

TOWARD CONCEPTUAL CONSISTENCY IN THE FOUNDATIONS OF ENTREPRENEURSHIP

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ABSTRACT

The study of entrepreneurship is still in its infancy. Kuhn (1962) points out that fields of knowledge evolve through paradigm competition and the search for better answers to new sets of inquiries, in which the maturing field of entrepreneurship, too, should be engaged. Barriers to evolutionary advances in entrepreneurship include the field's uneven development, its lack of consistency of terminology or method, and its relative isolation from developments in key informing fields. To avoid fragmentation and to enhance the opportunity for the systematic development of the entrepreneurship paradigm, we suggest exploring its parameters. Considered are three concepts which, while central to entrepreneurship, have previously been under-examined in an integrated fashion by entrepreneurship researchers. The intent is to explicate their separate and joint conceptual relationships to and means by which they inform or add to the field. A rudimentary process model addressing the factions of change, innovation, and creativity in association with the entrepreneurial event is presented as a fundamental basis for providing continuity and structural consistency to the evolving field of entrepreneurship. Finally, a call is made for careful definitions and explorations of differentiated (but oft-equated), central entrepreneurial terms, processes, and perspectives.

*It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.*

*The First approached the Elephant,
And happening to fall
Against his broad and sturdy side,
At once began to bawl:
'God bless me! but the Elephant
Is very like a wall!'*

*The Second, feeling of the tusk,
Cried, 'Ho! what have we here
So very round and smooth and sharp?
To me 'tis mighty clear
This wonder of an Elephant
Is very like a spear!'*

*The Third approached the animal,
And happening to take
The squirming trunk within his hands,
Thus boldly up and spake:
'I see,' quoth he, 'the Elephant
Is very like a snake.'*

*The Fourth reached out his eager hand,
And felt about the knee.
'What most this wondrous beast is like
Is mighty plain,' quoth he;
'Tis clear enough the Elephant
Is very like a tree!'
The Fifth who chanced to touch the ear,
Said: 'E'en the blindest man
Can tell what this resembles most:
Deny the fact who can,
This marvel of an Elephant
Is very like a fan!'*

*The Sixth no sooner had begun
About the beast to grope,
Than, seizing on the swinging tail
That fell within his scope,
'I see,' quoth he, 'the Elephant
Is very like a rope!'*

*And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!*

So, oft in theologic wars,

*The disputants, I ween,
Rail on in utter ignorance
Of what each other mean,
And prate about an Elephant
Not one of them has seen!*

“The Blind Men and the Elephant”, translated by John Godfrey Saxe, is a Hindu fable which occurs in the Udana, a Canonical Hindu Scripture.

INTRODUCTION

As entrepreneurship researchers, we may be not unlike the blind men in the Hindu fable, grappling with the reality of an elephant, yet forming a very different concept of its nature, because each comes to the task from a differently-conceived viewpoint. In retrospect, we may have contributed to more confusion in than convergence toward a unified theory of entrepreneurship. Have we have rushed to investigate first one, then another of this complex phenomenon’s facets? Have we idiosyncratically defined our studies to meet pet interests without first clearly elucidating the phenomenon of entrepreneurship and relating its association to overlapping concepts which have long existed as fields of study in their own rights, outside

the realm of business literature? Have we been remiss in defining clearly the constructs or phenomena being studied? Have we built on and extended previous work, or have we crafted an idiosyncratic (and non-comparable with previous work) definition or study? While growth is a sought-after condition, the consequence is sometimes discontinuity in aim and lack of unity with previous work.

Significant conceptual contributions have been made by researchers in the entrepreneurship domain; yet the knowledge so generated has not always contributed to the development of a coherent research stream that advances the field. In earlier studies, the focus has been on the individual characteristics and personality traits of entrepreneurs, largely within the context of small businesses (Diffley, 1982; Hisrich & O'Brien, 1982). Over the past decade, the field has seen considerable expansion into such disparate arenas as corporate entrepreneurship, macro environmental linkages, international entrepreneurship and career alternatives. Are these truly expansions of a central entrepreneurship phenomenon or are they, for the most part, unrelated applications of entrepreneurial concepts to other fields such as organization theory, international management, or human resources? If the former, they must be based on – and inform – a commonly-agreed-to construct of entrepreneurship; if the latter, their contributions accrue mostly to the dominant areas of study to which they offer extension or new application, not to the field of entrepreneurship.

Following this argument, then, what becomes crucial is a unified perspective on entrepreneurship as a field of study, as a phenomenon, and as a vehicle for developing and improving the performance of entrepreneurs. Agreement on the content of a field of knowledge – including its theories, methods, beliefs of causality, and standards – is important in the development of the field through its paradigms (Kuhn, 1962). Mackenzie and House (1978) observe that,

Paradigms help organize the processes of science. They provide direction for its development and help sort out facts in terms of their relevance. In the absence of a paradigm, all facts are more or less relevant and this gives the appearance of randomness to those gathering the facts.

