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WHAT IS AN ENTREPRENEURIAL OPPORTUNITY?

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ABSTRACT

What an entrepreneurial opportunity is and from whence it comes are important issues for understanding how markets function and come into being. In addition to describing the forum held on the topic and summarizing the contributions of the articles that appear in the special issue, this article shares a number of lessons learned during the conference and the editorial process. We explore three of the most important reasons for confusion about the opportunity construct: (1) the "objectivity" of opportunity, (2) the perceived importance of one particular individual in determining the direction of the social world and (3) what distinguishes the sub-class of "entrepreneurial" opportunity from the broader category of opportunity in general. Finally, we offer some directions for future research by illuminating important issues that emerged from the conference but remain largely unanswered by the papers of this special issue.

1. INTRODUCTION

Shane and Venkataraman (2000) define the field of entrepreneurship as the study of "how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited" (218). As such, entrepreneurial opportunities "are those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their costs of production" (Shane & Venkataraman, 2000:220; Casson, 1982). It can be argued, however, 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.

For management scholars and economists alike a lack of clarity regarding entrepreneurial opportunity presents a significant theoretical dilemma. Specifically, without a clear understanding of the nature of opportunity, formulating logically consistent prescriptions for both policy and practice is problematic because any theoretical basis of empirical results would be incomplete (Holcombe, 2003). Indeed, through this lens, some fundamental questions emerge regarding, for example, the distinction between the antecedents and consequences of opportunity exploitation, the true relationship between individuals and opportunities, the abilities of firms to establish and sustain a competitive advantage, the fundamental sources of economic and/or productivity growth, and the appropriate level of analysis for opportunity research in economics and management.

This special issue is intended to contribute to our understanding of what an entrepreneurial opportunity is (and is not) and from whence they come. The articles that appear in this issue were originally presented at a four-day workshop on the nature and sources of entrepreneurial opportunities. The workshop was held in March of 2005 at the Max Planck Institute of Economics and hosted by Professor David B. Audretsch, director of the entrepreneurship, growth, and public policy research group.

2. SOME BACKGROUND OF THE SPECIAL ISSUE

As with many opportunities, the work embodied in this special issue of *Small Business Economics* is the result of a casual conversation between Zoltan J. Acs and Larry Plummer during the entrepreneurship division social at the 2004 Academy of Management held that year in New Orleans. The discussion focused on one question: “What do we know about entrepreneurial opportunities?” Taking advantage of the social gathering of entrepreneurship scholars, the two wandered the room to pose the question informally to some of the people in attendance. The predominant response might be summarized as, “Not as much as we would like.” The general consensus of those queried was that the question is important, but that, with some important exceptions, most of the literature has centered on the recognition and exploitation of opportunities rather than on the existence or emergence of opportunities themselves.

As the conversation progressed, the question became, “How do we constructively discuss and debate the nature and origins of entrepreneurial opportunity?” Although the responses varied, the general tenor was that it would be particularly difficult to discuss and debate the existence and origins of opportunity for a number of reasons. Two comments, in particular, seemed particularly provocative: First, for any debate or discussion on entrepreneurial opportunity to be productive, it must avoid the slippery slope of "infinite regression," in which the origins of the origins (of the origins) are endlessly identified, characterized, and debated. Second, any productive conversation will depend to a large extent (perhaps overly so) on some agreement among the participants on whether opportunities are *discovered* or *created* by entrepreneurs (Acs and Audretsch, 2003, Chapter 1).

Motivated by the discussion, Professor Acs and Larry Plummer organized a four-day workshop on the topic held at the Max Planck Institute of Economics in March of 2005. The workshop announcement proposed "to bring together professors and doctoral students from both economics and management to discuss and debate the nature and sources of opportunity in an inductive process that draws insights from a variety of perspectives, including: from economics, the origins and expansion of the opportunity set; from entrepreneurship, opportunity recognition and discovery; and from strategy, opportunities to establish and sustain superior firm performance. In doing so, the goals are to isolate and classify the opportunity construct and suggest an agenda for further research."

