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# Beyond the Single-Person, Single-Insight Attribution in Understanding Entrepreneurial Opportunities

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**This article helps develop the creativity perspective within entrepreneurship in two ways. First, it elaborates on the nature of opportunity as a creative product. Rather than viewing opportunities as single insights, it suggests that they are emerging through the continuous shaping and development of (raw) ideas that are acted upon. Second, rather than attributing them to a particular individual, it highlights the contextual and social influences that affect the generation and shaping of ideas. This helps move entrepreneurship research beyond the single-person, single-insight attribution that currently permeates it.**

## Introduction

There is a well-known phenomenon in social psychology—the fundamental attribution error—whereby in judging the behavior and deeds of others, people typically underestimate the power of situations and situational pressures, and thus ascribe what they see to individual strengths or weaknesses (Ross, 1977). When we talk and think about (great) entrepreneurs, the fundamental attribution error is evident in our tendency to praise their individual characteristics or skills and overlook the enabling force of their environment. To some extent, the recognition of opportunities—especially those that are ultimately considered great, radical, creative, etc.—is an area of research especially prone to the fundamental attribution error. Indeed, in the spirit of the great, visionary deeds that Schumpeter (1934) ascribes to his entrepreneur–innovator, the search for the mind that produces these earth-shattering ideas is ever appealing and thus never ending.

Entrepreneurship is not the only field interested in the origin of great ideas. Neither is it the most advanced. The study of creativity, “the production of novel and useful ideas

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by an individual or small group of individuals working together” (Amabile, 1996, p. 1155) represents a long and advanced tradition in social and cognitive psychology (e.g., Glover, Ronning, & Reynolds, 1989; Sternberg, 1999). Nevertheless, its utility for the study of opportunities as great entrepreneurial ideas is not a matter of simple application due to several conceptual challenges that the context of entrepreneurship poses. It would be naïve to think that business ideas—the way we know them in our *post hoc* admiration of them—are originally conceived in the same shape and form; rather, they emerge in an iterative process of shaping and development. In addition, it is unrealistic to presume that individuals develop their ideas in isolation; rather, as potential entrepreneurs seek to convince, engage, or organize other social actors, this is a social process of discussion and interpretation. I refer to this process of shaping, discussion, and interpretation, whereby initial ideas are elaborated, refined, changed, or even discarded, as *opportunity development*. This term represents both a dynamic, iterative, and a socially embedded view of how entrepreneurial opportunities reach their final form. The dynamic, iterative aspect of this pertains to the gradual “polishing” of what is initially an unpolished idea. The socially embedded aspect pertains to the fact that potential entrepreneurs, rather than thinking and acting alone, are actively engaged in information and value exchange with a surrounding community. In order to systematically and rigorously study opportunity development, one needs to (1) capture its ephemeral beginning and fragile sustenance in order to avoid survival bias, (2) reconcile the positivist and constructivist accounts of the nature of opportunities, and (3) incorporate the involvement of stakeholders beyond the individual entrepreneur (Davidsson, 2003; Dutta & Crossan, 2005; Gartner, Carter, & Hills, 2003).

The purpose of this article is to establish new conceptual ground for the study of entrepreneurial opportunities by emphasizing their (gradual) development and by producing a constructive synthesis of ideas from the fields of creativity and entrepreneurship. A brief review of the entrepreneurship literature reveals that while there is some knowledge of the creative person and process, elaboration of the creative product and situation is lacking. The article tries to fill this gap in two ways. On one hand, it discusses how one of the most potent features of entrepreneurship—the presence of uncertainty and the need to act in its face—requires a reconceptualization of the nature of the creative product in entrepreneurship. Rather than being single insights, entrepreneurial opportunities pertain to a series of insights—reinforcing, modifying, or contradicting each other—emerging as one acts to resolve the uncertainty. On the other hand, it emphasizes that situational and social influences continuously affect—by directing attention, providing new information and interpretations, reinforcing beliefs, etc.—the potential entrepreneur’s knowledge of the developing opportunity. Rather than being the deed of a single person, entrepreneurial opportunities encompass a social, learning process whereby new knowledge continuously emerges to resolve the uncertainty inherent to each stage of opportunity development.

The article contributes to the entrepreneurship literature by introducing a conception of opportunities that goes beyond the single-person, single-insight explanation, thereby expanding the scope for developing entrepreneurship theory. Opportunities can be represented as a stream of continuously developed ideas, driven and shaped by one’s social interaction, creative insights, and action at each stage. The article is structured as follows. In the next section, it discusses the interactionist perspective as a framework for both conceptualizing extant entrepreneurship research and highlighting important conceptual gaps. In the following two sections, it develops propositions on the nature of opportunities as a creative product and the processes behind social and contextual influences. Finally, it discusses the implications of these propositions for future research.

