

A Three-Path Model of New Venture Creation: An Image Theory Perspective

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Executive Summary

Researchers in the entrepreneurship discipline have long sought to answer the question: “what drives people to entrepreneurship?” Previous research has focused, with little payoff, on the psychology of the entrepreneur in terms of which individual level traits differentiate those who engage in entrepreneurial behavior from those who do not. In this manuscript, we posit that people choose entrepreneurship as a career through one of three paths. We present a three-path model of new venture creation, which suggests that certain external influences initiate an individual’s cognitive processes of cognitive scripts and sense of opportunity recognition, thereby producing entrepreneurial behavior. This model is unique from, yet is complimentary to, the psychology-based theories that have been previously offered in the literature.

Introduction

What drives people to start a new venture? Potential entrepreneurs typically choose to start a new venture when they see it as the best alternative from a pool of viable alternatives. Many people may see starting a new venture as a suboptimal decision, while some may never even contemplate it as an alternative. Various reasons for the differences that distinguish entrepreneurs from non-entrepreneurs have been examined, such as personality characteristics (Abbey, 2002; Forlani & Mullins, 2000) and demographic characteristics (Crant, 1996; Stewart, Carland, Carland, Watson, & Sweo, 2003). Intentional models, however, have proven to be a better alternative in predicting entrepreneurial activity (Krueger & Carsrud, 1993; Krueger, Reilly, & Carsrud, 2000), since intentions are considered to be immediate antecedents of behavior (Ajzen, 1991).

According to Elfving, Brännback, and Carsrud (2009), the greatest reason for intention is an entrepreneurial event, referred to as a *shock*, which is a change in direction of a person’s life (i.e. job loss, midlife crisis, risk opportunity, money). A shock leads to the individual contemplating their circumstances, which, in turn, might lead to entrepreneurial behavior. However, Elfving and colleague’s (2009) contextual model of entrepreneurship acknowledges that these entrepreneurial events are necessary yet insufficient predictors of new venture creation. Other authors have pointed to factors such as necessary motivations, goals, and opportunity evaluation (Naffziger, Hornsby, & Kuratko, 1994; Boyd & Vozikis, 1994). Begum (1993) notes that self motivation, confidence, job skills, technical qualification, external

motivation, government policy, and calculated incentives are motivational factors related to a proclivity for entrepreneurship. Few studies have attempted to integrate these perspectives into a more comprehensive and generalizable model.

A new venture is often described as an extension of the founder, created in the founder's image (Chandler & Hanks, 1994; Mintzberg, 1988). While some researchers propose that entrepreneurship should be studied as a firm behavior at the organizational level (Ahuja & Lampert, 2001; Covin & Slevin, 1991; Lee & Peterson, 2000), there are also studies regarding entrepreneurship as a part of the life cycle of firms (McCarthy, Krueger, & Schoenecker, 1990). Much of the extant research focuses on entrepreneurs and their behaviors (Venkataraman, 1997), which has led to a tradition of considering entrepreneurship synonymous with new venture creation. Many studies have examined entrepreneurship as various personal characteristics of entrepreneurs, presenting the entrepreneur as an innovator (Schumpeter, 1934), locator and implementer of ideas, and leader (Baumol, 1968), as well as a possessor of idiosyncratic knowledge that enables opportunity recognition (Shane & Venkataraman, 2000).

Many researchers opine that entrepreneurs are individuals who focus specifically on newness and novelty in the form of new products, processes, and the development of entirely new markets and industries (Lumpkin & Dess, 1996), which is the perspective on entrepreneurship we adopt for our research provided that much research has followed this line of thinking (Chrisman, Bauerschmidt, & Hofer, 1998; Gnyawali & Fogel, 1994).

Existing research seeking to understand entrepreneurial behavior includes a number of content-focused models that do not really examine or explain the underlying process of new venture creation. The context is of particular importance for the study of entrepreneurship as entrepreneurial actions, and cognitions, occur in the presence of high risk and uncertainty (Baron, 2008). The increased uncertainty likely produces increases affective responses and perhaps even entrepreneurial motivation. For example, researchers have tried to answer the question by relating entrepreneurial cognition to new venture creation (Markman, Balkin & Baron, 2002; Mitchell, Busenitz, Bird, Gaglio, McMullen, Morse, & Smith, 2007).

Recent research has expanded the contextual view into the interaction between the entrepreneurs affective experiences and the inherently uncertain context. Biniari (2010) argues that the resulting emotions from the dyadic interaction between entrepreneurs and non-entrepreneurs in a given social context affect the entrepreneurial process and its outcomes. This, in turn, influences the emotional and social embeddedness of the entrepreneur, which may prove to be quite valuable for access to resources and credibility. Hahn, Frese, Binnewies, and Schmitt (2012) concluded that well-being is an important determinant of proactive behavior which illuminated the necessity to take a more differentiated view into the nature of entrepreneurial emotions than offered in the past. This is further echoed by Podoyntsyna, van der Bij, and Song who proposed that the strain caused by the experience of conflicting emotions collectively influence decision making.