The cumulation of knowledge requires an organizing framework upon which the facts and ideas are organized. (pp. 7, 8)

Common perspectives and agreed-upon methods are important for developing consistent scientific advances; without them an emerging field, especially, will consist of a series of idiosyncratic or personalistic interpretations without the means for independent verification by other researchers. Any paradigm demands a commonly-agreed structure; with numerous variables employed in the absence of such a organizing structure, agreement by observers and researchers on what is investigated will be difficult to attain. Wortman (1987) decried the emerging fragmentation of the field of entrepreneurship; in addition to lack of integration and the cultivation of distinctive research routes, he noted that entrepreneurship studies were suffering from content issues, nonrigorous statistical applications, and lack of practical significance. As a solution, he developed a comprehensive outline or framework for entrepreneurial studies which might be described as a fundamental base of operations for future work (Wortman, 1992). In an effort to explain the field's lack of continuity, Gartner (1989) and Wortman (1987) have noted that research in entrepreneurship is exceedingly difficult to do well because of the complex nature of the field. Particularly challenging, say Gartner (1989) and Wortman (1987), are decisions related to the independent variables that ought to be studied, the ways these variables should be operationalized, the most appropriate approaches for gathering data, and the techniques that should be used to analyze the data. The unit-of-analysis issue and the question of generalizability further complicate the investigation of entrepreneurship.

As an aside, it could be argued that the field is suffering "growing pains" not unlike the birth and growth issues experienced in other disciplines. However, we argue that the genesis of the resulting fragmentation may reside in comparatively basic and heretofore unresolved issues. The fragmentation may stem from failure to clearly articulate a workable definition of the phenomenon of entrepreneurship, coupled with its relationship to distinctly different, but overlapping, concepts. In this regard, entrepreneurship scholars may be very similar to the Hindu wise men in the poem, seeking to understand the elephant, each from his or her specific and differentially conceived viewpoint.

Despite the foregoing observations and the difficulties inherent in the study of entrepreneurship, progressive changes have occurred; the field of entrepreneurship has been fashioned into a more fully integrated and useful discipline. Within the last five years, the field has witnessed the development of more inclusive conceptual frameworks and the utilization of sophisticated statistical techniques. The publication of conceptually consistent and methodologically rigorous articles in scholarly academic journals is becoming more of a frequent occurrence. Nonetheless, we are not convinced that the field has reached its full potential as a field with substantive managerial applicability. It is hoped that the identification of difficulties with terminology and integration with other fields might provide a first step towards deepening our understanding of entrepreneurship while reaping the benefits of cross-disciplinary research.

A comprehensive treatment of the field of entrepreneurship is clearly a formidable task, since entrepreneurship is rooted in a myriad of sociopsychological disciplines and draws extensively from all business functional areas. Yet there are a few foundation concepts which define the field; their consistent definition, treatment, and application is likely to minimize semantic confusion and inter-study inconsistencies of results. Entrepreneurship cannot be analyzed nor incisively mapped without some proper, overdue exploration of its influences, processes, and parameters.

PURPOSE

From the preceding introductory remarks, one may infer that we are attempting to encourage the development of the field of entrepreneurship through three specific calls for action:

- (1) for researchers to consider and include within their studies and writings explicit treatments of foundational related areas of inquiry;
- (2) for researchers to conscientiously and deliberately build on previous research streams, and include explicit, operationally-verifiable definitions of the phenomena considered; and
- (3) for researchers to differentiate among the several manifestations of entrepreneurship and study them within frameworks that identify their commonalities as well as their unique processes and influencing factors.
- (4)

In the rest of this paper, we address these calls for action, identify and explain the contents of the opportunities they present, and offer recommendations by which they might be implemented.

A FISSURE OF THREE FIELDS

Particularly since the study of entrepreneurship is still in its infancy, some care should be taken to delineate its parameters so that the field escapes counterproductive divergence and fragmentation. We have selected for examination three concepts key to understanding entrepreneurship in a practical context. Although integral components in the entrepreneurial process, the concepts of change, innovation and creativity have been largely ignored by entrepreneurship researchers and *vice versa*. Instead, the three areas are each characterized by their separate, isolated research streams; indeed, studies of change, innovation, and creativity have existed for decades, predominantly in the psychology literature. Researchers are taught that good studies are conducted within carefully-constrained boundaries within which few variables are allowed to change, and that endogenous effects should be eliminated because of their contamination effects; as a result, studies have too often focused exclusively on detailed processes, concepts or applications, without treating important linkages situated within broader-based frameworks. Thus, fields that are potentially mutually-informative and -reinforcing are theoretically segmented and ultimately lack strength in practical applications.

The relationship of entrepreneurship to change, creativity and innovation as well as separate factions of entrepreneurship (e.g., the entrepreneurial process and event) has not been rigorously examined with an eye towards operational definitions and eventual managerial applications. This is an important issue because entrepreneurship has the potential to evolve as an even-more promising management research field. Dynamic global conditions and hostile environments create a necessity for the flowering of visionary start-ups as well as adaptive mature organizations. Our intention, however, is

not to develop a full-scale or integrating model of entrepreneurship; we leave that to others. Rather, our purpose is to provide a means for the important integration of related fields whose interrelationships and new consequent insights may ultimately lead to a robust and practice-centered theory of entrepreneurship. As a beginning small step, based on our interpretations of the literature a simple process model (see Figure 1) was extracted from the literature on and descriptions of entrepreneurial events, to illustrate the parameters of entrepreneurship. Our discussion of the model will highlight the relationship of separate areas of research, formerly displayed outside the business literature, to the entrepreneurial event.

Figure 1 about here.

