Belief-Action-Results Framework For Entrepreneurs

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ENTREPRENEURIAL OPPORTUNITIES: WHO NEEDS THEM?

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Abstract: Debate in management research on the status of the opportunity construct is now more than a decade old. We argue that the debate has led to little additional insight in entrepreneurship and we develop the case for abandoning the construct altogether. Uncertainty is central to entrepreneurship and innovation yet absent from opportunity-based approaches. We offer instead a "judgment-based view" of entrepreneurship which revolves around the nexus of resource heterogeneity and uncertainty and is operationalized in the "Beliefs-Actions-Results" (BAR) framework.

Keywords: entrepreneurship, opportunities, judgment, uncertainty, construct validity

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INTRODUCTION

Academic interest in entrepreneurship dates back at least to the Spanish Scholastics and Richard Cantillon (1755), but only recently has entrepreneurship become a specialized field of research. As the academic discipline of entrepreneurship emerged in the 1970s and 1980s, it was mostly descriptive, focused on the small-business management, the emergence of new companies, and individual-level creativity. As the field matured, scholars began building more explicitly on the theoretical insights of prominent economists and other scholars such as Israel Kirzner, Frank Knight, Ludwig von Mises, F. A. Hayek, Joseph Schumpeter, Herbert Simon, Richard Nelson, and Sidney Winter (Foss & Klein, 2015).[1] Measured by impact on contemporary entrepreneurship research, the most significant of these is Kirzner, whose concept of entrepreneurial discovery or alertness (Kirzner, 1973), became the basis of the "opportunity recognition" or "opportunity discovery" approach that dominates the entrepreneurship textbooks and much of the research literature.[2] More generally, a focus on opportunities—their discovery, evaluation, and exploitation—has become extremely influential in entrepreneurship research (Shane & Venkataraman, 2000; Shane, 2003; Eckhardt & Shane, 2003; Short, Ketchen, Shook, & Ireland, 2010).

Shane and Venkataraman (2000: 220) define 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." With opportunities as the unit of analysis, entrepreneurship research then centers upon three key questions, namely why, when, and how 1)

[1] Whether various strands of contemporary entrepreneurship literature really incorporate the essence of these foundational works, or simply appropriates their names for legitimacy, is an open question; Kirzner (2009), for instance, demurs that "my own work has nothing to say about the secrets of successful entrepreneurship. My work has explored, not the nature of the talents needed for entrepreneurial success, not any guidelines to be followed by would-be successful entrepreneurs, but, instead, the nature of the market process set in motion by the entrepreneurial decisions (both successful and unsuccessful ones!).

[2] Foss and Klein (2010) review the history of the "alertness" idea in entrepreneurship studies. Klein and Bylund (2014) discuss Kirzner's influence more specifically.

entrepreneurial opportunities arise, 2) certain individuals and firms and not others discover and exploit opportunities, and 3) different modes of action are used to exploit those opportunities (Shane & Venkataraman, 2000: 218). This is an ambitious and sweeping research program; yet, in practice, research within it mainly considers the antecedents of opportunity discovery associated with start-ups (Foss & Klein, 2012: 223-27; Foss & Lyngsie, 2014).

Debate in management research on the status of the opportunity construct is now more than a decade old.[3] In an early call for more debate, McMullen, Plummer, and Acs (2007: 273) noted that

> a good portion of the research to date has focused on the discovery, exploitation, and consequences thereof without much attention to the nature and source of opportunity itself. Although some researchers argue that the subjective or socially constructed nature of opportunity makes it impossible to separate opportunity from the individual, others contend that opportunity is as an objective construct visible to or created by the knowledgeable or attuned entrepreneur. Either way, a set of weakly held assumptions about the nature and sources of opportunity appear to dominate much of the discussion in the literature.

Following the call of McMullen et al., many critical voices have raised fundamental questions about the nature of the opportunity construct (Klein, 2008; Dimov, 2011; Klein & Bylund, 2014; Davidsson, 2015; Kitching & Rouse, 2016). Indeed, much discussion has concentrated on the issue of the nature of opportunities, as exemplified by this symposium.[4] We have

[3] In economics, the debate harks back at least to the 1970s (Loasby, 1982; Lachmann, 1986).