Given the mandate for the workshop, several scholars from management and economics including Mark Casson, Yosem Companys, Frederick Lehmann, Mark Sanders, Guido Buenstorf, Pamela Mueller, Jeffery McMullen, and Larry Plummer were asked to prepare papers. Each author, with the exception of Professor Casson, was assigned to address one of three topics – existence of opportunities, the discovery of opportunities, or the exploitation of opportunities – emphasizing a review of the relevant literature from economics, strategic management, or entrepreneurship. For sake of consistency, it was requested that each paper take as its starting point the concept of opportunity as suggested by Shane and Venkataraman (2000).

With the workshop a success, Professors Acs and Audretsch suggested that the papers be published as a special issue of *Small Business Economics* and requested that Jeffery McMullen and Larry Plummer take on the role of guest editors. Although submitted for and presented at the workshop at the Max Planck Institute of Economics, *no paper published in this special issue – including those authored by the guest editors – was spared complete and rigorous peer and editorial review*. Not all the manuscripts presented were accepted for publication and, in some cases, the article that appears here is substantially revised from the version presented at the workshop. As a first step, one of the workshop participants and both guest editors reviewed each paper. Following a revision based on the first review and our editorial instructions, each manuscript was then subjected to a double-blind review. Any manuscript requiring significant changes was then sent out for another double-blind review. We are grateful to the reviewers for their assistance.

III. THE ARTICLES IN THIS SPECIAL ISSUE

The special issue begins with the paper, "The Discovery of Opportunities: Extending the Economic Theory of the Entrepreneur," by Mark Casson and Nigel Wadeson. In their discussion, Casson and Wadeson argue that there is an affinity between the concept of opportunity and the concept of a project. A project is said to be a stock of resources committed to a particular use for a considerable period of time whereas an opportunity is a project not yet in operation that is part of the optimal set of projects in the economy. Framing opportunity as a project brings the concept of opportunity "down to Earth," as the authors put it, allowing for the concept to be considered in more theoretically rigorous and practical terms. In particular, Casson and Wadeson argue that framing an individual's search for a potential project – characterized by the economic "symptoms" it would resolve once in operation – is the key to fully developing a theory of entrepreneurship in terms of opportunity. Among the implications discussed in the paper is a diminishing return to discovery in the economy.

The next paper by Yosem Companys and Jeffery McMullen, "Strategic Entrepreneurs at Work: The Nature, Discovery, and Exploitation of Entrepreneurial Opportunities," develops a typology of opportunity based on a review and synthesis of the strategic management and entrepreneurship literatures. The authors characterize three "schools" regarding the sources and types of opportunity: the economic school, the cultural cognitive school, and the sociopolitical school. The economic school, focused on the objective dimensions of knowledge and information, attributes the existence of entrepreneurial opportunities to the distribution (or lack thereof) of information regarding material opportunities in society. The cultural cognitive school, while sharing an emphasis on knowledge and information, takes the view that it is the emergence of a subjective, shared meaning of knowledge that constructs opportunity. Finally, the sociopolitical school is built on the notion that opportunities are objective in the sense that they are social network structures and yet subjective given that their exploitation depends on the entrepreneur's political skills and ability to persuade others as part of successful commercialization.

Next, in "Creation and Pursuit of Entrepreneurial Opportunities: An Evolutionary Economic Perspective," Guido Buenstorf contends that "the crucial point is that entrepreneurial opportunities are mostly created by the activities of human agents." Indeed, although individuals may deliberately create opportunities, opportunities are often the unintended consequence of human activities motivated by other – some non-economic – objectives. Given this central thesis, Buenstorf concludes that whether opportunities exist exogenously or are actively created via human action is not the real issue. Instead, the essential controversy is whether opportunities are exogenous to the entrepreneur's own activity; in other words, whether the entrepreneur herself or some other agent creates the opportunity. Within this framework, Buenstorf distinguishes between "higher-order opportunities" (i.e., the opportunity to create the opportunity) from the opportunity itself; the former, perhaps in the form of scientific breakthroughs or regulatory changes, sets the stage for a new entrepreneurial opportunity that may or may not be created, discovered, or exploited by the actors that are responsible for the higher-order opportunity.