The importance of studying entrepreneurship through the solidification of broader parameters that encase complementary fields cannot be overstated. At a minimum, the conceptual exploration of a rudimentary process model may facilitate studies within and across the three arenas of entrepreneurship, innovation, change, and creativity through (1) a gleaning of relevant information from related fields without reinventing the wheel, and (2) a movement to strive for greater consensus of terminology. The second issue is not unimportant nor a question of arguing semantics. It is somewhat informally accepted in the field of entrepreneurship that scholars may create their own suitable definitions for entrepreneurial activities or events (within some clearly defined boundaries) which, unfortunately, however, translates to difficulties in integrating studies and fashioning a useful research stream.

A Contribution to the Blending of Fields

In order to better understand the multi-faceted phenomenon of entrepreneurship and to integrate studies within the discipline, a new perspective was taken in which an entrepreneur was defined as anyone starting an organization or working within the confines of an organization who “pursues opportunities without regard to resources currently controlled” (Stevenson & Jarillo, 1990). Thus, an overarching rationale is provided within which differing definitions of entrepreneurship are legitimized: with the focal point being the risk-taking, organization-establishing individual; as an organizational-level phenomenon not limited to starting a new organization or even to internal corporate venturing; as systems of actions and influences by which to infuse the individuals within an existing organization with opportunity-seeking values and behaviors; and finally, as a systematic set of individualistic decisions, influences, and behaviors associated with opportunity-seeking.

Emphasis shifted from descriptions of entrepreneurial activity to considering the levers available to organizations for proactively building systems that engender entrepreneurial activities. For example, Covin & Slevin (1991), Zahra (1991, 1993), and Hornsby, Naffziger, Kuratko & Montagno (1993) created progressive unifying frameworks in the entrepreneurship field that address external environmental conditions sparking entrepreneurial organizational postures, critical cultural elements associated with an entrepreneurial orientation, stumbling blocks for implementation, and links between entrepreneurship and organizational performance. The aforementioned frameworks have substantially advanced the field of entrepreneurship through judiciously readjusting the lens of entrepreneurial events to capture its detailed complexity. Ironically, however, creating a more finely-grained model by including more process variables of direct relationship to the dependent variable may have led to the unintended consequence of isolating the entrepreneurial phenomenon from consideration of effects of other, major factors from other related fields and, consequently, unwittingly limited topics for research.

Given the inherent interrelatedness of entrepreneurship, innovation, and creativity, one would expect there to have been a natural and conscious blending of research interests, results, methodologies, and diverse applications; yet each field is neatly compartmentalized with little cross-pollination. For example, creativity is rooted firmly in psychology, and innovation has primarily been examined in the fields of technology and engineering (Ford, 1996). We posit the next stage of the evolution of the entrepreneurship field may include a more holistic orientation, to include relevant concepts, topics, and selected information from the fields of creativity, change, and innovation. Grasping the fundamental questions of the creative process, articulating the various dimensions within which entrepreneurial change occurs, along with learning how to design innovative products and services

from previous work in other fields, could ultimately keep entrepreneurship researchers from reinventing the wheel.

Striving for Greater Consistency in Terminology

As separate fields, entrepreneurship, innovation, change, and creativity are currently suffering from a lack of consensus regarding pertinent terminology. Typologies or classification schemes detailing differences in entrepreneurial events as the outcomes of various couplings of individual and organizational factors have not resulted in any widely held belief regarding the characterization of entrepreneurship (Lumpkin & Dess, 1996). Consequently, a "broader theory of entrepreneurship" has not been postulated.

Likewise, while the field of innovation has progressed, it has been stated that, "The most consistent theme found in the organizational innovation literature is that its research results have been inconsistent" (Wolfe, 1994). Here, part of the problem has been attributed to a failure to clearly identify innovation characteristics, the stages of the innovation process, and the types of innovation studied (Abramhamson, 1991; Damanpour, 1991). Finally, some discussions of creativity perceive it as interchangeable with innovation, while other scholars argue that creativity is one integral part of the innovation process (Ford, 1996). No wonder that research results oftentimes are notable and worthy as stand-alone projects, but are self-contained regarding issues of generalizability and integration.

CURRENT VIEWS OF ENTREPRENEURSHIP

Entrepreneurial activity stems from an imbalance between the potentiality of something new and its realization, that is, the creating of an exploited opportunity where none existed previously, by one or more individuals. The core of entrepreneurship, both individual and corporate, is this pursuit of opportunity (Stevenson & Jarillo, 1990). One way of viewing entrepreneurship is through the emerging consensus in the field that the boundaries of entrepreneurship embrace an incremental innovation process (Pavitt, 1991) which eventually triggers an entrepreneurial event (Bygrave, 1989; Bygrave & Hofer, 1991), or a meaningful change and substantive redefinition or discovery of commercial value or application.

Another way of viewing entrepreneurship is to recognize that entrepreneurship is enabled by (a) the current or potential existence of something new (an innovation), (b) which may have been developed by new ways of looking at old problems (creativity), (c) or the lessened capability of prior processes or solutions to respond effectively to new problem parameters brought on by new or emerging external conditions (environmental change), (d) which can supplant or be complementary to existing processes or solutions (a change), (e) when championed by one or more invested individuals (the innovator). This latter perspective highlights the central roles played by change, innovation, and creativity.

