Strategic Entrepreneurship Journal
Strat. Entrepreneurship J., **4**: 66–84 (2010)
Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/sej.83

THE PRODUCTION OF ENTREPRENEURIAL OPPORTUNITY: A CONSTRUCTIVIST PERSPECTIVE

MATTHEW S. WOOD[1]* and WILLIAM MCKINLEY[2]
[1]*Department of Management, Cameron School of Business, University of North Carolina, Wilmington, North Carolina, U.S.A.*
[2]*Department of Management, Southern Illinois University at Carbondale, Carbondale, Illinois, U.S.A.*

This article presents a conceptual model of entrepreneurial opportunity production from a constructivist perspective. The model assumes that opportunity production proceeds through several stages, including conceptualization of an opportunity idea by an entrepreneur, objectification of that idea, and enactment of the opportunity into a new venture. However, not all opportunity ideas survive this full process. Between the conceptualization stage and the objectification stage, some ideas are abandoned due to inadequate objectification. Also, between the objectification stage and the enactment stage, some objectified opportunities are abandoned due to insufficient resource support. We identify variables that influence the likelihood that opportunity ideas will be objectified and other variables that influence the likelihood that objectified opportunities will be enacted, and these variables are incorporated into empirically testable propositions. In the discussion section, we describe several boundary conditions for our theory, contrast the theory with objectivist (discovery) theory, and derive implications for future research. Copyright © 2010 Strategic Management Society.

INTRODUCTION

It is widely acknowledged that the opportunity construct is central to the field of entrepreneurship, yet the origins of opportunities remain largely opaque (Plummer, Haynie, and Godesiabois, 2007). Much of the current discussion regarding the origins of opportunities focuses on the ontological and epistemological debate between the more widely adopted objectivist perspective and the lesser known constructivist perspective. The objectivist perspective argues that opportunities are created independently of the entrepreneur and, thus, are available to all (Hayek, 1948; Kirzner, 1979; Shane and Venkataraman, 2000; Shane, 2003). On the other hand, the constructivist perspective argues that opportunities are produced through a process of social construction and cannot exist apart from the entrepreneur (Shackle, 1979; Sarasvathy, 2001; Baker and Nelson, 2005). A significant portion of entrepreneurship research adopts the objectivist perspective and pays less attention to the possibility that entrepreneurial opportunities emerge as the result of entrepreneurs' actions that are framed by social processes and existing social structures (McMullen and Shepherd, 2006; Alvarez and Barney, 2007).

Treating opportunities as objective realities that exist apart from the entrepreneur directs researchers toward uncovering the reasons why some individuals discover opportunities while others do not. Individual traits (Deivansenapathy, 1986), differential access to opportunities (Krueger, 1993; Romanelli, 1989), and varying degrees of alertness to opportunities (Kirzner, 1979, 1985; Gaglio and Katz, 2001)

Keywords: entrepreneurial opportunity; creation; constructivism; objectification; enactment; abandonment
*Correspondence to: Matthew S. Wood, Department of Management, Cameron School of Business, University of North Carolina, Wilmington, Wilmington, NC 28403–5969, U.S.A. E-mail: woodms@uncw.edu

are just a few of the research foci in the objectivist tradition. This line of thinking is often called the *discovery* approach (Alvarez and Barney, 2007) and its core logic is reflected in the work of Shane and Venkataraman (2000: 220), who argue that while opportunity recognition is subjective to the individual, opportunities themselves are 'objective phenomena that are not known to all parties at all times.' Thus, the discovery perspective recognizes the importance of the entrepreneur, but is silent on the possibility that the entrepreneur operates in a social world that plays a part in the emergence and development of opportunities. Research on entrepreneurial cognition (e.g., McMullen and Shepherd, 2006; Mitchell *et al.*, 2002; Shepherd, McMullen, and Jennings, 2007) takes a step toward acknowledging these social influences, but still largely assumes that the entrepreneur is interpreting signals that are the product of an objective reality.

Because the discovery perspective does not fully acknowledge the social nature of economic structures and the role entrepreneurs play in the generation of opportunities within those structures, constructivist ontology and epistemology is gaining traction within the field of entrepreneurship (e.g., Sarasvathy 2001; Baker and Nelson, 2005; Dimov, 2007; Luksha, 2008; Felin and Zenger, 2009). There appears to be a growing contingent of scholars who feel that constructivism may shed new light on parts of the opportunity phenomenon that the discovery perspective is unable to illuminate. For example, Mahoney and Michael (2005) discussed some of the promising new insights that constructivist principles might provide and then laid the foundation for what a constructivist theory of entrepreneurship might look like, but they did not develop a specific model of the entrepreneurial opportunity production process. In a similar vein, Alvarez and Barney (2007) noted that several authors have described certain aspects of a constructivist (or creation) theory (e.g., Gartner, 1985; Sarasvathy, 2001; Baker and Nelson, 2005). However, creation theory has yet to be articulated as a unified theory in the literature. For these reasons, we believe that a constructivist theory that begins the process of identifying how entrepreneurial opportunities are produced by entrepreneurs is long overdue. This article seeks to fill that gap by introducing a constructivist theory that identifies the origins of opportunities, the entrepreneurial cognitions and actions associated with enacting an opportunity, and the entrepreneurial cognitions associated with abandonment of an opportunity.

Our multistage process theory is developed from the tenets of constructivism, which holds that much of the world that is presented to us is not really an objective reality, but rather a product of social construction (Weick, 1979; Giddens, 1984). Therefore, constructivists assume that human action is not simply a response to objective conditions, objects, and events. Instead, human action arises from the interpretation of external stimuli by actors, the investment of those stimuli with meaning, and the generation of subsequent behaviors (Gaglio, 1997). Moreover, constructivism replaces the idea of finding the truth in an objective world with the idea of testing for viability in a subjective world (Von Glasersfeld, 1981; Weick, 1995). Applying that logic to the investigation of entrepreneurial opportunities suggests that many opportunities are the outcome of social construction, not preexisting entities subject to detection by the entrepreneur. In this way, a constructivist perspective provides unique insights because it allows us to view opportunities as subjective phenomena that begin unformed and develop over time. Thus, a constructivist perspective departs from established literature (e.g., Kirzner, 1979) that considers opportunities as something already formed and awaiting discovery by alert individuals. Constructivism suggests that opportunities are the outcome of entrepreneurs' effort and action, and that such opportunities mirror the more general social processes through which individuals 'construct corridors from their personal experiences to stable economic and sociological institutions that comprise the organizations and markets we see in the world' (Sarasvathy, 2004: 289).

To be clear, we position our theory as a true constructivist perspective that supplements theory about the discovery of entrepreneurial opportunities (e.g., Shane, 2000; Kirzner, 1979) rather than seeking to supplant it. By this we mean that the constructivist perspective is different from, but not necessarily superior to, the objectivist view. Unlike the objectivist view, a major component of constructivist logic is the idea that consensus and coalition building are required to effectively influence current economic and social structures in ways that give rise to opportunities for profit (Shackle, 1979; Weick, 1979; Giddens, 1984; Sarasvathy, 2001; Dimov, 2007; Felin and Zenger, 2009). As such, the ideas of consensus and consensus building are key underlying components in the development of our theory.

Our constructivist model of opportunity production begins with the entrepreneur's perception of a

DOI: 10.1002/sej

possible opportunity in the form of an idea (Dimov, 2007). At this initial stage, the opportunity is imagined (Shackle, 1979; Klein, 2008) and the entrepreneur is likely to be uncertain about the viability of the opportunity. Thus, we posit that the entrepreneur will begin a sensemaking process (Weick, 1995) intended to clarify the viability of the envisioned future. This sensemaking process takes place through interactions between the entrepreneur and his or her peers: for example, family, friends, and mentors. The outcome of the sensemaking process is either objectification of the opportunity in the mind of the entrepreneur or abandonment of the idea. At the second stage, the entrepreneur attempts to enact objectified opportunities by engaging the social structure and trying to entrain (Collins, 1998) potential stakeholders into supporting the venture. The support of these individuals is needed to turn the opportunity into a working business (Lounsbury and Glynn, 2001). We argue that the entrepreneur's access to preexisting social ties and the entrepreneur's reputation facilitate the consensus building that is required to fully enact an opportunity. However, not all attempts at entraining stakeholders in opportunity enactment are successful, so our model recognizes that some objectified opportunities will also be abandoned by entrepreneurs at the enactment stage.

Our model suggests that opportunity abandonment, whether it occurs before objectification or before full enactment, will trigger a *post hoc* cognitive reconstruction by the entrepreneur. In that reconstruction, the entrepreneur will redefine his/her initial opportunity idea as an illusion. We argue that this *post hoc* reconstruction of the initial precipitating idea as illusory reduces cognitive dissonance (Festinger, 1957; Harmon-Jones and Mills, 1999) that is associated with the act of opportunity abandonment. In turn, this dissonance reduction has benefits for the entrepreneur, increasing his/her cognitive flexibility and openness to the pursuit of new ideas.

Through the model outlined above, this article makes predictions that are not derivable from the theory of the discovery of entrepreneurial opportunities (Kirzner, 1979; Shane, 2000). These predictions are captured in formal propositions that are available for future empirical testing. In developing those propositions, we identify the role of social structures, the entrepreneur's cognitive evaluations of those structures, and the entrepreneur's ability to influence social structures in the future as key elements in the opportunity production process. We also delineate the cognitive shifts that must take place for opportunity objectification to occur and state how social interaction influences these changes in mental models. Finally, we explicitly develop the notion that consensus building is a key to the successful enactment of opportunities and that social relationships and reputation help facilitate that task. These cognitive and social processes (and their associated relationships) have not been integrated in the existing literature and are not visible using discovery theory logic.

