

# The Entrepreneurial Archetype Scale: Dimensionalizing Entrepreneurial Capabilities In Traditional Firms

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## ABSTRACT

Measuring a firm's entrepreneurial culture is very important to entrepreneurship research. However, there are few generally accepted measures to accomplish this. Herbert and Brazeal's (1999) entrepreneurial archetypes framework provides the basis for a new way to look at firm's level of entrepreneurship especially for large companies. The paper is the first to create an instrument based on their entrepreneurial archetype framework. Our purpose in presenting this pilot study is to create discussion in this important area.

## WHY STUDY CORPORATE ENTREPRENEURSHIP?

The new entrepreneurial economy operates with the ease and simplicity of a Hollywood set, minus the glitz and glamour, as new ventures freely form and disband to exploit here-to-fore unacknowledged opportunities. The tragic events of September 11, 2001 signify the possibility of unprecedented environmental changes with effects that have echoed across multiple industries. The net effect is long-lasting cultural, social and political changes that forever alter the landscape of the American economy. While "new" entrepreneurs are strategically poised to *carpe diem*, older well established organizations operating with cumbersome structures lack the necessary agility that make it difficult to behave entrepreneurially. Such an orientation gives rise to what Krackhardt (1995) refers to as a "growth paradox" meaning a new firm seeking growth eventually structures itself for efficiency with respect to all-encompassing organizational systems, e.g., policies and procedures, general decision-making strategies, reward systems and strategic orientation. Consequently, the field of corporate entrepreneurship holds promise as a challenging arena and potential resolution as the TMT of main-line; revered companies seek to lodge a creative foothold amid environmental turmoil.

The purpose of this paper is threefold. First, we reiterate the important contribution that the study of corporate entrepreneurship makes to the overall field of entrepreneurship by highlighting the need to build a better understanding of entrepreneurial *vision and action in large established organizations*. Second, we present two new measures that may be used to

assess the entrepreneurial culture of a firm meaning entrepreneurial behavior at a firm level. Third, we seek this forum as a catalyst to initiate invigorating conversation about these new measures to capture insight regarding their advancement and future usefulness to the study of corporate entrepreneurship.

## **THE PROVINCE OF CORPORATE ENTREPRENEURSHIP**

In its broadest sense, entrepreneurship involves an incremental innovation process (Quinn, 1985) that eventually triggers an entrepreneurial event (Bygrave, 1989; Bygrave & Hofer, 1991). From a conceptual perspective, many advances in the field have occurred through examining entrepreneurship as an organizational-level phenomenon that emphasizes “how” entrepreneurship occurs through a stratagem of organizational venues rather than “why” or “what happens” when it occurs, the latter lending perhaps undue exclusive attention to the personality of the individual (Stevenson & Jarillo, 1990). In an effort to systematize the use of terminology in the field of corporate entrepreneurship, Sharma and Chrisman (1999) differentiated entrepreneurial activities based on those activities pursued independently and those activities pursued within the context of an organization, the former labeled “independent entrepreneurship” and the latter referred to as “corporate entrepreneurship”. The province of corporate entrepreneurship then includes two conceptually distinctive and separate arenas. The first is the creation of a new business within an existing organization also referred to as internal corporate venturing (Zajac, Golden & Shortell, 1991), and intrapreneurship (Pincot, (1985). The second set of corporate entrepreneurial activities is strategic renewal (Guth & Ginsberg, 1990). The associated activities refer to efforts to revitalize, renew or transform an organization’s strategy and structure. While new businesses are not brought into being, strategic renewal usually involves innovation and creativity.

Despite the configuring of corporate entrepreneurial activities or even the intended content of actions, we posit that innovative efforts undertaken within a pre-existing organization come about through corporate strategy identified by the TMT. Radical or frame-breaking innovations are born out of the TMT’s ability to expand or manipulate the organizational strategic context. Thus, the ability to consistently and systematically create a stream of incremental and radical innovations is wholly dependent on an appropriate creative culture replete with reward systems and legitimizing processes that encourage the entrepreneurial spirit, a process we call “strategic entrepreneurship” (Herbert & Brazeal, 1998; Hitt, Ireland, Camp & Sexton, 2001). While some consistency in outlining parameters seems to be evident in the field of corporate entrepreneurship, only a few validated measure of firm-level entrepreneurship exist, which is a major obstruction to concentrated research efforts (Brown, Davidsson & Wiklund, 2001).