Radical innovations (defined later) and their exploitation are defined as classically entrepreneurial events; it is not so clear-cut that stand-alone incremental innovations and their exploitation also may be labeled as entrepreneurial activities. This is an important distinction for academicians. Different researchers might attach opposing labels to events. For example, some scholars might label only discontinuous changes as entrepreneurial events, making such events a rare occurrence relative to the more common incremental innovations. Different organizational cultures, processes, and reward systems might emerge as differentially advantageous for radical and for incremental innovations. While the aforementioned logic represents a useful step in the development and articulation of core concepts in entrepreneurship, further refinement and clarification is necessary to carefully elucidate critical aspects of the phenomenon of entrepreneurship, as well as those of its relationship to the concepts of change, innovation, and creativity. Each concept will be examined and explored with reference to Figure 1.

ATTEMPTS TO MEND THE FRAGMENTATION

An awakening to embrace the entrepreneurial spirit, meaning motivation to pursue entrepreneurial activities, originates with turbulent and dramatically changing external organizational environments. In response to dynamic conditions, individuals or organizations may identify or impact opportunities for entrepreneurial activities. Economic recession, explosive industrial growth, technological breakthroughs, industry-wide restructuring -- these are but a few of the major changes that create the opportunity for entrepreneurial activities to arise. Thus, external environmental changes can be the impetus for launching the entrepreneurial process. Important characteristics of the process include a unique change of state, dynamism, and, certainly, initiation by human volition. The importance of human volition cannot be understated. Potential entrepreneurs must have an entrepreneurial mindset that enables opportunity recognition, and must perceive entrepreneurial activities as both desirable and feasible (Hisrich & O'Brien, 1982). This suggests an enabling economic and political ecostructure which does not impede small- and large-scale redeployment of resources in new ways, toward creative ends. Thus, as shown by the reverse arrow in Figure 1, innovations may bring about noteworthy external environmental changes.

The relationship of innovation, change, and entrepreneurial action tends toward the reciprocal. That is, dynamic economic conditions (for example) can create an opportunity for the innovation and change process to occur, which action in turn creates an innovation or change in outcome (meaning a change in product, service or commercial applications). As demonstrated in Figure 1, change and innovation are not mutually exclusive concepts; additionally, each may be conceptualized as both a process and an outcome.

Change

Change is generally considered in the entrepreneurship literature as being a precursor or antecedent of the entrepreneurial event. Definitionally, however, "change" encompasses alternative processes and, perhaps more importantly, has various loci of origination. *Environmental or external change* may consist of major transformations in the fundamental conditions within which organizations and individuals exist. (Examples include technological breakthroughs, economic recession or explosion, governmental (de)regulation, etc.). *Intermediate* levels of change may intervene between environment and individual or organization, as when an industry's value chain becomes disrupted and reorganized more efficiently because of new substitute products' becoming available through scientific advances (which latter would be defined as an environmental or external change). And other, more *micro or internal*, change forms may be observed in the accommodations organizations make in their operations and individuals in their activities to environmental or intermediate changes.

The point is that "change" is not the simple characterization of differences between one condition and another, separated by time alone; rather, it is useful to observe that the nature and locus of change affects powerfully the extent to which reactions at lower levels are rather more limited and reactive, or actions at lower levels are exploitive and proactive -- in terms of affecting an industry and its structure, the organization, the organization's component structural elements and processes, and the individual's ability to develop alternative products or services made potentially useful through the more macro-sourced change. In fact, environmentally-sourced change often seems to be assumed to be the precondition for the change (the new product or service) induced by the entrepreneur (defined at this stage as either an organization or an individual). That this is the case may be put into perspective by noting that an organization's technical core is attempted to be protected from disruption by external conditions through "buffering" (Thompson, 1967) when possible; when not possible to isolate the disturbance, the organization undertakes accommodations or attempts at a new equilibrium of organization-environment fit. Further, it may be less-well recognized that environmentally-sourced change is also the precondition for both innovation and creativity, processes that form the raw material for the entrepreneurial event.

In the generic sense, "change" typically is seen as positive, with inherent forward movement. While appearing to precede the potential entrepreneurial event, however, change may also have a less positive character, that being as backward movement, away from the status quo but towards traditional, bureaucratic procedures and stifling structural systems. For example, considerable downsizing in the defense industry in Southern California has resulted in long-term changes; these have led to an urgent

need for technology transfer and for innovative applications to be orchestrated (that is, for changed intermediate and internal conditions) by members of entrepreneurial organizations. This specific environment appears to be characterized by distrust of further restructuring and employee layoffs, as a result of the environmental changes imposed and organizational changes undertaken in response. Accordingly, it appears that the initial reactions of organizations in redeploying their assets and of organizational members seem to be that of regressing towards conservatism. From this sequence of logic, one may infer that, while change does appear to be a necessary prerequisite condition for entrepreneurship, the creation of change alone does not insure that entrepreneurial activities and behaviors will be forthcoming. Change then constitutes the broader set in which innovation may occur.

Further, change may be envisioned either as a process or an outcome. The process by which change is introduced, for example, and implemented leads to a new condition with distinctly different attributes, which new condition is the product or outcome of change -- *the change*. While very different in their attributes as a process or an outcome, the semantic potential for confusion when discussing "change" should be avoided by specifying which definitional condition applies. The change process may constitute backward or forward movement which results in an innovative (forward) outcome or a more traditional (backward) outcome.

