

CLAIRVOYANCE OR SOMETHING SINISTER: A MODEL OF MARKET INSIGHTS AND OPPORTUNITY RECOGNITION

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INTRODUCTION

Under the strong hand of neoclassical economics, entrepreneurial action in the context of perfect competition requires human actors to “creatively destroy” (Schumpeter, 1934) existing product categories and industries. While the view of neoclassical market equilibrium evokes an image of relentless inevitability, novel and unpredicted invention and action is the source of renewal and growth within the development of an economy (Schumpeter, 1934). However, under the invisible hand of a “predictably omniscient” market, the generation of entrepreneurial rents requires both unpredicted novelty and action in the formation of a successful venture (McMullen and Shepherd, 2003). Does then the enactment of entrepreneurial activity by human agents require the use of clairvoyance to find market opportunities or do market insights develop from a process a little less sinister? While the previous question is not without some irony, the fundamental question remains, how do entrepreneurs translate environmental stimuli into market insights and what in particular are the salient features of such a process that are most predictive of entrepreneurial action? Consistent with this approach, this paper will pragmatically focus upon constructing a process model by which entrepreneurs examine concrete external stimuli and cognitively construct a market insight upon which entrepreneurial opportunities can be built.

THEORETICAL FRAMEWORK

Entrepreneurial cognition research (Busenitz and Lau, 1996; Mitchell et. al. 2002; Busenitz et. al., 2005), as a framework for investigating why and how entrepreneurs think differently from other market agents, defines entrepreneurial cognitions as the use of knowledge structures (schemas) to examine opportunities and to make decisions regarding venture choice and growth (Busenitz and Barney, 1997; Baron, 1998; Mitchell et. al., 2002). According to Abelson and Black (1986) schema theory is based upon three major presuppositions. First, “the importance of top-down processing of input information;” Second, “the content specificity of schemas;” Finally, “flexibility of function of schemas.” In regards to the input information, there are two different ways in which information is stored within an individual’s memory: perception/object-based information, and meaning-based information (Anderson, 1985). As these different types of information are stored within an individual’s schema, theorists believe that the knowledge structures are used to make inferences regarding future events from relevant environmental stimuli (Abelson and Black, 1986). In addition, depending upon the magnitude of

stimulus and its relative influence upon the individual's schema, either a top-down or bottom-down processing of the relevant information is enacted (Abelson and Black, 1986). The distinction between the processing models is relevant to the entrepreneurial context as it determined whether the market agent will make inferences regarding the environmental stimuli or if the stimulus itself serves as the context for the development of a market insight.

In regards to the content specificity of schemas, it has been theorized that "the content of the schema and its structure define the inferences that can be made when the schema is activated in memory" (Seifert et. al., 1986). Implicit within this statement is the notion that the content of the schema shapes the recognition of specific attributes of the environmental stimuli which form the foundation of the situational inference.

The creation of a new knowledge structure through bottom-up processing or the reshaping of a current knowledge structure through top-down processing, both highlight the third and final presupposition of Abelson and Black (1986) regarding schema theory, specifically, the functional flexibility of knowledge structures. According to this principle, knowledge structures are described as having an active purpose in the mind by aiding in the assimilation and understanding of external stimuli (function) (Abelson and Black, 1986). In addition, knowledge structures and cognitive processes are theorized to have the flexibility to be combined and recombined in a multitude of ways to aid the entrepreneurs in assimilating new knowledge and experiences (flexibility) (Abelson and Black, 1986). The basic point of this presupposition is that knowledge structures are best conceptualized as dynamic and constantly adapting to external stimuli (Reiser, 1986) while still maintaining a structural consistency.

Ontological Views of Entrepreneurial Opportunities

According to Kirzner, the role of entrepreneurs is to move markets toward equilibrium as they perceive entrepreneurial opportunities that are said to exist concretely in the external environment (1979). The reliance upon an objectivist view as derived from a neoclassical paradigm, however, has led to some criticism of Kirzner in that this perspective ignores the presence of entrepreneurial creativity in the organization of innovation (Buchanan and Vanberg, 1991; Bottomore, 1992). Indeed as McMullen and Shepherd recently noted, no changes to a market can occur without some level of human agency (McMullen and Shepherd, forthcoming).