Along similar lines of thought Morris, Kuratko, Schindehutte, and Spivak proposed that both entrepreneur and the venture itself create one another through a dyadic interaction that

provides experiences to the entrepreneur that vary in their volume, velocity, and volatility (Morris, Kuratko, Schindehutte, and Spivak, 2012). Consistent with the aforementioned framework, Hayton and Cholakova (2012) suggest that both cognition and affect represent a deeply intertwined process that enables the entrepreneur to feel, think, and act in a systematic fashion. Welpel and colleagues (2012) further explain that the experienced emotions impact the evaluation and consequent exploitation.

Research suggests that cognitive maps are sensemaking tools that help continuously elucidate a subject, revising explanations as the information received changes. Cognitive maps are a form of mental processing in which an individual psychologically transforms information about a phenomenon into a personal understanding of it. These cognitive maps serve as the basis for decision making and action. These cognitive maps have been defined through many related terms, such as schema, mental models, and scripts.

In relation to this current manuscript, a cross-cultural study by Mitchell and colleagues (2000) examined the effect of cognition maps in the form of three scripts (*arrangements*, *willingness*, and *ability*) on the venture creation decision. Scripts are defined as a cognitive mechanism that comprises the key elements in a decision situation and the likely ordering of events. Previous literature has suggested that there are biases within the scripts of entrepreneurs, such as overconfidence (Busenitz & Barney, 1997) and self-justification (Baron, 1998). These entrepreneurship-related scripts integrate the tacit knowledge of the entrepreneur producing cognitive maps outlining the path to new venture creation. Consequently, many theorists advocate that new ventures are created in the image of the founder (Chandler & Hanks, 1994). Recent research has suggested that the entrepreneurial new venture is rooted in affect and emotion (Morris et al., 2012). Specifically, the venture and the entrepreneur create each other through an ongoing interactional process (Morris et al., 2012). While pointing out important variables in terms of venture creation, these models nevertheless fail to offer a greater understanding of why individuals choose entrepreneurial career paths.

Bhave (1994) offered a process model of entrepreneurial venture creation, which, through interviews with entrepreneurs, identified important variables in the process of venture creation, such as opportunity recognition. This study built a foundation for improved theorization concerning the process of new firm creation. However, this model leaves out important factors that have been suggested by previous research in entrepreneurial cognition. One of the factors omitted is the idea of mental maps or scripts. As suggested by Mitchell et al. (2000), scripts function as a knowledge structure and account for the comprehensive reality based on consideration of both the external situation and knowledge required in the situation to achieve better performance. Therefore, scripts play an important role in explaining entrepreneurs' decisions to start new ventures and the decision process of venture creation. Although Bhave (1994) acknowledged the importance of external triggers in initiating externally stimulated opportunity recognition, the model does not incorporate external variables addressing such triggers. The inclusion of such triggers would provide a better understanding of the entrepreneurial process since external environmental factors clearly play an important

influencing role. As such, inclusion of cognitive processes within a path model provides a promising avenue for further inquiry into the creation of new ventures.

The purpose of this paper is to propose a model of new venture creation that allows for systematic integration of factors, both internal and external, as part of the entrepreneurial venture creation process. Specifically, we propose a three-path model of new venture creation that extends the work of Bhawe (1994) by incorporating scripts and external factors referred to as *shocks*. The model presented is consistent with Elfving and colleague's (2009) findings, which suggest that the goal behind new venture creation may be to gain independence based on the process of detachment derived through situational momentum. Detachment precedes the need to acquire resources for the purpose of new venture success, whereas vision, self-efficacy, and goals relate to subsequent venture growth (Baum & Locke, 2004). Nevertheless, choice and goal development remain independent processes conceptually and behaviorally (Sarasvathy, 2001). Based on image theory, as presented by Beach and colleagues (Beach, 1993a; Beach, 1993b; Beach & Connolly, 2005; Beach & Mitchell, 1987), the three-path model of entrepreneurial venture formation takes into account the possibility of irrationality among decision makers within the decision making process. Beach stated that real decision processes seldom involve extensive evaluation: there is rarely any actual choice, behaviors are often pre-programmed, and decision makers use few strategies in making their decisions (Beach, 1993a). This view complements the current literature on opportunity recognition. Ultimately, image theory is less about rational decision making processes (i.e. opportunism, opportunity recognition) than it is about a surface level screening process that motivates entrepreneurial behavior. According to Herron and Sapienza (1992) motivation plays an important role in the formation of new ventures despite the validity of the argument for situational dependency as a primary determinant of new venture creation. Regarding the importance of motivation, Stewart and Roth (2007) found that a high achievement motivation plays an important role in the creation of new ventures through underlying commitment and perseverance.

By incorporating both cognitive and environmental factors into this path model of entrepreneurial venture formation, we offer an explanation of how entrepreneurs go through decision stages that culminate in the creation of a new venture. Therefore, the three-path model of new venture creation presented herein will provide greater understanding of new venture formation. In addition, the introduction of image theory into this area of research interjects a new and helpful perspective by suggesting that the entrepreneurial process is not wholly rational (Herron & Sapienza, 1992). Image theory further emphasizes that new ventures are, to a great extent, created in the image of the founders. Each new venture becomes an extension of its founder's values, beliefs, and assumptions about the business (Chandler & Hansk, 1994; Mintzberg, 1988).

