

REFLECTIONS ON THE 2010 AMR DECADE AWARD: DELIVERING ON THE PROMISE OF ENTREPRENEURSHIP AS A FIELD OF RESEARCH

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I examine the impact of the 2010 AMR Decade Award article on the entrepreneurship field over the past ten years, identifying aspects of “The Promise of Entrepreneurship As a Field of Research” that have been largely accepted by the field, those that the field has challenged, and those that the field has found to be unclear. I also correct errors made in the earlier work and discuss how the field of entrepreneurship has evolved in response to the publication of the original article.

In 2000 Sankran Venkataraman (Venkat) and I published an article entitled “The Promise of Entrepreneurship As a Field of Research.” At the time, we had no idea what impact it would have on the field, and we were prepared for a response of deafening silence. Contrary to our worst fears, however, the article was noticed. Over the ensuing decade the article has been heavily cited, praised, criticized, and debated. Our recent receipt of the 2010 AMR Decade Award for the article confirmed that it has significantly impacted the field of entrepreneurship.

Getting the award, however, didn’t answer a question I have thought about often over the past ten years: What has the article been cited for? For our definition of entrepreneurship? Or for our argument in favor of a distinctive domain for the field or our position that the heart of entrepreneurship is a nexus between individuals and opportunities? Or has it been for something else entirely?

Moreover, the award didn’t tell us anything about how the field responded to the article. What parts of the argument have scholars strongly agreed with? What aspects have they vehemently disagreed with? What dimensions have they thought were confusing and difficult to understand?

Because the award did not answer these questions, I jumped at the chance, provided by Amy Hillman, to write a paper discussing how the article has influenced the field of entrepreneurship over the past decade. I wanted to know which aspects of the article had the greatest

impact and which did not. In addition, I wanted to correct errors that I now believe Venkat and I made in the 2000 article, highlight some of the issues raised by the debate over the article that has ensued in the literature, and point out places where the article has triggered the most and least progress in advancing our understanding of entrepreneurship.

To write this review, I looked at the 2,586 articles Google Scholar lists as citing “Promise” to see how it was cited. Leaving aside the many “gratuitous” citations—articles that cited “Promise” to make the point that “entrepreneurship is important” or to justify a claim that was tangentially related to “Promise,” or articles that simply listed the 2000 article in the reference section but never actually cited it in the text—I identified the aspects of “Promise” that each author cited. My view is that the citing articles focused primarily on four dimensions of our article: (1) the discussion of entrepreneurship as a distinctive scholarly domain with its own research questions and theories; (2) the definition of entrepreneurship as a process rather than an event or embodiment of a type of person; (3) the discussion of the nexus of opportunities and individuals; and (4) the discussion of means-ends relationships, innovation, and new combinations.

After categorizing what aspect of “Promise” the citing authors were discussing, I (subjectively) evaluated whether the authors agreed with the article, disagreed with it, or thought our arguments were unclear. Below I offer my personal interpretation of the field’s reaction to the article. In doing so I highlight where consensus

has emerged, where controversy has developed, and where confusion reigns.

A DISTINCTIVE DOMAIN?

One of the main premises of "Promise" was that the entrepreneurship field lacked an intellectual paradigm and was best described as a "hodgepodge" of papers examining settings that previous scholars had (arbitrarily) decided involved "entrepreneurship." Venkat and I argued that this approach was problematic because it meant that the scholarly field of entrepreneurship had no distinctive area of intellectual inquiry. We posited that entrepreneurship would not become a useful or legitimate scholarly field until it offered a theoretical framework to explain and predict phenomena neither explained nor predicted by other fields (Shane & Venkataraman, 2000).

However, some authors (e.g., Davidsson, 2005) questioned whether the identification of a distinctive domain for entrepreneurship research is even possible, given the overlap of the field with other disciplines. Nowhere is this more of an issue than in the boundary between strategic management and entrepreneurship.

To make our case for a distinctive domain for the field of entrepreneurship, Venkat and I identified five dimensions on which we believed entrepreneurship explains and predicts a set of empirical phenomena not explained or predicted by strategic management. That argument, subsequently further developed by other scholars, is as follows. First, entrepreneurship examines many outcomes other than business performance, which is the focus of strategic management (e.g., entrepreneurship is concerned with how identification and exploitation of opportunities affect societal wealth and individual happiness). Second, strategic management examines how *firms* achieve objectives, whereas entrepreneurship does not require the existence of firms, can occur before firms are established, exists in settings in which firms do not exist, and can take place at lower levels than the firm level of analysis. Third, strategic management focuses on performance relative to other entities (relative firm performance), whereas entrepreneurship focuses on an individual's (or set of individuals') choices relative to his or her (their) other alternatives. Fourth, strategic management focuses on efforts to de-

velop and sustain competitive advantage, whereas entrepreneurship focuses on efforts to identify and exploit opportunities. Fifth, strategic management is, by definition, focused on strategic actions, whereas entrepreneurship is concerned with many nonstrategic activities, such as firm organizing, resource assembly, and the establishment of legal entities.