[4] See also the debate in the October 2017 issue of the *Academy of Management Review*, with contributions from Alvarez, Barney McBride and Wuebker; Berglund and Korsgaard; Foss and Klein; and Ramoglou and Tsang. The exchange between Davidsson and Wood in the June 2017 issue of *Journal of Business Venturing Insights* is also valuable.

also contributed to this debate (Foss & Klein, 2010, 2012, 2017). Our main point has been to highlight the centrality of uncertainty to the entrepreneurial process and to argue that these attributes are obscured by the opportunity construct. Opportunities can at best be manifest *ex post*, when entrepreneurial outcomes are successful. What entrepreneurship scholars mean by "opportunity" is simply a business idea, plan, or belief, which may or may not turn out as the entrepreneur imagines. Calling them opportunities not only violates the dictionary (and conventional) use of the term, it also misleads researchers and practitioners to think entrepreneurship is easy—all it takes is a good idea.

While these issues are fundamental to the field, we are not sure the controversy has done much to advance the theory of entrepreneurship, which seems to be fragmenting into different and competing strands emphasizing individual characteristics, market imperfections, effectual learning, resource constraints, and more. Why is the field going through these growing pains? One likely underlying motivation is the belief that constructs must be "ontologically grounded"—that is, they must closely mirror something in the real world—to be useful.[5] Put differently, researchers are concerned about construct validity, and the opportunities debate may be a struggle to define what and how we measure in entrepreneurship research.

Our proposed solution to these problems is get rid of the opportunity construct altogether (e.g., Foss & Klein, 2005, 2010, 2012, 2017; Klein, 2008). We suggest an alternative framework, described below, centered upon the entrepreneur's beliefs, actions, and results. Our arguments are motivated not by ontological or even epistemological concerns, but by more pragmatic questions about organizing constructs: What purposes do constructs serve, and how do they advance scientific progress?

[5] See Davidsson (2017a, 2017b) and Ramoglou and Tsang (2017) for a spirited debate on the ontological point.

To allow for cumulative growth of knowledge, all fields need central organizing constructs (Lakatos, 1970). Constructs serve several roles. *Methodologically,* they help identify, categorize and explain phenomena of interest; identify appropriate research methods; and—because constructs imply boundaries—assist with organizing the relevant research literature. Economics constructs such as equilibrium and utility or profit maximization serve such purposes. *Sociologically* or *institutionally,* constructs help define a field; they allow scholars to identify with a field and they give the field legitimacy. The opportunity construct has certainly served this role in the entrepreneurship area as it emerged in the last two or three decades. As Short et al. (2010: 40) put it, "opportunities are one of the key concepts that define the boundary and exchange conditions of the entrepreneurship field."

Constructs serve as points of demarcation because they exclude (research questions, methods, mechanisms, data sources). There are benefits as well as costs to such exclusion. Exclusion draws our attention to aspects of a phenomenon (e.g., economists and sociologists study different aspects of markets) and thereby help maintain research focus, exploiting economies of specialization. On the other hand, however, exclusion may block our vision and hinder progress in important areas. For example, the "representative firm" construct of microeconomics (which came to mean that all firms in an industry were identical) carried over to industrial organization made it hard for economists and for strategy scholars to conceptualize firm-level heterogeneity.

We argue below that something similar applies to the opportunity construct in entrepreneurship research. While the construct offers important benefits, in helping narrowing the focus and giving the field legitimacy, it also imposes substantial costs, and these have potentially harmful effects on entrepreneurship research, teaching, and practice. Call these the "opportunity costs of the opportunity construct." Here we restate some of our earlier misgivings regarding the

opportunity construct and suggest reorienting entrepreneurship research from an individual-opportunity nexus to a "(resource) heterogeneity-uncertainty nexus." This implies a simple framework based on "beliefs, actions, and results" (BAR).

THE OPPORTUNITY COSTS OF THE OPPORTUNITY CONSTRUCT

Critiques of the Opportunity Construct

Critiques of the opportunity-recognition or opportunity-discovery approach can be characterized as on ontological, epistemic, and methodological. In the first category is Alvarez and Barney's (2007) argument that opportunities do not always exist prior to action, but must be created, subjectively, by entrepreneurial imagination and effort. "Discovery entrepreneurs" focus on predicting systematic risks, formulating complete and stable strategies, and procuring capital from external sources. "Creation entrepreneurs" apply iterative, inductive, incremental decision making, are comfortable with emergent and flexible strategies, and are more likely to rely on internal finance.[6]

The "effectuation" approach belongs to the second category. Effectuation builds on the ideas of Simon, Knight, and is associated in particular with the work of Saras Sarasvathy (2008). Effectuation focuses on cognition and how entrepreneurs perceive the future. Entrepreneurs are viewed not as formulating a goal and then assembling the resources necessary to obtain it, but as acting cautiously, incrementally, and experimentally. "Effectual reasoning" involves starting with resources at hand, imagining potential actions and outcomes, and choosing outcomes with the smallest affordable loss.