In the following sections, we review relevant literature on image theory, scripts, and the idea of shocks. Based on this body of research, we offer a three-path model of new venture creation. Implications and discussions are offered subsequently.

Theoretical Development

The intention of an individual to become an entrepreneur is crucial to understanding new venture creation (Bird 1988). Models of decision making with a cognitive basis, such as Ajzen's (1991) Theory of Planned Behavior, and Shapero and Sokol's (1982) Entrepreneurial Event Model, emerged in an attempt to explain entrepreneurial intention (Audet, 2002, 2004; Krueger, Reilly & Carsrud, 2000; Kuehn, 2008; Peterman & Kennedy, 2003). Such rational choice models of decision making have dominated academic thought within this area for decades. However, the assumption of rationality within these models does not conveniently provide for the inclusion of such less-than-rational concepts as intuition, gut feelings, experience, fate, luck, or tradition. Whether referred to as an "economic model of decision making" or the more constrained "administrative model of decision making," such models posit that individuals gather a wide range of alternatives for a pending choice and evaluate those alternatives with the ultimate selection being based on the maximization of some personal outcome. However, rational decision models have fallen out of favor and alternatives have arisen. Research has recognized a range of cognitive differences, from intuitive to analytic, in terms of how people learn, gather knowledge, process information, and make decisions (Brigham et al., 2007; Leonard, Beauvais, & Scholl, 2005).

Image Theory: An Alternative to Rational Choice

Image theory suggests that decision makers make their decisions by using images stored within their cognitive frameworks based on their personal experience. Image theory suggests that most decisions in life do not involve choosing from several alternatives. Instead, one alternative surfaces after all others are rejected, at which point the person can decide to pursue that alternative or not. Such decisions are made based on congruence between the various alternatives and an individual's personal values, goals, and strategies (Lim, Morse, Mitchell, & Seawright, 2010; Morrell, 2004) found within their images. Thus, image theory is consistent with the research that suggests ventures are extensions of their founders. Image theory presents a description of how an individual actually makes decisions as opposed to a prescription of how the person should make decisions (Beach & Mitchell, 1987; Beach & Connolly, 2005; Lim et al., 2010). Image theory has been applied to decisions relating to turnover (Holtom & Inderrieden, 2006; Maertz & Campion, 2004), business ethics (Morrell, 2004), consumer behavior (Nelson, 2004); and punishment decisions (Dunegan, 1996).

Image theory suggests that decision makers use their accumulated knowledge and experience, stored as cognitive frameworks, to set standards regarding personal values, goals, and strategies to accomplish goals (Beach, 1998; Beach & Connolly, 2005). These standards are referred to as value images, trajectory images, and strategic images, respectively (Beach, 1993a; Beach, 1993b; Beach & Connolly, 2005; Beach & Mitchell, 1987). Value images are the set of values, morals, and ethical standards that define acceptable and unacceptable principles for living for each decision maker; Beach (1997) called these value images "self-evident truths." These value images determine the alternatives that are possible within the remaining two image

categories. Trajectory images are the goals and agendas that can be pursued in the decision maker's anticipated future. These images, which must be congruent with the value images, can range from specific to abstract, and they reflect what the decision maker seeks to achieve, as well as the decision maker's vision of the future. Strategic images represent the plans and tactics that will be used to achieve the decision maker's desired goals, as well as the forecasted results expected as a result.

A central point of image theory, as opposed to rational choice approaches to decision making, is that decision makers do not simply choose between alternative choices with objective criteria, instead "decisions consist of 1) adopting or rejecting potential candidates to be new principles, goals, or plans, and 2) determining whether progress toward goals is being made" (Montgomery, 1987, p. 221). In this way, decision makers screen information that could potentially lead to behavioral changes that violate perceived images. When important information about an alternative is missing or inconclusive, it is more likely that the alternative will be rejected. Although the vast majority of information received by the decision maker results in no changes in behavior, it is the differences in perceived image compatibility that causes the decision maker to consider an alternative course of action (Beach, 1993a; Beach & Connolly, 2005; Kuehn, 2009; Lee & Mitchell, 1994). When a decision maker recognizes a misalignment of images, the decision maker will then select an available course of action that realigns those images. We hold that the recognition of this misalignment is likely to occur through an event known as a *shock*.

The Precipitating Role of Shocks

Research has found that there is a bias toward maintaining the status quo, meaning that individuals tend to be more aware and sensitive to information that supports their current course of action than information that does not (Dunegan, 1995). As a result, to overcome the inertia within human behavior, it takes a "displacement event" or shock (Shapiro, 1982). While such an event does not have to be negative in nature, negative events are often more powerful than positive events in terms of causing drastic life changes. A shock is defined as a specific jarring event that initiates the psychological analyses involved in the process of screening alternative courses of action (Lee & Mitchell, 1994; Kuehn, 2009). This definition conceptualizes shocks as disruptive events, such as the death of a family member or the loss of a job. Alternative courses of action consist of paths that would lead to the creation of a new venture. The notion of shocks has been conceptualized at multiple levels of analysis and by different streams of scholarly research. At the macro-level, shocks have been characterized by technological discontinuities (Tushman & Romanelli, 1985), regulatory upheaval (Greenwood & Suddaby, 2006), and broad societal and cultural change (Tolbert & Zucker, 1996), as well as the disruption of relationships upon which firms are highly reliant (Uzzi, 1997).