While Knight certainly does not offer explicit criticism regarding the neoclassical view of market creation and entrepreneurial activity, he does describe the effects of market dynamism on creating uncertainty in the minds of market agents. Under Knight's paradigm he specifically identifies the following factors as the source of dynamic change and the cause of uncertainty: Population increases; Capital Increases; Production Improvements; Industry Structural Changes as firms grow and die; And growth in Consumer wants (1957). While Knight assumes these factors are in constant flux, could one reasonably assume that creative innovation by entrepreneurs simply taps into a latent market disequilibrium that inherently exists within each of the categories of change? A basic premise of this paper is that disequilibrium in external markets can be both latent (potential) (Sarasvathy, 2001; Sarasvathy et. al., 2003), dynamic (active) (Knight, 1957), or an arbitrage function exploiting latent disequilibrium in local markets (Buchanan and Di Piero, 1980; Kirzner, 1973; Casson, 1985) requiring creative foresight on one hand (Sarasvathy et. al., 2003; Buchanan and Vanberg, 1991), entrepreneurial alertness (Kirzner, 1997) at the other extreme, and a hybrid mix of the two extremes exemplified in arbitrage entrepreneurship (Casson, 1985; Buchanan and Di Piero, 1980; Kirzner, 1973).

To exploit latent disequilibrium is to find areas of potential disequilibrium where an entrepreneur can unleash the creative energy needed to create disequilibrium in the external market and generate economic rents. Exploitation of dynamic disequilibrium on the other hand is to discover opportunities already in motion and to formulate plans to generate rents. Finally, the use of arbitrage in entrepreneurship is to create local disequilibrium by importing external dynamic disequilibria to exploit local latent disequilibrium. Market insights then become the creation of entrepreneurial foresight on one extreme and the discovery by an alert entrepreneur on the other extreme, with the hybrid mix of strategies for the entrepreneur perceiving arbitrage disequilibrium.

Conceptual Model

Schema to Market Insight. Abelson and Black (1986) argue that cognitive schema are composed of both knowledge and experience. Within the domain of entrepreneurship research, knowledge has been described as “a combination of information, physical capital and human capital” (Sarasvathy et. al., 2003 : 150) which opens specific opportunities for market agents “with already owned knowledge and other assets” (Sarasvathy et. al., quoting Shane, 2000 : 150). Prior knowledge is also posited to increase a market agent’s absorptive capacity (Cohen and Levinthal, 1990) in that it allows the market agent to assimilate new information into one’s schema leading to the ability to make inferences regarding future stimuli. As the level of inference grows within the assimilation process, knowledge is said to become tacit.

The significance of experience, on the other hand, as a predictor of success in entrepreneurship has received empirical support in several research efforts (Gilad, Kaish, and Ronen, 1988; Long & Graham, 1988; Vesper, 1979) leading many practitioners and scholars to consider personal experiences as the best source for entrepreneurs to search in for ideas for starting new ventures (Timmons, 1994; Vesper, 1980). Overall, the combination of the optimal search patterns stimulated by experiences and the capability of the mind in remembering events in bounded context likely makes it easier for entrepreneurs to “discover” opportunities within a plethora of environmental stimuli (Gaglio, 1997).

In their conceptual model describing opportunity identification as a creative insight, Long and McMullan (1984) identify both knowledge and experience as antecedents to the initial vision for an entrepreneurial venture. In subsequent empirical testing and qualitative research into their model, Long and McMullan found that for entrepreneurs who discovered opportunities from a deliberate search, “knowledge, derived from work or education, was a more important influence on their decision to launch than the degree of innovation in their opportunity” (Gaglio, 1997 : 148-9, Long and McMullan, 1984).

In addition to knowledge-driven search processes, Long and McMullan also discovered another path towards an entrepreneurial insight, the role of serendipity. Earlier work on serendipity revealed that while most entrepreneurs attributed their market insight to serendipity, they almost always discovered their ideas through their work experiences (Vesper, 1980). In the case for arbitrage opportunities, market insights stem from both the choice to pursue an opportunity and the search for the appropriate context to enact such an opportunity, thereby involving search and serendipity.