Several scholars (e.g., Alvarez & Busenitz, 2001; Hitt, Ireland, Camp, & Sexton, 2001; Mitchell et al., 2002; Zahra & Dess, 2001) challenged this argument, asserting that strategic management explains most if not all of the phenomena that we claimed to be the distinctive domain of entrepreneurship. Their challenge was strengthened by the publication of an article by Venkat and Saras Sarasvathy in 2001, which stated that "entrepreneurship and strategic management . . . represent two sides of the same coin: the coin of value creation and capture" (Sarasvathy & Venkataraman, 2001: 3). That statement raised the question of whether Venkat himself was conceding that entrepreneurship is not distinct from strategic management.

My aim here is not to "prove" that Venkat and I were right in 2000 and that the strategists were wrong. I do not have the space to discuss the complete arguments on both sides of the debate, nor am I the sole arbiter of this question. Scholars in the field of entrepreneurship and elsewhere must decide for themselves whether they are persuaded by the arguments about the distinction between strategic management and entrepreneurship made in "Promise" and refined by other scholars. My goal here is only to stress the importance of the outcome of this debate to the field of entrepreneurship.

Under the logic presented in "Promise"—that entrepreneurship must explain and predict empirical phenomena that strategic management does not—entrepreneurship *cannot* have a distinctive domain if strategic management explains and predicts all that entrepreneurship says it explains and predicts. And if entrepreneurship has no distinctive domain, then I would argue that it is not a scholarly field. Rather, it is simply a setting in which other fields examine their research questions.

Some scholars (including a reviewer of this article, whose very valuable comments helped me think through this issue) have suggested that the field can sidestep the distinctive domain dilemma by shifting the terms of the dis-

cussion. These scholars argue that we can still have a distinct field of entrepreneurship even if there are no phenomena that entrepreneurship uniquely explains or predicts, because entrepreneurship might have distinctive theories and assumptions.

I am skeptical of this argument, for two reasons. First, no one has yet identified the unique assumptions and theories of entrepreneurship. Therefore, "the proof is in the pudding," as the saying goes. I would need to see the articulation of the unique assumptions and theories of entrepreneurship before I am willing to accept that such uniqueness exists. Second, I cannot see what those unique assumptions and theories would be if the phenomena explained and predicted by entrepreneurship were explained and predicted by other fields. Perhaps I lack creativity here, but I cannot envision the non-phenomenon-specific assumptions and theories about entrepreneurship that have not been discussed somewhere else in the social sciences. Of course, if someone more creative than I can identify what these unique theories and assumptions are, I would happily incorporate those as additional dimensions in which the field of entrepreneurship is unique.

Therefore, ten years after the publication of "Promise," I challenge those of us in the field of entrepreneurship (myself included) to convince the broader academic community of the set of empirical phenomena explained by entrepreneurship and not explained or predicted by other fields, including strategic management, and/or to clearly identify the assumptions and theories unique to entrepreneurship. In my opinion, the failure to achieve either of these goals would mean that no distinctive domain of entrepreneurship exists. And adhering to the position that entrepreneurship has a distinctive domain without clearly showing what is unique about it is untenable.

A more minor question concerns whether our discussion of the distinctive domain of entrepreneurship has led to a consensus. Bernier and Hafsi (2007) have said that the answer is yes—our delineation of the domain has become the consensus. Moreover, other authors have said that our effort has led to better connected and specified explanations for entrepreneurship and has facilitated the development of the field's legitimacy (Busenitz et al., 2003; Davidsson, Delmar, & Wiklund, 2002; Gartner, 2001). While I am

glad that many researchers have found our discussion of the distinctive domain of entrepreneurship useful, I am not convinced our efforts have led to a consensus about the domain of the field, its boundaries, purpose, areas of focus, or theoretical base.

As evidence of the lack of consensus, I point to the Academy of Management Entrepreneurship Division's domain statement. The division defines the domain of the field as

the creation and management of new businesses, small businesses and family businesses, and the characteristics and special problems of entrepreneurs. Major topics include new venture ideas and strategies; ecological influences on venture creation and demise; the acquisition and management of venture capital and venture teams; self-employment; the owner-manager; management succession corporate venturing and the relationship between entrepreneurship and economic development (http://cobweb2.louisville.edu/joomla_ent/index.php?option=com_content&view=article&id=46&Itemid=34).

If the delineation of the domain of the field that Venkat and I offered in "Promise" has really become the "consensus" view, then why does the Academy of Management Entrepreneurship Division describe the domain of the field in such a fundamentally different way? In short, I believe that the field still has much work to do to identify the distinctive domain of entrepreneurship research, and I invite all those working in the area to contribute to that discussion.