At the individual level, shocks can be categorized as positive, negative, or neutral events and as personal or organization-related in nature. An example of a personal event could be an illness or death of family members or close friends, receiving a financial windfall, or some

significant personal or familial milestone, such as a birth, a geographical move, or a graduation (Moffit, 2007). An example of a non-personal event could be a company closing that results in layoffs, the abandonment of particular markets that will be left to potential competitors, or an announcement of a new plant opening that will create opportunities for new business ventures in the supply chain. The key indicator of a shock is that the event is distinguishable and it causes the individual to consider the alignment of his own personal values, goals, and actions.

Shocks have been shown to be a key antecedent of quitting a job. In a study by Lee, Mitchell, Wise & Fireman (1996), 59% of nurses experienced a shock before changing jobs. Lee, Mitchell, Holtom, McDaniel, and Hill (1999) found that 71% of accountants in their study experienced a shock before changing jobs. Using a data set from GMAT, Holtom and Inderrieden (2003) found that 58% of the subjects who changed jobs experienced a shock prior to the career change. While the research has centered on shocks leading to job turnover, anecdotal evidence illustrates how shocks might also influence entrepreneurial new venture creation as well.

For example, Arthur Blank and Bernie Marcus scribbled plans for their new venture, called Home Depot, on a napkin after they had been fired from Handy Dan, a small chain of home improvement stores (Blank, Marcus & Andelman, 1999). They began their paths toward entrepreneurial ventures after experiencing a significant moment. Such shocks lead to the recognition of an opportunity and initiate psychological analyses that lead to the screening of alternative courses of action. Events are the triggering and defining element within a shock. While the shock may be an expected or unexpected event, it must be too powerful to go unrecognized. Most events experienced over a lifetime are not shocks. Events that are shocks to one individual will not necessarily be a shock to other individuals. The event is a shock if it gains the attention of the decision maker and shakes him out of a state of equilibrium or away from the status quo (Tushman & Romanelli, 1985). The shock needs not create negative emotion in the individual (Holtom, Mitchell, Lee, & Inderrieden, 2005), yet it must create a noticeable disruption within the individual's life equilibrium.

When a person encounters a shock, that individual is confronted with the possible recognition that their own values, goals, and actions may be misaligned with one another. It may be that the shock causes the individual to see that, in light of the new information embedded within the event, that their current tactics are not aligned with their perceived images. This prompts the individual to seek out whether the "shock can be responded to easily and in an appropriate manner. Of special interest is whether an obvious response (script) comes to mind in the form of past actions or rules the employee has generated from observing others or from knowledge he/she has acquired in other ways" (Holtom, et al, 2005, p. 341). It is the nature of these scripts that will be addressed next.

Scripts

Extant research has addressed the defining characteristics of an entrepreneur and what distinguishes them from other managers (Steward & Roth, 2007). In particular, theorists have long recognized the importance of studying the cognitive abilities and such theories have great potential within the field of entrepreneurship as well (Kuehn, 2009; Mitchell et al., 2007). Entrepreneurial cognitions are “the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth” (Mitchell et al., 2007, p. 97). These cognitions enable the discovery and exploitation of entrepreneurial opportunities (Shane & Vankataraman, 2000). In our model, we focus on cognition in the form of the cognitive scripts, which allow for the entry decision into entrepreneurship.

Scripts are schemas, cognitive structures that help a person understanding events and behaviors (Gioia & Poole, 1984). Scripts help organize knowledge and assumptions about a given topic or situation, thereby providing personal understanding and guidance for future actions (Lord & Kernan, 1987). Scripts are used in interpreting and processing information, transforming information into potentially meaningful sequences of possible events and situations. Scripts consist of memory units that are presumed to be constructed of scenes organized into vignettes (Wyer & Carlston, 1979). Abelson (1981) posited that three conditions are required for scripts to be relevant within a decisional event: 1) the individual must retain a cognitive representation of the script; 2) a situation that activates the script must occur; and 3) the script must be enacted as a choice in behavior. Research has found that new venture creation can be both a linear or non-linear process involving broad stages of development, such as opportunity searches, planning the new venture, marshalling resources, and implementation (Timmons, 2005). Abelson (1981) categorized scripts as weak and strong. Weak scripts stipulate the expected behaviors of self and others, but they do not limit the individual to a specific order in which to enact the behaviors. Strong scripts are ritualistic in nature because they relate to known events and situations in which the person knows exactly what behaviors are expected and the order in which they are to be performed (Abelson, 1981). As such, both strong and weak scripts can be applied to new venture creation.