## Creativity in Entrepreneurship

One of the central ideas in the broader creativity literature is that explaining creativity necessitates a conceptual constellation of four factors—person, process, product, and situation—as well as their interaction (Brown, 1989; Harrington, 1990). The complexity of the interaction between a person and a given situation is represented by Woodman and Schoenfeldt's (1989, 1990) interactionist model of creativity. Although the individual faces the situation with an arsenal of antecedent skills and predispositions—knowledge, cognitive skills, and noncognitive traits—the situation may further facilitate or inhibit the individual's creative accomplishment. This implies that, if we studied the two elements in isolation, there would be a large unexplained component remaining.

One of the central questions in entrepreneurship seeks to understand why some individuals and not others recognize certain opportunities (Shane & Venkataraman, 2000). This question has naturally made the application of a creativity perspective appropriate for understanding opportunity recognition. Yet, regrettably, it has also induced a predominant focus on who the opportunity “recognizers” are and how they think or what they do (i.e., creative person and process).

### The Creative Person in Entrepreneurship

There are four factors that have been established as instrumental for understanding the individuality of creativity—personality, intrinsic motivation, knowledge, and cognitive skills and abilities (Amabile, 1996; Woodman & Schoenfeldt, 1989, 1990). As the following brief review shows, these factors also have a well-established recognition in entrepreneurship research.

**Personality.** The quest for understanding how entrepreneurs differ from the general population in terms of various personality characteristics is one of the oldest research traditions in entrepreneurship and mirrors similar infatuations with the personality of great creative persons (e.g., Simonton, 1986) or great leaders (Yukl, 1989). Despite criticisms of this trait paradigm (e.g., Gartner, 1989), it is now well accepted that personality remains an important general predictor of entrepreneurial behavior, once specific mediating factors are considered (Baum, Locke, & Smith, 2001; Rauch & Frese, 2000). There are several factors that have been of greatest interest to researchers: need for achievement, locus of control, risk propensity, and tolerance for ambiguity (e.g., Begley & Boyd, 1987; Brockhaus, 1982; McClelland, 1961; Shaver & Scott, 1991), as well as, more recently, self-efficacy and the Big 5 personality factors (Ciavarella, Buchholtz, Riordan, Gatewood, & Stokes, 2004; Krueger, Reilly, & Carsrud, 2000; Markman, Balkin, & Baron, 2002). In the context of mixed results, methodological issues, and diverse samples, recent meta-analyses and reflections on this work have emphasized the need (1) to separate the emergence and success of entrepreneurs, (2) to search for more proximate or mediating predictors of specific behaviors, (3) to take into consideration situational demands, and (4) to acknowledge the inherent diversity among entrepreneurs (Rauch & Frese, 2000; Stewart & Roth, 2001). Points 1 and 3 consistently resonate throughout this brief review and serve to highlight the issues related to the nature and development of opportunities explored in the next two sections.

**Intrinsic Motivation.** Intrinsic motivation is fundamental for achieving creative outcomes. Similarly, it is inconceivable to think that people would recognize opportunities if they do not value entrepreneurship as a career option. Studies of the motivations of both

nascent and accomplished entrepreneurs suggest that intrinsic motivation—desire for independence, innovation, personal achievement—is a significant factor in explaining people’s entry into the entrepreneurship process (Carter, Gartner, Shaver, & Gatewood, 2003; Rauch & Frese, 2000; Utsch, Rauch, Rothfuss, & Frese, 1999). Nevertheless, the main premise of economic theories of entrepreneurship is that economic incentives (availability of profit opportunities) spur entrepreneurial discoveries (Kirzner, 1985). Yet, while there is evidence that the promise of financial reward induces a higher number of ideas (Shepherd & DeTienne, 2005), the evidence for its leading to more creative ideas has been mixed at best. In Shepherd and DeTienne’s (2005) experiment, the promise of financial reward exerted a different effect on the innovativeness of one’s ideas depending on one’s prior knowledge: The effect was positive for those with minimal prior knowledge, but negative for those with considerable prior knowledge. In a different experimental setting, posing a difficult problem and for which prior knowledge was not particularly relevant, financial incentives had no effect on the finding of creative solutions (Demmert & Klein, 2003; Kitzmann & Schiereck, 2005). This suggests that the effect of incentives may be contingent upon one’s intrinsic motivation or upon the specific situation in which one acts and thinks.

**Knowledge.** One of the central tenets in creativity research is the positive relationship between (domain) knowledge and creativity (Amabile, 1988). This notion has also been taken up in entrepreneurship research, linking prior knowledge to the construct of alertness (Kirzner, 1985). Indeed, several empirical studies have provided support for a positive relationship between prior knowledge and opportunity recognition (Corbett, 2006; Ko & Butler, 2006; Shane, 2000; Shepherd & DeTienne, 2005). Nevertheless, in line with the idea that too much domain knowledge may in fact impede one’s ability to come up with unusual, outside-the-box solutions (Frensch & Sternberg, 1989), there is evidence that the link between knowledge and opportunities is contingent upon one’s mode of learning or thinking (Corbett, 2006; Dimov, 2004; Ko & Butler, 2006). This suggests that knowledge may be a necessary but not sufficient condition for the recognition of opportunities; rather, it is intertwined with the way it is applied and extended in particular situations (Weisberg, 1999), i.e., it cannot be dissociated from one’s cognition or from the situation in which one uses it.