[6] Ramoglou and Tsang (2016) try to elide this controversy by defining opportunities as "propensities," and thus neither objective nor socially constructed (see also Foss & Klein, 2017).

Our critiques are mainly methodological. Building on Cantillon (1755), Knight (1921), and Mises (1949), we have questioned the very notion of opportunities, finding the opportunity metaphor redundant at best, misleading at worse. Our recent book, *Organizing Entrepreneurial Judgment: A New Theory of the Firm* (Foss & Klein, 2012), is dedicated to reconstructing, elaborating, and extending what we call, following Knight and Mises, the "judgment-based view" (JBV). In this approach, entrepreneurship is conceptualized as judgmental decision-making which takes place in a market setting under uncertainty. Entrepreneurs combine heterogeneous assets, which differ in their attributes, and deploy these assets within a firm to the production of new offerings they hope will satisfy customer wants, generating profits. Rather than pursuing opportunities—which are only realized *ex post*, after profits and losses are realized—entrepreneurs pursue profits, and try to avoid losses, by anticipating future market conditions.

We call opportunities metaphorical because "opportunity" is just another way of describing successful outcomes, not a separate concept. In everyday language, when we say, "John realized a profit opportunity by introducing his new product," we simply mean, "John introduced a new product and it turned out his expectations were correct, generating revenues in excess of costs." Our argument is not that opportunities exist, but only at a later stage of the process, but that the word "opportunity" adds nothing to the more straightforward language of beliefs, actions, and results.

Before presenting the judgment-based view in greater detail, we outline an additional set of methodological critiques of the opportunity construct. These are fundamentally pragmatic and center on the role of the opportunity construct in theory development.

Biases in Opportunity Research

The opportunity recognition or opportunity discovery stream promises sustained inquiry into the nature of entrepreneurial opportunities, who exploits them, and how exploitation takes place (Shane & Venkataraman, 2000: 218). We think the program has only been partly successful at developing this agenda, and the emphasis on opportunities may be partly to blame.

What is the thing that the entrepreneur discovers or creates? In Kirzner's (1973, 1997) formulation, price differentials (spatially or temporarily) create what are essentially arbitrage opportunities. The "alert" entrepreneur spots and seizes these objectively existing opportunities before other actors. The purpose of Kirzner's theory, however, is not to explain entrepreneurial action per se, but to offer a macro-level account of market equilibration; if alert entrepreneurs are present, waiting to exploit profit opportunities resulting from disequilibrium, then this disequilibrium cannot last for long (Foss & Klein, 2010). Oddly, Kirzner's "pure entrepreneur" does not own any assets (Rothbard, 1985; Salerno, 2008). He has no interest in teams or in firms. Uncertainty plays no role in this account, because opportunities are objective and known as soon as they are discovered, and there is no possibility of loss, because there is no investment (the worst that can happen is that an entrepreneur fails to recognize an opportunity, neither gaining nor losing). There is no explicit attempt to disentangle the discovery, evaluation, and exploitation of opportunities; rather, these are parts of the same *Gestalt*. Thus, the entrepreneur in Kirzner's theory should not be mistaken for the real thing; it is a device that is used to explain equilibration, and that is it.

Of course, management scholars building upon Kirzner's ideas have added their own psychological, experiential, demographic, or network-related factor to the explanation, typically as antecedents of opportunity discovery (e.g., Shane, 2000; Gaglio & Katz, 2001; Choi & Shepherd,

2004; Ardichvili, Cardozo, & Ray, 2003; Baron & Ensley, 2006). But the resulting theories share key features of Kirzner's approach. In particular, while there are healthy and growing literatures dealing with opportunity evaluation (e.g., Keh, Foo & Lim, 2002; Wood & Williams, 2014) and exploitation (e.g., Choi, Levesque & Shepherd, 2008; Hmieleski & Baron, 2008; Godley, 2013; Godley & Casson, 2015), the initial act of recognition or discovery continues to receive the lion's share of attention.[7]

The main empirical manifestation of entrepreneurship, in this approach, continues to be the act of starting a new company; there is much less little interest in understanding how established firms engage in the discovery, etc. of opportunities (which is relegated to the subfields of corporate entrepreneurship or "intrapreneurship"). The main emphasis also continues to be the individual entrepreneur rather than the entrepreneurial team (see, further, Foss & Lyngsie, 2014).