DEFINING ENTREPRENEURSHIP

In our 2000 article Venkat and I argued that the lack of a definition of entrepreneurship was holding back the development of the field, and we defined entrepreneurship as the identification, evaluation, and exploitation of opportunities. My review of the entrepreneurship literature over the past decade indicates that many authors have adopted the definition we put forth in "Promise." In fact, Aldrich and Cliff (2003) said our definition had become the consensus definition.

However, not everyone has agreed. The most widely supported alternative definition is that entrepreneurship is the study of firm (or organization) formation (e.g., Klyver, Hindle, & Meyer, 2008; Reynolds, 2009; Spencer, Kirchoff, & White, 2008). Proponents of this alternative definition have offered three arguments for its superiority

over the definition Venkat and I put forward in "Promise": (1) new firm creation is more consistent with popular perceptions of entrepreneurship than our definition; (2) new firm formation is more easily measured than the identification, evaluation, and exploitation of opportunities; and (3) our definition is so broad as to incorporate the activities of all market participants (Reynolds & Curtin, 2007).

These critics make valid points. But as Venkat and I argued in "Promise," they aren't sufficient to reject the definition we put forward. As we said then and in subsequent work, consistency with popular perceptions should not be the basis on which a field of scholarly inquiry is defined. Economists do not limit their field to what readers of the *Wall Street Journal* call economics, nor do psychologists define psychology by what the average person thinks the concept means.

Rather than look to what the public thinks, I believe the appropriate way to define entrepreneurship is to incorporate everything that shares the dimensions researchers consider unique to the field and to exclude everything that does not share these common dimensions. To me, firm formation does not meet this standard, because the creation of a new firm is merely one institutional arrangement for the identification, evaluation, and exploitation of opportunities. The same acts of identification, evaluation, and exploitation of opportunities that occur through firm formation also can be undertaken by people in existing firms or through market mechanisms (Shane & Venkataraman, 2000).

I would like to highlight that I do not think there is anything wrong with the study of firm formation, or even with the fact that most of the field focuses its attention on this form of entrepreneurship. Firm formation is an extremely important activity in its own right, and we should commend people like Bill Gartner and Howard Aldrich for providing the basis for theorizing about it and Paul Reynolds for making its empirical study possible.

I would only caution that limiting entrepreneurship to the study of firm formation will be very problematic if the same activity also takes place in markets or firms. This is very likely to be the case, because many opportunities that are exploited through new firm formation are identified by people working in existing firms.

The vast majority of people who found new firms are employed at the time they identify the opportunities that they exploit through firm formation, and the vast majority of the business ideas that these entrepreneurs formulate in response to those opportunities could be pursued by their previous employers. That is, firm formation simply represents a choice about how many people would like to exploit opportunities they have identified while working for others. If we limit the discussion of entrepreneurship to firm formation, then we would be limiting the field to the study of a particular organizational arrangement for an activity that also takes place inside existing firms and through markets.

I believe that the field has taken a problematic approach to dealing with this unresolved definitional debate. Instead of hashing it out, the field has largely adopted what Venkat and I put forward in "Promise" as its conceptual definition and new firm formation as its operational definition, citing the difficulty of obtaining data on other organizational arrangements under which entrepreneurship takes place.

However, new firm formation is a poor proxy for entrepreneurship as defined in "Promise." If entrepreneurship can occur through other organizational arrangements than firm formation and if the chosen modes are not randomly distributed, then empirical examination of new firm formation is unlikely to provide an unbiased test of the factors associated with entrepreneurship. Therefore, if the field is to advance, we need to do a better job of deciding on our definition of entrepreneurship and aligning conceptual and operational definitions in empirical work.

The tendency of the field to sidestep the mismatch between conceptual and operational definitions of entrepreneurship in empirical work has meant that little work has been done to identify the factors that affect the different organizational arrangements under which opportunities are identified, evaluated, and exploited (Alvarez & Parker, 2009; Davidsson, 2004). Although a few scholars have argued that the choice of mode (between markets and hierarchies or between existing and new firms) is affected by the individuals engaging in the activity, the entity in which the activity takes place, or the opportunity that is identified (Ucbasaran, Westhead, & Wright, 2001; Wiklund & Shepherd,

2003), a full-fledged explanation for the choice of organizational arrangements has not been developed, let alone tested.

PROCESS PERSPECTIVE

In "Promise" Venkat and I sought to shift the field's focus away from an equilibrium perspective that overweights the characteristics of individuals in explaining entrepreneurship. In contrast to the prevailing sentiment at that time, we argued that entrepreneurship should be seen as a process and not as the embodiment of a type of person. Over the past decade the field has largely adopted this process perspective.

In the context of firm formation, much important work has been done over the past ten years to examine the entrepreneurial process. This has been driven in part by the Panel Study of Entrepreneurial Dynamics (PSED), which provided the first large representative sample of people engaged in the process of starting firms. We now have a much better understanding of the process through which people exploit opportunities by creating new organizations than we had a decade ago.