**Cognitive Skills and Abilities.** The idea that creative outcomes are associated with distinct cognitive skills and abilities has found fertile ground in entrepreneurship research. Indeed, studies have shown that entrepreneurs use more heuristics than managers (Busenitz & Barney, 1997; but see also Allinson, Chell, & Hayes, 2000) and that cognitive biases are essential factors in risk perception and the decision to start a venture (Keh, Foo, & Lim, 2002; Simon, Houghton, & Aquino, 2000). In addition, the recognition of opportunities is associated with abilities such as higher-level learning which, through the application of mental schemas, heightens one’s alertness by inducing higher sensitivity to market disequilibrium signals (Gaglio, 1997; Gaglio & Katz, 2001) and mental simulations and counterfactual thinking, which pertain to reflection over past and future events (Baron, 1999; Gaglio, 2004). Finally, entrepreneurs’ different learning and thinking skills help them absorb and process information differently, which may make them sensitive to some opportunities but not others (Corbett, 2005, 2006; Dimov, 2004; Ko & Butler, 2006). Beyond individual differences, creative cognition in opportunity conception may involve conceptual combination, analogy, and initial problem formulation (Ward, 2004).

More generally, the above work converges under the idea that entrepreneurs form unique mental representations of the world (Baron, 2004; Mitchell et al., 2002; Shaver &

Scott, 1991). The main goal of this cognitive perspective is “understanding how entrepreneurs use simplifying mental models to piece together previously unconnected information that helps them to identify and invent new products or services, and to assemble the necessary resources to start and grow businesses” (Mitchell et al., 2002, p. 97). However, in the development of the cognitive perspective within entrepreneurship, there has been a conceptual twist. While cognitive psychology is typically blind to individual differences—it looks for commonality among people in the mental processes they use (Sternberg & Lubart, 1999)—entrepreneurship researchers have, for the most part, assumed that entrepreneurs are somehow different (even better) at the processes conducive to idea generation. In this regard, it is not clear why, other than by assumption and definition, entrepreneurs use more heuristics or other distinct cognitive processes. To avoid the fundamental attribution error trap, it is necessary to explore the possibility that certain situations elicit particular ways of thinking and deciding (Baron, 1998) and that entrepreneurs self-select themselves into such situations because of their knowledge, aspirations, or just serendipitous circumstances.

### **The Creative Process in Entrepreneurship**

There have been numerous studies in entrepreneurship trying to illuminate the process through which opportunity ideas get discovered. Some of these have applied the seminal work of Wallas (1926), whose model—encompassing the five stages of preparation, incubation, insight, evaluation, and elaboration—has been most influential in the creativity literature. The empirical approaches here have been both exploratory, focusing on entrepreneurs’ narratives of their early experiences (Long & McMullan, 1984), and confirmatory, focusing on the degree to which entrepreneurs agreed with the opportunity recognition process (Hills, Shrader, & Lumpkin, 1999). A refinement of the model has elaborated on the feedback loops among the stages (Lumpkin, Hills, & Shrader, 2003), but has received mixed empirical support (Hansen, Hills, & Lumpkin, 2005).

A stream of literature has linked opportunity recognition with search. One set of studies has focused on the triggers of motivated search, typically some kind of discrepancy between the reality and the aspiration of the entrepreneur (Heron & Sapienza, 1992; Sine & David, 2003). Others have focused on distinguishing motivated search from serendipitous discovery (Bhave, 1994; Koller, 1988; Long & McMullan, 1984) as well as a more refined classification of search processes (Chandler, Dahlqvist, & Davidsson, 2002; Chandler, DeTienne, & Lyon, 2003). There has been no evidence that a particular search approach dominates the opportunity recognition spectrum (Hills & Shrader, 1998; Kaish & Gilad, 1991; Zietsma, 1999). Nevertheless, the intensity of search as well as the amount or type of information sought are related to the entrepreneurs’ prior experience and confidence (Cooper, Folta, & Woo, 1995) as well as to the uncertainty and dynamics of their industry (Simon & Houghton, 2002).

Perhaps the main deficiency of this line of research is the conceptual collapse of the time between a first insight and the idea that ends up being implemented. Reliance of retroactive accounts of how ideas came about further exacerbates this collapse as they are filled with recollection bias and tendencies to glorify the successful endeavors and depreciate those that turn out to be wrong. This highlights the need for research that is more contemporaneous with the ideas it studies. Such research, however, needs a conception of opportunity that is different from a single, one-time insight.