A THEORETICAL MODEL OF OPPORTUNITY PRODUCTION

The discussion presented in this article is focused on the concept of entrepreneurial opportunity, which can be defined as a future situation that is both desirable and feasible, regardless of the resources currently under the control of the entrepreneur (Stevenson, Roberts, and Grousbeck, 1989; Stevenson and Jarillo, 1990). From a constructivist perspective, entrepreneurial opportunities emerge from the cognitions and behaviors of entrepreneurs as they engage in interactions with current social structures (Shackle, 1979; Weick, 1979; Sarasvathy, 2001; Giddens, 1984). This means that the development of opportunities is strongly conditioned by collectively institutionalized belief systems (Dimov, 2007). The emergence of opportunities can be conceptualized as a reduction of ambiguity for the entrepreneur and potential stakeholders, as well as an increased capacity of the entrepreneur to define the subjectivity of a socially constructed reality as a new and inevitable future reality (Berger and Luckmann, 1966; Weick, 1979; Companys and McMullen, 2007).

To locate our theory more specifically within the larger opus of constructivism, we are inspired most closely by the work of Von Glasersfeld (1981), Shackle (1979), Weick (1969, 1979), and Giddens (1984). Von Glasersfeld (1981) asserted two key principles of constructivist logic: (1) knowledge is not passively received, but rather built up through experiences of the individual over time; and (2) the function of cognitions is adaptive, serving to organize the experiential world rather than discover an ontological reality (Von Glasersfeld, 1981). These principles give rise to the idea that the objectivist concept of finding *truth* can be supplemented by the notion of *viability* as a criterion for focus in the

DOI: 10.1002/sej

experiential world. In other words, subjects do not discover the inevitability of an objective reality, but instead engage the world in a way that allows them to conceptualize a viable future. They then work to organize their experiential world in a way that is consistent with this viability cognition.

The work of Shackle (1979) parallels that of Von Glasersfeld (1981). Shackle (1979) argued that the future is unknowable, yet most actors behave as if they have imagined a real future. The actors then engage in behaviors that result in the creation of the envisioned future. Shackle (1979) argued that the course of human affairs is something that individuals construct by ways of action that are predicated on an imaginative interpretation of their world. Individual actors must choose from the set of possible futures that can be envisioned, and once this choice is made a mental shift takes place that orients the individual to a specific course of action (Shackle, 1979). When applied to entrepreneurship, this suggests that an opportunity idea may trigger perceptions of a possible envisioned future that is desirable and feasible (Stevenson *et al.*, 1989). That cognition is then enacted as the entrepreneur works to influence other actors toward making the vision a reality (Shackle, 1979). Shackle (1979: 15) also noted that with regard to an imagined future, 'any abandonment . . . will be hurtful to the chooser in some degree.'

Weick (1969, 1979) has elaborated a constructivist perspective that resembles Von Glasersfeld's (1981) and Shackle's (1979), but draws from the sociocultural evolution model presented by Campbell (1965, 1970). Weick (1969, 1979) maintained that individuals—including managers in organizations—engage in action, select components of that action for attention, and retain the resulting sense data as enacted environments. Thus, managers construct an environment that influences their future behavior, and that behavior either reaffirms or modifies the enacted environment. This fully recursive process entails a cognitive focus that induces managers to see primarily what they believe. As such, managers and entrepreneurs form beliefs regarding the viability of opportunity ideas and their actions then reflect those beliefs. An entrepreneur is likely to say 'I know that I can do it' even before such a belief has been shown to be true, and the entrepreneur behaves in a manner that is consistent with that belief as he or she engages in the development of an opportunity. This logic parallels that adopted by many researchers in the stream of work on managerial cognition (e.g., Hodgkinson and Sparrow, 2002; Porac and Thomas, 1990; Porac *et al.*, 1995).

Yet another scholar to elaborate constructivist logic is Anthony Giddens (1979, 1984), who developed a well-known theory of structuration. In this theory, Giddens (1984) identified the relationships that exist between structures (i.e., the rules, norms, and conditions that guide social action) and actors by highlighting the role social structures play in constraining social action. However, Giddens (1984) also acknowledged that actors have the freedom to modify social structures. In addition, Giddens (1984) clarified the relationship between social structures and resources and showed how actors must engage and, in some cases, modify current social structures in order to gain access to resources. Although Giddens (1984) was not referring directly to entrepreneurs or entrepreneurship, his theory carries lessons for that topic because access to resources is considered to be a key part of the entrepreneurial enterprise (Alvarez and Barney, 2004). Thus, Giddens' (1984) constructivist logic suggests that to understand entrepreneurship, 'we must take account of both structure and agency; we can then appreciate how societal influences shape entrepreneurial agency and how agency redefines or develops structure' (Jack and Anderson, 2002: 470).

Following the constructivist logic of Von Glasersfeld, Shackle, Weick, and Giddens, we base our theoretical framework on the concept that entrepreneurial opportunities are born out of entrepreneurs' ideas about the experiential world (including current social structures), developed through individual and collective beliefs, and come to fruition via the process of social construction implemented by the entrepreneur's agency. This general position provides the foundation for the more detailed theorizing to follow. Constructivist principles also add the notion that as an entrepreneur considers the introduction of new products or services, he or she must take into account the viability of such introductions. According to constructivist logic, the viability cognition emerges through experience, social interaction, and the individual's perceived ability to influence the current social structure in a way that allows for the creation of a path to a new venture (Zahra, 2008; Felin and Zenger, 2009). Thus, from a constructivist viewpoint, it can be argued that the entrepreneur does not predict the future (Kirzner, 1979), but rather focuses on the elements of the social structure and environment that he or she can control. Sarasvathy (2004) captured portions of this

DOI: 10.1002/sej

logic in her work on corridor construction by arguing that entrepreneurs are active in shaping their environments, and entrepreneurial opportunities arise from the efforts of individual entrepreneurs as they develop pathways to an imagined business venture.

The constructivist view, therefore, suggests that entrepreneurs are not simply filters and interpreters of information. Rather they are an integral part of opportunity emergence as they invent parts of what they believe to be viable (Weick, 1979). However, as Giddens' (1984) structuration theory highlights, the entrepreneur's notions of viability are normalized within the context of an encompassing social structure that is presented to the entrepreneur as objective. Therefore, entrepreneurs who consider activities to be viable that are at the margins of currently accepted social practice are likely to face difficulties as they attempt to enact an envisioned future (Berger and Luckmann, 1966). To summarize these general principles, we offer the following proposition:

Proposition 1: Entrepreneurial opportunities emerge from the interplay between current enacted social structures, the entrepreneur's cognitive evaluation of that reality, and the entrepreneur's perceived ability to enact a new reality in the direction of an envisioned future.

Opportunity objectification

Our first proposition highlights the constraint of the current social world on the aspirations of the entrepreneur and on the types of actions required to fully enact an opportunity for profit. To elaborate this logic, we suggest that opportunities begin to emerge as the entrepreneur experiences the social world and forms a cognitive evaluation of that reality. This results in the formation of ideas as envisioned futures (Shackle, 1979) that may or may not become opportunities. We call these *opportunity ideas*. We argue that for these ideas to become fully enacted opportunities, they must survive a process that begins with the objectification of the idea as an external *opportunity* for the entrepreneur (Shepherd *et al.*, 2007). Opportunity objectification is defined as the attribution of objective reality to an opportunity idea, so that the idea begins to be seen as an entity outside the observer's mind. The process that produces objectification is similar to the process of *objectivation* discussed by Berger and Luckmann (1966) and is distinct from the phenomenon of *reification* described by Lane, Koka, and Pathak (2006), Thomason (1982), and others.

Once an opportunity idea has formed in the mind of the entrepreneur, we argue that he or she will engage in an act of sensemaking (Weick, 1995). In this sensemaking episode, the entrepreneur will test the viability of the idea through interaction with peers. We use *peers* to signify friends, family members, mentors, and other associates who are close to the entrepreneur and whom he or she trusts. We believe that the entrepreneur will choose to engage in this sensemaking because of uncertainty about the viability of the idea, and the entrepreneur will choose peers because of his or her ready access to them and because of the reliability of their behavior in past interactions. However, not all peers provide the same value in the sensemaking process, because some peers are likely to be more knowledgeable about entrepreneurial practice than others (Dubini and Aldrich, 1991). Thus, the greater the perceived knowledge a peer has about entrepreneurship, the more the entrepreneur will value the peer's opinion about the actual existence of an opportunity.

As the entrepreneur engages in the sensemaking project, it may be informal—confined to short conversations or other verbal exchanges—or it may take on a more formal aspect—as in the case of a meeting or exchange of memos. Whatever form the sensemaking episode takes, we submit that most entrepreneurs will need an external source of affirmation that the idea is, in fact, viable and has the potential to be successfully enacted before he or she will pursue it further (Shackle, 1992; Taleb, 2007). The trust the entrepreneur feels in his or her peers, including those who are knowledgeable about entrepreneurship, will help reduce uncertainty as the entrepreneur attempts to ascertain whether the impression he or she has formed corresponds to a real opportunity. We argue that if a consensus emerges among knowledgeable peers that the opportunity idea is viable, the aforementioned objectification process will be triggered. Thus, it is agreement among peers about the existence of feasible means to exploit the opportunity idea that is the stimulus for opportunity objectification. This objectification process transforms the subjectively represented idea into an objectified opportunity that has (for the entrepreneur) the quality of an external reality. This objectification process parallels Shackle's (1992) concept that one must choose from a host of potential futures and that making that choice leads to a cognitive shift that commits the individual to a course of action.

