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Entrepreneurial Action Research: Moving beyond Fixed Conceptualizations

Hamid Vahidnia
Georgia State University
and
Texas Tech University

H. Shawna Chen
Brock University

J. Robert Mitchell
Colorado State University
and
Western University

Ronald K. Mitchell
Texas Tech University

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ABSTRACT

Entrepreneurial action occurs in dynamic situations; yet the implications of this dynamism have not been appreciated fully in research on entrepreneurial action. In this Chapter, we focus on the potential dynamism of entrepreneurial action as far as it relates to and can be informed by insights offered by entrepreneurial cognition research. We start by problematizing the existing research on entrepreneurial action for tending to explain entrepreneurial action using fixed conceptualizations. By fixed conceptualizations, we mean the treatment of entrepreneurs, their actions, characteristics, tendencies, and other factors influencing their actions using fixed and unchanging assumptions. We argue that these fixed conceptualizations hinder theory development and research on entrepreneurial action. Next we suggest how a socially situated cognition perspective can be used to help research on entrepreneurial action move beyond fixed-conceptualizations-based explanations and better capture the dynamism associated with entrepreneurial action. Grounded in the theoretical insights of this perspective, we offer seven promising future research directions that researchers can take to better capture dynamism associated with entrepreneurial action, and thus offer improved explanations of entrepreneurial action as it occurs in its changing and dynamic circumstances. We conclude with a discussion of methodological approaches that can be used in future research.

Introduction

Apple, Inc. co-founder, Steve Wozniak, once suggested that: 'Entrepreneurs have to keep adjusting to [their situation] . . . everything's changing, everything's dynamic' (Livingston, 2007, p. 56). The idea here is that entrepreneurial action occurs in situations that are dynamic (e.g. Haynie & Shepherd, 2009; Mitchell, Randolph-Seng, & Mitchell, 2011). In this chapter, we focus on the potential dynamism of entrepreneurial action as far as it relates to and can be informed by insights offered by entrepreneurial cognition research (Mitchell, Busenitz, Lant, McDougall, Morse, & Smith, 2002, 2004; Mitchell, Busenitz, Bird, Marie Gaglio, McMullen, Morse, & Smith, 2007; Mitchell et al., 2011). We do so by taking into account this notion of 'adjusting' by understanding the adaptive action that is crucial in both explaining entrepreneurial action theoretically and in helping entrepreneurs to take more effective action practically (e.g. Randolph-Seng, Mitchell, Vahidnia, Mitchell, Chen, & Statzer, 2015).

Ironically, entrepreneurial cognition research has not itself adjusted to this 'everything's changing, everything's dynamic' aspect of many entrepreneurial contexts. However, while this adjustment to cognitive dynamism has been gaining substantial momentum (e.g. Baker & Nelson, 2005; Baucus, Baucus, & Mitchell, 2014; Clarke & Cornelissen, 2014; Corbett, 2014; Drnovšek, Slavek, & Cardon, 2014; Forbes, 2014; Grégoire, 2014; Grégoire, Corbett, & McMullen, 2011; Cornelissen & Clarke, 2010; Haynie, Shepherd, Mosakowski, & Earley, 2010; McMullen, Wood, & Palich, 2014; Mitchell et al., 2011; Mitchell, Mitchell, Zachary, & Ryan, 2014; Randolph-Seng, Williams, & Hayek, 2014), much work prior to this acceleration has tended to treat the entrepreneurs, their actions, characteristics, tendencies, and other factors influencing their actions as being more monolithic, using fixed

conceptualizations or 'boxologies' (Mitchell et al., 2011; Smith & Semin, 2004). Additionally, fixed-conceptualization explanations often rely on some entity that relatively statically *influences* entrepreneurial action (e.g. Zahra & Wright, 2011) rather than using a conceptualization that captures entities dynamically *interacting* with entrepreneurs' cognitive resources and mental models to impact how entrepreneurs act when pursuing entrepreneurial opportunities. In this chapter we seek, therefore, to add to the developing dynamic-cognition-based explanations for entrepreneurial action.

To accomplish this task, the chapter is divided into two parts. In the first section, we look more closely at this general problem of fixed/stable conceptualizations, explaining how this 'fixed-ness' manifests itself in a variety of different forms, and thereby impedes the advancement of the management science of entrepreneurial action research. In the second section, using a socially situated cognition perspective (Mitchell et al., 2011, 2014; Smith & Semin, 2004, 2007), we suggest ways to apply this perspective to the further study of entrepreneurial action to enable researchers to incorporate dynamic cognition models in their analyses.

Entrepreneurial Action Research and the Problem of Fixed Conceptualizations

Entrepreneurial action can be defined as any activities entrepreneurs undertake when pursuing entrepreneurial opportunities (Alvarez & Barney, 2007). Creating new opportunities, businesses, and/or entrepreneurial artifacts happens only over time and occurs as a result, not of a single activity, but of a course of action taken by entrepreneurs (Alvarez & Barney, 2007; McMullen & Dimov, 2013; Mitchell, Mitchell, & Smith, 2008; Venkataraman, Sarasvathy, Dew, & Forster, 2012). As individuals move from one action to the next, the context in which they operate is

likely to change (Welter, 2011). Studying entrepreneurial action is thus about understanding, in relation to this changing and dynamic context, what entrepreneurs do, how they do it, and why they perform certain activities but not others, in each situation. Thus, in this chapter, entrepreneurial action is conceptualized to be a process involving behavioral and cognitive activities taken within a changing situation in the pursuit of entrepreneurial opportunities (e.g. Chen, 2015).

While prior research has advanced understanding of entrepreneurial action, much of this research would seem to treat factors that influence entrepreneurial action in similar ways that, we believe, may yet hinder the development of more fine-grained understandings of entrepreneurial action. Specifically, much of the prior research provides explanations that primarily are based on what we term 'fixed conceptualizations' of entrepreneurs, their character, motivations, tendencies, and social contexts. In the existing research, these factors are seldom, if ever, assumed to change. This makes it difficult to explain the dynamic actions of entrepreneurs in response to their dynamic context, when constrained by these fixed conceptualizations. As we shall attempt to demonstrate, such fixed conceptualizations manifest themselves in specific ways. We suggest that identifying many of these fixed conceptualizations is an important part of understanding how entrepreneurs think and act. In doing so, we join other scholars who have criticized entrepreneurial action (and more generally entrepreneurship) research to stimulate more fruitful research in response to this criticism (e.g. Davidsson, 2003; Dimov, 2007; Gartner, Carter, & Hills, 2003; McMullen & Dimov, 2013; Zahra & Wright, 2011).