## **CURRENT FIRM-LEVEL ENTREPRENEURSHIP MEASURES**

### **Entrepreneurial Orientation Scale**

Pioneering works (Miller, 1983) articulate three important constructs defining firm-level entrepreneurship behavior as follows: the extent to which managers engage in risk-taking behaviors, product innovation and adopt a proactive stance with regards to marketplace competition. Evidence of characterization of an organization as entrepreneurial is

operationalized through entrepreneurial management styles. Focus is placed on management philosophies and activities rather than the more obtuse and esoteric personality styles or characteristics. Miller postulated that firms merely imitating competitors' products or services, though novel to the organization was not to be misconstrued as risk-taking behaviors. Further, entrepreneurial organizations are proactive in their strategic orientation quickly claiming the status of the first mover advantage meaning they might create new markets through frame-breaking innovations. Finally, Miller placed much importance on product innovation, rather than or as having a higher priority than service innovations.

Miller's (1983) original scale was further developed by Covin and Slevin (1986; 1989) who refined the scale to an easily administered six item questionnaire while retaining the key constructs and ideas originally conceived by Miller. Given its demonstrated construct validity, reliability, and high correlations with theoretically related variables, including organizational performance and business strategy, the scale was embraced by entrepreneurship researchers. In fact, the scale has served the field of entrepreneurship well through operationalizing corporate entrepreneurship as an independent and/or dependent research variable, allowing for rigorous statistical analysis.

### **Intrapreneurial Assessment Instrument (IAI)**

Rather than examining an organization's disposition or entrepreneurial stance, Kuratko, Montagnano & Hornsby (1990) recognized a growing interest in corporate entrepreneurship as a necessary competitive advantage for established corporations to enhance the innovative capabilities of their employees. The IAI seeks to accurately measure and assess the effectiveness of an organization's environment for the implementation of corporate entrepreneurship programs. The IAI makes an important contribution to the specific and unique needs of the arena of corporate entrepreneurship through providing a thorough means for assessing an organization's current state of entrepreneurship and eagerness to wholeheartedly embrace creativity and innovation. As such, it offers a distinctive view of firm-level entrepreneurship.

### **Opportunity-Based Behavioral Orientations Scale**

In response to the criticisms discussed above, Brown, Davidsson & Wiklund (2001) operationalized Stevenson's (1983) conceptualization of entrepreneurship with concentrated prominence on the unabandoned pursuit of opportunity. Eight dimensions are arranged in the form of a semantic differential, which contrast entrepreneurial behavior with administrative behavior. The underlying philosophical thread states that the entrepreneur's (promoter's) attention is exclusively directed towards the pursuit of opportunity, while the trustee attempts to efficiently use resources within a predefined budget. Due to its newness, widespread utilization of the scale has not yet been demonstrated.

Most recently, studies have suggested a need to further explore a variety of conceptualizations of firm-level entrepreneurship (Zahra, Jennings, & Kuratko, 1999) due to the inability of a single scale to encompass all dimensions of corporate entrepreneurship. For example, Covin & Slevin's (1989) instrument identifies a set of current attitudes and past behaviors (Wiklund, 1999) that might not fully address all aspects of firm level entrepreneurial behavior (Zahra, 1993). Perhaps

most importantly, many current scales do not lucidly and directly enunciate the process of opportunity recognition, the creative mindset of the entrepreneur and how entrepreneurs envision potentially lucrative ventures while others see nothing. This conceptualization of entrepreneurship especially within large, sloth-like organizations cannot be deemphasized. The original conception of entrepreneurship as an opportunity-driven phenomenon “without regard to resources currently controlled” (Stevenson, 1983) has been revitalized by Shane and Venkataraman (2000) as the crux and final means of answering a very simplistic, yet complex question, “What is it that differentiates entrepreneurs from everyone else?”