In "Scientific Paradigms, Entrepreneurial Opportunities, and Cycles of Economic Growth," Mark Sanders creatively combines theories of entrepreneurship and opportunity, the philosophy and economics of science, and modern growth theory. In doing so, Sanders links (from entrepreneurship) the commercialization by entrepreneurs of those opportunities presented by new knowledge creation activities, (from new growth theory) the importance of such new knowledge as a driver of economic growth, and (from the philosophy and economics of science) ebb and flow of new knowledge creation as a reputation-driven, cyclical paradigm-shifting dynamic process per Thomas Kuhn (1971). As a whole, Sanders argues that opportunities and economic growth are strongly and explicitly linked to the evolution of science.

In the sole empirical article in the special issue, "Exploiting Entrepreneurial Opportunities: The Impact of Entrepreneurship on Growth," Pamela Mueller finds that, although the stock of knowledge in a region is an important determinant of local economic growth, it is new firms in general – seen as the exploitation of the opportunities that arise from R&D activities – and not public institutions that are the means by which knowledge contributes to the local economy. In particular, her results suggest that the contribution of public institutions and universities to regional growth pales in comparison with the contribution made by high-tech start-ups in particular. Mueller interprets the findings to suggest that new firms champion the innovations that drive economic growth and, as such, are far more likely to challenge the market positions of incumbent firms.

In the final paper of this special issue, "An Essay on Entrepreneurial Opportunity: Notes and Insights from Strategic Management," Larry Plummer, J. Michael Haynie, and Joy Godesiabois consider five major strategy argue that entrepreneurs may discover and exploit opportunities that in an objective sense are not genuinely new. They build on Randall Holcombe's (2003) suggestion that entrepreneurial activity is the most important source of new opportunities by adding the possibility that entrepreneurs will "under-exploit" an opportunity owing to errors in their entrepreneurial strategy; such under exploited opportunities are available to others to pursue. This suggests, the authors conclude, that a theory of opportunity should distinguish between those opportunities that are genuinely new and those that are under exploited instances of opportunities already in existence. They also highlight the matter of language or semantics (e.g., "new means-ends") as another of the central challenges of identifying and theorizing about the sources of opportunity.

IV. LESSONS LEARNED

Even though it would be difficult to find scholars from economics or management who would challenge the argument that entrepreneurial opportunity is important, one would be equally pressed to generate anything close to a consensus regarding (a) what entrepreneurial opportunity is and (b) from whence it comes. With the luxury of hindsight, we believe that one of the most important contributions emerging from the workshop and this special issue is an understanding of why consensus regarding the opportunity construct is so elusive. We briefly explore what we consider to be three of the most important reasons for the confusion: (1) the "objectivity" of opportunity, (2) the perceived importance of one particular individual in determining the direction of the social world and (3) what distinguishes the sub-class of "entrepreneurial" opportunity from the broader category of opportunity in general.

IV.1. What Makes an Opportunity "Objective"?

Opportunity is an inherently interdisciplinary topic. Human action is studied by economists, psychologists, sociologists, and a range of more applied fields including strategic management, organizational psychology, and entrepreneurship, to name only a few. Each of these disciplines, to a varying degree, consists of studies built on some conceptualization of rational choice (including examinations of deviations thereof). Consequently, human actors are often assumed, explicitly or implicitly, to engage in teleological (goal-oriented) behavior. Regardless of whether these theories are logical - viewing rational choice predominantly from the actor's perspective - or positive – taking the perspective of the system while assuming rational actors who predictably respond to the incentives provided by an objective environment (Buchanan, 1999), opportunity plays a fundamental role in allowing individuals to advance their goal pursuits.