Innovation

Innovation is traditionally defined as the successful implementation of creative ideas (Stein, 1974; Woodman, Sawyer & Griffin, 1993). Creativity is the point of origination for innovation; it is a necessary, but not sufficient, condition for innovation to occur (Amabile, Conti, Coon, Lazenby & Herron, 1996). Innovation, like change, may be conceptualized as either a process or an outcome. As a process, innovation often is depicted as continuous and cyclical, involving the stages of awareness, appraisal, adoption, diffusion, and implementation (Damanpour, 1991; Poole & Van de Ven, 1989). The innovation process may involve the refinement or modification of existing policies, procedures, product lines, and services, but these are not limitations to what may be innovated nor to the magnitude of the advance represented; the potential for innovation is beyond a minor refinement or modification, to the possibility for engendering uniqueness in attributes and outcome. The innovation process then necessarily involves the component of forward change. Thus, an innovation is a change that meets particular criteria, but a change need not be an innovation.

Literature addressing the innovation process has focused on such diverse topics as support services (Rosseau, 1989), user-friendliness of the innovation (Rivard, 1987), and handling employee resistance through job reassignment (Klein, Hall & Laliberte, 1990). The study of the innovation process is rooted in technology and often-times involves the implementation process for sophisticated computerized technology, such as three-dimensional computer-aided design and drafting (Klein & Sorra, 1996). Even psychological theories detailing conformity and commitment issues have been advanced (Kelman, 1961). Some studies have addressed the innovation process from a business perspective, including organizational cultures that facilitate the innovation process (Kanter, 1983; Kuratko, Montagno & Hornsby, 1990), and leadership styles conducive to an environment supportive of innovation (Quinn, 1985), yet more insights might be gained through cross-disciplinary research. Interestingly, inherent in the literature which treats its applications in business is the consistent theme that the innovation process is almost always fraught with obstacles and sometimes occurs in spite of the organizational context, rather than in response to heartfelt encouragement (Dougherty & Hardy, 1996).

When defined as an outcome rather than as a process, an innovation is the tangible product, service, or knowledge that is adoptable or diffusable, meaning it may be utilized in diverse contexts by different individuals (Ford, 1996). More broadly, however, the change in condition, process, outcome, or relationship which results from the innovation process itself may be either incremental or radical; as Henderson and Clark (1990) demonstrate, a series of incremental changes may result ultimately in dramatic changes, as in the case of Xerox Corporation and small copiers. The more radical or revolutionary kinds of innovations are termed "discontinuous" changes (Pavitt, 1991), innovations that cannot be graphically depicted by traditional linear models, that is, they are not simple extensions of historical improvements or advances in a technology. Instead, radical innovations are "frame breaking" in that they discard conventional technological processes and paradigms in favor of very different

insights into that which is changed. As a result, radical innovations require explanation through "chaotic" theories that allow for quantum leaps in conceptual thinking and events.

While innovations as outcomes may be incremental or radical in nature, when compared with their pre-innovation counterparts, it should be noted that there are other ways of classifying innovations. They have also be classified as administrative, technical, central, and peripheral (Damanpour, 1991), for example. For the purposes of this manuscript, we were less concerned with these classifications of the end-application or nature of the innovation, and more interested in incremental vs. radical innovations, whatever their applications or effects; we feel that this classification provides more powerful contingencies to the entrepreneurial event, as well as offering more immediately useful insights into the nature or definition of the entrepreneurial event, as follows.

Incremental innovations consist of relatively small modifications of, or refinements to, pre-existing processes or phenomenological states, and which typically are considered as occurring as discrete events scattered over time; thus, each incremental change may be considered less "creative", and less an innovation than a simple modification or improvement. It is possible, however, that the cumulative effect of a series of incremental improvements yields an end result which may meet the hallmarks of an innovation or a substantial and creative difference in the process or phenomenological state. Normally, however, such a substantial cumulative effect is not observed, for the incremental innovation is singular or the series of incremental innovations occurs over such a range of time as not to differ markedly with the industry state-of-the-art, which too has progressed.

Thus, the outcome of an *incremental* innovation process must be unique, by definition; but an incremental innovation is an extension or modification of pre-existing forerunners or models. The incremental innovation may be worthy commercially without further tinkering, or it may eventually trigger a radical or frame-breaking innovation. *Radical* innovations are "discontinuous" innovations; they represent dramatic departures from current ideals in design, application, and/or process. Illustrations are technological breakthroughs with no precedents or antecedents, ideas that originate in a blank slate, from *tabula rasa* to commercial success. The development of 3M's Post-It Notes® from a failed (too weak) adhesive is one example of the unpredictable leap of imagination that led to such an unanticipated, unprecedented product. Another might be the commercialization of the VCR or the fax machine, each involving the unexpected marriage of prior but unrelated technologies into a resulting product very different from its inputting technologies. Radical innovations are true quantum leaps in theory and application rather than the linear, progressive changes embodied in incremental innovations, game-winning grand-slam home runs rather than one or a series of singles, to use a baseball analogy.