As a point of departure, we review the various forms that fixed conceptualizations have taken in the existing literature. In order to make our case, we only attempt to discuss higher-level assertions, treatments, and/or generalizations

evident in these approaches. In doing so, we acknowledge that not all the research we discuss and reference contains each and every type of fixed conceptualization issue; nor has this research necessarily made assertions that speak to these specific types of fixed conceptualization. Rather, in many cases, the research we discuss might only implicitly assume the fixed conceptualizations we assert to be problematic. We thus acknowledge that we have sacrificed some elements of precision, but we do so as a way of highlighting the broad nature of the challenges that fixed conceptualizations present, and demonstrate that they require attention and consideration in future research. We discuss, and in a descriptive way 'stylize', seven such 'fixed conceptualizations' in the following paragraphs.

Fixed Conceptualization #1: Entrepreneurs Are Individuals with Fixed (and Heroic) Character/Characteristics

In prior entrepreneurship research, entrepreneurs are treated as having stable, and often heroic characteristics. Traditionally, and following the lead of Knight (1921), the entrepreneur is conceptualized to be a risk-taker and 'bearer' of uncertainty. Earlier research on entrepreneurial traits attempted to describe the nature of such a hero (e.g. Hornaday & Bunker, 1970) or identify characteristics of this superman-entrepreneur (e.g. McClelland, 1965; Pickle, 1964), yet extensive subsequent research

resulted in equivocal findings, not in a common and/or finite list of those traits (e.g. Brockhaus & Horwitz, 1986; Gartner, 1989)[1]. More recent research goes beyond such heroic treatment (e.g. effectuation-focused research), but nonetheless often implicitly treats the entrepreneur as having heroic characteristics. For example, as Arend, Sarooghi, and Burkemper (2015) argue, the means by which effectuation entrepreneurs start ventures include relatively unalterable characteristics such as who the entrepreneur is and what s/he wants. Additionally, in the effectuation approach, the entrepreneur may be seen to be a fully-in-charge heroic type who effectually creates the future, often from scratch (e.g. Sarasvathy, 2001). The entrepreneur is also portrayed to be so capable in dealing with others that in the majority of cases s/he '*cues in* intelligent altruism in others' (Sarasvathy & Dew, 2008, p. 729; emphasis in original), thus at least partly eliminating the need for the entrepreneur to check constantly whether these other parties are trustworthy and can be relied upon as the situation changes.

[1] But see also meta analyses by Collins, Hanges, and Locke (2004), Stewart and Roth (2001), and Zhao and Seibert (2006), which – through techniques of study aggregation – have been able to assert that traits or stable characteristics should not be so easily dismissed. Accordingly, it may be too early to draw a definitive conclusion on this line of inquiry. What can be offered, however, is that, even if certain entrepreneurial traits are found to be important in entrepreneurship, their influence on the new opportunity identification and exploitation may never be found to be so dominant to warrant entrepreneurs to be treated like heroes. This is the case because, in addition to traits, many other critical factors are also needed for entrepreneurs to identify and exploit opportunities successfully (e.g. learning capabilities, other people the entrepreneur interacts with, social setting and its constraints on entrepreneurs' actions, etc.).

Such heroic treatments, however, are reminiscent of institutional theorists' skepticism concerning the existence of 'hypermuscular supermen' change agents (e.g. Suddaby, 2010, p. 15) and Rumelt's (1987, p. 136) tongue-in-cheek characterization of the entrepreneur: 'Where do new businesses come from? The textbooks say that the entrepreneur, like the stork, brings them'. This skeptical view is shared by scholars who increasingly have noted how others, such as founding teams (e.g. Ruef, Aldrich, & Carter, 2003), networks (e.g. Birley, 1986) and mentors (e.g. Ozgen & Baron, 2007), among other contributors, are also important to creating new businesses/opportunities and to high entrepreneurial performance. The danger of conceptualizing entrepreneurs as heroes is that it often leads to mystification of the way individuals think and act in the face of inevitable dynamism (e.g. Mitchell, 1996), thus hindering better identification and transmission of entrepreneurship-related skills, as well as empirical and theoretical work on entrepreneurial action.

While such a fixed conceptualization may be appealing *post hoc*, it is encumbered by survival/success bias (Davidsson, 2003; Dimov, 2007), is unrealistic (Shane, 2008), and misleading as to practical expectations (Arend et al., 2015). A more practical set of assumptions might conceptualize most entrepreneurial actors to have limited capacity and resources (e.g. limited capacity to process information) when facing the obstacles of opportunity pursuit (Arend et al., 2015; Busenitz & Barney, 1997) and to rely on other people's minds (such as mentors, potential customers, family and friends) and available tools (such as computer programs and information systems), among other resources, to deal with entrepreneurial challenges (e.g. Mitchell et al., 2011). Shane (2008, p. 160) agrees, stating: 'Our collective belief that the typical entrepreneur is a hero with special powers … is a myth'.

Fixed Conceptualization #2: Uncertainty Is Temporally and Contextually Fixed

Prior entrepreneurship research often implies that entrepreneurs deal with uncertainty all at once, as if the process of forming an opportunity or creating a new venture occurs in one action. The earlier work of Kirzner and the concept of entrepreneurial arbitrage is one such example (Kirzner, 1973, 2009). From this perspective, uncertainty generally is a constant variable (set at a high level), where this degree of uncertainty does not fluctuate often, and the effects of different types of uncertainty and fluctuations of uncertainty are not much included in explanations. Milliken (1987), however, has theorized that there exist three types of perceived uncertainty in the environment: state, effect, and response, and in a notable departure from the 'uncertainty as a fixed condition' conceptualization, McKelvie, Haynie, and Gustavsson (2011) have operationalized Milliken's (1987) notion of multi-dimensional uncertainty and have examined its implications for entrepreneurial action.

However, despite these improvements, scholars continue to treat uncertainty essentially as fixed, and its relationship with entrepreneurial action is therefore not entirely clear and/or explicit. Instead of dealing with fluctuating (and therefore conceptually messy) uncertainty, entrepreneurs are assumed to circumvent it. For example, by focusing on those aspects of the future that are under the control of the entrepreneur (e.g. in effectuation-based explanations) or by entering the field of entrepreneurship 'accidentally' (e.g. in user entrepreneurship), actors are conceptualized as able to experience some fixed level of uncertainty.