What this brief review suggests is that, while there is increased understanding of the creative aspects of opportunity recognition as a central marker of entrepreneurship, this is limited to only two aspects of it, namely, the person and process involved. As many of the

identified relationships require further appreciation of the situations in which entrepreneurs act and of the more immediate results of their thoughts and actions, developing a deeper understanding of the complexities of the creative product and situation associated with opportunity recognition represents a fruitful area for advancing entrepreneurship research. The next two sections seek to lay the groundwork for doing just that.

## The Creative Product: Idea versus Opportunity

Yes, the linkage between creativity and entrepreneurship is intuitive. Yet, whereas creativity scholars have a clear notion of what the creative product is—“novel and useful ideas” (Amabile, 1996, p. 1155), expressed through verbalization, mathematical or artistic symbols, creative writing, architectural or engineering designs, etc.—entrepreneurship scholars cannot settle for just *ideas*; they are after *opportunities*.

Are ideas and opportunities distinct, or are opportunities simply a different form of expression of ideas in the domain of entrepreneurship? The received wisdom from the classroom or the business press is that not every idea is a good opportunity, thereby implying that what is interesting and what has commercial viability are two distinct considerations. Pushing this further, I argue that every opportunity has an initial idea as its progeny, i.e., someone must have thought about it for it to ever become a subject of human discussion. These two arguments suggest that opportunities are nested within the realm of ideas. In other words, ideas are necessary but not sufficient condition for opportunities to emerge. The sufficiency condition pertains to the continuous accumulation of evidence and conviction of commercial viability, existence of a potential market, ability to generate profit, and ability to sustain this profit over time in the face of (increasing) competition. Therefore, whereas ideas, once expressed, are ends in themselves—an abstract representation of an imagined (future) reality—opportunities exemplify the tension to make that reality come true.

But why can we not settle for ideas as an outcome for study in entrepreneurship research? I can think of two reasons. One, by doing this, we may lose our distinct identity as entrepreneurship scholars. Indeed, focusing on ideas will make us applied creativity researchers, studying the same phenomenon in a different setting. The implication of this is that our work will have to be tightly connected—drawing from and contributing to—the broader creativity literature. In this regard, there is vast theoretical arsenal in the creativity literature to explain how, when, and by whom ideas emerge. Our contribution, at best, would be to elaborate on some of the specific contingencies associated with conceiving business ideas. Two, the implication of this would be that I—thinking of a possible business idea as I write this—would have to be considered an *entrepreneur*. But entrepreneurship is about action in the face of uncertainty (McMullen & Shepherd, 2006). So, unless I do something about this idea, I cannot qualify as an entrepreneur. It is not about the idea per se; rather, it is about finding out whether the idea can really deliver its original promise. But then, how far should my idea stretch in order to be considered entrepreneurial, i.e., an opportunity? How can eventual commercial viability—and who is to make this judgment?—have a bearing on whether what I am thinking about *here* and *now*, before I have done anything about it or as I am taking the very first toward pursuing it, be considered an opportunity?

Let us suppose for a moment that I thought—perhaps after seeing the restaurant across the street packed with people having lunch—of opening a theme restaurant in Madrid, Spain (the pure idea). I then open up my web browser and search for a listing of theme

restaurants in Madrid and of feature articles about the restaurant business in Spain/Madrid more generally. This is the very first action I have taken, and now that I have done so, I am no longer in the realm of “armchair” thinking.<sup>1</sup> Am I getting closer to being or becoming an entrepreneur? Perhaps. The search yields several useful entries and after reading them all, I modify my idea in response to their implications for succeeding in the restaurant business in Madrid. My changed idea is now, at least theoretically, more feasible since it has addressed some of the outright difficulties associated with its original form. So, it is closer to being an opportunity. And so the process continues. After multiple web searches, discussions with friends, colleagues, restaurant owners, potential customers, etc., I may end up very excited about the idea (which by now may bear little resemblance to its original counterpart) and may undertake more formal steps in its pursuit (e.g., exploring various location options, speaking to potential investors or employees), or may abandon it completely, convinced that it is not feasible or ambitious enough. Regardless of the outcome, I have taken entrepreneurial action as I have helped resolve some of the uncertainty surrounding the original idea; I have acted in the face of uncertainty (McMullen & Shepherd, 2006).

How does this developmental sequence align with some of the definitions of opportunity in the literature? Eckhardt and Shane (2003, p. 336), following Casson (1982) and Shane and Venkataraman (2000), suggest that “entrepreneurial opportunities are situations in which new goods, services, raw materials, markets, and organizational methods can be introduced through the formation of new means, ends, or means-ends relationships.” The word *can* in this definition implies certainty as to the final outcome that opportunities represent. As such, the definition is time neutral—it pertains to opportunities *now*, yet deems them as such only *after* knowing their outcomes in the future. But how can we account for the fact that, when the present and the future are separated by fundamental uncertainty (Knight, 1921), the *ex post* characteristics of an opportunity cannot be known or correctly perceived *ex ante*? The disconnect between conception and consequences stems not only from the uncertainty and complexity of the opportunity environment but also from the possibility that consequences are created in ways not known beforehand.

