consequences of compassion at work. J. Organ. Behav. 29, 193–218.

Lilius, J.M., Worline, M.C., Dutton, J.E., Kanov, J.M., Maitlis, S., 2011. Understanding compassion capability. Hum. Relat. 64, 873–899.

Locke, K., Golden-Biddle, K., Feldman, M.S., 2008. Perspective-making doubt generative: rethinking the role of doubt in the research process. Organ. Sci. 19, 907–918.

Lumpkin, G.T., Dess, G.G., 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. Acad. Manag. Rev. 21, 135–172.

Mair, J., Marti, I., 2006. Social entrepreneurship research: a source of explanation, prediction, and delight. J. World Bus. 41, 36–44.

Majchrzak, A., Jarvenpaa, S.L., Hollingshead, A.B., 2007. Coordinating expertise among emergent groups responding to disasters. Organ. Sci. 18, 147–161.

McGrath, R.G., 1999. Falling forward: real options reasoning and entrepreneurial failure. Acad. Manag. Rev. 24, 13–30.

McKelvie, A., Haynie, J.M., Gustavsson, V., 2011. Unpacking the uncertainty construct: implications for entrepreneurial action. J. Bus. Ventur. 26, 273–292.

McMullen, J.S., 2011. Delineating the domain of development entrepreneurship: a market-based approach to facilitating inclusive economic growth. Enterp. Theory Pract. 35, 185–193.

McMullen, J.S., Dimov, D., 2013. Time and the entrepreneurial journey: the problems and promise of studying entrepreneurship as a process. J. Manag. Stud. 50 (8), 1481–1512.

McMullen, J.S., Shepherd, D.A., 2006. Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. Acad. Manag. Rev. 31, 132–152.

McMullen, J.S., Plummer, L.A., Acs, Z.J., 2007. What is an entrepreneurial opportunity? Small Bus. Econ. 28, 273–283.

Meek, W.R., Pacheco, D.F., York, J.G., 2010. The impact of social norms on entrepreneurial action: evidence from the environmental entrepreneurship context. J. Bus. Ventur. 25, 493–509.

Miller, T.L., Grimes, M.G., McMullen, J.S., Vogus, T.J., 2012. Venturing for others with heart and head: how compassion encourages social entrepreneurship. Acad. Manag. Rev. 37, 616–640.

Mitchell, J.R., Shepherd, D.A., 2010. To thine own self be true: images of self, images of opportunity, and entrepreneurial action. J. Bus. Ventur. 25, 138–154.

Mitchell, R.K., Smith, B., Seawright, K.W., Morse, E.A., 2000. Cross-cultural cognitions and the venture creation decision. Acad. Manag. J. 43, 974–993.

Mitchell, R.K., Smith, J.B., Morse, E.A., Seawright, K.W., Peredo, A.M., McKenzie, B., 2002. Are entrepreneurial cognitions universal? Assessing entrepreneurial cognitions across cultures. Enterp. Theory Pract. 26, 9–32.

Paavola, S., 2004. Abduction as a logic and methodology of discovery: The importance of strategies. Found. Sci. 9 (3), 267–283.

Pardales, M.J., Girod, M., 2006. Community of inquiry: its past and present future. Educ. Philos. Theory 38, 299–309.

Peirce, C.S., 1955. Philosophical Writings of Peirce. Courier Dover Publications.

Peredo, A.M., Chrisman, J.J., 2006. Toward a theory of community-based enterprise. Acad. Manag. Rev. 31, 309–328.

Pfeffer, J., 1993. Barriers to the advance of organizational science: paradigm development as a dependent variable. Acad. Manag. Rev. 18 (4), 599–620.

Powell, E.E., Baker, T., 2014. It's what you make of it: founder identity and enacting strategic responses to adversity. Acad. Manag. J. 57 (5), 1406–1433.

Powley, E.H., 2009. Reclaiming resilience and safety: resilience activation in the critical period of crisis. Hum. Relat. 62, 1289–1326.

Prawat, R.S., 1995. Misreading Dewey: reform, projects, and the language game. Educ. Res. 24, 13–22.

Quarantelli, E.L., 1993. Community crises: an exploratory comparison of the characteristics and consequences of disasters and riots. J. Conting. Crisis Manag. 1, 67–78.