DOI: 10.1002/sej

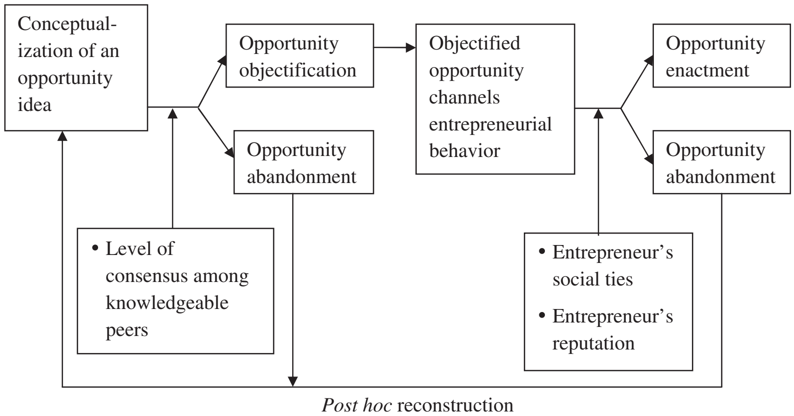

Figure 1. The production of entrepreneurial opportunity

The argument in the previous paragraphs suggests that the objectification of an opportunity idea will be enhanced by the peer group's knowledge base, and this can be contrasted with the common objectivist argument that it is the knowledge of the entrepreneur that allows for the discovery of opportunities (e.g., Kirzner, 1979; Shane, 2000; Wood and Pearson, 2009). We acknowledge that the entrepreneur's stock of knowledge is likely to play a role in the objectification process. However, a constructivist perspective suggests that the knowledge of the peer group members is also important. Those peer group members provide an assessment of whether the current social structure can be influenced in a way that will allow the development of the opportunity idea reported by the entrepreneur, and it is their consensus about that path of action that makes the opportunity real for the entrepreneur.

This suggests the following proposition:

Proposition 2: The greater the consensus among knowledgeable peers about the viability of an opportunity idea, the more likely the objectification of the opportunity for the entrepreneur and the more likely subsequent entrepreneurial action.

On the other hand, if knowledgeable peers with whom an entrepreneur is interacting do not exhibit consensus that the idea the entrepreneur has presented to them is viable and, therefore, entails an exploitable path of action, the entrepreneur is likely to rethink his or her original judgment. The schematic conception of the opportunity in the entrepreneur's mind will become more subjective, and it will become more difficult for the entrepreneur to sustain the cognition that the idea is an externally real opportunity. This is especially true if peers whom the entrepreneur considers to be knowledgeable form a solid consensus against the entrepreneur's initial position that the idea is meaningful and represents an opportunity for profit. In this case, we believe there is a significant chance that the entrepreneur will abandon the opportunity and turn his or her attention elsewhere (see Figure 1). Opportunity abandonment is a deflection of the entrepreneur's attention and effort away from an opportunity idea, accompanied by a decision not to pursue it. Though abandonment may not be permanent (entrepreneurs may cycle back to the same idea at a later time), we believe that in an era of rampant uncertainty (Shepherd *et al.*, 2007) and scarce attention (Collins, 1998; McKinley, Mone, and Moon, 1999), the pressure to abandon ideas that are not emerging as objectified opportunities will be high.

This contrasts with the image of the persistent entrepreneur who holds on against all odds and against all skepticism to bring an idea to fruition (Nicholson and Anderson, 2005). While such persistent conduct may be exhibited in some cases, for example in the pioneering days of new industries (Aldrich and Fiol, 1994; Santos and Eisenhardt, 2009), we believe that persistence will be the exception rather than the rule if sensemaking produces discord about the viability of an opportunity idea. Entrepreneurs are likely to abandon those ideas that resist objectification and divert their attention and effort elsewhere because such action conserves scarce time and attention and opens up the possibility of exploring new ideas. These arguments lead to a third proposition:

DOI: 10.1002/sej

Proposition 3: The less consensus among knowledgeable peers about the viability of an opportunity idea, the less likely the objectification of the opportunity for the entrepreneur and the more likely the abandonment of the idea.

Opportunity enactment

For those ideas that become objectified opportunities, we argue that a new process begins that may eventually lead to opportunity enactment (see Figure 1). Once an opportunity idea has become objectified and there is no longer doubt on the entrepreneur's part about its external status, the objectified opportunity will begin to channel the entrepreneur's behavior. The entrepreneur will begin to engage in more focused action designed to explore the possibility of acquiring support to capitalize on the opportunity. Constructivist logic suggests that this enactment process requires the entrepreneur to actively engage the social environment by entraining a group of stakeholders wider than the initial peer group involved in opportunity objectification (Collins, 1998; Gartner *et al.*, 1994; Johannisson, 2000). Therefore, we define opportunity enactment as the enlistment of stakeholder support sufficient to transform an objectified opportunity into a working venture. Put slightly differently, opportunity enactment requires the successful development of a coalition that supplies the resources to implement the means-end path envisioned at the opportunity objectification stage. These ideas are succinctly summed up by Sarasvathy *et al.* (2003: 157), who asserted that 'opportunities get created as the residual of a process that involves intense dynamic interaction and negotiation between stakeholders seeking to operationalize their aspirations into concrete products, services, and institutions that constitute the economy.'

Because opportunity enactment requires a coalition of stakeholders, the entrepreneur must work to absorb stakeholders into his or her view of the future and eventually reach a shared understanding of a future to come (Shackle, 1979). This entails an iterative process of talking with potential investors, contacting possible employees, surveying potential customers, and searching for technology that might be used to create the product or service that will fulfill the opportunity (Alvarez and Barney, 2007; Mitchell, Mitchell, and Smith, 2008). Market research may be conducted, distribution channels may be explored, the availability of capital assessed, and the resource space scanned. As the entrepreneur works with the stakeholders, receives feedback, modifies his or her entrainment moves, and attempts to influence the stakeholders yet again, the stakeholders will either reject the entrepreneur's vision or become entrained in it. If shared understanding among coalition members develops, objectification of the opportunity will be strengthened for both the entrepreneur and the stakeholders. This increases the focus of the entrepreneur's effort and enhances the odds of opportunity enactment. We emphasize that the survival of an opportunity to the enactment stage does not necessarily mean that any resulting venture will be financially successful—we confine the construct *opportunity enactment* to the initial establishment of a business venture. An empirical indicator of opportunity enactment, in the sense intended here, is the shipment of a venture's first product or the delivery of its first service to a customer (Schoonhoven, Eisenhardt, and Lyman, 1990).

The importance of enlisting the aid of others in the entrepreneurial process is not new in entrepreneurship theory, and it is an important aspect of the objectivist or discovery tradition (Long and Graham, 1988; Busenitz, 1996; Chrisman and McMullan, 2000). However, in the discovery perspective, the role of outside actors is to provide new sources of information that can be used in the entrepreneur's evaluation of the objective world (e.g., Shane, 2003). This logic holds that as the entrepreneur interacts with others, those individuals help shed new light on the *truth* associated with an objective opportunity. In the constructivist perspective, however, the important role of outside actors is opportunity development rather than opportunity discovery. Constructivist logic suggests that at the enactment stage, it is the cognitions and beliefs of outside actors that are influenced by the entrepreneur, rather than the reverse. For an empirical example of this influence process at the intersection of the computing, electronics, and telecommunications industries, the reader is referred to Santos and Eisenhardt's (2009) description of the construction of new markets by entrepreneurial managers. In essence, constructivist logic changes the direction of the causal influence on cognitions because the entrepreneur is attempting to enact what he or she thinks is a *viable* future (Weick, 1979). Thus, the uncertainty reduction (Dimov, 2007) at the enactment stage is primarily the stakeholders', rather than the entrepreneur's. Opportunity enactment becomes a consensus-building activity in which potential stakeholders are

DOI: 10.1002/sej

entrained in the effort to fulfill the potential of an opportunity that has previously been objectified for the entrepreneur and now comes to seem more and more objective to the stakeholders as well. From this logic our next proposition emerges:

Proposition 4: Opportunity enactment is a social and cognitive process requiring opportunity objectification and consensus-driven entrainment of stakeholders into an entrepreneurial project designed to fully exploit the objectified opportunity.

Social ties and reputation

Based on constructivist logic, we have argued that opportunities begin as ideas and sometimes become objectified for the entrepreneur. Some of these objectified opportunities then become enacted through entrainment of stakeholders into a consensus to support the opportunity. Given this argument, the literature on factors that influence entrainment of stakeholders into entrepreneurial projects becomes relevant. Prior research has indicated that social ties and reputation are likely to be influential factors in the entrainment of stakeholders (Reynolds and Miller, 1992; Rindova *et al.*, 2005; Dew *et al.*, 2008; Sarasvathy *et al.*, 2008). For example, Berglund (2007) argued that social ties are important because they provide a conduit through which outside actors are drawn into the venture creation process. As an increasing number of stakeholders become involved in the venture, shared identities form and higher-level commitments are made. In this way, social ties and reputation become key mechanisms in the consensus building that is necessary to launch a new venture. We acknowledge that social ties and reputation are not the only important factors in facilitating the enactment of emerging opportunities, but they are definitely worthy of note.

Social ties

Access to a network of social ties that predates the enactment attempt is likely to have a positive effect on an entrepreneur's ability to enact an objectified opportunity (Arenius and De Clercq, 2005; Porter and Powell, 2006). These social ties may include relations between the entrepreneur and his or her peer group, such as family, friends, and colleagues, and indeed it is common for founding teams to be composed of family members (Ruef, Aldrich, and Carter, 2003; Greve and Salaff, 2003). However, as suggested earlier, social ties that link the entrepreneur to individuals outside the immediate peer group are also important. These ties exhibit a compounding dynamic, because prior research suggests that preexisting ties can function as mechanisms through which new and significant ties are created, which often leads to increased resource access (Podolny and Baron, 1997; Vissa and Chacar, 2009).