Depending on the environmental stimuli, different market disequilibrium will be noted by the entrepreneur. For dynamic disequilibria, experience encoded within the knowledge structure is likely to be more salient as the active nature of disequilibria implies that if the individual has perceived the stimuli, they have experienced it because the stimuli is active in the external environment. In addition, as the section on schema theory indicated, the clear boundaries of salient experiences make them easier to use during the process of developing inferences, as the individual is pattern matching (matching new experience to old experience) rather than creating disequilibria ex nihilo based upon abstract knowledge of how economic phenomena are likely to occur. For latent disequilibria, knowledge encoded within the schema is likely to be more salient for cognitively constructing a market insight as the entrepreneur must rely upon knowledge of how economic phenomena will likely develop in order to create opportunities that exploit some latent (e.g., non-active) market disequilibria.

Early in this paper a distinction was made between market insights and entrepreneurial opportunity recognition. The basic premise underlying this distinction stems from the notion that market insights require cognitive processing while opportunity recognition requires cognitive processing and opportunity enactment (Weick, 1979). By relying upon salient content within one's schema, individual entrepreneurs are able to gain insights into the external environment where the possibility for pursuing economic profits exists.

Proposition 1A: *Entrepreneurs actively searching for opportunities will rely upon knowledge within the schema and will be more likely to develop market insights consisting of latent disequilibria.*

Proposition 1B: *Entrepreneurs perceiving dynamic disequilibria will rely upon prior experiences within the schema to formulate market insights.*

Proposition 1C: *Entrepreneurs actively searching for arbitrage opportunities will rely upon knowledge and prior experience equally within the schema to develop market insights.*

Perceived Desirability and Feasibility. Entrepreneurs, now having perceived a market insight into the external environment, must evaluate the perceived feasibility and desirability of their opportunity. Shapero (1975, 1982) argued that two things were necessary to determine recognition of a potential opportunity and intentions toward entrepreneurship. First, he stated that an entrepreneurial event must be "credible" (i.e. the person(s) must have intentions toward entrepreneurship formed by the presence of an entrepreneurial script). Second, he argued that some kind of "precipitating" (or "displacing") event is required which we argue arrives in the form and substance of the environmental stimuli. In turn, Shapero argued that there was at least a threshold level of perceptions of both feasibility and desirability. Shapero's ideas of perceived feasibility and desirability have met with support and have been developed in studies considering various breakdowns of perceived desirability and feasibility (for example Krueger 1993, 2000).

Perceived desirability also represents a cognitive threshold for individuals. Entrepreneurs with market insights must feel that they can exceed the threshold for achieving the target behavior before they will move forward. Our conceptual model also assumes a symbiotic relationship between perceived feasibility and perceived desirability, with both constructs influencing the development of perception for the other construct. Overall, the assumption is that once an entrepreneur evaluates a market insight based upon their perception of its feasibility and personal desirability, an opportunity is recognized. Although it is outside of the scope of this paper, once the feasibility and desirability threshold requirements have been surpassed, we

would predict that intentions towards starting an entrepreneurial venture based upon the recognized opportunity are being formulated within the entrepreneur's mind.

Proposition 2A: *Perceived feasibility will be the most salient threshold requirement for knowledge-based market insights attempting to exploit latent disequilibria as the entrepreneur must consider whether or not the insight is a feasible opportunity.*

Proposition 2B: *Perceived desirability will be the most salient threshold requirement for experience-based market insights attempting to exploit dynamic disequilibria as the entrepreneur must consider whether or not the insight is a desirable opportunity.*

Proposition 2C: *Both perceived feasibility and desirability are equally balanced for market insights attempting to exploit arbitrage opportunities in the external environment.*

Opportunity Recognition. As the dependent variable in our model, opportunity recognition is conceptualized as a decision result of a process wherein a market insight is evaluated based upon its perceived feasibility and perceived desirability. Consistent with this approach, we conceptualize the DV as a binary variable (eg., yes or no – opportunity is/is not recognized). Overall, the goal of using Opportunity Recognition as a binary dependent variable is to isolate the salient reasons why/why not market insights are translated into viable opportunities. Since the DV is simple and readily observable, it provides an anchoring perspective whereby researchers can seek to examine the interaction between schema content and environmental perception in entrepreneurs. Finally, it was the stated goal of this paper to provide a viable framework for understanding the cognitive process where entrepreneurs make predictions regarding future events. Since cognitive processes are difficult to examine as they unfold, using a binary dependent variable allows future empirical research of this model to effectively categorize processes that either did or did not lead to a recognized opportunity. Such a perspective is not uncommon in cognitive research as scholars must begin with observable behavior in order to build understanding into the mysteries of the mind.