However, much less progress has been made in several other areas. We have little more understanding of the process by which people exploit opportunities within existing organizations than we had a decade ago. We also have advanced very little in our knowledge of how entrepreneurs identify opportunities, formulate business ideas, and evaluate them. While research has begun to examine the effect of the value of entrepreneurial opportunities on their exploitation, we still have a limited understanding of how the business ideas formulated by entrepreneurs affect their decisions to exploit opportunities, as well as what influence the difficulty and risk inherent in the pursuit of opportunities have on the exploitation decision. Our understanding of how context influences the identification and exploitation of opportunities continues to be sparse, with very little learned about the impact of institutions and firm characteristics on these processes. Last, we have not explained much about the process of identifying and exploiting high-potential opportunities, given their rarity and the emphasis of researchers on collecting representative data over the past decade. Clearly, more research needs to be conducted on the entrepreneurial process.

Some scholars (e.g., Baker, Gedajlovic, & Lubatkin, 2005; Baker & Nelson, 2005; Hmieleski & Corbett, 2006) interpreted our assertion that entrepreneurship is a process involving the identification, evaluation, and exploitation of opportunities to mean that entrepreneurship follows a planned sequence in which identification always precedes evaluation, which always precedes exploitation. Perhaps our arguments in "Promise" were unclear, because this view reads too much into what we said. We did not intend to say that the entrepreneurial process is rational, planned, strategic, or even temporally ordered but merely that the entrepreneurial process has subprocesses.

I would like to make clear now that the argument in "Promise" is consistent with the view that the entrepreneurial process does not always take place in an ordered or strategic way. There may be no optimal entrepreneurial process, allowing for many equally effective approaches, which is an important issue for the field to explore. It is also possible that one approach may be optimal but that many entrepreneurs do not approach the process "the best way." This point has important ramifications for the field's desire to be normative. The "right" process might not be something we can easily deduce from observing how most entrepreneurs go about it. Moreover, if the median entrepreneur does not know what he or she is doing, leading to the poor performance we observe, should we then assume that the same factors account for the tendency to engage in entrepreneurship and performance at it? If not, then why do scholars in the field of entrepreneurship generally argue that the same characteristics of individuals and opportunities influence both the decision to exploit opportunities and performance at opportunity exploitation?

On the other hand, if there is no optimal approach to the entrepreneurial process, we should stop saying there is. Our textbooks should not present, as they often do, the argument that the strategic and temporally ordered approach is the best way to go about the activity in the absence of evidence to support this assertion.

THE NEXUS OF OPPORTUNITIES AND INDIVIDUALS

In our 2000 article Venkat and I argued that the scholarly community should replace its per-

son-centric approach to entrepreneurship with the view that entrepreneurship involves the nexus of opportunities and individuals. The field, we argued, should think not just about the people who identify, evaluate, and exploit opportunities but also about the opportunities those people identify, evaluate, and exploit. We defined entrepreneurial opportunities as “those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production” (2000: 220). While many scholars have agreed with our effort to introduce opportunities into the discussion of entrepreneurship, our description of entrepreneurial opportunities has led to much debate in the entrepreneurship literature.

First, it has raised the question of whether opportunities are always profitable. This is an important point, because if people who identify opportunities are entrepreneurs and everyone who identifies an opportunity is successful, then entrepreneurial failure would not exist. Singh (2001: 10) claimed that our definition “requires that entrepreneurial opportunities generate profit,” challenging its validity. While Singh is right to point out that entrepreneurial opportunities cannot always be profitable, I believe that he misunderstood the meaning of the word “can” in our definition. We used that word to indicate possibility. Moreover, Venkat and I also argued that an entrepreneur’s conjecture about what will happen if resources are recombined and the output sold can turn out to be correct or incorrect. If it is correct, then the entrepreneur earns a profit. If it is incorrect, then the entrepreneur incurs a loss. Thus, our definition of entrepreneurial opportunities does not *require* them to be profitable; rather, our definition suggests only that the probability new goods, services, raw materials, and organizing methods could be introduced and sold at greater than their cost of production exceeds zero.

Another criticism has centered on our assertion that entrepreneurial opportunities are objective phenomena. Although some researchers have agreed with our argument (e.g., McMullen, Plummer, & Acs, 2007), others have challenged it, saying that entrepreneurial opportunities are subjective and need to be enacted or created to exist (e.g., Alvarez & Barney, 2007; Baker et al., 2005; Klein, 2008). I believe the lack of clarity

about what I meant¹ by “entrepreneurial opportunities” in “Promise” and in subsequent writings has led to an unnecessary debate in the field. Many authors, such as Davidsson (2003), have interpreted the term *entrepreneurial opportunities* to be synonymous with the term *business (venture) ideas*. For instance, Samuelsson and Davidsson wrote that “the opportunity or venture idea these individuals are pursuing—has been relatively neglected” (2009: 4).