The constructivist logic guiding this article implies that social ties play a different role in opportunity enactment than the discovery perspective would suggest. In the discovery perspective, social ties have been conceptualized as a channel through which information about a detected opportunity flows to the entrepreneur (Shane, 2000; Shane and Cable, 2002; Greve and Salaff, 2003). In contrast, constructivists (Shackle, 1979; Giddens, 1984) would highlight the flow of information through social ties from the entrepreneur to the stakeholders, as the entrepreneur builds a case for support of the project. The outcome is a shift in the mental models of the stakeholders and, by extension, a solidification of existing opportunity objectification for the entrepreneur. Thus, in the constructivist approach, a prime benefit of social ties is that they help persuade stakeholders of the feasibility of an opportunity and, in so doing, further support the entrepreneur's confidence (Dimov, 2010).

Existing entrepreneurship research has also shown that a wide network of social ties leads to increased access to key resources (Greve and Salaff, 2003; Hansen, 2000; Shane and Stuart, 2002; Jensen and Koeing, 2002; Stuart and Sorenson, 2005; Singh *et al.*, 1999; Reynolds and Miller, 1992). In order for an opportunity to be fully enacted, financial capital must be secured, and the entrepreneur's social ties can facilitate that task. If the entrepreneur is linked into a preexisting social network that includes bankers or investors, even if those ties are not direct but mediated through others, the entrepreneur can use the ties to influence the flow of capital toward his or her project. If the entrepreneur knows intermediaries (Granovetter, 1973; Burt, 1992, 2005) who have ties to providers of capital, the intermediaries can also be enlisted in the enactment of a shared meaning for the entrepreneur, the intermediary, and the capital provider. This is consistent with research on venture capital activity showing that venture capitalists tend to invest in start-ups that they have learned about from personal contacts (Shane and Stuart, 2002; Hsu, 2004).

In addition to securing financial capital, attracting key human resources and gaining access to tacit knowledge are also important outcomes of social ties (Stuart and Sorenson, 2005). Because of the high probability of new venture failure (Stubbart and Knight, 2006), attracting key employees can be especially difficult for a start-up firm. Just as with the investor, the entrepreneur must be able to convince potential employees that the opportunity, if enacted into a new venture, can yield a stream of revenue and, hopefully, profits. Baker, Miner, and Eesley (2003) found that in the 29 start-ups they studied, 52 percent of early hires were secured through personal relationships. These findings support the idea that the entrainment of potential employees into the developing entrepreneurial project is facilitated if preexisting social ties can be utilized to get a number of simultaneous commitments from employees. In that way, each potential employee becomes aware of others moving into the state of commitment. That awareness of collective commitment reinforces the entrainment of each individual employee and further supports the consensus that the project they are joining will produce rewards. On the basis of these arguments we suggest another proposition (see the vertical arrow on the right side of Figure 1):

Proposition 5: The greater an entrepreneur's access to preexisting social ties, the more likely he or she will be to build consensus about the value of the project and entrain potential stakeholders into the project, and the more likely opportunity enactment.

In contrast, without a well-developed network of social ties, the entrepreneur is less capable of extending his or her influence into the environment to engender a consensus among potential stakeholders that the objectified opportunity being pursued is worthy of support. Because social ties facilitate stakeholder entrainment and resource access, an entrepreneur who lacks social ties will face greater difficulty in his or her attempts to enact the objectified opportunity. Also, as Nahapeit and Ghoshal (1998) pointed out, social ties provide a vehicle for the exchange and combination of knowledge that leads to new knowledge. In this case, it is the knowledge regarding the feasibility of the opportunity that must be conveyed, and lack of social ties puts the entrepreneur at a disadvantage in communicating opportunity-related knowledge and vision to others. All these factors make opportunity enactment more tenuous, and if the difficulties compound, the path of opportunity abandonment becomes more likely (see Figure 1). This supports the following proposition:

Proposition 6: The less an entrepreneur's access to preexisting social ties, the less likely he or she will be to build consensus about the value of the project and entrain potential stakeholders into the project, and the more likely opportunity abandonment.

Reputation

Another factor that we argue is influential in the process of opportunity enactment is the entrepreneur's reputation for previous entrepreneurial success. Reputation is formally defined as information regarding an individual's prior performance (Podolny, 1994). We consider an entrepreneur's reputation for past entrepreneurial success a critical resource that he or she brings to the postobjectification attempt to enact a current opportunity. The entrepreneur's reputation is critical because it helps reduce the uncertainty of potential stakeholders about whether the objectified opportunity can be successfully enacted and financial returns generated (Burt, 1992). In other words, entrepreneurial reputation constitutes a signal to stakeholders about the feasibility of opportunity enactment. Previous research has shown that developing a reputation by demonstrating past achievement and gaining the endorsement of important insiders helps an entrepreneur overcome the skepticism of outsiders in the enactment of a new opportunity (Eisenhardt and Schoonhoven, 1996; Burton, Sorenson, and Beckman, 2002). For example, Shane and Cable (2002) explored the relationship between entrepreneurs and seed investors and found that reputation mediated the relationships between them. Shane and Cable (2002) concluded that as an entrepreneur's reputation grew, investors were more willing to invest and were willing to do so while consulting fewer outside sources.

Entrepreneurs who have specialized skills or previous success in new venture creation are likely to develop a reputation that puts them in the category of high-status actors. Rindova *et al.* (2005) argued that high-status actors are more likely to attract resources to their organizations because those actors can disseminate uncertainty-reducing information.

Similarly, Pollock and Rindova (2003) demonstrated that reputation is an important determinant of public attention, and that increased public attention leads to increased entrepreneurial performance. The common theme that emerges from this literature is the idea that an entrepreneur's reputation enhances the entrepreneur's influence. This influence is an important factor in the consensus development process (Santos and Eisenhardt, 2009), and developing the consensus of stakeholders is required for the entrainment of those individuals into the entrepreneur's project. This entrainment propels the entrepreneur along the path of opportunity enactment (see Figure 1). Based on this reasoning, we offer the following proposition:

Proposition 7: The greater an entrepreneur's reputation for past opportunity enactment, the more likely he or she will be to build consensus about the value of the current project and entrain stakeholders into the project, and the more likely opportunity enactment.

However, individuals who have never engaged in entrepreneurship before, who have a limited track record for securing financial capital, or have limited managerial experience will have much more difficulty overcoming stakeholder resistance to providing support (Shane and Cable, 2002). An entrepreneur lacking reputation must work harder to build an identity for himself or herself and create a sense of shared meaning about the opportunity being presented to stakeholders if they are to be enfolded into the project. Investors, potential employees, and other interested parties are likely to be very skeptical about an opportunity presented by a novice entrepreneur (Aldrich and Auster, 1986). In this case, the entrepreneur's lack of reputation is a signal to potential stakeholders that compounds, rather than reduces, their uncertainty—with no track record, the efficacy of the entrepreneur is in doubt. If stakeholders are reluctant to get involved in the project because of the entrepreneur's lack of reputation, such reluctance further enhances doubt both on the part of the entrepreneur and of other potential stakeholders observing the development of the project. Such an erosion of confidence by the entrepreneur and potential stakeholders can fatally truncate entrainment so that the entrepreneur eventually has little option but to abandon the opportunity. While lack of reputation does not inevitably create the truncation suggested, it increases the probability of such self-reinforcing dynamics, enhancing the likelihood of opportunity abandonment (see Figure 1). This suggests:

Proposition 8: The less an entrepreneur's reputation for past opportunity enactment, the less likely he or she will be to build consensus about the value of the current project and entrain potential stakeholders into the project, and the more likely opportunity abandonment.

THE AFTERMATH OF ABANDONMENT

Thus far, our model has clarified the processes associated with opportunity enactment and opportunity abandonment, but it has not said much about the emotional state of the entrepreneurs moving through these processes. By and large, entrepreneurship scholars have focused on opportunities that have successful outcomes (for an exception, see Shepherd and Cardon, 2009). Therefore, our knowledge about the emotional states of successful entrepreneurs is probably better than our knowledge about the emotional states of entrepreneurs who have abandoned opportunities (e.g., Simon, Houghton, and Aquino, 2000). Successful entrepreneurs who have produced an existing business from an opportunity idea can be assumed to experience high levels of emotional energy as a result of the production. These entrepreneurs have started with an idea, experienced its objectification through peer consensus about its viability, and enacted a venture by entraining stakeholders into a project to exploit the opportunity. Such actions are empowering, and should enhance emotional well being and pride. These emotional states are similar to those that develop in a scholar taking part in an important discussion at the center of his or her discipline's attention space (Collins, 1998), or a manager making decisions and experiencing successful outcomes that are then attributed to his or her own agency. However, in the realm of entrepreneurship, what about those entrepreneurs who have experienced opportunity abandonment?