It would seem that the notion of opportunity only makes sense in the teleological context of goal setting and goal striving. That is, opportunities are always an opening to do *something* and are, therefore, "means" to an end. However, these ends are often means in and of themselves. This observation may provide insight regarding a growing controversy concerning whether opportunities are objective or subjective in nature. Deliberations of the workshop participants and a careful reading of the articles in this special issue suggest that research could benefit from delineating between (a) objectivity as generalizability, (b) objectivity as accuracy, and (c) objectivity as timelessness.

IV.II. Objectivity as Generalizability

To the extent that either the end (goal) or the means (opportunity) can be generalized, an opportunity will be seen as being "objective." By "generalized," we mean that the existence or description of the opportunity is not dependent or contingent on a specific situation, environment, or individual. In this sense, opportunity may be generalized along two dimensions. First, as the number of individuals that share a goal increases, the more likely it is that an opportunity will be seen as objective. For instance, a scholarship for free college tuition might be seen as an objective opportunity because of the pervasiveness with which members of society share the goal of getting an education. Second, the more applicable the opportunity is in advancing a wide variety of goals, the more likely it is to be seen as objective. The pervasiveness with which the goal of a college degree is sought, for example, is due to a college education's ability to serve as the means to a considerable variety of ends (higher income, prestige, cultural literacy, etc.).

Gradients of objectivity exist even within a particular discipline. For instance, neoclassical economists tend towards complete generalizability by viewing individuals as instrumentally rational (North, 1990). At the other end of the continuum are radical subjectivists, such as Shackle (1979) and several Austrian economists (e.g., Ebeling, 1986). Finally, institutional economists tend to fall somewhere in-between these extremes, viewing individuals as substantively (Simon, 1983) or procedurally rational (North, 1990) and proposing that institutions are responsible for preventing randomness of error in individual preferences.

In our opinion, the perspective taken by Casson and Wadeson as well as Companys and McMullen helps shed some light on these complex but important issues. In the case of the former, Casson and Wadeson take a strongly objective point of view by describing opportunity as a project not in operation while making no claim that the opportunity's existence is dependent on any specific factors. Companys and McMullen, in contrast, suggest that, at least in some cases, opportunities are defined on the basis of shared meaning or social network structures. A comparative reading of these two articles, as well as the others in this special issue, serves to highlight the differences in outcomes described by theories built on differing assumptions of what is and what is not objective.

IV.II. I Objectivity as Accuracy

Objectivity may also be a function of whether profit potential is realized. This usage of the term equates objectivity with accuracy between expectations and subsequent events. Consequently, if an opportunity is seen as an alternative course of action that allows one to remove some discontent from his life more cost effectively than existing activities, then this opportunity is a belief that time may or may not reveal as justified. If the belief in profit potential turns out to be a realization of profit, then one's subjective belief is arguably verified to be an objective fact. One can then view this "accuracy" as perceptual acuity in predicting an inevitable future (Mises, 1949) or successful enactment as the result of either serendipity or accurate assessment of what can be influenced given one's ability and access to resources (Weick, 1979). Consequently, an opportunity is viewed as objective when action reveals that a subjective belief in an opportunity was "correct." The potential for an error in judgment implies the existence of some benchmark or ideal against which to measure the accuracy of the judgment. As long as it is possible to debate the extent to which an entrepreneur's judgment or belief about the future value of an opportunity is right or wrong, there is debate regarding to what extent the opportunity is an objective construct. This poses a question for future research: is it possible for scholars to determine or define the benchmark or ideal against which to gauge the accuracy of entrepreneurial action? The article by Plummer, Haynie, and Godesiabois would suggest yes and that doing so is a particularly important step in developing a theory of opportunity.