However, I believe that “entrepreneurial opportunities” and “business ideas” are different concepts. Entrepreneurial opportunities are situations in which it is possible to recombine resources in a way that generates a profit. Business ideas are entrepreneurs’ *interpretation* of how to recombine resources in a way that allows pursuit of that opportunity.

Entrepreneurs’ business ideas are not objective. They are plans created and enacted in response to the entrepreneurs’ beliefs about opportunities. In fact, if I substitute the phrase “business idea” for the word “opportunity,” I can quote Alvarez and Barney to describe business ideas: *business ideas* “are social constructions that do not exist independent of entrepreneur’s perceptions” (2007: 15). Similarly, I can quote Klein and say that *business ideas* “do not exist objectively, *ex ante*, but are created, *ex nihilo*, as entrepreneurs act based on their subjective beliefs” (2008: 182).

I now believe that had Venkat and I thought to say this in 2000, much needless disagreement could have been avoided. Few scholars reject the idea that objective factors influence opportunities. For instance, I do not know of any entrepreneurship scholar who would argue that scientific advance, political and regulatory changes, and demographic and social shifts *do not* make it possible to introduce new and potential profitable resource combinations. Rather, our critics want to make clear that the entrepreneurial process is not a simple Kirznarian (1997) discovery process in which entrepreneurs merely notice the potential for profit and do little else. They want to incorporate the Schumpeterian (1934) notion that entrepreneurs also exploit those potentially profitable opportunities by creatively recombining resources.

¹ I cannot speak for Venkat on this point.

Adding the concept of business ideas to the discussion allows us to incorporate the notion that entrepreneurs' decisions about how to recombine resources are subjective and creative, without rejecting the role of objective forces in influencing the existence, identification, and exploitation of opportunities. Consider the example of Leonardo DaVinci's concept of air travel to see what I mean. Historical records show that Leonardo DaVinci thought of the idea of air travel. If opportunities are completely subjective and are created by entrepreneurs regardless of the objective conditions surrounding them, then DaVinci should have been able to found an airline. However, he was unable to do so. The situation in which this service *could* be introduced and sold at greater than its cost of production—an objective phenomenon independent of what DaVinci thought—did not exist in Renaissance Italy, given the level of scientific advance at that time. No matter how creative DaVinci was, "LEO Air" could not be "enacted"—that is, brought into existence by talking about it (Weick, 1969).

In contrast, the opportunity to replace the Silk Road as the route for bringing spices from Asia to Europe did exist in Renaissance Italy. At that time and place, it was objectively possible to bring spices from Asia to Europe in a different way from going overland across the Silk Road. But individual entrepreneurs' plans to take specific sea routes to Europe from Asia were *subjective* business ideas about how to recombine resources to exploit this potential for profit.

The idea that opportunities—situations in which people have the potential to make a profit—are objective is not a semantic point. It is a necessary concept to preserve the ideas that entrepreneurship can be unsuccessful and that entrepreneurship depends on the nexus of people and opportunities. If, as Klein explains, "opportunities for entrepreneurial gain are . . . inherently subjective—they do not exist until profits are realized" (2008: 180)—then unsuccessful entrepreneurship is a logical impossibility. No entrepreneur can fail to generate an entrepreneurial profit. And if entrepreneurs always generate a profit, then we cannot have failed entrepreneurs. If, however, objective opportunities make it possible for entrepreneurs to formulate subjective new business ideas, which are uncertain, then unsuccessful entrepreneurship can exist. In response to a given objective op-

portunity, the business ideas that some entrepreneurs come up with turn out to be profitable, making those who pursue them "successful," whereas the ideas thought up by others turn out to be unprofitable, making those who go after them "unsuccessful."

Viewing entrepreneurial opportunities as subjective also clashes with the idea that entrepreneurship involves the nexus of individuals and opportunities. If opportunities are formed in the minds of entrepreneurs, as the subjectivists argue, then the opportunity side of the individual-opportunity nexus is a function of the individual. And if both opportunities and individuals are a function of individuals, then no nexus exists. Instead, all aspects of entrepreneurship are a function of the individual, and the person-centric perspective on entrepreneurship must be correct. Klein recognizes this point, saying, "An alternative way to frame a subjectivist approach to entrepreneurship . . . is to drop the concept of *opportunity* altogether" (2008: 183). Therefore, I maintain that objective opportunities must be a central part of the explanation of the opportunity-based perspective on entrepreneurship that researchers have been developing over the past decade.