Scripts have taken on varying conceptualizations depending upon the context in which they are examined. As it relates to this study, Mitchell, Smith, Seawright, and Morse (2000) differentiate between different kinds of scripts as they pertain to new venture creation. Specifically, they discuss *arrangement* scripts, *willingness* scripts, and *ability* scripts (Kuehn, 2009; Mitchell et al., 2000, 2007).

Arrangement scripts are the knowledge structures that individuals possess which concern the use of specific arrangements, such as contacts, relationships, resources, and assets, which support their own performance and expert level mastery within a given domain. Possession of, or access to, specific arrangements is an integral part of a script. With regard to venture creation decisions, arrangement scripts might be about idea protection, venture networks, and the application of venture specific skills. Expert information processing theory suggests that

entrepreneurs, those who make the venture creation decision, have and use appropriate arrangement scripts about idea protection, venture networks, resource access, and venture specific skills in order to make the venture creation decision (Mitchell et al. 2000).

Willingness scripts are the knowledge structures that underlie an individual's receptivity to the idea of engaging in and committing to a new venture. They include actionable thoughts about seeking, committing to, and pursuing opportunities. For example, willingness scripts focused on opportunity seeking might revolve around openness and exploring new situations and possibilities. Entrepreneurs are expected to have more highly developed scripts relating to opportunity seeking, commitment, and opportunity pursuit (Mitchell et al., 2000). Willingness scripts permit entrepreneurs to experience less risk by reducing their perceived uncertainty.

Ability scripts are knowledge structures that individuals possess which concern the capabilities, skills, knowledge, norms, and attitudes required in order to create a successful venture. These scripts are particularly important for ventures that require a significant amount of skill input from the founder.

According to Lord and Kernan (1987), scripts allow for the adoption and elaboration of new goals. A script may include one or more paths toward a specific goal. Various situations can allow a script to have multiple tracks in the form of an "if then" decision tree (Gioia & Poole, 1984). Such a script organizes tasks and challenges into a hierarchical means-end-structure that can easily be adapted to include or exclude new experiences. This multiple track decision tree within scripts is particularly important with regard to our three path model of entrepreneurship. The model allows for built-in flexibility and the ability to pursue alternative paths. Basically, one blocked path does not necessitate an end to progress, but, rather, opens up alternative pathways. Scripts also organize goals within a hierarchical means-end structure, prioritizing and providing direction in terms of pursuing them in a specific order.

Entrepreneurs have been categorized within the literature as novice, one-time, and habitual entrepreneurs based on the frequency in which they engage in entrepreneurial ventures (Baron & Ensley, 2006). Mitchell and colleagues (2007) found that entrepreneurs have unique knowledge structures that help them to process information in ways that allow them to see advantages even in imperfect market conditions because they use information in better ways than non-entrepreneurs (Ericsson, Krampe, & Tesch-Romer, 1993; Leddo & Abelson, 1986; Read, 1987). Research has suggested that entrepreneurial scripts are dynamic knowledge structures that are influenced by deliberate practice-based change (Baron & Henry, 2010; Mitchell, 2005).

Opportunity thinking versus obstacle thinking provides an example of the different types of thought patterns that an entrepreneur might adopt (Manz, 1986; Neck & Manz, 1992; 1996). Opportunity thinking involves a pattern of thought that focuses on opportunities, worthwhile challenges, and constructive ways of dealing with challenging situations. Obstacle thinking, conversely, involves a focus on the negative aspects and hurdles involved in challenging situations (e.g. reasons to give up and retreat from problems). Additionally, within the entrepreneurship literature, there are additional constructs that share domain content with opportunity thinking (Timmons, 2005). One related construct, skill in opportunity recognition,

has been found to be significantly related to entrepreneurial performance (Baum, 1995). Because of this, the question arises: What can be done to increase the likelihood and the degree to which entrepreneurs are opportunity thinkers?

Opportunity Recognition

The discovery and exploitation of opportunities underlies the successful execution of an entrepreneurial endeavor (Eckhardt & Shane, 2003; Shane, 2003; van de Ven & Engleman, 2004; Zahra, Sapienza, & Davidsson, 2006). Typically, discovery occurs prior to exploitation (Eckhardt & Shane, 2003, 2010), though this is not necessarily the case (Baker, Miner, & Easley, 2003; Bhave, 1994; Davidsson, et al., 2008; Sarasvathy, 2001). Scripts can lead to the search of entrepreneurial opportunities and, ultimately, to finding them. Therefore, we address within our model the process by which individuals come to pursue opportunities due to external shocks or existing mental scripts, which in turn leads to new venture creation.

Eckhardt and Shane (2003) brought forth a new perspective on entrepreneurship, namely, the perspective of opportunities, which has its basis in a long history of research efforts (Schumpeter, 1934; Stevenson & Jarillo, 1990). Eckhardt and Shane (2003) suggested that opportunities should be the key concept within the field of entrepreneurship, arguing that entrepreneurial opportunities are the prerequisite for the formation of entrepreneurship. Gaglio and Katz (2001, p. 95) echoed this argument by asserting that "understanding the opportunity recognition process represents one of the core intellectual questions for the domain of entrepreneurship." Following this line of reasoning, Eckhardt and Shane (2003) further defined the field of entrepreneurship as involving "the study of sources of opportunities; the process of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them" (p. 218). A major contribution of this perspective is that viewing entrepreneurship as the study of opportunities allows researchers to study entrepreneurship without being restricted to organizational or individual levels of analysis, since focusing on entrepreneurial opportunity is crucial for both individuals and firms.