Renko, M., 2013. Early challenges of nascent social entrepreneurs. Enterp. Theory Pract. 37, 1045–1069.

Reynolds, P., Miller, B., 1992. New firm gestation: conception, birth, and implications for research. J. Bus. Ventur. 7, 405–417.

Roberts, D., Woods, C., 2005. Changing the world on a shoestring: the concept of social entrepreneurship. Univ. Auckl. Bus. Rev. 7, 45–51.

Romani, L., Primecz, H., Topçu, K., 2011. Paradigm interplay for theory development: a methodological example with the Kulturstandard method. Organ. Res. Methods 14 (3), 432–455.

Russell, J.A., 2003. Core affect and the psychological construction of emotion. Psychol. Rev. 110, 145.

Russell, P., Milne, S., 1997. Meaningfulness and hedonic value of paintings: effects of titles. Empirical Studies of the Arts. 15 pp. 61–73.

Rynes, S., Bartunek, J., Dutton, J., Margolis, J., 2012. Care and compassion through an organizational lens: opening up new possibilities. Acad. Manag. Rev. 37, 503–523.

Sarasvathy, S.D., 2001. Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. Acad. Manag. Rev. 26, 243–263.

Sarasvathy, S.D., Dew, N., Velamuri, S.R., Venkataraman, S., 2010. Three views of entrepreneurial opportunity. Handbook of Entrepreneurship Research. Springer, pp. 77–96.

Schuler, S.R., Hashemi, S.M., Badal, S.H., 1998. Men's violence against women in rural Bangladesh: undermined or exacerbated by microcredit programmes? Dev. Pract. 8, 148–157.

Schultz, M., Hatch, M.J., 1996. Living with multiple paradigms the case of paradigm interplay in organizational culture studies. Acad. Manag. Rev. 21 (2), 529–557.

Sebastian, I.M., Bui, T.X., 2009. Emergent groups for emergency response—theoretical foundations and information design implications. AMCIS 2009 Proceedings, p. 638.

Seixas, P., 1993. The community of inquiry as a basis for knowledge and learning: the case of history. Am. Educ. Res. J. 30 (2), 305–324.

Seligman, M.E., Csikszentmihalyi, M., 2000. Positive Psychology: An Introduction. American Psychological Association.

Seligman, M.E., Steen, T.A., Park, N., Peterson, C., 2005. Positive psychology progress: empirical validation of interventions. Am. Psychol. 60, 410.

Shah, S.K., Tripsas, M., 2007. The accidental entrepreneur: the emergent and collective process of user entrepreneurship. Strateg. Entrep. J. 1, 123–140.

Shalley, C.E., Perry-Smith, J.E., 2008. The emergence of team creative cognition: the role of diverse outside ties, sociocognitive network centrality, and team evolution. Strateg. Entrep. J. 2, 23–41.

Shane, S., 2000. Prior knowledge and the discovery of entrepreneurial opportunities. Organ. Sci. 11, 448–469.

Shane, S., Eckhardt, J., 2003. The individual–opportunity nexus. Handbook of Entrepreneurship Research. Springer, pp. 161–191.

Shane, S., Venkataraman, S., 2000. The promise of entrepreneurship as a field of research. Acad. Manag. Rev. 25, 217–226.

Shanley, J.P., 2005. Doubt: A Parable. Dramatists Play Service, Inc.

Shepherd, D.A., 2003. Learning from business failure: propositions of grief recovery for the self-employed. Acad. Manag. Rev. 28, 318–328.

Shepherd, D.A., DeTienne, D.R., 2005. Prior knowledge, potential financial reward, and opportunity identification. Enterp. Theory Pract. 29, 91–112.

Shepherd, D.A., Patzelt, H., 2011. The new field of sustainable entrepreneurship: studying entrepreneurial action linking "what is to be sustained" with "what is to be developed". Enterp. Theory Pract. 35, 137–163.

Shepherd, D.A., Patzelt, H., Baron, R., 2013. "I Care About Nature, but…": Disengaging Values in Assessing Opportunities that Cause Harm. Academy of Management Journal 56, 1251–1273.

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. J. Manag. Stud. 51 (6), 952–994.