The introduction of the concept of opportunities has changed the focus of the field of entrepreneurship over the past ten years. Research has focused less on the characteristics of entrepreneurs and more on the characteristics of opportunities (Mitchell et al., 2004; Soh, 2003). However, as McMullen et al. (2007) and Davidsson (2004) highlight, this advance has been limited in many ways. To date, little work has explored the sources of entrepreneurial opportunities, and, as a result, we know little about why there are more opportunities in some places or at some points in time than at others.

There is little work describing entrepreneurial opportunities. For instance, few studies have considered the difference between opportunities in product markets and factor markets (Sarkar, Echambadi, & Harrison, 2001). Few authors have pursued the categorization of strong and weak forms of opportunities, representing the Schumpeterian and Kirznerian types, respectively. And little research has been conducted to assess the value or riskiness of opportunities. Of course, as Levie and Autio (2008) point out, this limited advance might result from the difficulty of op-

erationalizing the construct of opportunity as Venkat and I outlined it in 2000.

Further development of our understanding of opportunities is important, if only to advance our knowledge of the effects of individuals on entrepreneurship. As Venkat and I argued in "Promise," to accurately examine the influence of individuals on entrepreneurship, researchers need to measure the effects of opportunities. Otherwise, if the two are correlated, the effects of opportunities will be misattributed to individuals and the effects of individuals on entrepreneurship will be systematically overstated. While a few researchers now control for opportunities when examining the effects of individuals in their empirical research, not enough of this type of work is done to provide accurate estimates of the effects of individual characteristics on entrepreneurship. As a result, the field may have systematically overestimated the importance of individual characteristics to entrepreneurship.

Some observers (e.g., Baker et al., 2005; Davidsson, Low, & Wright, 2001; Zahra & Dess, 2001) have criticized "Promise" for underestimating the influence of the environment or context surrounding the entrepreneur on the identification and exploitation of opportunities. While our critics are right that the article did not do justice to the environmental context in which entrepreneurs operate, I think they are wrong to infer that our lack of emphasis on the context reflects a belief that our approach was context free. We limited our discussion of the influence of the environment on entrepreneurs because we wanted to draw attention to the fact that entrepreneurship requires agency. At the time we wrote the article, much attention was being focused on cultural, political, economic, and industry conditions influencing entrepreneurship, with less attention on the activity itself. But entrepreneurial activity does not spring spontaneously or mechanically from environmental conditions; rather, it occurs through the thoughts and actions of people. In the limited space we had, we sought only to redirect the field's attention to that point. Therefore, I would like to confirm here that discussion of environmental factors that influence entrepreneurship is complementary to the framework put forth in "Promise."

Similarly, Baker et al. (2005: 495) claimed that our argument in "Promise" was undersocialized

because it lacked "consideration of the social causes . . . of the information asymmetries and cognitive differences" that underlie the identification of opportunities. Perhaps. But our intent was not to deny the influence of social factors on information asymmetries and cognitive differences. Our failure to discuss the social causes of information asymmetries and cognitive differences merely represented our desire to focus on linking these two factors to opportunity identification, not their antecedents. I would be one of the first to argue that social relationships influence opportunity identification by affecting both access to information and the cognitive properties needed to value it.

MEANS-ENDS RELATIONSHIPS, INNOVATION, AND RECOMBINATION

I now believe that Venkat and I did a bad job of explaining the role of resource recombination in entrepreneurship in our 2000 article. Our poor explanation has led to confusion over the role of new means-ends relationships, what entrepreneurial resource recombination means, and the relationship between innovation and entrepreneurship.

Venkat and I argued that the exploitation of entrepreneurial opportunities demands the creation of new means-ends relationships (ways to combine resources) rather than optimization within existing means-ends frameworks. Foss and Klein (2008) have challenged this position, saying that there is no need to limit entrepreneurship to efforts to create new means-ends relationships. As they explain, under uncertainty, all profit opportunities involve nonmaximizing decisions. Therefore, distinguishing between efforts to create new means-ends frameworks and efforts to optimize within existing means-ends frameworks offers little benefit to understanding entrepreneurial decision making.

While Foss and Klein (2008) are right that people can pursue profit both by creating new means-ends relationships and by working within existing means-ends relationships, I believe that the former involves entrepreneurship and the latter does not. Entrepreneurship involves more than the Kirznerian process of discovering opportunities for profit. It also involves coming up with a business idea about how to recombine resources to exploit those opportuni-

ties, as well as the exploitation process itself. Efforts to pursue opportunities for profit within existing means-ends frameworks, such as arbitrage, do not involve entrepreneurship because entrepreneurship is limited to efforts to pursue profit opportunities *by* recombining resources.

Our underdeveloped and incomplete explanation of recombination led many to read into our argument the Schumpeterian idea that resource recombination involves fundamentally different products, processes, ways of organizing, sources of supply, and markets. This led some scholars to dub our perspective the "innovation perspective" (Koster, 2006), arguing that we were describing entrepreneurs who exploit "radically new and novel, rather than the incremental or improved" (Seymour, 2006: 139) innovation.