Extensive research has suggested that opportunity recognition plays a critical role within the new venture creation process. Opportunity recognition has been found to be an important antecedent of new venture creation (Shaver & Scott, 1991). Bhave (1994) noted that entrepreneurs are driven by internal or external opportunity recognition when starting new ventures. In other studies, Baum, Locke and Smith (2001) regarded opportunity recognition as a competency possessed by entrepreneurs for the future growth of new ventures. Opportunity recognition is not, however, considered to be constrained to a systematic search; it can also be based on accidental discovery. Research suggests that people do not necessarily search for opportunities, but, rather, they happen to recognize the value of newly received information (Kirzner, 1997). Koller (1988) reported that most entrepreneurs recognize, rather than seek out opportunities for their firms. In such a mode, the entrepreneur is receptive, yet not actively engaged in a formal, systematic search process.

Currently, the areas of entrepreneurship research previously examined, namely, shocks, scripts, images, and opportunity recognition serve as the theoretical basis for three different paths that might lead to the formation of new ventures. In remedy, this manuscript offers a three-path model of new venture creation, which explores the implications of scripts, shocks, and opportunity recognition in combination with one another. The three-paths are explained within the sections that follow.

Path 1 to New Venture Creation: Post Shock No Rational Choice

First, a shock to the system impacts a non-entrepreneur. This event triggers immediate reactions from the individual, which are based on the individual's personal characteristics and experiences. Based on this shock, the individual scans the situational idiosyncrasies and determines whether these characteristics match up with past situations. If no match is found and no script present, this may trigger impulsive behavior from the potential entrepreneur, resulting in an assessment of whether the present time might be the right time to begin a new venture. This type of decision frame resembles a "what-if" type of thought pattern. The potential entrepreneur may recognize certain unique situational characteristics, which might lead the individual to conclude that these circumstances are appropriately favorable for the creation of a new startup. Research has found that entrepreneurs do not perceive starting a new venture as risky due to certain underlying cognitions, meaning what is perceived as risky to one person is not perceived as risky to another (Simon, Houghton, & Aquino, 2000).

In other words, the decision to pursue a new venture is almost an automatic one, occurring rapidly and instinctively, with little or no systematic analysis conducted. This almost automatic decision is mostly consistent with entrepreneurship theories grounded in effectuation rather than causation (Sarasvathy, 2001). It may not involve the process of discovery before an individual moves into the process of exploitation. Discovery is the conceptual process of initial recognition and opportunity development for a new venture (Shane & Venkataraman, 2000; Ardichvili, Cardozo, & Ray, 2003). Exploitation is a separate process involving concrete actions undertaken in pursuit of the opportunity (Davidsson, et al., 2008; Eckhardt & Shane, 2010; Shane & Venkataraman, 2000). While much of the research claims that discovery and exploitation are sequential, with discovery occurring first, some researchers claim that discovery and exploitation are symbiotic, non-directional, iterative, counterintuitive, and accidental (Sarasvathy, 2001; Baker et al., 2003). Symbiotic discovery-exploitation incorporates feedback, learning and adaptation (Bhave, 1994).

Sarasvathy (2001) suggested that "the generalized aspiration of starting a business is not a necessary starting point for effectuation processes" (p.247). Effectuation theory is rooted in the logic of control over the future, meaning that the entrepreneur takes a given set of means and then focuses on selecting a particular alternative from a list of several alternatives plausibly achievable through the given set of means. The given set of means can include any sort of financial, material, human, and organizational resources. Effectual thinking is the application of

the "what-if" scenario to each of the possible alternatives for the purpose of choosing the best course of action.

Path 2 to New Venture Creation: Post Shock Rational Choice

An external shock could lead to the judgment that nothing like that particular shock has ever occurred in the individual's past. Accordingly, there may not be any personal or situational experiences that trigger a corresponding response. Prompted by such a shock, the potential entrepreneur assesses the value, strategic, and trajectory images in order to re-assess the situation. Consistent with research on effectual thinking, this assessment could lead the individual to the decision to pursue a new venture. Specifically, the potential entrepreneur's value images might elicit an evaluation of how well the opportunity fits with the individual's personal principles and how easily these principles can be integrated into the potential decision to pursue the new venture.

The trajectory image then determines whether the potential entrepreneur's personal goals are congruent with the judgment as to whether the new venture will meet these goals or not. Expert information processing theory, combined with cognition literature, suggests that potential entrepreneurs may have scripts that are more entrepreneurially expert than other people, thus they are more willing to make commitments within their domain of expertise (Mitchell, et al., 2007). Further, the strategic image leads to judgments as to whether the current efforts and goals are consistent with the desired goals. The potential entrepreneur then decides to become an entrepreneur, producing an organization that is consistent with their own personal images and pursuing the new venture start up accordingly.