The entrepreneur abandoning an opportunity at either the objectification stage or the enactment stage (Figure 1) may experience the abandonment as a failure. In turn, feelings of failure are likely to be a source of cognitive dissonance. This is a condition in which two cognitions held by an individual are dissonant, or incongruent (Cooper, 2007; Festinger, 1957; Harmon-Jones and Mills, 1999; Parker and

DOI: 10.1002/sej

McKinley, 2008). For example, if an entrepreneur believes that good entrepreneurs are successful at enacting opportunities, no matter how subjective those opportunities may appear when first conceived, the cognition that he or she has abandoned an opportunity will be incongruent with that belief. Festinger (1957) and Harmon-Jones and Mills (1999) noted that cognitive dissonance is uncomfortable for the individual experiencing it. Dissonance and discomfort following opportunity abandonment are consistent with Shackle's (1979: 45) statement that abandoning a choice that has been made is 'save for *force majeure*, to suffer a psychic injury.' Shackle (1979) went on to argue that choice is a commitment of effort, resources, and hopes to a course of action, and this commitment exposes the actor to an increased level of imaginative experience. If an entrepreneur abandons a choice, the entrepreneur may experience a truncation of imaginative experience and an associated sense of self-betrayal and erosion of self-esteem.

Festinger (1957) argued that individuals in dissonant states will attempt to alleviate the dissonance. This can be accomplished by changing the behavior that triggered the dissonance, by changing cognitions about that behavior, or by introducing new cognitions that are consistent with the behavior (consonant cognitions; see Festinger, 1957, and Harmon-Jones and Mills, 1999). If entrepreneurs who have abandoned opportunities feel cognitive dissonance, we suggest (following Festinger, 1957) that they will seek ways to reduce that dissonance. At least in the moments following abandonment, entrepreneurs are unlikely to reduce dissonance by reversing their act of abandonment, since this would involve surmounting strong social and cognitive pressures that have narrowed perceived options in favor of abandonment. A cognitive dissonance reduction mechanism that may be easier for the entrepreneur to adopt is to engage in a *post hoc* reconstruction of the opportunity that was abandoned. Specifically, the entrepreneur can retrospectively reconstruct the opportunity he or she has just abandoned as illusory.

In the case of abandonment at the objectification stage, this reconstruction is almost automatic, because the external status of the opportunity has not yet been fully solidified in the entrepreneur's eyes, though the opportunity does exist as an idea. *Post hoc* reconstruction at this point provides clarification, defining the opportunity idea as an illusion. This assuages dissonance attributable to the entrepreneur's failure to achieve the ideal that good entrepreneurs should be able to take ideas about opportunities and give them substance as working businesses. In the case of opportunity abandonment at the enactment stage—when the entrepreneur is already dealing with an opportunity that has been objectified for him or her—the *post hoc* reconstruction will likely take the form of an error attribution. The entrepreneur will adjust his or her perceptions to believe that the opportunity that had appeared viable and real was not adequately grasped. Even if the entrepreneur initially clings to the objectification, we believe that he or she will eventually modify relevant cognitions in a post-hoc reconstruction of the opportunity as illusory.

This perceptual gambit introduces a cognition (the opportunity was illusory) that is consistent with the abandonment action and, thus, the gambit alleviates the dissonance that stems from the inconsistency between the belief that good entrepreneurs successfully exploit opportunities and the knowledge that the entrepreneur has abandoned an opportunity. Put a bit differently, failure to follow through and exploit an illusory opportunity is less a crime of entrepreneurial incompetence than a prudent action. Thus, the entrepreneur's dissonance is reduced and the entrepreneur's sense of personal capability is enhanced. This reasoning leads to a proposition about the postabandonment cognitions of the entrepreneur:

Proposition 9: Abandonment of an opportunity will lead to post hoc reconstruction of the opportunity as illusory.

If the entrepreneur does react to opportunity abandonment by reconstructing the opportunity as illusory, and he or she reduces cognitive dissonance through this perceptual adjustment, the entrepreneur's attention and effort can be reallocated to the conceptualization of new opportunity ideas (see the bottom loop in Figure 1). A prolonged state of cognitive dissonance might inhibit such flexible adjustment, reducing the entrepreneur's emotional energy (Shepherd and Cardon, 2009) and interfering with his or her awareness of the peripheral cues (Weick, 1995) that may coalesce into a new opportunity idea. In other words, interpreting an abandoned opportunity as an illusion liberates the entrepreneur to explore ideas about new paths into the future. Such interpretation resembles the *defining* tactic Sutton and Callahan (1987) described in their account of stigma management strategies among executives of

DOI: 10.1002/sej

bankrupt firms. Some executives used *defining* to alleviate the stigma of Chapter 11 bankruptcy, stating that their firms did not enter Chapter 11 to seek relief from financial problems. As Sutton and Callahan (1987: 426) explained, defining is a form of the 'defense of nonoccurrence.' In the realm of entrepreneurship, retrospectively interpreting an opportunity that has been abandoned as a nonoccurrence is a defense mechanism, reducing worry about one's competence as an entrepreneur. Worry is not a good recipe for the conceptualization of new opportunity ideas, and those entrepreneurs who can move past the worry will be better equipped to renew the opportunity idea-objectification-enactment cycle (Mitchell *et al.*, 2008). This logic conceptualizes postabandonment dissonance reduction as a productive step in the restoration of the entrepreneur's confidence, energy, and attention, motivating the entrepreneur to *keep on truckin*' in the sometimes frustrating search for an opportunity idea that can be fully enacted. While such enactment attempts do not always bear fruit, the continuation of enactment trials is necessary for the eventual establishment of a new venture. The logic summarized in this paragraph suggests a final proposition:

> *Proposition 10: In cases of opportunity abandonment, the post hoc reconstruction of the opportunity as illusory gives the entrepreneur confidence to engage in the attempted production of new opportunities.*

DISCUSSION

We have used a constructivist lens to develop a theory that identifies the origins of opportunities and depicts the processes that result in the production of opportunities. By bringing the constructivist perspective to bear on the issue of entrepreneurial opportunities, we have generated some unique insights that are not visible when one applies the objectivist or discovery framework. For example, our theory suggests that opportunities begin as ideas, rather than market imperfections (Schumpeter, 1934) and then are objectified (or abandoned) as a result of social processes that emerge from the entrepreneur's interactions with peers. For those opportunities that do get objectified, additional social processes are instigated by the entrepreneur in an effort to entrain stakeholders into supporting the development of a venture to fully enact the opportunity. These social processes involve the building of consensus through a flow of information that diffuses from the entrepreneur through social ties to potential stakeholders. The reputation of the entrepreneur is important in making the information credible, so that both preexisting social ties and reputation are significant determinants of whether or not an objectified opportunity gets enacted into an ongoing venture. Abandonment of an opportunity can occur either at the objectification stage or at the enactment stage, and our model predicts that entrepreneurs experiencing abandonment will be subject to cognitive dissonance. However, we hypothesize that they will adjust to that outcome through a *post hoc* reconstruction of the opportunity as illusory. This reconstruction renews the entrepreneur's emotional energy by displacing attribution for the abandonment from an incompetent entrepreneur to an illusory opportunity.

Boundaries of the theory

Dubin (1978) has noted that one of the key components of theory building is the specification of the boundaries within which a theory is expected to apply. Therefore, we next consider boundary conditions for our theory, and we also spell out how those boundary conditions pose opportunities for future research. One boundary condition may be the experience of the entrepreneur (Romanelli, 1989; Shane, 2000; Sarasvathy *et al.*, 2008). Objectification of opportunity ideas by very experienced entrepreneurs may be less dependent on the generation of consensus through interactions with peers, instead conforming more closely to a solitary act of recognition (Ucbasaran, Westhead, and Wright, 2006). That is, a very experienced entrepreneur may not need as much consultation with peers about the viability of an opportunity idea to experience the idea as an externally real opportunity. For the very experienced entrepreneur, subjectivity may be transformed into objectivity in a sudden inversion—the entrepreneur just knows at some point that the idea is viable and represents an opportunity. From a cognitive perspective, long experience may provide an entrepreneur with a well-established schema that allows the entrepreneur to sort opportunity ideas into *viable* and *nonviable* categories, thus permitting him or her to achieve opportunity objectification alone (Dutton and Jackson, 1987; Busenitz and Barney, 1997). Thus, for the experienced entrepreneur, Kirzner's (1979) concept of *alertness* may more closely describe opportunity objectification than our model of objectification through peer consensus. This insight is also consistent with Shane's (2000) conclusion that entrepreneurs who understand the technology in an industry can identify entrepreneurial opportunities with considerable fidelity, bypassing the uncertainty that often afflicts the entrepreneur at the opportunity objectification stage.

The boundary condition just specified presents an opportunity for future research. Researchers could perform field studies to track entrepreneurs who have varying levels of experience in order to determine to what degree each entrepreneur engages in sensemaking with peers after having conceived an opportunity idea. To capture the emergence of those ideas, the entrepreneurs could be asked to keep logs recording their thoughts about possible business opportunities. Data on each entrepreneur's level of experience in prior opportunity enactment could also be collected. Based on our discussion of boundary conditions, we would predict that more experienced entrepreneurs would engage in less consultation with peers after conceiving an idea than their colleagues with less entrepreneurial experience. In addition to a field research design, this prediction could also be tested in a laboratory experiment in which entrepreneurs of varying experience would be exposed to ambiguous sense data that might or might not indicate an opportunity. The entrepreneurs could be given the chance to consult with peers before rendering judgment on the meaning of the sense data. If the prediction based on our boundary condition were valid, experienced entrepreneurs would engage in less consultation and come to quicker judgments about whether the sense data indicated a viable opportunity than their less-experienced colleagues. Such a result would be consistent with Eisenhardt's (1989) observation that experienced counselors are associated with quicker managerial decision making. In the realm of entrepreneurship, the implication of our boundary specification is that Kirznerian alertness requires long experience.