These scholars have rightly explained that limiting the discussion of new means-ends relationships to Schumpeterian resource recombination excludes much entrepreneurial activity. For instance, Smith, Matthews, and Schenkel write, "Under the new means-ends definition, Michael Dell would not have been exploiting an entrepreneurial opportunity, since the manufacture and sale of personal computers was a well-established economic activity at the time Dell started his venture" (2009: 41). However, I believe that Michael Dell was pursuing an entrepreneurial opportunity—the potential for profit in making and selling personal computers. While Dell's business idea may not have been Schumpeterian, he recombined resources. His recipe for putting together resources was different from his predecessors in the personal computer business.

While entrepreneurship can and does involve the creation of fundamentally new recipes for resource combination, as was the case with the initial biotechnology companies that exploited genetic engineering to pursue opportunities for profit, it can also involve more prosaic recombination. When we wrote "Promise," Venkat and I were not limiting entrepreneurship to *fundamentally* new means-ends relationships. In fact, our article referred to both Schumpeterian and Kirznerian types of opportunities. These opportunities, we claimed, differ in the amount of innovation they demand of entrepreneurs' efforts to recombine resources, with Schumpeterian opportunities generally demanding more innovation than Kirznerian ones. For instance, the idea of producing cars powered by hydrogen fuel

cells requires more innovation than the idea of opening a McDonald's franchise in a new location. However, all efforts to exploit entrepreneurial opportunities involve some innovation, because entrepreneurs' resource combinations cannot be complete and perfect replications of resource combinations used by others. Otherwise, the entrepreneurs would, by definition, *not* be recombining resources.

With the benefit of hindsight, I now wish Venkat and I had more carefully explained the role of recombination in our 2000 article. Because entrepreneurs do not simply arbitrage—buying resources at one time or place and selling them at another—but recombine resources, entrepreneurial decision making involves making judgments of the future value of resources if they are recombined. Moreover, recombination itself can represent a fundamentally new means-ends relationship or a slight modification of an existing one.

CONCLUSION

With the benefit of hindsight, Venkat and I were wise to be circumspect in our article when we said "that we may have offered some uncertain assumptions, potentially flawed logical arguments, or have made statements that will prove, ultimately, to be inconsistent with data yet to be collected" (2000: 224). Subsequent work has shown some of our arguments to be incorrect and others poorly articulated and confusing. Therefore, I am glad to have been given the opportunity to correct my errors and better articulate the confusing points. (However, I expect that future research will identify errors and confusing points articulated here as well.)

Despite being an admittedly flawed article, "Promise" appears to have advanced the field of entrepreneurship. While debate still remains in many areas, and some areas have seen more advancement than others, the field appears to have moved toward consensus around the core idea that entrepreneurship is a process that depends on both opportunities and individuals. Moreover, on the four dimensions of the article from which researchers appear to have drawn most heavily over the past ten years—(1) the idea of entrepreneurship as a distinctive scholarly domain; (2) the definition of entrepreneurship as a process rather than an event or embodiment of a type of person; (3) the nexus of

opportunities and individuals; and (4) means-ends relationships, innovation, and new combinations—the field has advanced significantly since we wrote the article. This indicates that the article has made a contribution to the field, if I might be permitted the immodesty of saying so myself.