These biases may derive from measurement issues. Thus, focusing on the discovery or recognition of an opportunity by an individual means that the exercise of entrepreneurship is located at a point in time (Dimov, 2007). In contrast, if entrepreneurship is a messy process involving the interaction of many individuals with more or less concrete ideas and experimenting with available resources and different ways of sourcing them ("evaluating" opportunities), attempting to arrive at something more definite ("exploiting opportunities"), as in the effectuation approach (Sarasvathy, 2008), measurement is much more complicated. However, we argue that it is the emphasis on the "opportunity" that ultimately produces the above biases (and the more so, the more the "objective" nature of opportunities is stressed).

[7] A Google Scholar search conducted February 8, 2018 returns 22,300 results for "opportunity recognition," with another 4,190 for "opportunity discovery" and 4,570 for "entrepreneurial alertness." A search for "opportunity evaluation" yields 3,740 hits and "opportunity exploitation" returns 3,900.

Opportunity Costs of Opportunity Research

If "opportunities" exist "out there," it is easy to jump to the conclusion that they just need to be recognized (presumably, "evaluation" is part of this) and that exploitation is a minor problem. This could explain why opportunity discovery research has emphasized the recognition and downplayed the exploitation of opportunities. If opportunities exist in, as it were, "ready-made" form, there is less of a need for a process of social interaction in a team of entrepreneurial individuals (Harper, 1998), and little need for a process of experimenting with resources (Sarasvathy, 2008) and contractual and governance forms (Foss & Klein, 2005, 2012). This, in turn, explains why there has been more interest in individuals and startups than entrepreneurial teams, economic organization, and established companies as agents of entrepreneurship in the opportunity discovery approach.

A more basic problem is that, opportunity, in the dictionary sense, always refers to objective conditions. ("The invitation to participate in this symposium gives us the opportunity to express our reservations about opportunities.") It is certainly true that practitioners use this kind of language to describe business ideas, market conditions, and so on (Ramoglou & Tsang, 2017). But it is wise to remind practitioners, as well as scholars and students, that these "opportunities" are *imagined*, not real; ex ante, there are only actions and possible results, not preexisting opportunities. In other words, entrepreneurship is fundamentally action under uncertainty, and opportunity language deemphasizes this uncertainty, to the detriment of theory and practice.

Of course, the existence of "deep" uncertainty doesn't mean action is hopeless, or results are random. On the contrary, entrepreneurial action can be bold and decisive; that's exactly what judgment entails. Uncertainty simply means that decision-making cannot be modeled as if it

were choice under probabilistic risk; it doesn't mean entrepreneurs are always or even mostly incorrect in their intuitive understandings of the future. Nor does uncertainty mean that reality is subjective; on the contrary, the judgment-based view is fully compatible with ontological realism. Objective market conditions (what Davidsson [2015] calls "external enablers") are central to the results of entrepreneurial action, but this still does not make "opportunities" real.

Placing uncertainty front and center allows us to think systematically about how entrepreneurs peer into the uncertain future. Packard et al. (2017), for example, show that entrepreneurs can reduce uncertainty either by selecting on a narrow set of means, anticipating all the possible ends of those means (akin to effectuation), or focus on a few target outcomes, being more open about potential means. There are many possible ways to dimensionalize and systematize our thinking about uncertainty (Milliken's [1987] well-known distinction between state, response, and environmental uncertainty is another). A focus on opportunities, either discovered or created, renders mute these kinds of conversations, and misleads practitioners and students into thinking that entrepreneurship is easy—all you have to do is find the right opportunity!

Opportunity language also creates an artificial distinction between entrepreneurship and the theory of the firm, strategic management, organizational behavior, and other firm-level phenomena (Foss & Klein, 2005). In contrast, the judgment-based view, with its emphasis on resources and governance, provides a more natural link between entrepreneurship and the resource-based, transaction-cost, and property rights views of the firm and firm strategy. Knight (1921, p. 271) argued that judgmental decision-making is inseparable from responsibility and control, that is, ownership and direction of a business venture. "The essence of enterprise is the

specialization of the function of responsible direction of economic life. . . . Any degree of effective exercise of judgment, or making decisions, is in a free society coupled with a corresponding degree of uncertainty-bearing, of taking the responsibility for those decisions."