IV.II.II Objectivity as Timelessness. Finally, objectivity can be debated based on whether the nature of the opportunity concerns fixed natural relationships of cause and effect that are consistent with physical laws of nature or is representative of fleeting, societal patterns that may change over time. These natural relationships tend to be timeless principles that also have market potential, such as technical or technological advancements. In this context, opportunities might be objective in the sense that they are "timeless" revelations of physical nature as opposed to contextually dependent revelations of mercurial human nature subject to the fads of an era or cultural conditions at a specific period of time. Thus, the market value of the opportunity may change as the novelty of the opportunity diminishes, but the fact remains that an improvement in productivity is discovered through a revelation of natural laws. This "natural law" view of opportunity is taken by Mark Sanders who contends that growth and opportunity are the outgrowth of creation of objective and explicit scientific knowledge. This notion, to varying degrees, is also reflected in the papers by Benstorf and Mueller in which progress is an outcome of objective advances in knowledge.

IV.III How Important is Any One Individual to Determining the Direction of the Social World?

The above observations suggest that opportunity is a concept that finds its meaning in the context of human action. Scholars of concepts such as competitive advantage are likely to be studying generalized ends – i.e., multiple parties that are pursuing the same end. Perhaps, this contributed to the field of strategy's early bias towards positivism, viewing resources as objective, measurable, elements of action. Opportunities are then seen as objective because they constitute scarce means to this end that are available to multiple actors. Thus, studies primarily involve between-participant phenomena and consequently the theorist's point of view tends to be at the level of the activity rather than the level of the individual that is contemplating the activity. Buchanan (1999) notes that these "positive" economic theories conflict with "logical" economic theories, such as those that favor the individual as the unit of analysis.

For instance, scholars of concepts such as judgment and decision-making are more likely to address the idea of opportunity as "properly-justified" belief. Whether it is the accuracy of the belief or its ability to motivate a self-fulfilling prophecy largely depends on the philosophical assumptions of the scholars studying the subject. These philosophical assumptions can be as fundamental and profound as whether human action is governed by free will or determinism. Does the theorist believe the path of society will inevitably unfold in a particular way regardless of the contributions of any one particular actor? If so, one may view successful entrepreneurs as being better at predicting the future than either unsuccessful entrepreneurs or members of the general population who do not even attempt to act? Under this scenario, emphasis is on which qualities allow some but not others to notice these structural opportunities awaiting exploitation? For instance, do particular abilities or types of knowledge act as isolating mechanisms that prevent everyone from seizing an opportunity?

In contrast, if the direction of the social world is believed to be there for the taking, then successful entrepreneurs may be conceptualized as some type of Nietzchean supermen who impose their will on the world more efficaciously than others. But, are motives really that different? Do only a few have the desire to create an empire, as Schumpeter (1934) suggests? If so, are we to assume that the supply of entrepreneurial talent is steady and independent of environmental conditions? Just how different are individual ends? Do most people seek the same ultimate ends of pleasure, power, or meaning, as Freud, Adler, and Frankl, would respectively have us believe? And even if there were only a few absolute ends, would this necessarily imply anything about the generalizability of the means sought in achieving those ends?

Finally, the conceptualization of opportunity as objective in nature when it refers to the discovery of *natural* laws of cause and effect will appeal to scholars of technology and innovation management and growth theorists who are often interested in real productivity gains, which they believe yield the economic growth that is responsible for the wealth of nations and the eradication of absolute poverty.

Whether addressing objectivity as generalizability, accuracy, or timelessness, the fact remains that opportunity finds its meaning in the context of human action, and human action occurs within the flux of time, making it inherently uncertain (Mises, 1949). Thus, it seems that one cannot have opportunity without uncertainty, but because the human condition is characterized by the passage of time, there will always be uncertainty, and therefore, some form of opportunity. Thus, for various proposed reasons individuals appear to experience this uncertainty differently as a function of knowledge, motivation, ability, geography, etc., enabling some but not others to act.