Yet, in the dynamic world, most entrepreneurs can neither be expected to accomplish all they must undertake in one event, nor can they be expected to remain

undaunted by aspects of the world that are beyond their control (e.g. McGrath, 1999), in some cases preferring, for example, certain losses to uncertain gains (Kahneman & Tversky, 1979). Additionally, as entrepreneurs take action, new information inevitably becomes available about the supply and demand related to an opportunity (e.g. Mitchell et al., 2008), leading to variation in levels of uncertainty throughout the process. Similarly, when individuals invite others to join their venturing activities, the new team member may add much knowledge and information processing power to the team that may influence the level of uncertainty an individual or team perceives (Ruef et al., 2003). Therefore, we argue that accounting for variability in the level of perceived uncertainty in explanations is of theoretical and practical importance for studying entrepreneurial action.

Fixed Conceptualization #3: Entrepreneurs' Motivation Is Considered to Be Fixed

Much of our current understanding of entrepreneurial action comes from studying those who have succeeded (Davidsson, 2003). Yet, generalizing from this small portion of actors may or may not capture the real world as experienced by the majority of other actors. For example, in fixed-conceptualization approaches, most individuals generally are assumed not to enter into the realm of uncertainty represented by their taking entrepreneurial action (i.e. motivation = zero). But then something happens and an individual entrepreneur-actor decides now to 'bear' the uncertainties of taking entrepreneurial action; the motivation of that entrepreneur seems to have then been assumed to remain high and constant (i.e. motivation = fixed and high). For example, McMullen and Shepherd's (2006) account of entrepreneurial action, while providing an insightful synthesis of much previous work on entrepreneurial action, presupposes that, once having entered the realm of

entrepreneurship, the entrepreneurs' motivation will remain (constant and) high. Shepherd, McMullen, and Jennings (2007) further imply that, once an individual overcomes ignorance and/or reduces doubt to believe that an opportunity is for him/her, entrepreneurial action 'ensues' thereafter.

Likewise, fixed conceptualizations of motivation can be seen in other work in the literature. For example, Shah and Tripsas (2007) and Baker, Miner, & Eesley (2003) generalize their models of user entrepreneurship and improvisation from data related to those who succeeded and thus focus on those entrepreneurs who have (by definition) high levels of motivation. While the primary focus of such work is to describe certain processes, when it comes to their generalizations, scholars often suggest (or assume) that entrepreneurs are sometimes so motivated that they frequently and readily act. In reality, however, we suggest that entrepreneurs' motivation may change frequently, e.g. depending even upon relatively minor sensory input (Baucus et al., 2014) or upon otherwise larger changes the entrepreneur may experience. We see inklings of this line of thinking in work that specifies several points in the entrepreneurial process where changes in mental processing may occur (Wood, Williams, & Grégoire, 2012).

Fixed Conceptualization #4: Actors Have Fixed (and Narrow) Criteria for Action

Past entrepreneurship research with strong roots in economics suggests that, when making choices or taking action in the pursuit of entrepreneurial opportunities, individuals mostly rely on certain fixed criteria, including, for example, seeking the objective of maximizing their expected return/utility (e.g. Casson, 1982) or judging if the 'risk/return dilemma' associated with an opportunity justifies pursuing it (McMullen & Shepherd, 2006, p. 141). Fixed-criteria (for action) research has been

criticized on a number of grounds. First, reliance on fixed criteria such as maximizing expected return may not be feasible because, in many cases, one may not conceptually be able to calculate expected returns associated with entrepreneurial opportunities (e.g. see: Miller, 2007). Second, entrepreneurs can have multiple economic and non-economic criteria when acting, i.e. they are multi-objective when pursuing entrepreneurial opportunities (e.g. see: Baker & Pollock, 2007; Hamilton, 2000). For example, scholars have observed that entrepreneurs may pursue entrepreneurial opportunities because they have strong personal values for pursuing certain opportunities, seek independence, attempt to make a difference in the world, and/or want emancipation, among other things, while simultaneously trying to gain financial results (e.g. Rindova, Barry, & Ketchen, 2009). Some even argue that financial criteria themselves can be multi-faceted and changing as entrepreneurs' financial goals may change as entrepreneurs go through different stages of a business life cycle (e.g. Carter, 2011; Kammerlander, 2016). These arguments have led scholars to critique entrepreneurship research for becoming 'too narrowly focused' on maximizing financial returns/gains and/or on wealth maximization (e.g. see: Greenbank, 1999; Rindova et al., 2009, p. 478).

To address this narrow focus on some fixed criterion such as maximizing one's financial return, some research has offered alternative possibilities. For example, Sarasvathy (2001) proposes that, in contrast to causation-based entrepreneurial actions, which are based generally on maximizing expected returns, effectuation-based entrepreneurial actions are taken based on the criterion of affordable loss. In such cases the entrepreneur predetermines how much loss is affordable and focuses on what can be done by available means. Thus, effectuation theory replaces the fixed and unchanging criterion of maximizing one's return with the criterion of affordable loss,

which itself appears to be of similar type in the sense that affordable loss is much like maximizing return in its tendency to restrict focus. To us, this substitution thus appears essentially to be substituting one type of static and fixed criterion in place of another. Thus, effectuation theory, in our view, does not easily accommodate the idea that entrepreneurs may have multiple and often changing criteria when making decisions and taking action (e.g. Carter, 2011; Hamilton, 2000; Rindova et al., 2009).

In sum, both theoretical and empirical research demonstrates that actors (such as entrepreneurs) utilize multiple criteria when acting (e.g. Gigerenzer, 1996; Hamilton, 2000; Rindova et al., 2009; Wood & Williams, 2014). Additionally, we take note also that the criteria that guide entrepreneurial action may change as the situation changes – e.g. in different stages of one's business (Carter, 2011; Gigerenzer & Goldstein, 1996; Miller, 2007). Wood and Williams (2014, p. 576), for example, found support for the notion that evaluation of opportunities 'takes the form of a multi-criteria structured decision problem'. Thus, we argue that appreciating multiple and broader sets of criteria can help make entrepreneurial action research more productive and more connected to the real world of many entrepreneurs (e.g. Randolph-Seng et al., 2015; Shepherd, 2015). Accordingly, in future conceptualizations of the criteria that invoke entrepreneurial action, we suggest that actors be treated as agents that take into account multiple criteria when acting and that these criteria themselves also be conceptualized as changing.