If “can” is interpreted in a less strict sense, it becomes a matter of individual belief rather than “objective” third-party judgment. When I say, “I can do it,” before I actually try and see whether that is really the case, “can” refers to my personal belief. This suggests that in the previous example of the (changing) idea of opening a restaurant, every step of persistence in exploring the idea further represents a “situation in which new goods, services . . . can be introduced through the formation of new means, ends, or means-ends relationships.” Indeed, assuming some basic form of rationality such that I am not inclined to a futile pursuit of what I think are not feasible ideas, every time I take further action, I actually *believe* that the idea will work eventually. The series of such situations may end in three possible states: (1) I stop believing *now* and the idea dies; (2) I actually try to establish the business and stop believing then; or (3) I continue believing and the business emerges. In the first scenario, I am essentially a *potential* entrepreneur, in the second, a *nascent* entrepreneurs, and in the third, an (emerged) entrepreneur.

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1. It should be noted here that there are many different actions that I may take at this stage, each creating different implications and trajectories for the future development of the idea. What I do essentially depends on whether I use the processes of causation or effectuation—as discussed by Sarasvathy (2001)—to guide my actions. While Sarasvathy elaborates on the logic that guides one’s actions, and thus on the diversity of actions that the different logics imply, I focus here on the fact that the action itself represents a way to move the idea forward.

Along the way from the initial to the final idea, I keep reproducing it, ever incorporating new information coming to me from the media or from the opinions and judgments of others. The creative outcome(s) in this process, then, is the finding of solutions for further progressing with the idea—i.e., shaping it—given the available information at each point in time. In this sequence of ideas, the point at which we call the idea an “opportunity” is important as it creates the problem of left sensoring, i.e., ignorance of all the shaping efforts occurring and ending prior to this point. Not actually worrying about when and where to apply the “opportunity” label could help us capture all the shaping efforts. This implies that we either call the entire shaping process, regardless of where and how it ends, “opportunity” or discard the label completely (hardly a solution that would bring a piece of mind to the field). The former solution essentially rests on a pragmatic approach: One’s idea is valid, i.e., it deserves to be called “opportunity,” as long as one is willing to do (and does) something about it. At the moment of acting, there is no objective basis to discard the validity of the opportunity—it is the belief of the potential entrepreneur against the beliefs of other observers. Only after the action can one of the beliefs be ascertained as correct.

Perhaps the only tangible marker to the idea that is being shaped is my action/intention to pursue it further. Indeed, as Kirzner (1979, p. 169) argues, “Only ideas that are acted upon are deemed to have been perceived as profit opportunities.” Action is thus a distinguishing step for entrepreneurs in their dealing with uncertainty (Knight, 1921; McMullen & Shepherd, 2006; Mises, 1949) and an important ingredient to the conception of opportunities. This implies that the notion of opportunity is inseparable from one’s intention to pursue it and that the recognition of an opportunity is conceptually inseparable from the opportunity itself (Sarason, Dean, & Dillard, 2006). This is also consistent with the idea of opportunity emergence as an intention-driven process (Krueger, 2000) as well as the notion that opportunities flow *from* rather than *toward* individuals, i.e., that they are enacted (Gartner, Bird, & Starr, 1992; Gartner et al., 2003) or effectuated (Sarasvathy, 2001). Enactment entails an individual’s conceiving of a particular environment (Gartner et al., 2003; Weick, 1979) and acting as if this environment were real (Gartner et al., 1992)—just as discussed in the idea-shaping example mentioned earlier. This leads us to the following proposition:

**Proposition 1:** Opportunity, as a creative product in entrepreneurship, is the progress (idea + action) along a continuum ranging from an initial insight to a fully shaped idea about starting and operating a business.

### **The Creative Context: Opportunity Development as a Social, Learning Process**

Even if we accept the notion that the creative product in entrepreneurship is the continuous shaping of an idea, this is still not sufficient to complete the picture. Consider this: If I were not looking at the restaurant out of the window, the insight may not have appeared; if I had come upon the “wrong” website or talked to the “wrong” person, I could have decided not to pursue it further. The insight itself and its early shaping are so fragile that we have to consider the context in which these occur and thus appreciate their enabling or constraining influences. In their interactionist model of creativity, Woodman and Schoenfeldt (1989) speak of contextual and social influences as constituting the creative context—while the former represent the more immediate task conditions of the individual, the latter represent the broader social interactions in which the individual



engages. As I will argue next, these two influences help drive what is essentially a learning process at its core: They direct attention, provide new information and interpretations, reinforce beliefs, etc., thereby equipping the potential entrepreneur with new knowledge that helps resolve the uncertainty inherent to each stage of opportunity development.