THE JUDGMENT-BASED ALTERNATIVE

Foundations: The Heterogeneity-Uncertainty Nexus

To make progress, entrepreneurship theory needs more than core constructs; it needs to embed these constructs in a web of other constructs, assumptions, etc. (Quine, 1969). For example, the opportunity discovery perspective of Shane (2003) and his followers highlights the "individual-opportunity nexus." The effectuation approach associated with Sarasvathy (2008) is based on the organizing ideas that entrepreneurs start with what they have; they cooperate with parties who, because these are willing to commit, are (highly) trustworthy; entrepreneurs look at how to leverage contingencies in a way that is beneficial to them; and they are skilled at integrating these different modes of behavior.

The basic organizing assumptions of our judgment-based view (JBV) is that entrepreneurs are individuals who seek to combine heterogeneous resources in the pursuit of profit under genuine uncertainty. Thus, the JBV combines the Austrian School's emphasis on capital heterogeneity (Menger, 1871; Mises, 1949; Lachmann, 1956) with the Knightian emphasis on uncertainty (Knight, 1921). As Lachmann (1956: 16) puts it, "We are living in a world of unexpected change; hence capital combinations . . . will be ever changing, will be dissolved and reformed. In this activity, we find the real function of the entrepreneur." In fact, as Lachmann (1956: 16) points out, real-world entrepreneurship consists primarily of choosing among combinations of heterogeneous capital assets:

> [T]he entrepreneur's function ... is to specify and make decisions on the concrete form the capital resources shall have. He specifies and modifies the layout of his plant. ... As long as we disregard the heterogeneity of capital, the true function of the entrepreneur must also remain hidden.

It is useful, in this regard, to characterize resources using Barzel's (1997) idea of *attributes*. Attributes are characteristics and possible uses of assets, as perceived by an entrepreneur. Capital assets are heterogeneous to the extent that they have different, and different levels of, valued attributes. Attributes may also vary over time, even for a particular asset. In a world of "true" uncertainty, entrepreneurs are unlikely to know all relevant attributes of all assets when production decisions are made. Nor can the future attributes of an asset, as it is used in production, be forecast with certainty. These emerge because of entrepreneurs gaining insight in what can be done with the assets they control. In other words, whereas (resource) heterogeneity tends to be a given in management research (e.g., in most of the RBV; Barney, 1991), heterogeneity should rather be seen as endogenous to entrepreneurial processes of experimenting with asset combinations (Foss & Foss, 2008).

Such experimental activity may take place in the context of trying out new combinations through the acquisition of or merger with another firms, or in the form of trying out new combinations of assets already under the control of the entrepreneur. The entrepreneur's success in experimenting with assets in this manner may depend on whether his *judgment* is borne out by the facts, along with secondary factors such as transaction costs in the market for corporate control, internal transaction costs, the entrepreneur's control over the relevant assets, how much of the expected return from experimental activity that he can hope to appropriate, and so on. Note the centrality of heterogeneity here: Not only is heterogeneity a cause of transaction costs (because

assets differ in terms of assets, resources must be used to ascertain these attributes), asset combinations differ in their ultimate performance implications. Under uncertainty, it is, however, not clear how (and which) assets should be combined. Hence, there is a need for the exercise of judgment.

Judgment: Decision-Making without a Formal Model or Rule

Judgment refers to the need for individuals to make decisions about the future without access to a formal model of decision rule, as would apply to situations of "rational" behavior under probabilistic risk. Judgment is decision-making that, in a commercial context, concerns unique business investments for which it is difficult or impossible to assign probabilities to outcomes, or perhaps even to specify the set of possible outcomes itself (Shackle, 1972; Zeckhauser, 2006). In such situations, individuals will reach different decisions even if they share the same objectives and data are presented to them in the same manner, because they have access to different complementary information, interpret the data in different ways, and so on.

As Casson (1982: 14) notes, "[t]he entrepreneur believes he is right, while everyone else is wrong. Thus, the essence of entrepreneurship is being different—being different because one has a different perception of the situation." Judgment can be conceptualized as intuition or gut feeling (Huang, 2012), what Mises called *Verstehen*, or "understanding." Mises (1949: 582) says the entrepreneur relies on a "specific anticipative understanding of the future," one that "defies any rules and systematization." Of course, entrepreneurs can (and do) apply techniques and heuristics for decision-making (see Buffet & Clark, 1997; Grandori, 2010), but ultimately an act of judgment is required. Contributors to this stream have typically argued that exercising judgment

is a skilled activity and that some perform it better than others (e.g., Knight, 1921: 298; Mises, 1949: 585; Casson, 1982: 25).[8]

Entrepreneurial judgment is not just decision-making under uncertainty, but decision-making about the use of scarce resources to service customers' future preferences in pursuit of economic profits. Because judgment is costly to articulate and trade, those wishing to exercise judgment must take control of productive activities themselves. This requires that the entrepreneur assume ownership of complementary assets and make investments to put his idea into practice. Thus, the entrepreneurial firm may be characterized as the entrepreneur, his specific judgment, and the assets that he owns or otherwise controls. In this conception the entrepreneurial firm is organized around an unpriced resource bundle—that is, while there are factor markets for many of the resources that the entrepreneur controls, his own judgment is not one of those resources.