Fixed Conceptualization #5: Social Situation/Context Is Fixed

In much of the literature, the context within which an entrepreneur is expected to work is generally assumed to be a market system, which itself provides an actor with little information (e.g. generally only price differences). In such a case, actors face

Knightian uncertainty, where action is predicated upon various information-gaining strategies (Knight, 1921). But often it is not clear how these strategies relate to the specifics of the context in which they take place. Specifically, the market context generally is treated as being broad and homogeneous, detached from the actions of entrepreneurs (e.g. Zahra & Wright, 2011). Under such an assumption, it is mostly the differences between the cognitive resources residing inside the mind of the individual (Gaglio & Katz, 2001; Kirzner, 1973) that are suggested to impact entrepreneurial action.

In some research, the context is either: (1) included also in a very broad sense such as at the industry level not tightly connected to individual's actions (e.g. knowledge-intensive industries, as in Baker et al., 2003), or (2) essentially treated as irrelevant, as actors are expected to rely upon certain stable types of behavior no matter what the structure of the outer environment looks like (e.g. Sarasvathy, 2001). In either case, context is still fixed in our view. This assumption, while often convenient in specific research instances, is in sharp contrast to Simon's (1990) view that: '… human rational behavior … is shaped by a scissors whose two blades are the structure of task environments and the computational capabilities of the actor' (1990, p. 7).

Instead, then, for entrepreneurial action explanations to increase in their effectiveness, we suggest context be included as playing a major, dynamic, and changing role in entrepreneurial action. As the context of most entrepreneurs changes over time (e.g. Zahra & Wright, 2011; Welter, 2011) and as even slight changes in the environment can cause important changes in the behavior of the actors in that environment (e.g. Semin & Smith, 2013), more dynamic conceptualizations of the context and how its components influence entrepreneurial action are needed. Indeed,

some scholars have even suggested ways of overcoming some of the methodological weaknesses of capturing the significance of changing context on action (Chalmers & Shaw, in press).

Fixed Conceptualization #6: Actors Have Fixed Tendencies toward Action

Synthesizing some of the work conducted earlier in entrepreneurship research (e.g. Casson, 1982; Knight, 1921, and others), McMullen and Shepherd (2006, p. 135) argue that, as these approaches suggest, individuals acting under uncertainty tend to be in a somewhat perpetual state of 'hesitancy, indecisiveness, and procrastination', leading these individuals to miss profit opportunities. We read this as a suggestion that there is a fixed tendency toward action that translates into no entrepreneurial action at all. Yet, once some individuals manage to escape this detrimental state (into entrepreneurial action at least), they are then expected to engage in entrepreneurial action and do so seemingly continuously thereafter, having assumedly adopted a fixed tendency toward entrepreneurial action.

Similarly, some research portrays entrepreneurs in ways that seem to have certain predispositions toward action. For example, Baker et al. (2003) suggest that some entrepreneurs are so ready to act that they readily improvise (or simultaneously plan and execute). Yet, no explanations as to *why some* entrepreneurs do improvise while others do not are offered, and – according to this account – we do not know what exactly was happening in either the internal (cognitive) world or in the external (outside) world that may have led to this type of behavior (e.g. Zahra & Wright, 2011), leading to black-box-type explanations for entrepreneurial action (e.g. Mitchell et al., 2011).

It has long been suggested that many actors simply do not show a fixed tendency (coming solely from within their mind) when acting but, instead, that their behavior is more likely to also include a response component to the demands of their social situations (Gigerenzer & Goldstein, 1996; Granovetter, 1985; Simon, 1990). Not seriously accounting for the changes (or stability) in the context when theory building or theory testing can, we believe, undermine our ability to understand why such fixed tendencies are observed (e.g. Johns, 2006; Rousseau & Fried, 2001). We therefore argue that it is only when we fully appreciate the social situation of entrepreneurs (Liñán, Moriano, & Jaén, 2016; Mitchell et al., 2011; Mitchell et al., 2014; Randolph-Seng et al., 2015) that we may be able to move beyond these fixed conceptualizations of actors' tendencies toward action or inaction, to more fully explain *why* entrepreneurs take some actions and not others.

Fixed Conceptualization #7: Actors Have Fixed Foci of Attention

In both earlier and newer approaches to the study of entrepreneurial action, there seems to be portrayed an insensitivity of actors to the multi-faceted nature of entrepreneurial phenomena. At a conceptually higher level, Hayek (1937) points to the importance of foresight in action, suggesting that: 'before we can explain why people commit mistakes, we must first explain why they should ever be right' (1937, p. 34). He then argues that there are really two fundamentally different conditions of data (or knowledge available to the actor), which he argues are separate: (1) that individuals' subjective data are mutually compatible with each other; and (2) that this subjective, mutually compatible data possessed by involved individuals correspond to the objective, real world data (1937, pp. 39–40).

Traditional approaches generally focus on the objective side of the argument, that is, on market condition/imperfections, without sufficient discussion of how individuals act (e.g. Kirzner, 1973; for one exception, see Mises, 1949). Thus, actors are portrayed to have a limited focus: fixed at the system level, e.g. to identify profit opportunities. Some emergent approaches, however, typically portray actors that mostly or almost entirely focus on the subjective side of Hayek's argument. These actors are theorized to focus on what they think, with limited attention given to what the broader social system, such as a market, may value (see, most notably, Sarasvathy, 2001). Thus, the focus of the actor, generally, seems to be fixed on himself/herself. Accordingly, in our view, these potentially one-sided portrayals of actors that have fixed foci of attention do not fully take into account the effects of changes that occur as a result of the dynamics of the context on entrepreneurs' actions and the effects of those changes that occur as a result of the actions of entrepreneurs in the context (e.g. Johns, 2006; Welter, 2011). We therefore suggest that in future work on entrepreneurial action, if we are to understand the mutual influence of entrepreneurs and their social situation on entrepreneurial action, actors be treated as agents who focus on both their subjective and objective worlds dynamically.

Summary

In this section we have argued that approaches to entrepreneurial action often use fixed conceptualizations to characterize entrepreneurs and their attributes, tendencies, motivations, social contexts, etc. in explanations for entrepreneurial action. We have argued that this use of fixed conceptualizations leads to black-box-type explanations that cannot fully capture the dynamics and the changing nature of the thinking and doing of entrepreneurs in their social situations. Such fixed conceptualizations can

take several forms, which we have discussed in the preceding paragraphs and summarize in the summary stylizations presented in Table 3.1.

Insert Table 3.1 here.