Proposition 7: *The corresponding match between schema content and perceived market insights as filtered through the threshold variables is the most likely predictor of opportunity recognition in entrepreneurial action.*

DISCUSSION

While economists rely upon the inevitability of entrepreneurial action (Arrow, 1979), behavioral researchers are more interested in the cognitive processes that are most efficacious for stimulating entrepreneurial action. While opportunity recognition still does not create an inevitability of action on the part of an entrepreneur it can be conceptualized as a mediating step between an idea and concrete action. In addition, it reflects a process by which an entrepreneurs cognitions move from unconscious categorization towards conscious evaluation of an insight into the external environment (Gaglio, 1997). Nevertheless, the distinction between the insight and recognition is important as it emphasizes the stage (market insight stage) where inferences are likely to be made and as this paper has discussed in previous sections, inferences are the source of entrepreneurial prediction and insight into the external environment. To this point Knight writes, “We perceive the world before we react to it, and we react not to what we perceive, but always to what we infer” (1957 : 201). In addition, this paper attempts to clarify some of the debate between economic and behavioral theories of entrepreneurship by highlighting the critical nexus of individual cognitions and general market dynamics. By linking both dynamic and latent market disequilibrium to the cognitive processing abilities of

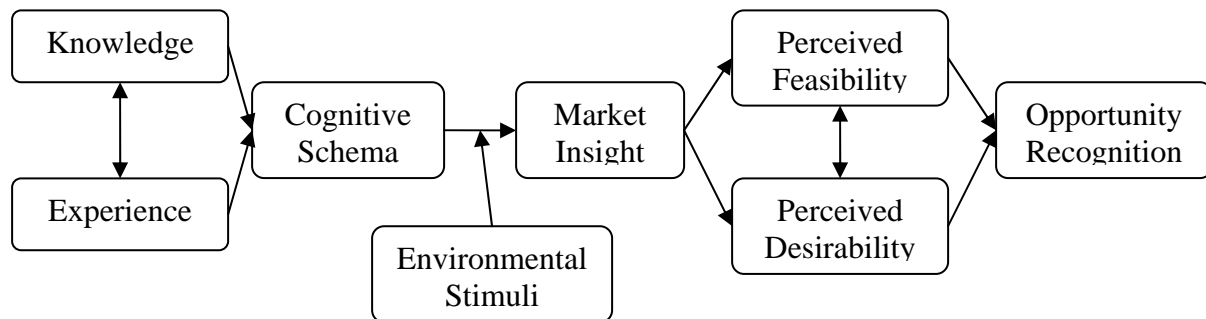
entrepreneurs, this paper identifies the cognitive capabilities that are most salient for particular types of market insights. Overall, the goal of linking these perspectives was to construct an alternative framework upon which both the behavioral and economic perspectives can be utilized to describe how entrepreneurs construct insights into the external environment.

CONCLUSION

Overall, this paper takes the position that both the behavioral and economic theories of entrepreneurship are necessary for the continued development of this critical aspect of entrepreneurship research. Since entrepreneurship is the story of both the entrepreneur and the market any attempt to downplay one to emphasize the importance of the other is to only tell half of the story. Such reasoning in the past created an unrealistic view of entrepreneurs in economics as some type of clairvoyant market agent able to see what an “omniscient” market could not, or it created the idea in behavioral paradigms that markets somehow solely exist within an entrepreneur’s perceptions. By identifying the nexus of the external environment and the entrepreneur’s cognitive schema and the different types of market disequilibria, this paper intended to tell a more complete story of how market agents can both recognize and create the disequilibrium necessary to earn entrepreneurial profits. While the cognitive construction of entrepreneurial foresight remained a mystery to both Knight and Kirzner, the usage of schema theory within this text has, at the very least, provided entrepreneurship researchers with the ability to unlock the mysteries of the mind. In summary, it is hoped that the content of this paper provides researchers with the information needed to understand the process by which individuals, through alertness and/or creativity, are able to construct market-breaking opportunities that serve as the source for renewal and growth in the modern economy.

REFERENCES AVAILABLE FROM THE AUTHORS UPON REQUEST

FIGURE ONE: CONCEPTUAL MODEL



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