A second boundary condition on our theory may be the size of the founding team, that is, the group planning to develop an opportunity idea and share equity in any resulting business. Membership in such teams can vary from a single individual (the solitary entrepreneur) to several persons (Chandler, Honig, and Wiklund, 2005). We emphasize the distinction between the founding team and the group of peers we referred to in the earlier section on opportunity objectification. The larger the founding team, the less need there may be to go outside the team to get assessment from external peers about the viability of an opportunity idea under consideration (Fiet and Busenitz, 1997; Foo, Sin, and Yiong, 2006). In other words, a large team may have the capacity to furnish its own viability evaluation (Barney *et al.*,1996). Though our propositions were formulated from the point of view of the individual entrepreneur, bringing team size in as a boundary condition emphasizes the point that opportunity production is sometimes a team effort. If consensus on viability can be achieved within the team, the team might make the transition to opportunity objectification without communicating with peers (Barney *et al.*, 1996). Thus, our description of the social dynamics in the objectification stage of the model might be less applicable the larger the number of equity partners seeking to develop an idea.

In summary, at the objectification stage, our model may be more representative the closer the situation comes to solo entrepreneurship and the less experience that is available to the entrepreneur. Whether these same attributes form boundary conditions for the opportunity enactment stage of our model is less clear. Taking team size as an example, it might be argued that a large founding team composed of members with strong reputations and powerful social ties will be an efficacious instrument for opportunity enactment. The team members can use their social ties to build a complex web of influence that penetrates the environment (Santos and Eisenhardt, 2009), engineering a tight consensus among stakeholders about the viability of a project and entraining them into the venture. The reputation of the team members would enhance the credibility of the information being communicated to stakeholders, strengthening the entrainment process. In this scenario, the social dynamics presented in the second part of our model would be more applicable the larger a founding team. On this argument, one could infer that solitary entrepreneurs would have more difficulty implementing the enactment process we described and, indeed, they might be more prone to postobjectification abandonment. However, large teams also experience disagreements, conflicts, and problems of coordination (Blau, 1970). Thus, large team size may sometimes interfere with the team's capacity to engage in enactment dynamics such as those envisioned in our theory. In that case, a different model would need to be formulated to describe the enactment of objectified opportunities in large teams, and one would draw the boundary conditions of our opportunity enactment component to suggest that such teams are less well represented.

In our view, the uncertainty about the exact trajectory of the team size boundary condition is less a liability than a stimulus for future research. Researchers could compare the social dynamics that characterize the enactment of objectified opportunities in teams of varying size, from solo entrepreneurs to multiperson teams. The most likely venue for such research would be the field, but research of the type we contemplate could also be conducted in a laboratory setting by simulating the creation of a new venture from idea objectification to enactment. Among the research questions to be answered would be: (1) Do larger teams presented with objectified opportunities move more quickly through the process of enactment through entrainment of stakeholders? (2) Is team size related to the likelihood of emerging from the enactment process with an ongoing business? (3) Do solo entrepreneurs or multiperson teams have the greater probability of abandoning an opportunity, even after a period of engagement in attempted opportunity enactment? We believe that such research questions would not be raised by an objectivist perspective on opportunity detection, and the answers would help refine the boundary conditions for our constructivist theory.

Theoretical implications

As noted in the introduction, our theory speaks directly to the opportunity creation versus opportunity discovery debate (Alvarez and Barney, 2007) by providing an alternative to the discovery perspective. We emphasize again that our purpose in posing this alternative is not to overthrow discovery theory, but rather to supplement it. Our theory suggests that, at least in some cases, opportunities do not originate in market perturbations, but in the perturbations of entrepreneurs' cognitions. Changes in the social context may stimulate sensory inputs that coalesce into an idea about a possible opportunity, and if the idea becomes objectified and understood as an external opportunity, it may compel focused action on the part of the entrepreneur. If that action results in the entrainment of stakeholders into a new venture, the opportunity becomes enacted and may eventually be established as a profitable business. However, if peers or stakeholders are not supportive of opportunity objectification or opportunity enactment, the opportunity is likely to remain subjective, and we suggest that it will be abandoned by the entrepreneur. Though such abandonment may be temporary, we believe it is probable if cognitive or financial support is not forthcoming. This assumes a practical orientation among entrepreneurs: they pursue ideas that their social context affirms as viable and abandon those whose viability cannot be demonstrated fairly quickly. In the case of abandonment, we also believe that entrepreneurs will engage in a *post hoc* reconstruction of the opportunity they had been focusing on, construing the opportunity as an illusion and their involvement as mistaken rather than ineffective. This will reduce the cognitive dissonance that is associated with abandonment, restoring the entrepreneur's emotional energy and stimulating a new quest for exploitable ideas. Indeed, as portrayed in Figure 1, the *post hoc* reconstruction is a generative force, facilitating new iterations of the opportunity production process we have been discussing.

We believe that such theoretical implications would not be forthcoming in a discovery perspective, because in discovery theory an objective opportunity—rather than the entrepreneur's cognitions—is the source of the opportunity development process. In a discovery perspective, the entrepreneur is a detector of an external phenomenon that would exist whether or not the entrepreneur was present to record it (Kirzner, 1979). If that phenomenon is validly detected, focused action by the entrepreneur ensues. In contrast, in a constructivist perspective, the entrepreneur is an influence agent, seeking to generalize an idea about an opportunity by creating a consensus about its viability. Without the entrepreneur, the opportunity could not exist, and it is the entrepreneur's cognitions and actions that give rise first to opportunity objectification and then to opportunity enactment. Opportunity abandonment, when it occurs, is also conceptualized as a cognitive event in constructivist theory, because it involves a deflection of attention away from the entrepreneur's current focus on a particular opportunity.

In a constructivist perspective, particularly the one presented here, opportunity ideas are targeted at the future and reflect the assumption that cognitions can lead to behaviors that alter social and material conditions. Opportunity ideas are also molded by the local social structure that the entrepreneur encounters, first in his or her exchanges with peers and subsequently in exchanges of resources and commitments with stakeholders. This logic is a clear departure from discovery theory, because discovery theory emphasizes truth seeking and underplays the transition from subjectivity to objectivity that takes place

DOI: 10.1002/sej

during opportunity objectification. As such, the use of constructivism has allowed us to develop a theory that highlights the role of ideas and social processes as drivers of entrepreneurial opportunity production.

As emphasized in the derivation of our propositions, consensus building is fundamental to the production of opportunities. Discovery theory, on the other hand, deemphasizes the social mechanism of consensus building because discovery theory explicitly rejects the notion that entrepreneurs are *makers of history* (Sarasvathy *et al.*, 2003). Constructivist logic makes room for the possibility that during the consensus building process it is the potential stakeholder whose cognitions and beliefs are influenced by the entrepreneur, as opposed to the objectivist notion that it is the entrepreneur's schemata that are altered by information coming from stakeholders. Constructivist logic changes the direction of the effect because the entrepreneur is attempting to enact what he or she sees as a viable future (Weick, 1979).

Because consensus building is an important element in our constructivist theory, we identified preexisting social ties and reputation as critical variables in the opportunity production process. Preexisting social ties and reputation are mechanisms through which an entrepreneur builds consensus among stakeholders and entrains them into an evolving venture. Social ties have been considered influential in the discovery perspective as well, but their role is to facilitate information flow to the entrepreneur that enhances representation of an objective reality. Here again, the application of constructivist logic changes the game by suggesting that it is information flow from the entrepreneur to the stakeholder that needs better understanding. Over time, this information flow can entrain investors, partners, customers, suppliers, and regulators into the opportunity production process and this, in turn, leads to shared identities, shared commitment, and an objectification of the opportunity for them as well (Simon, 1993; Berglund, 2007).

Reputation for prior entrepreneurial success allows the entrepreneur to overcome the uncertainty and skepticism of stakeholders during the enactment stage of opportunity production. The role of reputation is less relevant in a discovery perspective because reputation is a product of the social world and not something that affects the entrepreneur's ability to detect an objective reality with fidelity. The integration of social constructs like reputation into models of entrepreneurship adds explanatory power to those models, because such constructs have been shown to be influential in explaining the marshalling of resources (Barney, 1986; Larson, 1992; Fernhaber and McDougall-Covin, 2009) and the defining of organizational boundaries (Santos and Eisenhardt, 2009).

Finally, our model considers the possibility that many opportunities will be abandoned at the objectification or enactment stages of opportunity production. This truncates the opportunity production process for that particular opportunity. We believe that opportunity abandonment is likely the default outcome in opportunity production, occurring much more frequently than current literature would lead us to believe. The postabandonment reconstruction process that we suggest, in which abandoned opportunities are reinterpreted as illusions, implies that entrepreneurs are intuitive seekers of cognitive equilibrium. That equilibrium allows the entrepreneur to renew the opportunity production process for new opportunity ideas, exploring the viability of new paths into the future. Since those paths involve high uncertainty, commitments of other people's time and money, and an increasing dependence of stakeholders on the realization of the entrepreneur's opportunity idea, equilibrium on the entrepreneur's part is particularly important.

CONCLUSION

In conclusion, it may be worth emphasizing that our constructivist model of opportunity production not only contributes to entrepreneurship theory, but has the potential to give back something to the constructivist social theories that inspired it. Because entrepreneurs are such active agents in the social contexts they inhabit and are also subject to constraint by those contexts, entrepreneurial ventures would be excellent sites to study the structure-action dialectic described by constructivist theorists such as Giddens (1984) and Weick (1979). Indeed, a researcher is more likely to see evidence of the reciprocal relationship between structure and action in entrepreneurial projects than in more routinized situations where encompassing structure and human action have become so taken for granted that they are rendered invisible. Thus, we close by recommending that social researchers interested in the empirical testing of theories of social construction might seize the opportunity represented by entrepreneurship and study entrepreneurs in action as a way of operationalizing the abstract phenomena referenced in those theories. To do so might put general constructivist theory on firmer empirical footing, enhancing our grasp of the structure-action dialectic that characterizes all aspects of social life.