It has most likely become abundantly clear by now that this special issue has probably raised more questions than it has answered. As Companys and McMullen's paper observes, many of the questions broached begin with philosophical assumptions regarding human nature and social exchange. However, it seems clear that opportunity is typically viewed as an alternative activity – or in the case of Casson and Wadeson's paper, an alternative project – that is believed to promise profit in whatever endeavor the entrepreneur is pursuing. The question then becomes largely a matter of what level in the hierarchy of meaning one is addressing. That is, almost every end is the means to some higher end until one reaches his or her "highest goal" (Ray, 2004). This introduces a whole host of conceptually confusing issues regarding whether opportunity refers to a simple act that can take place in a moment's time (e.g., Kirzner, 1973) or whether opportunity refers to an entire action sequence encompassing acts that encompass acts that encompass acts, and so on, until the activity or project is complete.

Therefore, an issue arises regarding whether an opportunity refers to a goal that is believed to be superior to one's current course of action or whether opportunity refers to the environmental conditions that are necessary for the conversion of a goal or intention into actual behavior. Because human action is often sequential and hierarchical, such that certain decisions and actions are necessary precursors of others and subsequent acts only make sense within the context of prior decisions and actions, the notion of opportunity can encompass both a goal and the "ingredients" necessary to achieve it. Are both of these concepts of opportunity necessary to study human action in general and entrepreneurial action in particular? And, do the various conceptualizations of the opportunity construct presented above preclude, reinforce, or overlap each other?

IV.IV What Makes an Opportunity an Entrepreneurial Opportunity?

The challenge of establishing anything close to an interdisciplinary consensus regarding opportunity notwithstanding, it may be far more important for scholars to simply take a stance on this issue and then clearly articulate their position and definition of what is and is not an opportunity. Indeed, this may be the *most* important step; it is clear to us from the workshop and this special issue that no discussion or debate to resolve theoretical inconsistencies and gaps regarding opportunity can begin without the discussants first defining what they mean by the words "entrepreneurial opportunity." By designating the meaning of the adjective "entrepreneurial," scholars may begin the march toward clarifying the issues and away from obstacles that are attributed to ambiguity in language or philosophically intractable differences.

Owing, perhaps, to a similar point of inspiration (e.g., Shane & Venkataraman, 2000; Shane, 2003), most of the articles in this special issue conceptualized the entrepreneur as a function, and therefore equated an entrepreneurial opportunity with the generation of new goods or services. Using an economic lens, Casson and Wadeson defined entrepreneurs as "people who believe that they have lower information costs than other people" and argue that "[a]n entrepreneur becomes a specialist decision-maker when other people place their resources under the entrepreneur's control by lending funds, e.g., by investing in his firm." They go on to define an opportunity as "a project which would form part of the optimal set [if information *were not* scarce] but which is not in operation [because information *is* scarce]." These projects generate "goods and services." Therefore, Casson and Wadeson limit their notion of opportunity to entrepreneurial opportunity by discussing only projects that generate goods and services.

Similarly, Companys and McMullen propose, "…an *entrepreneurial* opportunity is more accurately described as an opportunity to engage in entrepreneurial action, in which *entrepreneurial* denotes a sub-class of some broader category of human action. Because all human action is arguably motivated by profit (Homans, 1974), the adjective entrepreneurial is used to qualify the manner by which this profit is sought – i.e., through the introduction of new goods or services." They go on to point out, "This is consistent with Shane and Venkataraman (2000) who borrow from Casson (1982) to define entrepreneurial opportunities as objective situations that entail the discovery of new means-ends relationships through which new goods, services, raw materials, and organizing methods can be introduced to produce economic value."