In this decision path, the potential entrepreneur shifts to a more rational decision model, which involves further steps in the decision process to pursue a new venture. A significant event (shock) leads the individual to re-assess the current situation, which results in a recognition of the uniqueness of the situation. Consequently, the potential entrepreneur scans the environment for opportunities. Upon recognition of such an opportunity, the entrepreneur decides to pursue the new venture if it is consistent with their own value, trajectory, and strategic images.

Path 3 to New Venture Creation: No Shock Long Term Intent

For a person to pursue a particular alternative, it must be compatible with existing images. Beach (1998) noted that by the time most people reach adulthood, they have developed sufficient images to deal with any life issues that arise. New alternatives must make it past a large number of developed images, meaning that this compatibility test is not easily passed. New alternatives that deviate too far from the status quo are usually rejected (Beach & Mitchell, 1990). Therefore, for an entrepreneurial alternative to be considered compatible, it must not be in misalignment with existing images. This would imply that value images, trajectory, and strategic images have already taken into account entrepreneurship as a viable path, even if it is not part of one's experiential history.

This decision-making path resembles long-term planning that results in the creation of new ventures that have been thought through for a long time. The decision here lies less in scripted images of the potential entrepreneur than the two previously discussed paths, but more so in the recognition of an opportunity. In such scenarios, entrepreneurs pursue self-actualization over more fundamental needs. When the “time is right” the potential entrepreneur acts on a plan that has been developed over a significant period of time, perhaps several years in development. Much of this mindset results from perceptions of risk, which fits with the effectuation concept of affordable loss (Sarasvathy, 2001). When contingencies such as the financial stability of the potential entrepreneurs’ family will not be jeopardized by pursuing the new venture, then the individual chooses to pursue a life-long dream of starting the firm in order to achieve a level of personal fulfillment from it. This would imply that images recognize stability and security as important precursors for pursuing a new venture. These potential entrepreneurs may differ from other entrepreneurs in terms of their perception of risks, which leads to the necessary stability and security conditions within their images.

Implications

Implications for Entrepreneurship

New venture creation, as an engine of innovation, is important for everyone, from the individual consumer to the overall economy (Parker, 2004), and Audretsch (2009) has asserted that an entrepreneurial society is key to taking advantage of global economic opportunities. Therefore, understanding the decision process by which individuals choose to start new ventures is incredibly important. The purpose of this manuscript was to examine the intention to pursue a new venture, since research has established that such action is intentional (Krueger, 1993).

McGrath and MacMillan (2000) posited that entrepreneurs have an entrepreneurial mindset that affects their decision making, including whether they choose to pursue value creation opportunities. The present investigation provides an integrative framework that addresses three underlying pathways that lead to individuals becoming entrepreneurs by choosing to start new ventures. This model integrates not only internal and external factors that influence people in their decisions to create a new venture, but it extends the current literature by providing a deeper understanding into the way that people think through the decision process. Despite our approach in integrating multiple paths our theoretical model allows for differentiation between the three-paths discussed.

The model provides new answers to questions that have been asked for decades concerning the cognitive structures of entrepreneurs. Mitchell and colleagues (2007) called for further exploration of entrepreneurial cognition and how it affects decision making. Summers (2000) posited that some individuals have psychological traits that make them more likely to pursue new venture creation upon a trigger event. These trigger events, alternatively called entrepreneurial, displacement, and precipitating events, push or pull an individual to change

course. We propose that the combination of images and scripts compose, to some extent, this propensity to act. This paper suggests that shocks are often necessary to evoke entrepreneurial scripts. In turn, those scripts rely upon the value, trajectory, and strategic images inherent to the potential entrepreneur. Scripts analyze the circumstances for the determination of potential opportunities. If potential opportunities are identified, the entrepreneur must then determine whether the opportunities need to match the circumstances, which are evaluated as to alignment with their images.

This model proposes that there are significant differences based on whether the decision is made more instinctively or rationally. Differences in cognitive styles utilized would imply differences in approaches to opportunity discovery and exploitation, particularly in terms of whether effectual or causal approaches are preferred. Indeed, the knowledge structures composing the potential entrepreneur's arrangements, willingness, and ability scripts may be a priori indicators of their preference in cognitive style. Likewise, personal experiences, particularly in terms of values, trajectory, and strategic images, might likewise influence which scripts direct the cognition process. Indeed, these images may serve as the foundation upon which scripts are constructed.

Of particular note within this model is the third path, which suggests that a shock is not a necessity. However, since no evident shocks occur yet these individuals choose to pursue new venture creation, there is likely some internal trigger that occurs. There could be some important differences in terms of such individuals' value, trajectory, and strategic images. In particular, the individual may have value images that are equally, if not more so, inclined toward the pursuit of entrepreneurship as the value images of individuals within the other two paths. It could be that their trajectory images include certain built-in alarms that, if they are self-aware, produce shocks when the conditions are met. For example, an individual might believe that they need to start a business before they become too old to meet the physical demands in terms of hours of effort each day, affects of sleep and stress level, and so forth. As such, recognition of their own age might trigger a shock that is emergent from their own trajectory images. Likewise, perhaps seeing others they know be successful, or remembering how good it feels to think about their aspirations, could cause internal triggers that have no external visibility to generate shocks that are no less affectively potent than external shocks. Alternately, it could be that the scripts that these individuals have developed are such that certain preconditions must be in place for the scripts to be enacted, such as financial security, retirement, or sufficient discovery effort to ensure less risk in the exploitation stage of pursuing the new venture.