Overall, this review suggests that the study of entrepreneurial action can benefit by moving toward what we see to be more realistic conceptualizations. Such conceptualizations could provide accounts of action in which actors: (1) are viewed in more 'ordinary' ways as individuals with limited (cognitive and otherwise) resources; (2) experience varying levels of uncertainty, both temporally and contextually, as they proceed to create new value; (3) have motivations that vary at different points in the process; (4) have criteria for taking action or choosing among different courses of action that are variable or multi-faceted; (5) influence and are influenced by the nuances of their social situation and the other people/tools/objects with whom they interact; (6) have relatively complex sets of interests and changing tendencies that guide their actions; and (7) attend to both inner and outer demands of their environment, as these demands change.

In the second section of this chapter, we offer an approach that may assist in accomplishing a more robust conceptualization. We first introduce the socially situated cognition perspective as a broad approach to the task of offering more realistic explanations of entrepreneurial action. We then provide more specific 'future directions' in which this perspective can be used to assist researchers to develop more nuanced conceptualizations of the dynamics of entrepreneurial action, and we then conclude the chapter.

Entrepreneurial Action Research: Toward Dynamic Conceptualizations

In the previous section we have argued for a more dynamic conceptualization of entrepreneurial action. The socially situated cognition perspective provides such a conceptualization, beginning with the notion that the most important function of cognition is to support action, where: 'thinking is for doing' (Fiske, 1992, p. 877). Socially situated cognition helpfully offers four themes or major assumptions for utilization by scholars when attempting to include this thinking-is-for-doing mechanism in better explanations: (1) cognition is action-oriented; (2) cognition is embodied; (3) cognition is situated; and (4) cognition is distributed (Smith & Semin, 2004).

That cognition is *action-oriented* means thinking does not merely occur for its own sake, but it has evolved to support and facilitate the capacity of individuals to take adaptive action within their environment, e.g. to achieve some goal or goals. That cognition is *embodied* suggests that thinking is heavily affected by the neurophysiology that produces a variety of different states of the body (e.g. Baucus et al., 2014, for a review of the neurophysiology of emotion and motivation). That cognition is *situated* suggests that the communicative (e.g. conversation with other individuals), relational, and group context in which an individual finds herself/himself influences the individual's thinking and doing. Thus, the content of thinking is thought to come not only from the individual's mind, but also from the environment

in which one lives. That cognition is *distributed* means that not all thinking is done within the mind/brain of an isolated individual, but that, when acting, individuals also rely on other minds and tools that are disseminated across their social setting, including other actors and tools in the environment (Smith & Semin, 2004, 2007).[2]

In the remainder of this section, we focus on future directions: seven suggestions[3] for how a socially situated cognition perspective can assist in overcoming the potential problems of fixed conceptualizations of entrepreneurial action (as outlined in the first section) by enabling the development of more nuanced and fine-grained conceptualizations of entrepreneurial action. Specifically, we argue that a socially situated cognition perspective enables such fine-grained conceptualizations of human thought and behavior to be developed by taking into account critically important factors that go beyond the inner and mental resources of the individual actor and instead integrate explanations of the real world that most entrepreneurs experience (e.g. Randolph-Seng et al., 2015; Shepherd, 2015).

Future Direction #1: Examine Entrepreneurial Action from a Macroscopic View

[2] For a more detailed review of the literature on human cognition and the key developments that led to work on a socially situated cognition perspective in entrepreneurial action research, see Randolph-Seng et al. (2015).

[3] We note that these seven future directions do not necessarily directly correspond to the seven fixed conceptualizations we have outlined above. That is, they are not mutually exclusive in their applicability to resolving the problems associated with the fixed conceptualizations previously discussed.

The variety of forms that the problem of fixed conceptualization can take implies that research to date has focused tightly on certain attributes in isolation (e.g. personality, motivation, etc.) as part of deepening understanding of these factors and their role in entrepreneurial action. However, because of such a sharp focus on certain factors, we are somewhat disabled from more fully understanding the interaction among all of these factors. In other words, research has focused on a 'microscopic' view of social cognition, but also must attend to a 'macroscopic' view of social cognition. As Semin and Smith (2013) write:

> A microscopic perspective involves attending to traditional individual and representation-centered elements prevalent in mainstream psychology and social psychology, such as attention, motivation, representation, and categorization. In contrast, the phenomena to be explained and understood at a macroscopic level are social interaction in specific contexts and the processes driving it. This higher or macroscopic level organization has an entirely different quality than do the single units that compose and give rise to the phenomenon. (2013, p. 128)

For entrepreneurial action research, taking a macroscopic view can mean that, besides focusing on what entrepreneurs do (i.e. their 'observable' behaviors) or how they think (e.g. mental representations or cognitive resources they may have acquired through past experiences), we may need also to investigate a combination of factors that collectively and simultaneously, in the macro sense, influence entrepreneurial action (e.g. the combination of factors personal to the actor, such as their goals, together with the demands of the social and nonsocial situation, etc.). Under a macroscopic explanation, entrepreneurial action is likely to be taken in relation to the whole: the collective effects of such factors as opposed to their specific effects, e.g. being directed by some fixed and/or stable criteria such as maximizing utility or minimizing loss. As changes happen in any of these social and nonsocial factors (under the social situated view: where action, embodiment, situation, and distribution

of cognitions merge macroscopically), the next actions might then, as a result, be expected to be influenced and thereby to be enacted differently. The 'whole', in this view, is conceptualized to be much more changeable and dynamic than previously conceptualized, as well as much broader (Semin & Smith, 2013). Thus, the macroscopic view, where entrepreneurial action is seen in its broader and changing social context, allows one to understand and explain how and why certain actions are taken, how and why the whole situation evolves as it does, and how behavioral responses to those situations, such as entrepreneurial action, are influenced accordingly.

Future Direction #2: Attend to the Specific Content of the Empirical World

Socially situated cognition suggests that, in many cases, human beings make decisions in real time, i.e. use mental representations that are constructed 'online' mentally, and they act based upon these representations as they interpret the environment, as opposed to acting based on 'offline' mental representations of the underlying structures (those not constructed in the moment) that are restored from cognitive resources such as long-term memory. For the most part, real-time use is the case because creating mental representations of the environment from mental storage at times can be costly (Semin & Smith, 2013). If, when pursuing entrepreneurial opportunities, entrepreneurs have to focus constantly on a variety of aspects of their environment that at times are highly novel (e.g. Teece, 2012), then it is problematic for these actors to rely constantly on previously stored cognitive resources, some of which may not apply to the current, immediate situation. Additionally, and at certain

times, it may become too costly mentally or even impossible for entrepreneurs first to develop the cognitive resources applicable to the current situation and then, second, to use these resources to guide their actions, e.g. in cases where entrepreneurs have limited time and have to improvise. Theoretically, this future direction (of attending to the specific content of the empirical world) relies on the assumption that 'the world is its own best representation' (Agre, 1997, p. 63) and means that including in explanations attention to the specific content of the empirical world, as constructed 'online' in the mind of the entrepreneur, may improve the explanatory power of future research on entrepreneurial action.