Sanders continues the delineation of entrepreneurial opportunity according to the generation of new goods and/or services. He observes,

> …the opportunity for a new product can be broken down into constituting bits of knowledge and by definition only emerges when all of its knowledge-components exist. Only when an entrepreneur (firm or person) has the vision to bring together all pieces of required and helpful knowledge and combine them with the financial, material and human resources needed to develop the idea into a product (improvement) is an opportunity being developed into a product. The latter activity is mostly profit driven but presupposes that the knowledge, finance, and resources are available. And even then history shows that it is the market and a considerable share of luck that determines which innovations succeed and which fail.

Similarly, Buenstorf articulates notions of opportunity according to Austrian economics who view the "pure entrepreneur" as a "hypothetical analytical device whose '*entire* role arises out of his alertness to hitherto unnoticed opportunities' (Kirzner, 1997: 39, emphasis in original)'" and compares them to other explanations, such as that offered by Schumpeter. Buenstorf notes,

> …while the Kirznerian entrepreneur discovers and pursues opportunities that exist within the economic sphere (and are reflected by the price system), the Schumpeterian entrepreneur discovers and pursues opportunities that exist outside the economic sphere (and are not yet reflected by the price system).

Within their respective literatures, these opportunities are understood to concern the generation of new goods and services, which either move the system toward or away from equilibrium.

Finally, the articles by Plummer, Haynie, and Godesiabois and Mueller share the notion that entrepreneurial opportunities are opportunities to generate new goods or services, but Mueller deviates somewhat by adding the element of starting a firm. She notes, “Starting a firm in order to realize an entrepreneurial opportunity is assumed as a mechanism for knowledge diffusion and for the exploitation of knowledge.” Ultimately, however, the firm is started with the purpose of introducing a new good or service.

V. FUTURE DIRECTIONS

The answers, issues, and questions broached above stimulated debate at the conference which led to the emergence of three important issues that remain largely unanswered by the papers of this special issue: (1) from whence do entrepreneurial opportunities come, (2) if the agent (organization) who exploits an entrepreneurial opportunity is not the same as the agent (organization) who was responsible for its creation, then how does he or she become aware of it, and (3) why are new firms necessary to exploit entrepreneurial opportunities? These questions are suggestive of three potentially necessary but currently non-existent theories. First is a theory of entrepreneurial opportunity, which seeks to explain the source of commercializable new knowledge. Second is a theory of knowledge spillovers which seeks to explain how agents who are not responsible for bearing the costs of creating new knowledge may come to enjoy its benefits in terms of the entrepreneurial opportunity it provides them. Finally, a theory of the emergence of the firm is necessary to explain why the creation of new knowledge does not simply take place within the confines of existing organizations. These interrelated questions seem to be inadequately addressed by the economics and management literatures.

Assume, for example, that the economy is in disequilibrium and that opportunities are objective, as many Austrian economists would suggest (Kirzner, 1973). In this scenario, entrepreneurial opportunities are datum that exists within the price system (tastes and technology are given and the entrepreneur operates under conditions of risk but not necessarily uncertainty). Entrepreneurs are agents who are alert to disequilibrium profit opportunities, and a new means end vehicle, such as the creation of a firm, may not be required. The emphasis is on the individual exploiting the opportunity. His or her action, in turn, creates an opportunity within the price system for the next entrepreneur, and so on. The objectivity of entrepreneurial opportunities is therefore a matter of arbitrage (exploitation) rather than the creation of new knowledge. Consequently, entrepreneurial opportunities are objective and the recognition and exploitation of them is subjective. Moreover, opportunities (in terms of commercializable new knowledge) need not be created, but merely discovered, according to the predominant Austrian view (i.e., Kirzner, 1997, Shane 2003).

In contrast, the issue becomes more complex under a Schumpeterian approach. First, opportunities do not exist as part of the market because they are outside of the price system. Most of the conference participants agreed with Schumpeter’s notion that some entrepreneurs act at the interface of the economy and various other domains, such as science, to introduce new knowledge to the economy and create demand where it did not exist prior to their efforts. This distinction between science and the economy, though conceptually helpful, may become increasingly problematic as existing firms engage in science for profit, i.e., R&D. Is this the creation of an entrepreneurial opportunity?