## The Learning Process

Whereas the continuous shaping of an idea is propelled by an individual's sustained belief in the commercial potential of the idea, the belief itself is dependent upon the interpretation and meaning in which the individual envelops the idea. Indeed, it is the diversity of meanings (or different means–ends configurations) that helps generate ideas (Kirzner, 1985; Mir & Watson, 2000). As meaning emerges from one's prior experience (Weick, 1979), opportunity development is inherently linked to the dynamics of experience and is thus a learning process (Cope, 2005; Dutta & Crossan, 2005; Minniti & Bygrave, 2001; Ravasi & Turati, 2005). However, such individual learning, when viewed in the context of the purposive nature of opportunity development, whereby potential entrepreneurs seek to engage and organize other social actors, may transcend the individual agent and become organizational (social) in nature (Dutta & Crossan, 2005; Ravasi & Turati, 2005).

In the absence of proximal or tangible commercial outcomes, how may we represent the emergence and early development of opportunities, particularly their transition from involving a single individual to engaging a broader social audience? The 4I organizational learning framework highlights three psychosocial processes—taking place at the individual and group levels—that may capture this early gestation and transition of opportunities<sup>2</sup> (Crossan, Lane, & White, 1999; Dutta & Crossan, 2005). Individuals engage in *intuiting* that generates ideas with perceived potential; they then trigger a process of *interpreting* as they try to clarify those ideas by themselves and by engaging third parties in further refining and gaining support for the ideas. Through these social interactions, a shared understanding of the opportunity idea begins to emerge, and thus the overall learning process enters the *integrating* phase. This is the stage at which a more formal nascent entrepreneurial team may be formed as the idea shows continuing merit and induces an even more intensive pursuit.

Intuiting and interpreting occur at an individual level, whereas interpreting and integrating occur at a group level, i.e., involving (potential) entrepreneurs and people from their immediate social or business circle. In this regard, we can conceive of contextual influences as the factors that affect the former and of social influences as the factors that affect the latter.

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2. While there are various models of organizational learning in the current literature, there are several considerations that make the 4I framework particularly useful for the context of opportunity development and thus to this article. First, it is possible, without endangering the validity of the model, to recast its organizational boundaries from those of an existing organization to the more general realm of a developing opportunity. Indeed, the 4I framework has originally been conceived to represent the process of strategic renewal, which pertains to reorganization in pursuit of new opportunities. In the current case, the reorganization can be conceived as moving from no organization at all to an emerging organization. Second, the model lies well on a foundation of epistemological relativism as the processes of intuiting, interpreting, and integrating allow for a diversity of interpretations and meanings. In this sense, the model allows for the “worldview” of individuals to feed the learning process. Third, while individual ideas and actions play important roles, the model covers higher, collective levels of meaning generation and action.

## Contextual Influences on Idea Generation

Intuiting is “the preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experience” (Weick, 1995, p. 25). This is an individual process that triggers the learning associated with opportunity development. The essence of this process is one’s becoming aware of a business idea that one perceives as holding some perceived potential in meeting current or emerging customer needs (Dutta & Crossan, 2005). Individuals emerge from this process with an “inexplicable,” preverbal sense of what is possible (Crossan et al., 1999). Their initial interpretation of this sense makes it communicable by giving it verbal shape and meaning. The intention to communicate this to others then depends on whether the self-derived meaning reinforces or discredits the initial intuitive sense of possibility.

When individuals engage in intuiting and early interpretation, they are likely situated in a particular context: executing a particular task, performing a regular job, walking leisurely in the park, etc. The contextual influences that affect both the intuiting and early interpretation of an idea pertain to the characteristics of the immediate task environment as well as to the information and attention it affords the individual. Some contexts exert particular pressures—emotional, time, fatigue—thereby inducing different ways of thinking (Baron, 1998). In addition, particular characteristics of the immediate task environment of individuals—autonomy, positive or negative affect, nature of task, nature and availability of feedback, etc.—affect their propensity to generate ideas (Amabile, 1988; Oldham & Cummings, 1996). These same characteristics then affect the interpretative response (positive or negative) to these ideas. An individual’s reaction to a particular idea will likely be different in different situations.

Perhaps more importantly, the information to which individuals are exposed has a considerable effect on the ideas that they generates. Indeed, as Drucker (1985) suggests, innovative ideas come from a variety of sources and are thus potentially available to many people. But not all individuals will react to the same information in the same way, just as the same individual would not react to different pieces of information in the same way. On one hand, as the opportunistic assimilation hypothesis suggests (Seifert, Davidson et al., 1995), new information may interact with problems that have been encoded in a person’s long-term memory and thus may induce an insight—*prima facie* serendipitously—that helps solve these problems. On the other hand, individuals have different absorptive or learning capacities to assimilate and extend the available information (Corbett, 2006; Dimov, 2004) thereby generating different meanings from it (Crossan et al., 1999; Daft & Huber, 1987). These individual learning and interpretation differences stem from the individual’s prior experience (Kolb, 1984; Walsh, 1995). More generally, one’s ideas and action in a given situation depend not only on what one knows, but also on how one applies and extends his or her knowledge in that situation (Bontis, Crossan, & Hulland, 2002; Weisberg, 1999). The context is thus unique in the way it engages a particular individual in the generation and early shaping of ideas.