### **Entrepreneurial Archetype Scale (EAS)**

While we applaud the new direction of firm-level entrepreneurship measures with respect with opportunity-driven constructs and comprehensiveness of subject matter, we are interested in developing a scale that attempts to more cleanly characterize an organization’s strategic orientation for entrepreneurship. Instrumentation of this sort would aid rigorous research efforts and ultimately lend advice to executives searching for answers in a chronically tumultuous environmental state. Because the aforementioned scales rely on a summing of scores across constructs, it might be difficult to ascertain when an organization might be described as entrepreneurial. In other words, what configuration of entrepreneurial behaviors constitutes an entrepreneurial organization? When is entrepreneurial behavior, entrepreneurial? Further, some of the scales identify the “collective” management style of a particular business unit’s decision makers rather than the TMT. We posit that in the 21<sup>st</sup> century the TMT will emerge as a major player in the arena of opportunity recognition in entrepreneurial firms. Only the TMT can change the strategic context of the organization and readily allow for the consistent development of new products and services. As a footnote, we are not advocating that the presented scales refine or make obsolete the aforementioned firm-level entrepreneurship scales.

In this paper, we have constructed a scale based on Herbert and Brazeal’s (1999) framework that describes the level of entrepreneurship in corporations. The scale is not designed to speak to an entrepreneurial disposition or orientation, but to a current assessment of entrepreneurial behaviors that classify an organization based on Herbert and Brazeal’s archetypes (see Herbert and Brazeal for an in depth discussion of each archetype). Couched within the archetypes is terminology that points to specific behaviors such as opportunity recognition, e.g., my organization recognizes opportunities through producing a consistent stream of incremental innovations. These archetypes (Figure 1) are on a continuum from least to most entrepreneurial cultures.

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Figure 1 about here

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### ***The Entrepreneurially Challenged Organization***

The Entrepreneurially Challenged Organization (ECO) does not normally embrace new methods or products/services. The organization’s culture is not open to new ideas and risk-taking.

“Employees wishing to incrementally modify or improve even considerably outdated processes and procedures are often shunned, punished financially, and viewed as troublemakers.”

### ***Accidentally Innovative Organization***

Top managers at the Accidentally Innovative Organization (AIO) rely on chance rather than intent for improvement, modification, or innovative application to products or services. While the AIO does not have entrepreneurial tendencies embedded in its culture, when the firm does stumble across an incremental or radical improvement opportunity, it is seized in an act of serendipity. Although the AIO may not actively shun innovative activities (as does the ECO), it does not deliberately construct and maintain a culture that rewards creative endeavors.

### ***Entrepreneurially-Oriented Organization***

Organizational members in Entrepreneurially-Oriented Organization (E-OO) are dedicated to improving pre-existing processes or products and are encouraged by policy toward incremental innovation. Lacking a single-minded focus on fine-tuning all organizational resources to discovering breakthrough technologies, these organizations are less likely to pursue radical innovations, preferring to achieve lucrative ends through the successful harvesting of numerous incremental innovations. Consequently, while the E-OO has entrepreneurial behaviors embedded in its culture, the firm is less skilled at frame-breaking radical innovations.

### ***Entrepreneurial Organization***

The Entrepreneurial Organization’s (EO) culture is dedicated to and structured for the facilitation, creation, and implementation of innovative processes, products, or technologies. Entrepreneurial organizations are those that have serious commitments to both incremental and radical innovations as being strategically important to the competitiveness of the organization and tactically important to its operations and processes. Brazeal and Azriel (2002) advanced this conceptual framework by using the entrepreneurial archetype framework to inform our understanding of TMT’s in the context of the type of innovation or change firms pursue and the entrepreneurially driven environment. The entrepreneurial archetype matrix (Figure 2) illustrates a firm’s entrepreneurial-driven culture and its aggressiveness in enacting both incremental and radical changes or innovations.

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Figure 2 about here

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## **METHODS**

Two measures were developed based on Herbert and Brazeal (1999) original framework of entrepreneurial archetypes, and Brazeal and Azriel’s (2002) follow-up work. The first measure consists of statements that were created based on five dimensions (innovative spirit, management support, risk taking, rewards, and type of innovation). Four statements were developed to measure each of the five dimensions for a total of 20 statements. Each of the four statements

was developed to reflect one of the four previously described archetypes and were rated using a Likert-type scale 1-“Not at All” to 4-“Extremely Well”.