Human action may be required to create opportunities – i.e., R&D – but the person who creates the opportunity does not have to be the same person responsible for exploiting it. According to Hebert and Link (2007),

> …under uncertainty-based theories entrepreneurs do not so much discover profit opportunities as create them, often through their organizing efforts (Alvarez and Barney 2005, p. 788). Among the ironies revealed by their research, Alvarez and Barney recognize that because the condition of uncertainty is often not stable over time, the bases of organizing entrepreneurial firms are not likely to be stable over time. In particular, uncertainty-based firms may turn into risk-based firms once the probability distribution of outcomes associated with uncertain exchanges are learned through experience. Entrepreneurial firms, in other words, may be temporary, but their persistence is nevertheless a prerequisite for the continual development of economic firms.

As a result, opportunities (commercializable new knowledge) are *created* if the agent who bears the costs of R&D is also the agent who exploits the value that his or her R&D investment creates. In contrast, if the agent who exploits the opportunity is not the same as the agent who created it, then the opportunity that was created must also be discovered. Indeed, if the exploiting agent and the creating agent are different, then the opportunity may be objective and the discovery subjective and a theory of knowledge spillovers may be necessary to explain exploitation. Therefore, it may be imperative for the entrepreneurship scholars to address the question: are entrepreneurial opportunities endogenous or exogenous to the existing price system?

Whenever the exploiting agent and the creating agent are one in the same, the likelihood that one will need a new means-end vehicle, such as a new firm to exploit the discovery seems less likely. Presumably, exploitation could take place within the confines of the existing organization because of the interrelated nature of the knowledge created and the activities necessary to exploit it. However, when the creating and exploiting agents differ, it would seem that the likelihood that a new firm will be necessary to exploit the opportunity would increase.

Numerous possible answers come to mind, but review of the literature suggests few theories that explain the need for the emergence of new firms. Thus, discussions at the conference suggest that as many as three new theories may be needed to tackle some of these issues: (1) a theory of entrepreneurial opportunity (that explains how the sources of opportunity outside the market find their way into the market), (2) a theory of the emergence of the firm (that explains why entrepreneurial opportunities are not simply exploited by existing firms), and (3) a knowledge spillover theory of entrepreneurship (that explains how those who did not create the entrepreneurial opportunity are able to exploit its benefits).

VI. CONCLUSION

Our experiences from participating in the conference, and then serving as guest editors, for this special issue have taught us a great deal, while simultaneously underscoring how much work is needed before we can fully understand the important concept of entrepreneurial opportunity. Despite the fact that each of the papers sought to delineate entrepreneurial opportunities from the broader class of opportunities for human action in the same way, a considerable amount of variance in perspective characterizes the pages that follow, showing that even when scholars agree on the end – discussing the nature and source of entrepreneurial opportunity – the means of how best to achieve this goal may still diverge significantly.

This suggests that the road forward is likely to be bumpy, subject to confusion over assumptions and terms and likely to elicit substantial debate regarding what is and is not an important topic for further inquiry. This may discourage the more timid scholars among us, who wish to pursue research interests with a higher likelihood of payoff in terms of publishable research, leaving the study of topics such as entrepreneurial opportunity and entrepreneurial action to the more entrepreneurial among us. However, because the combination of novelty and utility promise significant profits for the individual willing to create (Amabile, 1996; Lepak, Smith, & Taylor, 2007), there appears to be significant incentives for scholars who wish to make a contribution to the scientific community to bear this uncertainty (McMullen & Shepherd, 2007). Therefore, although a fog of uncertainty still remains around the topic of entrepreneurial opportunity, we believe that the articles in this special issue illuminate the beginnings of various paths forward, paths leading to greater insight into important subjects ranging from personal fulfillment, to competitive advantage, to economic growth and development. Enjoy the journey!

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