ACKNOWLEDGEMENTS

Previous versions of this article were presented at the Association Internationale de Management Strategique, Grenoble, France, 2009, and at the 2009 Babson College Entrepreneurship Research Conference. The authors would like to thank Jay Barney, Jeff McMullen, Craig Engstrom, Katarina Sikavica, and the anonymous *SEJ* reviewers for their helpful comments.

REFERENCES

Aldrich H, Auster ER. 1986. Even dwarfs started small: liabilities of age and size and their strategic implications. In *Research in Organizational Behavior*, Staw BM, Cummings LL (eds). JAI Press: Greenwich, CT; 165–198.

Aldrich H, Fiol C. 1994. Fools rush in? The institutional context of industry creation. *Academy of Management Review* **19**(4): 645–670.

Alvarez SA, Barney JB. 2004. Organizing rent generation and appropriation: toward a theory of the entrepreneurial firm. *Journal of Business Venturing* **19**(5): 621–635.

Alvarez SA, Barney JB. 2007. Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal* **1**(1–2): 11–26.

Arenius P, De Clercq D. 2005. A network-based approach on opportunity recognition. *Small Business Economics* **24**: 249–265.

Baker T, Miner A, Eesley D. 2003. Improvising firms: bricolage, account giving, and improvisational competencies in the founding process. *Research Policy* **32**: 255–276.

Baker T, Nelson R. 2005. Creating something from nothing: resource construction through entrepreneurial bricolage. *Administrative Science Quarterly* **50**: 329–366.

Barney JB. 1986. Strategic factor markets: expectations, luck, and business strategy. *Management Science* **32**(10): 1231–1241.

Barney JB, Busenitz L, Feit J, Moesel D. 1996. New venture teams' assessment of learning assistance from venture capital firms. *Journal of Business Venturing* **11**(4): 257–273.

Berger P, Luckmann T. 1966. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge.* Doubleday: New York.

Berglund H. 2007. Opportunities as existing and created: a study of entrepreneurs in the Swedish mobile internet industry. *Journal of Enterprising Culture* **15**(3): 243–273.

Blau PM. 1970. A formal theory of differentiation in organizations. *American Sociological Review* **35**: 201–218.

Burt R. 1992. *Structural Holes: The Social Structure of Competition*. Harvard University Press: Cambridge, MA.

Burt R. 2005. *Brokerage and Closure: An Introduction to Social Capital.* Oxford University Press: New York.

Burton N, Sorenson J, Beckman C. 2002. Coming from good stock: career histories and new venture formation. In *Research in the Sociology of Organizations* (vol. 19), Lounsbury M, Ventresca M (eds). JAI Press: Greenwich, CT; 231–264.

Busenitz L. 1996. Research in entrepreneurial alertness. *Journal of Small Business Management* **36**(5): 35–44.

Busenitz L, Barney JB. 1997. Differences between entrepreneurs and managers in large organizations: biases and heuristics in strategic decision making. *Journal of Business Venturing* **12**(1): 9–31.

Campbell DT. 1965. Variation and selective retention in sociocultural evolution. In *Social Change in Developing Areas: A Reinterpretation of Evolutionary Theory*, Barringer HR, Blanksten GI, Mack RW (eds). Schenkman: Cambridge, MA; 19–49.

Campbell DT. 1970. Natural selection as an epistemological model. In *A Handbook of Method in Cultural Anthropology*, Naroll R, Cohen R (eds). Natural History Press: Garden City, NY; 51–85.

Chandler G, Honig B, Wiklund J. 2005. Antecedents, moderators, and performance consequences of membership change in new venture teams. *Journal of Business Venturing* **20**(5): 705–725.

Chrisman J, McMullan W. 2000. A preliminary assessment of outsider assistance as a knowledge resource: the longer-term impact of new venture counseling. *Entrepreneurship Theory and Practice* **12**: 37–53.

Collins R. 1998. *The Sociology of Philosophies: A Global Theory of Intellectual Change.* Harvard University Press: Cambridge, MA.

Companys YE, McMullen JS. 2007. Strategic entrepreneurs at work: the nature, discovery, and exploitation of entrepreneurial opportunities. *Small Business Economics* **28**(4): 301–322.

Cooper J. 2007. *Cognitive Dissonance: Fifty Years of a Classic Theory.* Sage Publications: London, U.K.

Deivansenapathy P. 1986. Entrepreneurial success: influence of certain personal variables. *The Indian Journal of Social Work* **46**(1): 547–555.

Dew N, Read S, Sarasvathy S, Wiltbank R. 2008. Outlines of a behavioral theory of the entrepreneurial firm. *Journal of Economic Behavior and Organization* **66**(1): 37–59.

Dimov D. 2007. From opportunity insight to opportunity intention: the importance of person-situation learning match. *Entrepreneurship Theory and Practice* **31**(4): 561–583.

Dimov D. 2010. Nascent entrepreneurs and venture emergence: opportunity confidence, human capital, and early planning. *Journal of Management Studies.* Forthcoming.

Dubin R. 1978. *Theory Building* (2nd edn). Free Press: New York.

Dubini P, Aldrich H. 1991. Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing* **6**: 305–314.

Dutton JE, Jackson SE. 1987. Categorizing strategic issues: links to organizational action. *Academy of Management Review* **12**: 76–90.

Eisenhardt K. 1989. Making fast strategic decisions in high-velocity environments. *Academy of Management Journal* **32**: 543–576.

Eisenhardt K, Schoonhoven C. 1996. Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms. *Organization Science* **7**(2): 136–150.

Felin T, Zenger T. 2009. Entrepreneurs as theorists: On the origins of collective beliefs and novel strategies. *Strategic Entrepreneurship Journal* **3**(2): 127–146.

Fernhaber S, McDougall-Covin P. 2009. Venture capitalists as catalysts to new venture internationalization: the impact of their knowledge and reputation resources. *Entrepreneurship Theory and Practice* **33**(1): 277–295.

Festinger L. 1957. *A Theory of Cognitive Dissonance.* Stanford University Press: Stanford, CA.

Fiet J, Busenitz L. 1997. Complementary theoretical perspectives on the dismissal of new venture team members. *Journal of Business Venturing* **12**(5): 347–357.

Foo M, Sin H, Yiong L. 2006. Effects of team inputs and intrateam processes on perceptions of team viability and member satisfaction in nascent ventures. *Strategic Management Journal* **27**(4): 389–399.

Gaglio CM. 1997. Opportunity identification: review, critique, and suggested research directions. In *Advances in Entrepreneurship, Firm Emergence, and Growth*, Vol. 3, Katz J (ed). JAI Press: Greenwich, CT; 139–202.

Gaglio CM, Katz JA. 2001. The psychological basis of opportunity identification: entrepreneurial alertness. *Small Business Economics* **16**(2): 95–111.

Gartner W. 1985. A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review* **10**: 696–706.

Gartner W, Shaver K, Gatewood E, Katz J. 1994. Finding the entrepreneur in entrepreneurship. *Entrepreneurship Theory and Practice* **18**(3): 5–9.

Giddens A. 1979. *Central Problems in Social Theory.* University of California Press: Berkeley, CA.

Giddens A. 1984. *The Constitution of Society: Outline of the Theory of Structuration.* University of California Press: Berkeley, CA.

Granovetter MS. 1973. The strength of weak ties. *American Journal of Sociology* **78**: 1360–1380.

Greve A, Salaff J. 2003. Social networks and entrepreneurship. *Entrepreneurship Theory and Practice* **28**(1): 1–22.

Hansen E. 2000. Resource acquisition as a start-up process: initial stocks of social capital and organizational foundings. In *Frontiers of Entrepreneurship Research*, Vol. 20, Reynolds R, Autio E, Bruch C, Bygrave W, Manigart S, Sapienza H, Shaver K (eds). Babson College: Wellesley, MA; 111–120.

Harmon-Jones E, Mills J. 1999. An introduction to cognitive dissonance theory and an overview of current perspectives on the theory. In *Cognitive Dissonance: Progress on a Pivotal Theory in Social Psychology*, Harmon-Jones E, Mills J (eds). American Psychological Association: Washington, DC; 3–21.

Hayek F. 1948. *Individualism and Economic Order.* University of Chicago Press: Chicago.

Hodgkinson GP, Sparrow PR. 2002. *The Competent Organization: A Psychological Analysis of the Strategic Management Process.* Open University Press: Buckingham, U.K.

Hsu D. 2004. What do entrepreneurs pay for venture capital affiliation? *Journal of Finance* **59**: 1805–1844.

Jack S, Anderson A. 2002. The effects of embeddedness on the entrepreneurial process. *Journal of Business Venturing* **17**(5): 467–488.

Jensen L, Koeing H. 2002. The effect of social networks on resource access and business start-ups. *European Planning Studies* **10**: 1039–1046.

Johannisson B. 2000. Networking and entrepreneurial growth. In *Blackwell Handbook of Entrepreneurship*, Sexton D, Landstrom H (eds). Wiley-Blackwell: New York; 368–386.

Kirzner I. 1979. *Perceptions, Opportunity, and Profit.* University of Chicago Press: Chicago.

Kirzner I. 1985. *Discovery and the Capitalist Process.* University of Chicago Press: Chicago.

Klein P. 2008. Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal* **2**(3): 175–190.

Krueger N. 1993. The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice* **18**(1): 5–21.

Lane PJ, Koka BR, Pathak S. 2006. The reification of absorptive capacity: a critical review and rejuvenation of the construct. *Academy of Management Review* **31**: 833–863.