These individual ratings for each of the statements in the five areas were tallied. For example, the first statement for each of the five areas were added together to obtain a composite score and was then given a numeric value between 1-entrepreneurially challenged organization and 4-entrepreneurial organization. If two types tied the two numbers were added together and divided by two to obtain an average.

The second measure was based on the same research as the first measure. This measure consisted of four vignettes that describe four company types (“A – least entrepreneurial” to “D – most entrepreneurial”) presented to the reader in a continuum format. The vignettes were carefully worded so that they would not match the wording in the statement measure in order to ensure that respondents did not try to match the two. Respondents were instructed to select the number (1 to 12) that corresponds to the vignette letter that best matches their company, e.g. 2= A, 5 = B, etc. They were also told that if their company falls between two of the vignettes they should choose the number that corresponded best between the two letters, e.g. 6 if vignette B matches better than C.”

## **Developmental Test**

The pilot test consisted of a small sample of 12 respondents. This sample was used to make initial adjustment to both measures. The authors were primarily interested in reactions to content and format by the respondents in order to create conversation and refine both instruments in later studies. Respondents were asked to think about either their company or a company that they knew very well in providing their answers for both measures. The respondents all had intimate knowledge of the company that they rated through being an employee, consultant, or in one case an owner. A simple Pearson correlation between the composite score (1= least entrepreneurial to 4=most entrepreneurial) of the entrepreneurial statement measure and the vignette measures (1 to 12) was used to test whether the two measures were strongly associated. The correlation between the two was .77 providing evidence to support this proposition. In addition, respondents were asked to comment on the two measures. Respondents were asked to describe their answers when the two measures did not correspond.

## **Pilot Test**

Subjects for the pilot test were participants in another study being conducted on strategic alliances. A total of 60 subjects participated in this portion of the questionnaire. Four subjects were not administered the archetype statements due to a time commitment. Participants were entrepreneurs or senior managers of small high technology companies. They had a relationship with the other firm between for at least six months. These individuals were either interviewed by phone or in person as part of the study. Instead of responding to the first measure based on their company, they were asked, “How well do the following statements reflect your partner’s top management team’s philosophy?” Next, each respondent was asked to read the four vignettes. Respondents then rated their company on the same continuum as in the developmental test for both their company and their partner.

Validity of the measures was tested several ways. First, researchers who are experts in entrepreneurship and data analysis reviewed the measures as to their conceptual (face) validity. Second, a Pearson's correlation test indicated a strong relationship between the two measures ( $r=.731$ ,  $p<.01$ ) using a two-tailed test providing evidence that the two instruments measure the same construct. Third, SPSS was used to conduct reliability analysis to obtain another measure of reliability. For this test, all of the same number statements were entered as a single scaled item (e.g. all statement 1's for each variable for a total of four items). The results of this reliability test were mixed. Two cases had missing values. Rather than throwing out these responses, the means of their respective variables were used. Interestingly, this resulted in decreased alpha levels for each of the archetypes. In addition, another case was thrown out due to being incorrectly completed. The alpha for each archetype is as follows: entrepreneurial challenged organization .7682; accidentally innovative organization .6343; entrepreneur-oriented organization .1608; entrepreneurial organization .8637.

## **Discussion**

While this sample is small there is some statistical evidence that these measures may be able to provide the entrepreneurial research community with an additional tool for measuring entrepreneurship at the organizational level after it is further refined. Only the two outer archetypes, ECO and EO, had alpha levels that provide evidence that the measure is reliable. This may be due in part to several factors. First, a small number of respondents were not fully familiar with the reward system that their partner had in place. This resulted in guessing or choosing a middle of the road answer for several of the responses within this dimension. Second, a small number of the respondents had difficulty in understanding the statements which may have adversely affected the sample due to its size.