Furthermore, it is likely that individuals will engage in different forms of action if 'online' mental representations are constructed differentially depending upon, for example, *both* environment and embodiment (due to the influence of group context, perception of the social environment, and/or even slight differences in bodily states, etc.). Due to such path dependency in entrepreneurial action, among other factors, small initial differences can lead to considerable subsequent differences in results (Arthur, 1989; Baucus et al., 2014). Thus, a better understanding of how individuals create these mental 'online' representations based on their specific empirical world, and the effects of subtle differences in such 'online' constructions, are of theoretical and practical importance in future research on entrepreneurial action.

Future Direction #3: Work with Situated Concepts

A socially situated cognition perspective suggests that, in most cases, human beings create situated versions of concepts (Semin & Smith, 2013, pp. 131–2) – e.g. of success, cooperation, competition, morality, trust, etc. Thus, instead of working with fixed, universal, and objective concepts, such as acting, for example, based on having a fixed conceptualization of what success is, individuals are likely to construct

situated versions of concepts they already know or learn as they interpret the context in the light of their entrepreneurial goals, such as in the case of an entrepreneurial opportunity that is being constantly developed and thus changed (e.g. Dimov, 2007). Further examination in future studies, to detect the presence and influence of concepts that have been utilized in one way to guide the actions of entrepreneurs, but now are utilized in another way to guide, for example, follow-on entrepreneurial action, and furthermore to detect the way that meanings change as a result, is another theoretical direction for future research on entrepreneurial action. Where entrepreneurs are conceptualized to work with concepts that are malleable and thereby are changeable in their meanings, theorizing and empirical research might then also profit from the greater explanation of variance possible as these changes are captured in individuals, in their mind-body interaction, in the interface with other actors, and in the interaction with environments in the process of opportunity pursuit.

We suggest that one specific way to pursue this suggested line of research using situated concepts might be to examine how individuals interpret the world according to their current goals. Under the cognitive malleability assumptions of socially situated cognition, entrepreneurs' motivation would not be conceptualized as fixed throughout the entrepreneurial process. Nor should the criteria for entrepreneurs to take action be fixed or narrow. For example, unlike the motivation of many entrepreneurs to achieve monetary or other forms of success, at least early in the process, Spivack, McKelvie, and Haynie (2014) found that, later in the process of entrepreneurial action, some habitual entrepreneurs' behavioral and motivational factors showed similarities with those of 'addicted' individuals. Such changes, embodied in these entrepreneurs' brain and body, have been found to change the very content of their motivation and/or goals and were critical in those entrepreneurs'

interpretation of the world, resulting even in negative influence of their behaviors on their family and friendships, among other factors. If, in researching entrepreneurial action, we conceptualize entrepreneurs as individuals who use situated concepts when acting, then we see as possible that these and other pluralistic views of factors motivating action can be captured effectively and the criteria for the invocation of action can thereby allow entrepreneurial action research to better explain differences in the actions of entrepreneurs.

Future Direction #4: Explore Entrepreneurial Action across Levels of Analysis

Although several scholars have stressed that it is the collective action, interaction, negotiation, and shared experience between entrepreneurs and their stakeholders that shape and reshape entrepreneurial opportunities (e.g. Alvarez & Barney, 2007; Mitchell, Mitchell, Mitchell, & Alvarez, 2012; Randolph-Seng et al., 2015; Venkataraman et al., 2012; Welter, 2011; Zahra, 2007; Zahra & Wright, 2011), research to date has failed sufficiently to explore entrepreneurial action across levels of analysis (Grégoire et al., 2011). As we explained in the first section of this chapter, this problem may have occurred at least in part because actors in entrepreneurial action research have been conceptualized to have fixed foci of attention. The socially situated cognition perspective suggests that cognition enables the adaptive regulation of self and others' behavior (Semin & Cacioppo, 2008; Smith & Semin, 2004), and that adaptive action requires examining cognitive and behavioral factors not only at the individual level but also at least at a social level of analysis (Semin, Garrido, & Palma, 2012; Semin & Smith, 2013). This cross-level examination in turn involves the examination of social interactions and functional purposes in a wider variety of social contexts.

We suggest that, from a socially situated cognition perspective, entrepreneurial action can be viewed across individual and social (e.g. team, community, and environment) levels of analysis (e.g. Autio, Dahlander, & Frederiksen, 2013; McGrath & MacMillan, 2000; Spedale & Watson, 2014; West, 2007). When viewed mostly at the individual level, cognition can involve static individual- and representation-centered elements, such as motivation and scripts that are activated in similar fashion across all situations (Smith & Semin, 2004, 2007). In contrast, when cognition is considered simultaneously at the individual and social levels, it involves social interactions and functional purposes in a variety of specifiable social contexts (Semin & Smith, 2013). Entrepreneurial action may thus be conceptualized to cross individual and social levels of analysis. For example, Autio et al. (2013) combined data collected from an online user community and found that both the interactions between entrepreneurs and the community and the interactions between the community and entrepreneurial opportunities (as forms of distributed cognition) regulate entrepreneurs' evaluation of entrepreneurial opportunities and their propensity to engage in entrepreneurial action (action at the level of the individual).

These cross-level engagements may occur in particular where entrepreneurs test potential opportunities through interacting with users in the Internet community; where feedback from the community motivates entrepreneurs to adapt or abandon potential opportunities; and where the adapted opportunities transform the community's validation and further encourage the entrepreneurs' engagement of entrepreneurial action (Autio et al., 2013). We suggest that, by using a socially situated cognition perspective and attending to real-world entrepreneurial action at multiple levels of analysis, and by parsing entrepreneurial action through an examination of social interactions at the levels of individuals, teams, communities,

and institutions, we thereby may enable a better understanding of entrepreneurial action.