Moreover, factor markets cannot easily ascertain how the entrepreneur's judgment complements other resources. A benefit of this is that the entrepreneur will have an information advantage with respect to understanding the value of his judgment in combination with other resources; resources can be purchased at a price below their net present value (Rumelt, 1987). But, this also means that fully understanding the returns to judgment requires understanding how judgment complements other resources. Note also that judgment is exercised with respect to several complementary activities. The entrepreneur must decide which inputs to purchase, what investments to undertake, which managers to hire, and so on. Many of these decision situations are

[8] Two common confusions, both discussed in Foss and Klein (2015: 591-593): first, judgment per se (the act of judging the future) is not the same as good judgment (wisdom, prudence, foresight), and second, exercising judgment is not the same as being lucky (or unlucky), though both judgment and luck are distinct from "rational" decision-making under probabilistic risk. For more on the differences between uncertainty, ambiguity, and other forms of unknowability, see Foss and Klein (2012: chapter 4) and Packard et al. (2017).

uncertain in the sense of Knight. Understanding the exercise of judgment requires considering it in the context of a bundle of assets or investments underlying those activities.

Implications: Investments and the BAR Framework

Our emphasis on the entrepreneur's judgment has strong implications for the unit of analysis in entrepreneurship research (Foss & Klein, 2012: Chpt. 4). First, in the JBV there is no sense in which opportunities can be said to *exist ex ante*, waiting to be discovered. To the extent that opportunity language is meaningful at all, entrepreneurial opportunities *cannot* exist until profits are realized. Thus, opportunities can at most be an *ex post* construct.[9] And what, then, do we call losses—the (obviously) common result of entrepreneurs paying more for resources then they will eventually be revealed to be worth, in terms of generating profits? Non-opportunities?[10]

Of course, we can call entrepreneurial beliefs—what entrepreneurs imagine they can do with the resources they control and those they can access—"opportunities." (The economist Alfred Kahn, forbidden by President Ford from using the term "inflation," once suggested the word "banana" as a substitute; likewise, we can call opportunities bananas.) We can dimensionalize and measure those imaginations. What we are then talking about are entrepreneurs' more or less

[9] Kirzner has always emphasized the metaphorical nature of the opportunity construct. In a 1997 interview he remarks: "I do not mean to convey the idea that the future is a rolled-up tapestry, and we need only to be patient as the picture progressively unrolls itself before our eyes. In fact, the future may be a void. There may be nothing around the corner or in the tapestry. The future has to be created. Philosophically, all this may be so. But it doesn't matter for the sake of the metaphor I have chosen. . . . Ex post we have to recognize that when an innovator has discovered something new, that something was metaphorically waiting to be discovered. But from an everyday point-of-view, when a new gadget is invented, we all say, gee, I can see we needed that. It was just waiting to be discovered."

[10] Ramoglou and Tsang (2016) introduce the terms "realized opportunities," "unrealized opportunities," and "nonopportunities" for what we—using ordinary language—refer to correct and incorrect judgments. The existence of losses also poses problems for the opportunity-creation perspective. If entrepreneurs create their own future, they would not create a future in which their revenues fall below costs. If outcomes are socially constructed, then we need a theory of social emergence to explain the conditions under which outcomes produce profits rather than losses. In the judgment-based view, entrepreneurs act based on imagined future profits, which may or not be realized.

well-defined intentions and plans. Why call these "opportunities," a piece of terminology that seems redundant and potentially misleading?

Consider instead an ordinary-language account of what entrepreneurs do. They invest resources based on their knowledge and beliefs about current conditions and their expectations about future profits and losses that result from these investments. We may refer to these beliefs and expectations using opportunity language, but what entrepreneurs are doing is *acting.* The purely cognitive aspects of surveying the landscape, thinking about resources, imaging possible outcomes, considering work/life balance, and so on are best understood as pre-entrepreneurial activities; entrepreneurship per se doesn't begin until investments are made. Hence the unit of analysis in the JBV is action, not opportunity. Specifically, we think the unit of analysis in entrepreneurship research should be the assembly of resources in the present in anticipation of (uncertain) receipts in the future—in other words, *investment*.