The distinction between incremental and radical innovations is not moot nor mere semantics. Incremental innovations are the lifeblood of improvements in operations, cost control, and product or service performance, for example. As such, they are the *sine qua non* of any organization which intends to maintain a viable presence. For many thoughtful managers, the choice is not whether or not to have incremental innovations, but how to develop and manage ongoing processes for a steady stream of such innovations; incremental innovations are minima, not maxima. Incremental innovations may be seen as the bare minimum for keeping up with competitors and remaining in the competitive arena. True competitive advantage emerges from radical innovations. Interestingly, some organizations find that isolated or a number of innovations -- incremental and/or radical -- are not that unusual; what is difficult is creating and managing the prolonged or sustained process by which multiple innovations -- incremental and/or radical -- across multiple organizational levels at different stages of the innovation process; this is arduous and calls for system-wide changes (Dougherty & Hardy, 1996). Incremental and radical innovations are the outcomes of individual and/or organizational processes of different natures. Organizations systematically striving for revolutionary changes are usually structured into small multi-disciplinary work teams which are given consideration latitude to bring innovations to fruition. By contrast, traditional research and development departments generally underscore a short-term orientation, advocate incremental changes, and are not team driven, but are isolated within one department which itself is embedded in bureaucratic layers. Organizations which fail to incorporate the benefits of team dynamics are uniquely disadvantaged for several reasons, one being that creativity flourishes within well-managed teams, and another being they cannot build the necessary web of multi-

leveled sensory devices, important for tracking lucrative opportunities.

Radical innovations are also invaluable to organizations operating within an increasingly hostile marketplace as typified by today's economic conditions. Of urgent importance is promoting revolutionary innovations representative of new market niches; industry creation; and product, service or process reformulations. Radical innovations are further characterized by their potential for future importance for environmental events that might trigger legitimate business opportunities spanning the next ten years (Cornwall & Perlman, 1990).

Creativity

Creativity is the process through which invention occurs; that is, creativity is the enabling process by which something new comes into existence. Reaping the fruits of innovation begins with creative activities, such as brainstorming a series of potentially worthy ideas by individuals or teams who have perceived an opportunity for exploration (Amabile, *et al.*, 1996). Not surprisingly, the study of creativity is steeped in the traditional psychological themes of individual characteristics, personalities, and behaviors.

More recently, the scope of psychological studies has been expanded to include the social context of creative behaviors such as management style, and intrinsic motivational factors that might enhance creativity. Here again, we see potential for significant development in both fields through a conscious blending of the cognitive component of creativity and the entrepreneurial event.

Woodman, Sawyer, and Griffin (1993) consider creativity, when undertaken in complex social settings, to be a subset of innovation, which is in turn a subset of change. Not all innovations are creative, for some innovations are incremental changes or were developed by others and adapted for use locally. We view creativity somewhat differently, as a process which mediates the potential presented by external or environmental change and the entrepreneur's innovative response to the opportunity, as shown in Figure 1. The creative process then is the starting point or origin of innovation which sets into motion a series of events culminating in the entrepreneurial event. Creativity is a variable in its extent of creativeness, that being measured by how radical a departure the creation is from its antecedents or predecessors. At some point, one might argue that a creation and an innovation come close to intersecting: An innovation with a little more creativity changes dramatically into something creative and is no longer just an extension or modification or improvement of its antecedents. Creativity is also a function of situational attributes, including the skill, knowledge, intensity, and availability of other resources of the creative person(s).

The Frame of Reference for Innovation and Creativity

At this point, the issue of the frame of reference for innovation and creativity should be acknowledged, for it contributes rather substantially to semantic and conceptual difficulties. The frame-of-reference question is that of, "When is an innovation an innovation?" That is, must an innovation be truly unique -- the first anywhere -- or is it a relative concept: "Our competitors have been doing this, but we've never done it before now, so it's an innovation for us," or even, "We've borrowed the concept from another industry and applied it for the first time in our industry, so it's an innovation." That innovations are borrowed and applied across industry lines is not surprising; in fact, the use of best-practice or benchmarking investigations, that involve studying how organizations practice uniquely well some activity *no matter what their industry*, depends on the presumption that an innovation is not uniquely constrained in its applicability by its industrial context or genesis. Thus, in practical terms, the copying and applying of innovations in different settings suggests that an innovation should be defined as such within relevant local bounds, insofar as uniqueness is concerned. Similarly, the creativity that led to the very first application of the innovation would be expected to be at its highest; in successive applications, to further modifications or to applications in different settings, would be expected to be somewhat less or rather less in creative input. It is instructive to note Miller's (1983) *caveat* that a local innovation implemented in order to copy competitors -- and hence to avert, not undertake, risk -- is an example neither of entrepreneurial activity nor of an entrepreneurial firm.

The Entrepreneurial Event

Entrepreneurship occurs within and without the established organization. While there are many similarities between the two, we explicitly distinguish between (individual) entrepreneurship and corporate entrepreneurship. The classic conception of *entrepreneurship* is that of the individual, independent entrepreneur who assumes financial and other risks in order to exploit a new idea or product possibility; he or she may be supported by another, perhaps a venture capitalist or a family member, but the risks of failure uniquely devolve upon the entrepreneur. In *corporate entrepreneurship*, individual or group entrepreneurship is fostered within a pre-existing organizational setting, which organization provides support for the development and exploitation of one or more innovations which are deemed strategically and financially consistent with the supporting organization's mission.