## **Weaknesses and Future Studies**

A considerable weakness in the results of the reliability analysis results for the statement measure is the sample size. Most importantly, however, the instrument needs to be refined so that the statements within each dimension do a better job of helping respondents differentiate between archetypes. Construction of the two measures of firm-level entrepreneurship behavior was pursued in response to Zahra, Jennings & Kuratko's (1999) call for a need to further explore a variety of conceptualizations of firm-level entrepreneurship due to inabilities of a single scale to encompass all dimensions of corporate entrepreneurship. Further, we were interested in embracing the conceptualization of opportunity recognition and the process of entrepreneurship in traditional firms as a futuristic role of the TMT. We are hopeful that our early attempt at the construction of the measures will facilitate a clearer characterization of an organization's strategic orientation for entrepreneurship. Future studies will rigorously address a more comprehensive and precise articulation of the archetypes.

## References

- Brazeal, D. V. & Azriel, J. A. (2002). Learning to cruise on “internet time”: Making the connection between strategic entrepreneurial archetypes and environmental scanning activities. *16<sup>th</sup> Annual National Conference USASBE* Reno, Nevada.
- Brown, T.E., Davidsson, P. & Wiklund, J. (2001). An operationalization of Stevenson’s conceptualization of entrepreneurship as opportunity-based behavior. *Strategic Management Journal*, 22, 953-968.
- Bygrave, W. D. (1989). The entrepreneurship paradigm (1): A philosophical look at its research methodologies. *Entrepreneurship: Theory & Practice*, 14, 7-26.
- Bygrave, W.D. & Hofer, C. W. (1991). Theorizing about entrepreneurship. *Entrepreneurship: Theory & Practice*, 16, 13-22.
- Covin, J. G., & Slevin, D. P. (1986). The development and testing of an organizational-level entrepreneurship scale. *In Frontiers of Entrepreneurship Research*, pp. 628-639. Wellesley, MA: Babson College.
- Covin, J.G. & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal* 10, 75-87.
- Guth, W. D. & Ginsberg, A. (1990). Guest editors’ introduction: Corporate entrepreneurship. *Strategic Management Journal*, 11, Summer, 5-15.
- Herbert, T. T. and Brazeal, D. V. (1999). Entrepreneurializing the Organization: Archetypes of Commitment to Corporate Entrepreneurship and Implications for Strategic Entrepreneurship, *The Proceedings for the 44th Annual ICSB Conference*.
- Hitt, M. A., Ireland, D., Camp, M. & Sexton, D. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22, 479-491.
- Krackhardt, D. (1995). Entrepreneurial opportunities in an entrepreneurial firm: A structural approach. *Entrepreneurship Theory & Practice*, 18, Spring, 53-69.
- Kuratko, D.F., Montagno, R.V. & Hornsby, J.S. (1990). *Strategic Management Journal*, 11, 49-58.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29, 770-791.
- Pinchot, G. III (1985). *Intrapreneuring*. New York: Harper & Row.
- Quinn, J. B. (1985). Managing innovation: Controlled chaos. *Harvard Business Review*, 63, 73-84.
- Shane, S.A. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217-226.
- Sharma, P. & Chrisman, J. (1999). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory & Practice*, 23, Spring, 11-27.
- Stevenson, H.H. (1983). A perspective on entrepreneurship. *Harvard Business School Working Paper* 9-384-131.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship: Theory and Practice*, 24, 37-48.
- Zahra, S. (1993). A conceptual model of entrepreneurship as firm behavior: a critique and extension. *Entrepreneurship Theory & Practice*, 16, Summer, 5-21.

Zahra, S.A., Jennings, D.F. & Kuratko, D.F. 1999. The antecedents and consequences of firm-level entrepreneurship: the state of the field. *Entrepreneurship: Theory & Practice*, 24, 45-63.

Zajac, E. J., Golden, B. R., & Shortell, S. M. (1991). New organizational forms for enhancing innovation: The case of internal corporate joint ventures. *Management Science*, 37, 170-185.



Figure 1 The Four Corporate Entrepreneurial Archetypes (Brazeal & Azriel, 2002)

**Enacting Innovation/Change**

		Incremental	Radical
Entrepreneurially Driven Environment	High	E-OO	EO
	Low	EC	AIO

Figure 2: Entrepreneurial Archetype Matrix (Brazeal & Azriel, 2002)