An emphasis on investment has the advantage that it links entrepreneurship to already established constructs for which measures exist, such as projects (i.e., a stock of resources committed to activities for a specified period), investments, and business plans. The entrepreneurial process thus involves beliefs, actions, and results (BAR).

Beliefs. Entrepreneurship begins with the entrepreneur's beliefs about the present (resource characteristics and availability, scientific and technical conditions, consumer preferences), possible futures (production outcomes, consumer demands, legal and regulatory issues) and her ability to bring about various possible futures (beliefs about causality, self-efficacy, confidence).

We assume the entrepreneur desires to bring about a particular future that, from her subjective perspective, is preferred to the present.[11]

Actions. Entrepreneurship proper begins once investments are made—i.e., when resources are acquired, combined, and committed to various production plans.[12] This could involve the creation of a new firm, but could also be manifest in a new product or new organizational practice, or even in a decision to maintain existing plans or resource deployments. What mean by action is stewardship or responsibility for productive assets, decisions about which must always be made in conditions of uncertainty (i.e., in the real world). Note that this concept allows for a broader range of "entrepreneurial" activities than is conventional in the literature. A decision not to devote resources to a new venture or product (in particular, when competitors are pursuing similar ventures or products) reflects the decision-maker's idiosyncratic judgment about the uncertain future, and this is an entrepreneurial act in Knight's (1921) sense.

Results. After actions have been taken (i.e., after investments have been made), the entrepreneur learns if those actions did in fact bring about the anticipated desirable future. As the saying goes: reality bats last. These results are in some sense objective (profits and losses, the market value of the entrepreneur's assets, the survival of the venture), though obviously there are elements of subjective interpretation at play.[13] First, the desired outcome may include non-financial aspects such as personal satisfaction, the achievement of some social goal, etc., and these are not easily measurable (Klein et al., 2010). Second, even if results take an objective (quantitative)

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[11] Davidsson (2015) distinguishes between "new venture ideas" (the entrepreneur's plan, vision, model, etc.) and "opportunity confidence (her beliefs about her ability to implement the idea profitably). Both are "beliefs" in our terminology, though we agree that these different categories of beliefs may be worth studying separately.

[12] We like Rothbard's (1985: 283) comment: "Entrepreneurial ideas without money are mere parlor games until the money is obtained and committed to the projects."

[13] Of course, accounting measures involve some element of discretion and could be considered "subjective" on that basis alone.

form, the entrepreneur must give them meaning through subjective interpretation. She knows that the firm or project failed, but why did it fail? What were the specific causal mechanisms? This involves tacit knowledge, subjective beliefs, etc.

After results are realized, there is also an adjustment stage: the entrepreneur either learns, and plans to take different actions in the future, or runs out of capital and is forced to exit. (We can call these treatment effects and selection effects, respectively.)

Some Advantages of BAR Language over Opportunity Language

While practicing entrepreneurs often speak of "opportunities" they mean beliefs about possible outcomes of their actions, not opportunities in the dictionary sense. Indeed, we think the language of beliefs, actions, and results fits more naturally with ordinary means of expression, both among practitioners and scholars. I am hungry for Chinese food, so I go to a Chinese restaurant, expecting that this meal will satisfy my hunger. My beliefs about the future (feeling satiated, experiencing the enjoyment of a good meal) cause my action (going to the restaurant), followed by results (I liked the meal, or I didn't). There is no benefit to using opportunity language here.

Moreover, the BAR framework avoids making artificial distinctions between opportunity recognition, opportunity evaluation, and opportunity exploitation and the artificial, linear decision-action framework they imply.

Another advantage is that the BAR framework deals symmetrically with profits and losses. Profits obtain when the beliefs motivating action are correct—realized revenues turn out to be greater than expenditures (perhaps with discounting). Losses occur when the reverse is true, revenues fall short of expectations. There is no need to invoke "non-opportunities" or some other

tortured construction to explain what happens when entrepreneurial action does not bring about the desired result; we simply note that the entrepreneur's beliefs were incorrect.

Ontologically, the BAR framework recognizes the interdependence of objective and subjective factors. Resource availability, the action of rivals or regulators, realized customer preferences, the laws of nature, and other "objective" factors help determine the results of the entrepreneur's action. But decisions and actions result from subjective interpretation of these phenomena, as well as subjective expectations about the future. Put differently: Do entrepreneurs discover? Yes: they discover resources, customers, competitors, and causal relationships. Do entrepreneurs create? Yes: they create firms, products, business plans, interpretations of mechanisms and relationships, and so on. But no one discovers or creates "opportunities"!