One might usefully make a further distinction within the concept of corporate entrepreneurship, visualizing a continuum similar to Covin and Slevin's (1989) conservative-entrepreneurial continuum. Their conservative firm was risk-averse, non-innovative, and reactive, while entrepreneurial firms were risk-taking, innovative, and proactive. By contrast, we suggest (with more than a little of our tongues in our cheeks) a range of outcome-configurations associated with the organization's orientation to entrepreneurship, shown as Figure 2. The intent is to represent the different, systematic outcomes of totality (or non-existence, or intermediate levels) of focus engendered within the organization on wide-ranging and deeply-engrained entrepreneurial activities. At the far end of the continuum, we suggest, might be an entire organization dedicated to and structured to facilitate the development, creation, and implementation of innovative processes, concepts, products, or services; this represents the emerging conceptualization of the *Entrepreneurial Organization*, of which a strategic option may be defined as Corporate Entrepreneurship, Intrapreneuring, or New Enterprise Venturing within the confines of the existing (traditional) corporate structure. Examples might be the revered 3M Corporation or other paragons of institutionalized innovation, such as smaller software companies, in which all employees, regardless of position, department, or rank, are expected (if not required) to spend a given percentage of their time working on projects of their own undertaking, if not interest. Note that the projects are not limited to product enhancements or cost-saving production engineering endeavors, but are likely to be found in the warehouse, logistics, evaluation procedures, and other fundamental business responsibilities.

Figure 2 about here.

Anchoring the other, near end of the continuum is the *Entrepreneurially-Challenged Firm*, which is oblivious to the concept of new methods or products/services, and which employs a culture of denial to any new idea or risk. Employees wishing to incrementally modify or improve even considerably outdated processes and procedures are shunned, financially punished, and viewed as trouble-makers. Somewhere to the left of the Entrepreneurial Organization is the *Entrepreneurially-Oriented Organization* within which members' improvements to pre-existing process or products are encouraged by policy and by process, toward incremental improvements, but without the single-minded focus on turning all organizational resources to the end of developing breakthrough technologies. Entrepreneurially-Oriented Organizations are less likely to develop radical innovations which might necessitate dramatic departures from current organizational strategy, although refinements which do not impact negatively (that is, requiring interfacing processes with or procedures in, say, another department to be changed to accommodate the innovation) on the *status quo*, are considered rather positively. Stereotypical suggestion-box inputs might be good examples of the types of improvements deemed proper within such an organization. And, of course, to the left of the Entrepreneurially-Oriented Organization must lie the *Accidentally-Innovative Organization*, in which individual improvements, modifications, or innovative applications happen by chance rather than by intent!

For those organizations which have strategic intentions of developing, nurturing, and maintaining entrepreneurially-oriented individuals and innovation-spawning processes and an internal environment of creativity, important corollary issues include the management of innovation. Explicit establishment of a "knowledge bank" (Brazeal & Krueger, 1994) and of facilitating structural and communicational devices are important steps in empowering potential entrepreneurs to seize opportunities for innovation. In fact, Pavitt (1991) concludes that large innovative firms systematically accumulate and build on their

technological innovations; the gaining of experience in the innovative process and in the firm's technical competencies is essential. In a pragmatic sense, the involvement of top management can be inferred when consistent innovation is observed in a firm; the necessary consistency of learning opportunities and accumulation of experience are enabled only by the allocation of corporate resources and the articulation of appropriate strategies, explicit roles of management. By being proactive in the defining and establishing of appropriate conditions, the top management team explicitly encourages the innovation process among interested parties through the building of an entrepreneurial organizational environment and human resource practices that actively promote entrepreneurial activities and thinking. And by so doing, the probability of innovative outcomes is enhanced substantially.

In many firms and aspiring businesspeople, the entrepreneurial event is experienced. In many firms and aspiring businesspeople, the entrepreneurial event is *not* experienced, too. The entrepreneurial event cannot include the modification of existing processes and products/services within pre-existing structures; it must include the separation of the innovation from its predecessor (if any) and its separate exploitation or commercialization. Thus, a process engineer who modifies an intake valve in a refinery has not experienced an entrepreneurial event; should s/he patent the valve, quit the employing company, secure financing, set up a company, and manufacture and market the valve, however, then we could say that there has been an entrepreneurial event. We do not deny that entrepreneurial events occur within organizations, as in intrapreneuring, for the structure explicitly isolates the venture and the exploitation of the innovation, conditions very similar to our argument for separate exploitation or commercialization. The defining condition is not that of the extent of creativity involved in the invention of a new product or service or process, but what happens to that innovation. The entrepreneurial event is a nonlinear event, and, thus, is geared toward the concrete outcome of radical innovations which are implemented through radical changes.