Larson A. 1992. Network dyads in entrepreneurial settings: a study of the governance of exchange relationships. *Administrative Science Quarterly* **37**: 76–104.

Long W, Graham J. 1988. Opportunity identification process: revisited. In *Research at the Marketing/Entrepreneurship Interface*, Hills GE, LaForge RW, Parker BJ (eds). Office of Entrepreneurial Studies, University of Illinois at Chicago: Chicago; 209–220.

Lounsbury M, Glynn M. 2001. Cultural entrepreneurship: stories, legitimacy, and the acquisition of resources. *Strategic Management Journal* **22**(6–7): 545–564.

Luksha P. 2008. Niche construction: the process of opportunity creation in the environment. *Strategic Entrepreneurship Journal* **2**(4): 269–283.

Mahoney JT, Michael SC. 2005. A subjectivist theory of entrepreneurship. In *Handbook of Entrepreneurship Research: Interdisciplinary Perspectives*, Alvarez SA, Agarwal R, Sorenson O (eds). Springer: New York; 33–54.

McKinley W, Mone MA, Moon G. 1999. Determinants and development of schools in organization theory. *Academy of Management Review* **24**: 634–648.

McMullen J, Shepherd D. 2006. Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review* **31**: 132–152.

Mitchell R, Busenitz L, Lant T, McDougall P, Morse E, Smith J. 2002. Toward a theory of entrepreneurial cognition: rethinking the people side of entrepreneurship. *Entrepreneurship Theory and Practice* **27**(2): 93–105.

Mitchell R, Mitchell J, Smith J. 2008. Inside opportunity formation: enterprise, failure, cognition, and the creation of opportunities. *Strategic Entrepreneurship Journal* **2**(3): 225–242.

Nahapiet J, Ghoshal S. 1998. Social capital, intellectual capital, and the organizational advantage. Academy of Management Review **23**: 242–266.

Nicholson L, Anderson A. 2005. News and nuances of the entrepreneurial myth and metaphor: linguistic games in entrepreneurial sense-making and sense-giving. *Entrepreneurship Theory and Practice* **29**(2): 153–172.

Parker T, McKinley W. 2008. Layoff agency: a theoretical framework. *Journal of Leadership and Organizational Studies* **15**(1): 46–58.

Plummer LA, Haynie JM, Godesiabois J. 2007. An essay on the origins of entrepreneurial opportunity. *Small Business Economics* **28**(4): 363–379.

Podolny JM. 1994. Market uncertainty and the social character of economic exchange. *Administrative Science Quarterly* **39**: 458–483.

Podolny JM, Baron JN. 1997. Resources and relationships: social networks and mobility in the workplace. *American Sociological Review* **62**(5): 673–693.

Pollock T, Rindova V. 2003. Media legitimation effects in the market for initial public offerings. *Academy of Management Journal* **46**: 458–483.

Porac JF, Thomas H. 1990. Taxonomic mental models in competitor definition. *Academy of Management Review* **15**: 224–240.

Porac JF, Thomas H, Wilson F, Paton C, Kanfer A. 1995. Rivalry and the industry model of Scottish knitwear producers. *Administrative Science Quarterly* **40**: 203–227.

Porter K, Powell P. 2006. Networks and organizations. In *The Sage Handbook of Organization Studies* (2nd edn), Clegg S, Hardy C, Lawrence T, Nord W (eds). Sage Publications: London, U.K.; 767–799.

Reynolds P, Miller B. 1992. New firm gestation: conception, birth, and implications for research. *Journal of Business Venturing* **7**: 405–417.

Rindova V, Williamson I, Petkova A, Sever J. 2005. Being good or being known: an empirical examination of the dimensions, antecedents, and consequences of organizational reputation. *Academy of Management Journal* **48**(6): 1033–1049.

Romanelli E. 1989. Organization birth and population variety: a community perspective on origins. In *Research in Organizational Behavior*, Cummings LL, Staw BM (eds). JAI Press: Greenwich, CT; 211–246.

Ruef M, Aldrich HE, Carter NM. 2003. The structure of founding teams: homophily, strong ties, and isolation among U.S. entrepreneurs. *American Sociological Review* **68**(2): 195–222.

Santos F, Eisenhardt K. 2009. Constructing markets and shaping boundaries: entrepreneurial power in nascent fields. *Academy of Management Journal* **52**(4): 643–671.

Sarasvathy S. 2001. Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review* **26**: 243–263.

Sarasvathy S. 2004. Constructing corridors to economic primitives: entrepreneurial opportunities as demand-side artifacts. In *Opportunity Identification and Entrepreneurial Behavior*, Butler J (ed.). Information Age Publishing: Greenwich, CT; 291–312.

Sarasvathy S, Dew N, Read S, Wiltbank R. 2008. Designing organizations that design environments: lessons from entrepreneurial expertise. *Organization Studies* **29**(3): 331–350.

Sarasvathy S, Dew N, Velamuri S, Venkataraman S. 2003. Three views of entrepreneurial opportunity. In *Handbook of Entrepreneurship Research*, Acs Z, Audretsch D (eds). Springer: New York; 141–160.

Schoonhoven CB, Eisenhardt KM, Lyman K. 1990. Speeding products to market: waiting time to first product introduction in new firms. *Administrative Science Quarterly* **35**: 177–207.

Schumpeter J. 1934. *The Theory of Economic Development.* Harvard University Press: Cambridge, MA.

Shackle GLS. 1979. *Imagination and the Nature of Choice.* Edinburgh University Press: Edinburgh, U.K.

Shackle GLS. 1992. *Epistemics and Economics: A Critique of Economic Doctrine.* Cambridge University Press: Cambridge, U.K.

Shane S. 2000. Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science* **11**: 448–469.

Shane S. 2003. *A General Theory of Entrepreneurship: The Individual-Opportunity Nexus.* Edward Elgar: Cheltenham, U.K.

Shane S, Cable D. 2002. Network ties, reputation, and the financing of new ventures. *Management Science* **48**(3): 364–381.

Shane S, Stuart T. 2002. Organizational endowments and the performance of university start-ups. *Management Science* **48**(1): 154–170.

Shane S, Venkataraman S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review* **25**: 217–226.

Shepherd DA, Cardon MS. 2009. Negative emotional reactions to project failure and the self-compassion to learn from the experience. *Journal of Management Studies* **46**: 923–949.

Shepherd DA, McMullen JS, Jennings PD. 2007. The formation of opportunity beliefs: overcoming ignorance and reducing doubt. *Strategic Entrepreneurship Journal* **1**(1–2): 75–95.

Simon H. 1993. Altruism and economics. *The American Economic Review* **83**(2): 156–161.

Simon M, Houghton S, Aquino K. 2000. Cognitive biases, risk perception, and venture formation: how individuals decide to start companies. *Journal of Business Venturing* **15**(2): 113–134.

Singh R, Hills G, Hybels R, Lumpkin G. 1999. Opportunity recognition through social network characteristics of entrepreneurs. In *Frontiers of Entrepreneurship Research*, Reynolds R, Bygrave W, Manigart S, Mason G, Meyer H, Sapienza H (eds). Babson College: Wellesley, MA; 228–241.

Stevenson H, Jarillo J. 1990. A paradigm of entrepreneurship: entrepreneurial management. *Strategic Management Journal* **11**(4): 17–27.

Stevenson H, Roberts M, Grousbeck H. 1989. *New Business Ventures and the Entrepreneur.* Irwin: Homewood, IL.

Stuart TE, Sorenson O. 2005. Social networks and entrepreneurship. In *Handbook of Entrepreneurship Research: Interdisciplinary Perspectives*, Alvarez SA, Agarwal R, Sorenson O (eds). Springer: New York; 233–252.

Stubbart CI, Knight MB. 2006. The case of the disappearing firms: empirical evidence and implications. *Journal of Organizational Behavior* **27**: 79–100.

Sutton RI, Callahan AL. 1987. The stigma of bankruptcy: spoiled organizational image and its management. *Academy of Management Journal* **30**(3): 405–436.

Taleb N. 2007. The Black Swan. Random House: New York.

Thomason BC. 1982. *Making Sense of Reification: Alfred Schutz and Constructionist Theory.* Humanities Press: Atlantic Highlands, NJ.

Ucbasaran D, Westhead P, Wright M. 2006. Habitual entrepreneurs. In *The Oxford Handbook of Entrepreneurship*, Casson M, Yeung B, Basu A, Wadeson N (eds). Oxford University Press: New York; 461–483.

Vissa B, Chacar A. 2009. Leveraging ties: the contingent value of entrepreneurial teams' external advice networks on Indian software venture performance. *Strategic Management Journal* **30**(11): 1179–1191.

Von Glasersfeld E. 1981. The concepts of adaptation and viability in a radical constructivist theory of knowledge. In *Piagetian Theory and Research*, Sigel I, Brodzinsky D, Golinkoff R (eds). Lawrence Erlbaum: Hillsdale, NJ; 87–95.

Weick KE. 1969. *The social psychology of organizing.* McGraw-Hill: New York.

Weick KE. 1979. *The Social Psychology of Organizing* (2nd edn). McGraw-Hill: New York.

Weick KE. 1995. *Sensemaking in Organizations.* Sage Publications: Thousand Oaks, CA.

Wood M, Pearson J. 2009. Taken on faith? The impact of uncertainty, knowledge relatedness, and richness of information on entrepreneurial opportunity exploitation. *Journal of Leadership and Organizational Studies* **16**(2): 117–130.

Zahra S. 2008. The virtuous cycle of discovery and creation of entrepreneurial opportunities. *Strategic Entrepreneurship Journal* **2**(3): 243–257.

DOI: 10.1002/sej