**Proposition 2:** The individual’s immediate context—task environment and the information and attention it affords—affects the processes of intuiting and interpreting through shaping the individual’s thinking and engaging (enhancing or impeding) with the individual’s specific knowledge and learning abilities.

## Social Influences on Idea Shaping

*Interpreting* is “the explaining, through words and/or actions, of an insight or idea to one’s self and to others” (Crossan et al., 1999, p. 525). In this process, potential

entrepreneurs engage in explaining and defending the “fuzzy” images of their insights. They thus interact not only with their immediate social network—family, friends, classmates, colleagues, teachers, etc.—but also with some potentially more instrumental stakeholders to the development of the idea: partners, informal and formal investors, consultants, accountants, customers, suppliers, employees, etc. (Greve & Salaff, 2003). Depending on the selected conversants, the idea may take different shapes and proportions or may be abandoned quickly. The social context not only provides established meanings, but also allows for new meanings to be generated (Aldrich & Fiol, 1994).

The social influences on the opportunity development process pertain to the interpretation and integration inputs that the potential entrepreneurs receive from the social audience with which they engage in discussing, selling, or defending their ideas. There are several such inputs that this social interaction provides. First, given that market information is dispersed, others can provide valuable pieces of information—to the benefit or detriment of the initial idea—that one does not currently possess. Indeed, as the economic sociology literature suggests, one’s social network may provide many information benefits, such as access to diverse or novel information (Burt, 1992), referrals (Shane & Cable, 2002), and timeliness (Gargiulo & Benassi, 2000), which may in turn be instrumental for the development of opportunities (Singh, 2001). In addition, given the larger knowledge base to which one has access, there is a wider set of interpretations that the idea could access. These interpretations emerge as conversants serve as sounding boards for the initial idea, bringing in suggestions or different evaluation angles. Even more importantly, these social contacts may give the potential entrepreneur access to various resources—financial, technical, marketing, legitimacy—that could potentially increase or shrink the scope of the initial idea (e.g., Dubini & Aldrich, 1991; Shane & Cable, 2002; Stuart, Hoang, & Hybels, 1999). Finally, one’s social circle, through its imposition of social roles, identities, and cultural norms—or, more generally, through affecting one’s cognition—may be instrumental in motivating (respectively dejecting) the individual to further pursue/shape the idea (De Carolis & Saporito, 2006; Krueger, 2000).

**Proposition 3:** The social context—the social audience with which individuals engage to discuss their ideas—affects the processes of interpreting and integrating through providing information, interpretation, resources, and reinforcement that help shape/develop the individuals’ ideas.

## Discussion and Conclusion

One of the persisting and most intuitive notions in entrepreneurship is that the recognition of opportunities is, inherently, a creative process. This article helps develop the creativity perspective within entrepreneurship in two ways. First, it elaborates on the nature of opportunities as a creative product. Rather than viewing them as single insights, it suggests that they are emerging through the continuous shaping and development of (raw) ideas that are acted upon. Second, rather than attributing them to a particular individual, it highlights the contextual and social influences that affect the generation and shaping of ideas. This helps move entrepreneurship research beyond the single-person, single-insight attribution that currently permeates it.

This perspective helps bring reconciliation and theoretical precision in the study of opportunity recognition in several ways. First, there is at present no agreed upon understanding, neither theoretical nor empirical, of what opportunity recognition entails. Conceptually, there has been a diversity of verbs used to describe how opportunities come

into existence: discovery, identification, enactment, recognition, acknowledgement, emergence, etc. Each verb carries its implicit assumptions on the nature of opportunities and the process involved. Empirically, there has also been a variety of ways in which opportunities have been observed in practice: Some studies view them as ideas that are tried out in practice, resulting in both successes and failures (Shane, 2000); others view them as the number of ideas written down (Corbett, 2006; Shepherd & DeTienne, 2005), yet others view them as the number of ideas considered during some past period of time (Ko & Butler, 2006). As the current framework suggests, all these verbs and empirical aspects—from the occurrence of an idea through its elaboration or consideration, to its actual implementation—are essential, cascaded parts of an *opportunity development* process.

Second, the philosophical debate on the ontological nature of opportunities has been a major hurdle for theoretical progress. This study suggests that the discourse could be innocuously shifted instead to the epistemological nature of opportunities. While silent to their ontological aspect—who would deny that a physical reality exists out there?—it highlights their epistemological aspect, i.e., the interpretation and meaning that people have of this underlying reality. This is essentially a position of epistemological relativism (Mir & Watson, 2000), an assumption that forms the most general level of this article's theoretical propositions (Stinchcombe, 1968). It guides the examination of opportunities to the micro level, through the eyes of particular individuals. Essential to understanding opportunities within this perspective is how individuals perceive their environment and conceive of future possibilities within it. The focus here is on the heterogeneity of perceptions of reality and on the beliefs (expectations) about the future that emerge from these perceptions.