CONCLUSION

In summary, this paper proposes that the fragmentation of the field of entrepreneurship is at least partially due to the growing need for -- but lack of -- "fit" between (a) the increasing amount of data and insights into the entrepreneurial phenomenon and (b) the central requirement for a fundamental mapping of entrepreneurial concepts. As a beginning by which to enhance the "fit", we have suggested three modest directions for gaining agreement on the entrepreneurship field. First, we argue for a more consistent definition of the process and the event of creativity, innovation, and change, in order to encourage consistent terminology among those contributing to the field. Second, we offered a rudimentary general-process model illustrating a proposed interplay between critical fields or research areas strongly related to entrepreneurial endeavors and intentions. The creation of the general-process model is a premeditated event to proactively ensure continuity of the field in its early stages. The importance of such a model cannot be understated; entrepreneurship brings a strong presence to start-up operations as well as established organizations seeking to prosper beyond the turbulent 1990's. A process model of entrepreneurship and its related components serves as the fundamental beginnings in the creation of a web of theoretical underpinnings for the entrepreneurial paradigm. Third, and finally, we suggest that the current all-encompassing conception of entrepreneurship actually is a rather limited one, with specific applications within the individual-entrepreneurial arena, while other applications of entrepreneurship consist of and employ very different processes and parameters in pursuit of very different objectives; corporate entrepreneurship is one ready example of another application of entrepreneurship concepts. Consequently, scholars should be careful to explicate the nature, form, and components of the mental model they are using; the generic use of the terms, "entrepreneurial", "entrepreneur", and "entrepreneurship", when the writer refers loosely to processes, agents, conditions, or relative inherent elements of creativity, innovativeness, or change, should be sharply reduced and the terms used only when explicitly and definitionally appropriate.

Further, the general-process model suggests the existence and effects of interesting contextual parameters not often considered within the traditional views of the field. We believe they provide useful extensions to that which we know of mediating factors and additional external forces; they can be better conceptualized and linked more rigorously to important practical applications. Across many entrepreneurial situations, the strategic decision for entrepreneurial activities is not well understood, and particularly poorly conceived is senior executives' responsibilities in corporate applications of

entrepreneurship. Thus, the role of the top management team (“TMT”) has been visualized heretofore as a collective facilitator of entrepreneurial activities pursued at lower levels in the organizational structure. Strong executive leadership may prove to be a central factor to infuse the organizational context with opportunity-seeking values and cultural norms, since innovations created by lower level employees reside within the existing strategic context of the organization as defined by the TMT. The role of the TMT as a direct participant or generator of innovations opens the door for more dramatic, radical innovations indicative of discontinuous changes and potentially industry-altering changes. By definition, the TMT is fully capable of defining, modifying or dramatically changing the strategic context of the company, all of which have strong implications for success and survival. We think that this contextual and driving factor has the opportunity to identify and explain much of corporate entrepreneurial conditions, processes, and outcomes, from the unique perspective of environment, competition, and strategy -- entrepreneurship as competitive advantage.

Second, the unique mentality and accompanying philosophy of the entrepreneur has not been fully explored in a practical context, particularly with reference to perceptual issues surrounding the seizing of opportunities. We were unable to uncover much information on creativity as it relates to companies seeking a competitive edge through an entrepreneurial focus, yet the creative mindset of the entrepreneur is certainly strongly related to the generation of innovations and entrepreneurial events.

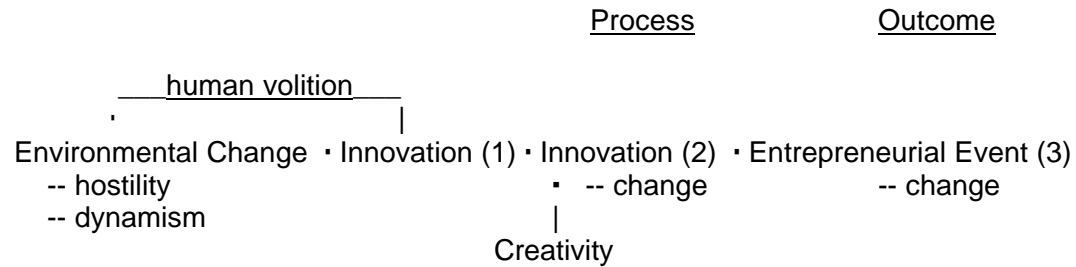
Thus, the encouragement of consistency of terminology and method and the proposed organizing device of the general-process model are presented as potential means to generate continuity of the field in a proactive fashion and lend guidance to future research studies addressing many challenging and high-potential issues. Kuhn (1962) observes and admonishes that the development of fields of knowledge is through the creation of paradigms that incorporate the best current explanations and solutions of problems, and which advance the field through generating alternative explanations and solutions. As Gartner (1985) observed,

Instead of many different researchers palpating different parts of the elephant and reaching reductive conclusions, at least all will know the name, if not the nature, of the beast with which they are dealing.

For the field of entrepreneurship to advance and to make contributions to the practice of management, consistency and agreement by its practitioners and its researchers should begin.

FIGURE 1

A SIMPLE MODEL OF THE ENTREPRENEURIAL PROCESS:
THE RESPECTIVE ROLES OF CHANGE, CREATIVITY AND INNOVATION



NOTE: Innovation (1) is housed in the technology literature.
 Innovation (2) is housed in the psychology literature.
 Entrepreneurial Event (3) is housed in the business literature.

FIGURE 2

GRADATIONS OF COMMITMENT TO ENTREPRENEURSHIP WITHIN ORGANIZATIONS

<i>Level of Commitment:</i>	Non-existent	Low	Medium	Total Commitment
<i>Type of Organization:</i>	The Entrepreneurially-Challenged Firm	The Accidentally-Entrepreneurial Firm	The Entrepreneurially-Oriented Organization	The Entrepreneurial Organization

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