Shepherd, D.A., McMullen, J.S., Jennings, P.D., 2007. The formation of opportunity beliefs: overcoming ignorance and reducing doubt. Strateg. Entrep. J. 1, 75–95.

Shepherd, D.A., Patzelt, H., Wolfe, M., 2011. Moving forward from project failure: negative emotions, affective commitment, and learning from the experience. Acad. Manag. J. 54, 1229–1259.

Shepherd, D.A., Haynie, J.M., McMullen, J.S., 2012. Confirmatory search as a useful heuristic? Testing the veracity of entrepreneurial conjectures. J. Bus. Ventur. 27, 637–651.

Shepherd, D.A., Patzelt, H., Williams, T.A., Warnecke, D., 2014. How does project termination impact project team members? rapid termination, 'Creeping Death', and learning from failure. J. Manag. Stud. 51, 513–546.

Short, J.C., Ketchen, D.J., Shook, C.L., Ireland, R.D., 2010. The concept of "opportunity" in entrepreneurship research: past accomplishments and future challenges. J. Manag. 36 (1), 40–65.

Smith, J.B., Mitchell, J.R., Mitchell, R.K., 2009. Entrepreneurial scripts and the new transaction commitment mindset: extending the expert information processing theory approach to entrepreneurial cognition research. Enterp. Theory Pract. 33, 815–844.

Sorenson, O., Audia, P.G., 2000. The social structure of entrepreneurial activity: geographic concentration of footwear production in the United States, 1940–19891. Am. J. Sociol. 106 (2), 424–462.

Stevenson, H.H., Jarillo, J.C., 1990. A paradigm of entrepreneurship: entrepreneurial management. Strateg. Manag. J. 11, 17–27.

Stinchfield, B.T., Nelson, R.E., Wood, M.S., 2013. Learning from Levi-Strauss' legacy: art, craft, engineering, bricolage, and brokerage in entrepreneurship. Enterp. Theory Pract. 37, 889–921.

Sutcliffe, K., Vogus, T.J., 2003. Organizing for resilience. Positive Organizational Scholarship: Foundations of a New Discipline. 94 p. 110.

Swedberg, R., 2009. Schumpeter's full model of entrepreneurship. In: Ziegler, R. (Ed.), An Introduction to Social Entrepreneurship: Voices, Preconditions, Contexts. Edward Elgar, Cheltenham, U.K., pp. 77–106.

Tang, J., Kacmar, K.M., Busenitz, L., 2012. Entrepreneurial alertness in the pursuit of new opportunities. J. Bus. Ventur. 27, 77–94.

Tripsas, M., Gavetti, G., 2000. Capabilities, cognition, and inertia: evidence from digital imaging. Strateg. Manag. J. 21, 1147–1161.

Ucbasaran, D., Westhead, P., Wright, M., 2008. Opportunity identification and pursuit: does an entrepreneur's human capital matter? Small Bus. Econ. 30, 153–173.

Venkataraman, S., 1997. The distinctive domain of entrepreneurship research. Advances in Entrepreneurship, Firm Emergence and Growth. 3 pp. 119–138.

Waugh, C.E., Fredrickson, B.L., 2006. Nice to know you: positive emotions, self–other overlap, and complex understanding in the formation of a new relationship. J. Posit. Psychol. 1, 93–106.

Waugh, W.L., Streib, G., 2006. Collaboration and leadership for effective emergency management. Public Adm. Rev. 66, 131–140.

Welpe, I.M., Spörrle, M., Grichnik, D., Michl, T., Audretsch, D.B., 2012. Emotions and opportunities: the interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. Enterp. Theory Pract. 36, 69–96.

West, G.P., 2007. Collective cognition: when entrepreneurial teams, not individuals, make decisions. Enterp. Theory Pract. 31, 77–102.

Wiklund, J., Davidsson, P., Audretsch, D.B., Karlsson, C., 2011. The future of entrepreneurship research. Enterp. Theory Pract. 35, 1–9.

Wilson, E.B., 1990. An Introduction to Scientific Research. Courier Dover Publications.

Yli-Renko, H., Autio, E., Sapienza, H.J., 2001. Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. Strateg. Manag. J. 22, 587–613.

York, J.G., Venkataraman, S., 2010. The entrepreneur–environment nexus: uncertainty, innovation, and allocation. J. Bus. Ventur. 25, 449–463.

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