In the past, attention was given to the fact that entrepreneurship education has not spent enough time and attention on attitude development (Garavan & O'Connell, 1994) and personal skill development (Chen et al. 1998). However, there has been expansive growth in entrepreneurship education across all levels, both formally and informally. In fact, Kuratko (2005) cites over 1600 colleges or universities that offer entrepreneurship education and Katz (2003) has even suggested that the educational field of entrepreneurship "has reached maturity" (p.283). As a result, this has exposed individuals to more positive images of entrepreneurs and entrepreneurship as a career choice (Kuehn, 2009). This would imply that, from these positive

images, people would develop value, trajectory, and strategic images that are more aligned with entrepreneurship, and that, through the instruction and role modeling provided, people would develop scripts that are more expert in nature, leading to better entrepreneurial performance in terms of opportunity discovery and exploitation. Indeed, recent research suggests that entrepreneurial role models may enhance future entrepreneurial activity. (Bryant, Fabian, Kinnamon, & Wright, 2012). However, there is scant evidence to support major upswings in the number of successful nascent entrepreneurs. Yet contrary to this, it is suggested that veteran entrepreneurs develop expert scripts to process information very differently than inexperienced entrepreneurs (Gustafsson, 2004). More research needs to be conducted in this area to see if, indeed, images and scripts have been improved, leading to greater numbers of entrepreneurs and greater success.

Implications for Future Research

There are a number of ways in which the three-path model of new venture creation might be further explored, developed, and improved. Certainly, empirical testing of the theoretical framework presented herein would be a beneficial route. Such empirical validation would enable us to gain further insight, thereby advancing theoretical and empirical knowledge in the field of entrepreneurship. Entrepreneurship researchers might conduct a study similar in design to the study conducted by Bhawe (1994). Interviews with current entrepreneurs about their personal shocks, scripts, opportunity searches, opportunity recognition, and opportunity refinement experiences would prove extremely useful in examining the validity of the model we have presented.

Researchers might study also this model at the macro-level by examining the onset of shocks that occur on the societal level. One might examine the founding processes of new ventures stemming from societal level shocks such as the attack on the world trade center in 2001, Hurricane Katrina in 2005, and the economic troubles which have occurred since 2008. The proposition inherent within this aforementioned research opportunity is that societal level shocks will be precursors of increased levels of new venture creation. The fact that negative shocks are more likely to trigger entrepreneurial intention than positive shocks indicates that the nature of the shocks themselves need further research.

Research suggests that some individuals are more inclined to pursue entrepreneurial alternatives than others due to entrepreneurial psychological traits, such as independence (Ang & Hong, 2000), innovativeness (Ang & Hong, 2000; Rauch & Freese, 2007), internal locus of control (Brockhaus, 1987), and risk-taking propensity (Ang & Hong, 2000; Luthje & Franke, 2003). It has been argued within the literature that there is a global culture of entrepreneurship (Mitchell, 2003; Mitchell et al., 2000, 2007) with a pervasive entrepreneurial mentality (McGrath & MacMillan, 2000). Future research might examine how these traits are related to the creation of scripts and how they are the foundations of images.

Related to this would be the impact of the normative environment, particularly the effects of one's culture and one's family environment. Such influences are known to influence entrepreneurial intention (Davidsson & Honig 2003; Liñán & Santos 2007; Urbano, 2006; Veciana, Aponte, & Urbano, 2005). According to Shapero and Sokol's (1982) model, perceptions of desirability not just from the individual's value system, but from the social system as well influence the decision to pursue an entrepreneurial course. These factors might influence the degree and nature of impact particular shocks have on a potential entrepreneur based upon how those shocks are interpreted normatively within the culture and family unit.

Recent research by Haynie and his colleagues suggests that individuals with an entrepreneurial mindset actually evolve their scripts as they are faced with shocks and uncertainties (Haynie, Shepherd, Earley, & Mosakowski, 2010). If the meta-cognition of scripts by entrepreneurs and individuals with an entrepreneurial mindset is supported by future empirical evidence, it may support additional script-based and non-script-based paths to entrepreneurship that may broaden the model we have introduced herein.

Finally, further examination of the interplay and influence of images and scripts, as well as other aspects of cognition, on the entrepreneurial process is strongly warranted. It is important to understand the influence of images and scripts, not just in terms of entrepreneurial intention, but in terms of all aspects of the entrepreneurial process, because this will provide greater predictive power in identifying potential entrepreneurs and it will also provide insight for the development of higher quality entrepreneurial educational content.

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Figure 1: Paths to New Venture