Future Direction #5: Understand Action and Activities as the Whole and the Parts

As mentioned previously, future research opportunities exist where scholars examine entrepreneurial action from a macroscopic view. In this subsection we suggest an extension of this idea: research helping to explain and to understand the relationships between the 'whole' phenomenon and its 'parts'. This macroscopic view captures in entrepreneurial action the 'infinite diversity as the outcome of a recursively generated system … that [at] each level … displays a new emergent quality' (Semin et al., 2012, p. 140). Thus, when we conceptualize entrepreneurial action as syntheses of sets of discrete activities (Alvarez & Barney, 2007; Shepherd, 2015), we may then consider entrepreneurial action taken within a larger social process to represent the 'whole', and entrepreneurial activities to represent the constituent 'parts'. Entrepreneurial action may thus be conceptualized further to possess a substantively different quality than entrepreneurial activities, and vice versa. We argue that, where it is assumed that the parts cannot be comprehended without insights from explaining the whole, and that the whole cannot be analyzed without identifying and accessing the parts (Gazzaniga, 2010; Zacks & Tversky, 2001), then possibilities emerge for the explanation of additional variance in entrepreneurial action.

To date, scholars have mostly treated entrepreneurial action either as a single act (measured by attributes such as frequency, likelihood, and propensity) (e.g. McKelvie, Haynie, & Gustavsson, 2011; Mitchell & Shepherd, 2010) or as a series of activities (measured by magnitude, pace, and rhythm of event occurrence) (e.g. Autio et al., 2013; Delmar & Shane, 2004; Lichtenstein, Carter, Dooley, & Gartner, 2007).

From a socially situated cognition perspective, we suggest that future research not only use entrepreneurial activity as 'the key unit of analysis' (Shepherd, 2015, p. 6) but also explore the relationships among activities as well as the relationships between constituent activities and entrepreneurial action (e.g. Spedale & Watson, 2014). As one example of such an approach, we note that Chen (2015) suggests that entrepreneurial activities can be organized under four ordinal degrees of abstractness and be considered together to better capture the dynamics of entrepreneurial action.

Future Direction #6: Treat Entrepreneurial Action as a Process

Entrepreneurial cognition research has also fallen short in articulating entrepreneurial action as a process (Grégoire et al., 2011). In fact, one can argue that it is the lack of a process orientation in research on entrepreneurial cognition and action, such as, for example, lack of longitudinal studies, that contributes to the continued dependence in entrepreneurial action research on many of the fixed conceptualizations reported earlier in this chapter. Indeed, the socially situated cognition perspective is based on the assumption that the cognitive processes involve an inherently social process (Fiske, 1992; Robbins & Aydede, 2009) and are thus interactive (Semin et al., 2012).

For example, in studying the process whereby entrepreneurs move from one action to the next, we suggest that we may be able to use socially situated perspective or other dynamic cognition-based approaches to unbundle entrepreneurial action as an interactive, open-ended process, thereby to offer additional explanation and a better understanding, according to the following logic. Given that the socially situated cognition perspective emphasizes the significance of situational factors on cognition and action, and thus offers ways to unbundle the dynamic, interactive process among cognition, action, and the environment, we may argue that: (1) entrepreneurial action

is interactive because action requires the social interactions between an entrepreneur's mind and other objects and persons in the social and physical environment; (2) entrepreneurial action is a process because social interactions between entrepreneurs and their stakeholders (e.g. family and friends, team members, customers, investors, suppliers, community, governments, and environment) take place over time; and (3) entrepreneurial action is open-ended because, as different factors may influence construction of 'online' mental representations, different entrepreneurial actions may be taken.

Theorized as an interactive open-ended process, entrepreneurial action should not therefore be treated as a fixed entity measured by attributes (e.g. more or less in frequency or propensity) but as a non-linear sequence of activities discerned by general patterns or mechanisms (Langley, 1999; McMullen & Dimov, 2013; Mohr, 1982; Van de Ven, 2007). Treating entrepreneurial action as a process thus opens another avenue for future research. For example, Lichtenstein et al. (2007) distinguish several patterns of entrepreneurial action that lead to better likelihood of venture creation and suggest that the sequence of entrepreneurial action is determined by the rate, dispersion, and concentration of entrepreneurial activities. Chen (2015) also found an underlying distance-abstractness mechanism that drives the entrepreneurial action process. As a result, she suggests that no particular sequence of entrepreneurial action should be deemed to be the best practice but instead that, within a changing situation, sequences simply unfold from the distance-abstractness mechanism over time.

Future Direction #7: Unbundle Entrepreneurial Action Using the Duality of Cognition

From the socially situated cognition perspective, cognition is described as being complex, dynamic, and changing (moment-to-moment), especially as a result of factors at the social level (Heider, 1958; Lewin, 1951; Mitchell et al., 2014; Semin & Cacioppo, 2008; Simon, 1981). In the first section of this chapter, we argued that it is too costly cognitively for individuals to create mental representations of the world in many situations, and that, as such, the mind creates 'online' representations so as to respond and act based on the demands of the immediate situation. However, by 'online' representations we do not mean that cognition is an empty box that is refilled constantly by the content of the body, the environment, and/or other people with whom one's cognition interacts. Indeed, cognition and action should not be conceptualized to completely lack representativeness of situations, or as completely malleable (Semin et al., 2012). Thus, rather than conceptualizing cognition within a stability-change dichotomy, entrepreneurial action research might benefit from a conceptualization that views entrepreneurial cognition and its effects on entrepreneurial action as a 'duality' in which 'stability and change are fundamentally interdependent – contradictory but also mutually enabling' (Farjoun, 2010, p. 202).

For example, using an agent-based simulation, Mitchell, Mitchell, & Randolph-Seng (2014) suggested that the moment-to-moment interactions between a potentially more stable inner environment (internal cognition) and a potentially more dynamic outer environment (situations) drive the propensity and frequency of entrepreneurial action in the form of exchange creation. Shaver (2012) suggests that future studies can expand the stability-change and inner-outer dichotomies into a more refined two-by-two representation that more completely conceptualizes potential causes of entrepreneurial actions, where external task difficulty and internal dispositional ability are relatively stable (they can change over time but not from moment to moment),

while external luck and internal effort can change rather quickly from moment to moment. In sum, the socially situated cognition perspective affords future research with additionally rich explanations of interdependency between stability and change in inner and outer environment at individual and social levels.

Conclusion

In this chapter, we have focused on entrepreneurial action as it can be informed by a more complete awareness of the limitations of fixed conceptualizations, and by insights offered by entrepreneurial cognition research, especially the dynamic cognition approach offered by socially situated cognition theory. But how is this newly conceptualized research to be accomplished? As we conclude the chapter we briefly discuss some possible responses to this question. Looking forward, we see a few possible methodological approaches that can be adopted in future research to enable the application of a socially situated perspective to empirical work on entrepreneurial action, as we now discuss.