REFERENCES

- Aldrich, H., & Cliff, H. 2003. The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18: 573–596.
- Alvarez, S., & Barney, J. 2007. Discovery and creation: Alternative theories of entrepreneurial action. *Organizações em Contexto*, 3(6): 123–152.
- Alvarez, S., & Busenitz, L. 2001. The entrepreneurship of resource-based theory. *Journal of Management*, 27: 755–775.
- Alvarez, S., & Parker, S. 2009. Emerging firms and the allocation of control rights: A Bayesian approach. *Academy of Management Review*, 34: 209–227.
- Baker, T., Gedajlovic, E., & Lubatkin, M. 2005. A framework for comparing entrepreneurship processes across nations. *Journal of International Business Studies*, 36: 492–504.
- Baker, T., & Nelson, R. 2005. Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50: 329–366.
- Bernier, L., & Hafsi, T. 2007. The changing nature of public entrepreneurship. *Public Administration Review*, 67: 488–503.
- Buzenitz, L., West, G., Shepherd, D., Nelson, T., Chandler, G., & Zacharakis, A. 2003. Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*, 29: 285–308.
- Davidsson, P. 2003. The domain of entrepreneurship research: Some suggestions. *Advances in Entrepreneurship, Firm Emergence and Growth*, 6: 315–372.
- Davidsson, P. 2004. *Researching entrepreneurship*. New York: Springer.
- Davidsson, P. 2005. Method issues in the study of venture start-up processes. In A. Fayolle, P. Kyro, & J. Ulijn (Eds.), *Entrepreneurship research in Europe: Outcomes and perspectives*: 35–54. Cheltenham, UK: Edward Elgar.
- Davidsson, P., Delmar, F., & Wiklund, J. 2002. Entrepreneurship as growth, growth as entrepreneurship. In M. Hitt, D. Ireland, S. Camp, & D. Sexton (Eds.), *Strategic entrepreneurship*: 328–342. Oxford: Wiley-Blackwell.
- Davidsson, P., Low, M., & Wright, M. 2001. Low and MacMillan ten years on: Achievements and future directions for entrepreneurship research. *Entrepreneurship Theory and Practice*, 25(4): 5–16.
- Foss, N., & Klein, P. 2008. The unit of analysis in entrepreneurship research: Opportunities or investments? *International Journal of Entrepreneurship Education*, 6(3): 145–170.
- Gartner, W. 2001. Is there an elephant in entrepreneurship? Blind assumptions in theory development. *Entrepreneurship Theory and Practice*, 25(4): 27–39.
- Hitt, M., Ireland, D., Camp, M., & Sexton, D. 2001. Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22: 479–491.
- Hmieleski, K., & Corbett, A. 2006. Proclivity for improvisation as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 44: 45–63.
- Kirzner, I. 1997. Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature*, 35: 60–85.
- Klein, P. 2008. Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, 2(3): 175–190.
- Klyver, K., Hindle, H., & Meyer, D. 2008. Influence of social network structure on entrepreneurship participation—A study of 20 national cultures. *International Entrepreneurship and Management Journal*, 4: 331–347.
- Koster, S. 2006. *Who's child? How existing firms foster new firm formation: Individual start-ups, spin-outs and spin-offs*. Unpublished doctoral dissertation, Rijksuniversiteit Groningen.
- Levie, J., & Autio, E. 2008. A theoretical grounding and test of the GEM model. *Small Business Economics*, 31(3): 235–263.
- McMullen, J., Plummer, L., & Acs, Z. 2007. What is an entrepreneurial opportunity? *Small Business Economics*, 28(4): 273–283.
- Mitchell, R., Busenitz, L., Lant, T., Mcdougall, P., Morse, E., & Smith, B. 2002. Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship Theory and Practice*, 27(2): 93–104.
- Mitchell, R., Busenitz, L., Lant, T., Mcdougall, P., Morse, E., & Smith, B. 2004. The distinctive and inclusive domain of entrepreneurial cognition research. *Entrepreneurship Theory and Practice*, 28: 505–518.
- Reynolds, P. 2009. New firm creation in the United States: A PSED I overview. In *Foundations and trends in entrepreneurship*. Hanover, MA: Now Publishers.
- Reynolds, P., & Curtin, R. 2007. *Panel study of entrepreneurial dynamics program rational and description*. Working paper, University of Michigan, Ann Arbor.
- Samuelsson, M., & Davidsson, P. 2009. Does venture opportunity variation matter? Investigating systematic process differences between innovative and imitative new ventures. *Small Business Economics*, 33(2): 229–255.
- Sarasvathy, S., & Venkataraman, S. 2001. *Strategy and entrepreneurship: The outlines of an untold story*. Working paper No. 01-06, Darden Business School, University of Virginia, Charlottesville.
- Sarkar, M., Echambadi, R., & Harrison, J. 2001. Alliance entrepreneurship and firm market performance. *Strategic Management Journal*, 22: 701–711.
- Schumpeter, J. 1934. *Capitalism, socialism, and democracy*. New York: Harper & Row.

- Seymour, R. 2006. Hermeneutic phenomenology and international entrepreneurship research. *Journal of International Entrepreneurship*, 4(4): 137–155.
- Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25: 217–226.
- Singh, R. 2001. A comment on developing the field of entrepreneurship through the study of opportunity recognition and exploitation. *Academy of Management Review*, 26: 10–12.
- Smith, B., Matthews, C., & Schenkel, M. 2009. Differences in entrepreneurial opportunities: The role of tacitness and codification in opportunity identification. *Journal of Small Business Management*, 47: 38–57.
- Soh, P. 2003. The role of networking alliances in information acquisition and its implications for new product performance. *Journal of Business Venturing*, 18: 727–744.
- Spencer, A., Kirchoff, B., & White, C. 2008. Entrepreneurship, innovation and wealth distribution: The essence of creative destruction. *International Small Business Journal*, 28(5): 9–26.
- Ucbasaran, D., Westhead, P., & Wright, M. 2001. The focus of entrepreneurial research: Contextual and process issues. *Entrepreneurship Theory and Practice*, 25(4): 57–80.
- Weick, K. 1969. *The social psychology of organizing*. New York: McGraw-Hill.
- Wiklund, J., & Shepherd, D. 2003. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24: 1307–1314.
- Zahra, S., & Dess, G. 2001. Entrepreneurship as a field of research: Encouraging dialogue and debate. *Academy of Management Review*, 26: 8–20.

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