CONCLUSIONS

The notion of entrepreneurial opportunity has become central in management entrepreneurship research; some call it foundational to the field. Thus, Short et al. (2010: 40) even declare that "[w]ithout an opportunity, there is no entrepreneurship." Well, if entrepreneurs do not think they may make a profit, they will not take entrepreneurial action. Stated this way, the proposition is a tautology. More importantly, as we have argued above, this is a strange use of "opportunity," because entrepreneurs, while frequently right about the expected results of their action, are also frequently wrong. What Short et al. mean is, "unless the entrepreneur believes her action can bring about a result she favors, she will not act." We find that a more natural, realistic, and scientifically accurate way to describe the scenario.

As this article makes clear, we differ strongly from the view that opportunity should continue to be the central organizing construct in entrepreneurship theory. We think it is not only

possible, but preferable, to research the key phenomena of interest to entrepreneurship scholars—the creation, operation, and evolution of firms; the choice between self- and paid employment; the processes of creativity, innovation, initiative, and responsibility that drive the economy forward—without invoking the opportunity construct. We have offered instead the judgment-based view, organized around the heterogeneity-uncertainty nexus, and made concrete by the BAR framework, as an instance of "opportunity-free" theorizing.

Moreover, we have tried to show that this issue is not merely terminological, as some critics have suggested (Ramoglou & Tsang, 2016), but practical, methodological, and pedagogical. While every field needs core constructs, we think opportunity is not a useful one for entrepreneurship research. At best, it is redundant; *ex post,* when entrepreneurial action is successful, we can describe the process using opportunity language without harm. But why bother? At worst, opportunity language misleads us into discounting the fundamental uncertainty that pervades human action and the ways entrepreneurs try to overcome it.

Besides placing proper emphasis on uncertainty and the challenges of entrepreneurial decision-making, the judgment-based perspective offers several additional implications (Foss & Klein, 2012: chapter 9). First, the emphasis on resources, and the need to exercise effective stewardship of resources under uncertainty, implies that entrepreneurship is about more than startups, small enterprise, and high-growth firms. Excepting the specialized literature on corporate entrepreneurship, the research literature has had little to say about judgment and uncertainty in mature markets, among existing enterprises (including large ones), within ownership groups and teams, and even in nonmarket settings (Klein et al., 2010; McCaffrey & Salerno, 2011).

One response is that the judgment-based approach does not distinguish strongly enough between the entrepreneurship fields and the related areas of strategy, organizational design, governance, and so on. We understand this concern from the standpoint of institutional legitimacy; if entrepreneurship is to have its own journals, conferences, centers, departments, and funding lines, it must be somehow distinct. Ultimately, however, we think the close connection between the judgment-based view of entrepreneurship and theories about firms and industries is a feature, not a bug. As argued above, demarcation serves a purpose, but can also hold back the growth of knowledge. After all, scientific breakthroughs typically occur at the intersections among fields, especially in business administration (Zahra & Newey, 2009).

For example, as we discuss in Foss and Klein (2012), many of the key issues in the economic theory of the firm, corporate governance, and stakeholder theory can be recast as entrepreneurship problems—expanding the scope of entrepreneurship studies. Firms are collections of heterogeneous resources under common ownership, and ownership is necessary because entrepreneurial judgment cannot be bought and sold. To exercise judgment an entrepreneur, or group of entrepreneurs, must take ownership, which brings residual control rights over productive resources (Foss et al., 2017). Property-rights economics (e.g., Hart, 1995) recognizes the role of residual control rights but not the open-endedness of markets, resources, and resource characteristics capture in the judgment-based view.

Moreover, contemporary debates about stakeholder approaches to the firm and corporate social responsibility can be understood better in light of the judgment-based view (Foss and Klein, 2018). Instead of asking whether firms should be operated in the interests of shareholders or a broader set of stakeholders—i.e., who really owns the corporation—we can ask, what does it mean to own a firm, and what are the rights and responsibilities associated with ownership? If

ownership is understood as an entrepreneurial function (the right or responsibility to make decisions about resource use under uncertainty), we can then analyze why some people and not others become entrepreneurs, which input suppliers are best suited to perform the entrepreneurial role, how financial markets match individuals and groups to resources, and so on.

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