Third, the current framework highlights the importance of accounting for the context in which opportunities emerge. Comparing those who pursue opportunities to those who do not requires systematic analysis not only of their individual skills and characteristics but also of the situations and information they are exposed to as well as of the people with whom they interact and discuss their ideas. These are factors that are not currently included in studies of opportunity recognition and are thus a source of unobserved heterogeneity.

Finally, there are new ways of thinking about the distinction and intertwined nature of ideas and opportunities—where does one stop and the other begin? If opportunities only pertain to commercially viable projects, then we need to wait and see if a potential project is indeed such before calling it an “opportunity.” But in the absence of commercial proof or when an idea fails, is it because the idea was inherently bad or because its implementer did not have the right skills or use the right strategy? Making the success of an idea one of our research targets essentially subsumes the field of strategy whose main goal is understanding differences in performance. Focusing instead on action as a behavioral marker of opportunities (McMullen & Shepherd, 2006) could help establish clearer boundaries between the fields of entrepreneurship and creativity on one side and entrepreneurship and strategy on the other. More specifically, whereas creativity explores the generation of ideas, entrepreneurship focuses on the acting upon and continuous shaping of these ideas through which one enters in a competition with other producers; once the process is situated in a competitive context, strategy studies the generation and implementation of competitive moves to produce superior performance and long-term survival.

The proposed perspective opens several avenues for future research. First, it expands the range of dependent variables within entrepreneurship. Rather than focusing on some final outcome—the emergence or eventual success of the business, thereby incurring survival bias in its full strength—it suggests that the progress of an idea, whether in its verbal form or through the entrepreneurial intentions it inspires and sustains, could be a less bias-prone research target. Such progress can be measured by the taking of specific

steps—researching, discussing, etc.—or the formation of specific intentions to do so. This would help elaborate on the transition from potential through nascent to accomplished entrepreneur. In addition, it would also expand the scope of the study of the opportunity process from its initial trigger to its eventual shaping and development. For the ideas that occur, how are they elaborated, refined, verified? With whom and at what stage?

Second, the study of the early progress and shaping of ideas opens significant room for employing experimental methodologies. Through their high internal validity, experiments provide a tremendous boost for theory development, as evidenced by the progress in the fields of cognitive psychology and creativity. The origin and early action on people's business ideas is not only conducive to experimental study (Gaglio & Katz, 2001), but also helps alleviate some of the concerns with external validity that currently cripple the utilization of this methodology in entrepreneurship research. Whereas it may be hard to model the decision context of accomplished entrepreneurs in experimental settings, the choices faced by potential or nascent entrepreneurs are much more conducive to manipulation. Experiments that focus on the individual part of the idea generation and development process could vary the amount and nature of information that individuals receive as well as the follow-up opinions and information used to verify their initial ideas. Such work could focus not only on the generation of ideas themselves, but also on whether these ideas actually propel people to take some action in their pursuit or verification. Experiments could also focus on the group part of the idea development process, manipulating the social role of one's conversants as well as the actual opinions or suggestions they give. Naturally, the theoretical insights emerging from this experimental work could be followed up by field observations or surveys that would enhance their external validity.

Finally, the research questions driving and emerging from the experimental work outlined earlier could help expand the scope for study of the creative person by refining existing research questions and asking new ones. Personality differences and intrinsic motivation are likely to affect one's persistence to pursue an idea, one's likelihood to abandon one's beliefs in the idea, and one's desire and ability to discuss and defend the idea in a broader social context. On the other hand, one's knowledge and cognitive skills would likely explain one's desire to pursue some ideas but not others or one's desire and effectiveness in elaborating or pursuing ideas in a particular way. The set of potential research questions here is indeed vast. To what extent can the progress of an idea be explained by individual characteristics? Do these characteristics affect whether and with whom one would discuss their ideas? What are the distinct roles that various members of one's social network play in the shaping of ideas? Are their skills and characteristics distinct? These are just a few.

The ideas in this article also have implications for the domains of management education and practice. With an increased number of business school courses focusing on entrepreneurship, a more elaborate focus on the process and context of opportunity development would encourage more students to put forth ideas (they do not have to be ingenious right away!) and would create a more formal infrastructure for the assessment and shaping of these ideas. Similarly, with firms seeking to promote corporate entrepreneurship, the focus should be less on the outright selection and funneling of ideas, and more on providing an institutional context for generating, nurturing, assessing, and shaping multiple ideas.

In conclusion, the study of entrepreneurship pushes us toward understanding one of the most exciting aspects of human endeavors—the birth and creation of the “future.” A creativity perspective—with its interaction of product, person, process, and context—when adapted to the entrepreneurial context of action under uncertainty, can be an invaluable conceptual tool for doing so.

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