Because, as we have suggested, future research should treat entrepreneurs, their tendencies, motivations, contexts, etc. as dynamic and changing, researchers need to employ methods that are suitable for such a challenging task. For instance, quantitative longitudinal studies, measuring key variables and their variations, and the influence of variations (not just the absolute values) on key aspects of entrepreneurial action may provide additional explanations of entrepreneurial action. To further enrich such explanations, using qualitative longitudinal studies and either quantitatively coding theoretically important aspects of the context, or qualitatively identifying the how and why of the relationships identified can also be a promising research approach.

Future research can also use certain qualitative and quantitative methods that are capable of capturing the dynamics and the socially situated aspects of entrepreneurial action outlined above. For instance, visual mapping is a good strategy in tracing the overall temporal patterns and may be used to capture the *content* of a concept as well as the overall process of entrepreneurial action in limited space at a single glance. Visual maps may associate how an initial new idea that forms the basis of an entrepreneurial opportunity (Davidsson, 2015) evolves differently depending on who shapes the development of the opportunity, and in what ways (Dimov, 2007). Visual mapping thus can be used to explain the *situated* nature of entrepreneurial action. Conjoint analysis can be used by researchers who have the opportunity to collect a large number of attributes associated with the context, social actors, and other key aspects of entrepreneurial action. Conjoint analysis may show how and why even small changes in one or two of the factors tracked can influence or even transform the property of the whole process of entrepreneurial action. Thus, conjoint analysis offers a way to adapt empirically a *macroscopic* explanation of how and why entrepreneurs act the way they do.

In such ways, future research can capture empirically the cognitive aspects of entrepreneurial action, especially in terms of socially situated cognition theory. Our emphasis on this dynamism returns us to the quotation from Steve Wozniak with which we began this chapter: ‘entrepreneurs have to keep adjusting to [their situation] . . . everything’s changing, everything’s dynamic’ (Livingston, 2007, p. 56). As we have described above, this ‘everything’ can be understood in terms of the broader changing, social (macroscopic) context (future direction #1), especially as it relates to the ‘online’ interpretations that entrepreneurs develop in their interactions with the changing world (future direction #2) and the situation-specific nature of these

understandings that are developed *within* and *across* each context (future direction #3).

We also note that this 'everything' needs to be understood more broadly, especially across levels of analysis, encompassing the decisions, individuals, teams, firms, communities, economies, and societies (future direction #4) and the specific actions that combine to affect each of these different levels (future direction #5). We therefore emphasize additionally the importance of Wozniak's suggestion that the 'everything' is also changing, and that this process of change is essential for understanding entrepreneurial action, but is also open-ended and uncertain (future direction #6). It is this duality of stability and change that represents a fundamental tension, but also opportunity in better understanding entrepreneurial action and cognition (future direction #7). In this way, through analyzing many of the key limitations in entrepreneurial action research imposed by fixed conceptualizations, and by speculating innovatively, we hope in this chapter to have articulated the implications of a socially situated cognition perspective for entrepreneurial action research.

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TABLES

Table 3.1. Examples of Fixed Conceptualizations in Explaining Entrepreneurs and Their Actions

Type of fixed conceptualization	Stylized understanding of earlier approaches	Stylized understanding of more recent approaches	Stylized understanding of issue(s)
1. Entrepreneurs are individuals with fixed (and heroic) character/ characteristics	The entrepreneur is the bearer of uncertainty (e.g., Knight, 1921) who shows 'boldness' (Kirzner, 1997: 72).	The entrepreneur is an 'effectuator' who creates the future, seemingly with little need to take its forces into account (e.g., Sarasvathy, 2001: 262).	Actors are not heroic, but do act in the face of limitations (e.g., Simon, 1990). Without an understanding these nuances, the nature of entrepreneurial actions may remain mystical. (e.g., Mitchell 1996; Rumelt, 1987)
2. Uncertainty is temporally and contextually fixed	The entrepreneur apparently deals with high levels of uncertainty throughout the process (e.g., Knight, 1921).	The entrepreneur comes to the stage in an 'accidental' manner (Shah & Tripsas, 2007: 123), experiencing minimum uncertainty.	Process views (e.g., McMullen & Dimov, 2013) explain that time is important and that formation of an opportunity generally occurs in a sequence of actions, allowing the actors to deal, step by step, with varying levels of uncertainty (e.g., McGrath, 1999).
3. Entrepreneurs' motivation is considered to be fixed	Once decided to bear uncertainty, the entrepreneur's motivation remains somewhat constant throughout the process (e.g., Kirzner, 1973).	The entrepreneur seems to have a rather fixed level of motivation while constantly improvising (e.g., Baker et al., 2003).	Actors' motivational levels change as they receive new information from the world. Survival bias (e.g., Davidsson, 2003) should not lead us to assume that all actors show high levels of motivation throughout the opportunity formation process
4. Actors have fixed (and narrow) criteria for action	Criterion: How can the entrepreneur maximize his or her expected utility (e.g., see: Miller, 2007)?	Criterion: How much the entrepreneur can afford to lose (Sarasvathy, 2001)?	Ample empirics (e.g., on escalation of commitment; Staw, 1981) suggest that neither of the two criteria is entirely realistic. Human action cannot and should not be reduced to one single principle (Gigerenzer, 1996).
5. Social situation/ context is fixed	The context does not provide sufficient clue for the individual, leaving him or her in vacuum (e.g., Knight, 1921).	The context is discussed in broad and general terms. e.g., as in terms such as 'new knowledge-based firms' (Baker et al., 2003: 256).	Without an understanding of the causal role of context results in an under-conceptualized understanding of '…human rational behavior [as]… scissors whose two blades are the structure of task environments and the computational capabilities of the actor' (Simon, 1990: 7).
6. Actors' have fixed tendencies toward action	Actors almost always have doubt. This often undermines action (e.g., Knight).	Actors show a 'bias toward action' (Baker & Nelson, 2005: 334) or have certain principles to follow in almost all situations (Sarasvathy, 2001).	In reality, actors engage in different types of actions, not just one type, as the situation may demand (e.g., Gigerenzer, 1996).
7. Actors have fixed foci of attention	Actors mostly focus on understanding the objective reality (e.g., Kirzner, 1973).	Actors mostly focus on their own selves or worlds (e.g., Sarasvathy, 2001).	Entrepreneurial phenomena need to be viewed with a multi-faceted perspective (e.g., Hayek, 1937).