

## Predicting Patterns of Entrepreneurial Opportunity Discovery

### Abstract

The emerging knowledge economy affords new sources of wealth creation based upon innovative intellectual assets, collaborative learning networks, and effective infusion of advanced technology. Nurturing and managing the flow of knowledge, in the form of emergent ideas, may be the most important competence of the future for creating and sustaining competitive advantages in the global economy. As a subset of the emerging knowledge and innovation theme, opportunity recognition is central to the entrepreneur's ability to generate excessive rents necessary to justify the high risk of new venture development. Additionally, opportunity recognition skills allow managers and stakeholders to anticipate technological disruptions and discontinuities in existing markets.

Opportunity recognition and discovery continues to be a popular subject as evidenced in the number of related abstracts (20) at the 2004 Babson-Kauffman Entrepreneurship Research Conference. Opportunity recognition is commonly defined as the perception of a potential to create a profitable new venture, or to improve the strategic position of an existing business (Tesfaye, 2004). Rather than a discrete random event, opportunity recognition is more often an emergent process driven by learning (DeTienne & Lyon, 2004). Despite the significant attention to opportunity recognition not much research has been devoted to understanding this as an emergent learning process. This paper contributes to the literature by exploring the possibilities of bisociative thinking as an emergent learning process of creativity and innovation.

Bisociative thinking was first introduced by Arthur Koestler in his book The Act of Creation (1964) to describe a type of analogical and metaphoric thinking process that leads to great acts of creativity. Bisociation has also been described as the mixture in one human mind of visual physiognomies from two contexts or categories of objects that are normally considered separate categories by the literal processes of the mind.

Koestler contrasted bisociation with the more familiar and mundane associative (purely logical) thinking saying that association refers to previously established connections among ideas but that bisociation involves making entirely new connections among ideas. According to Koestler, every creative act involves a process that brings together and combines previously unrelated ideas. Koestler's definition addresses all forms of creativity, whether in art, science or humor, but limited attention has been given to bisociative thinking to the business environment until recently.

Recently, the editors of Entrepreneurship 2000 indicated that bisociation derives creative ideas from the intersection of two seemingly unrelated concepts to produce that "ah-ha" sensation in the market place. They concluded bisociative thinking holds tremendous

promise for explaining the “how” of entrepreneurial innovation from multiple environmental perspectives (Smilor and Sexton, 1998).

Ko and Butler (2004) described bisociative thinking as the missing link between prior knowledge and recognition of entrepreneurial opportunities. They found that bisociation played a significant role in determining whether or not individuals recognized opportunities. They conclude that it explains why some individuals are capable of entrepreneurial behavior. Although measured at the individual level, they suggest bisociative thinking ability would be important at all levels of the firm, and thereby benefit from more novel products or services by nurturing this ability in their employees. Countries can increase entrepreneurial activities by devoting more resources to enhancing bisociative thinking abilities in their education systems.

Similarly, Baron proposed a model that relates opportunity recognition to pattern recognition—the process through which individuals perceive emergent patterns among diverse and seemingly unrelated stimuli or events...This model suggests that because of their unique knowledge structures (e.g., prototypes, exemplars), specific persons perceive patterns among emerging changes in technology, markets, demographics, etc., that others overlook. Baron claims that it is possible that persons proficient at opportunity recognition have better developed prototypes of business opportunities or a richer set of exemplars of this concept than other persons. They may also possess highly efficient working memories. He suggests several ways of training individuals to be more effective at recognizing opportunities, such as exposing them to business opportunities and training them in effective search strategies (Baron, 2004).

This paper explores the influence of bisociative thinking on patterns of opportunity recognition, staged in an experiential and emergent learning process, while considering the cognitive predispositions and prior knowledge of stakeholders. It is proposed that the volume, uniqueness, and diversity of emergent ideas using bisociative thinking are affected by cognitive profiles of problem solving tendencies, prior knowledge, education, and experience of the engaged organizational stakeholders. The outcome of the study should tell managers and key stakeholders the optimum make of groups to maximize brainstorming of new ideas.

#### Hypotheses:

- Individuals with higher innovator scores will produce more ideas during the nominal phase of divergent brainwriting
- Individuals with higher innovator scores will produce higher rated trends during the nominal phase of divergent brainwriting of trends.
- Individuals with higher innovator scores will produce opportunities from a greater variety of trend combinations.
- Individuals with higher innovator scores will produce more paradigm-unique ideas during the nominal phase of divergent brainstorming
- Individuals with lower innovator scores will produce more appended ideas during the nominal phase of divergent brainstorming

- Groups with higher innovator scores will produce more ideas in the convergent brainstorming phase
- Groups with higher innovator scores will produce more paradigm-unique ideas in the convergent brainstorming phase
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- Structured discussion question will produce more paradigm related ideas.
- Gallery writing technique will produce more ideas,
- Participants in a reward system will produce more ideas.
- Groups with greater experience diversity will produce more unique ideas.
- Groups with greater demographic diversity will produce more unique ideas.
- Groups with higher left-brain scores will produce more unique ideas.
- Groups with greater functional diversity will produce more unique ideas.
- Groups with greater hierarchical diversity will produce more unique ideas.

## Sample

Data are expected to be gathered from a series of industry-specific visioning seminars. A variety of stakeholders from diverse points on the value chain will be invited to a medium-sized group session that will explore the future of their industry. Participants will engage in a variety of brainstorming and brainwriting activities using verbal (face-to-face) and electronic modalities.

## Procedure

Participants will complete one assessment instrument that will identify their individual style of problem definition and solving and a second assessment involves determining the left-brain—right-brain tendencies to establish their cognitive profile. Data related to their management experience, tenure, and education will also be collected.

Participants are trained and engaged in environmental scanning processes. They will be introduced to concepts such as prevailing trends, driving forces, countervailing forces, and paradigm shifts.

Participants are introduced to the theory of bisociation and the interactive effects of the environmental trends researched in the Input phase. Participants are thoroughly immersed in manual techniques to explore and brainstorm opportunities and threats associated with the interaction of the prevailing trends as a foundation. Classification, rating, and voting techniques will be introduced for prioritizing new ideas.

Participants are also trained on techniques for associating new ideas from identified opportunities and threats during brainstorming sessions. These sessions alternate between anonymous individual and group converging activities. They can be synchronous (working at the same time) or asynchronous; centralized (working in same location) or decentralized. The output of individuals and groups are tracked based on the quantity and quality of their contributions. Brainstorming sessions will target specific

themes: problem solutions, strategies, new policies, collaborations and community action plans.