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Venture Creation and the Enterprising Individual: A Review and Synthesis

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Venture creation is at the heart of entrepreneurship. Enterprising individuals or groups start new ventures and, thus, we must understand the role of individuals if we are to understand venture creation. In this article, we review and critique the venture creation literature that has examined the role of the individual, with an eye toward identifying under-researched topics and improving research designs. We then highlight individual judgment as a particularly important future direction for research on the role of enterprising individuals in venture creation. We also discuss techniques for accessing entrepreneurs and for evaluating entrepreneurial judgments. © 2003 Elsevier Science Inc. All rights reserved.

Entrepreneurship is maturing as a discipline. Until quite recently, there were few established disciplinary boundaries for entrepreneurship research. Instead, it was distinguished from other research primarily by the context of investigation—i.e., a setting in small businesses or corporate venture initiatives (Venkatraman, 1997). Shane and Venkatraman (2000), however, have proposed a domain definition that emphasizes key research questions rather than research context. They define the field of entrepreneurship as the “scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited” (2000: 218). This definition focuses on entrepreneurial individuals interacting with their environment and, more specifically, on their actions in discovering, evaluating and exploiting opportunities. Shane and Venkatraman have suggested a path for future research on entrepreneurship.

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Venture creation—i.e., planning, organizing, and establishing new organizations (Gartner, 1985)—has long been an important topic for entrepreneurship researchers (e.g., Cooper, 1970). Venture creation is so central to the entrepreneurship research domain that Gartner stated provocatively, “Entrepreneurship *is* the creation of organizations. What differentiates entrepreneurs from non-entrepreneurs is that entrepreneurs create organizations, while non-entrepreneurs do not” (1988: 11—emphasis added). Thus, venture creation is clearly a key issue in entrepreneurship. The venture creation phenomenon involves interaction between the environment and individuals. Entrepreneurship, and, thus, venture creation stands at the nexus of lucrative opportunities and enterprising individuals (Venkatraman, 1997).

The role of the individual in creating ventures has been approached over many years from many different perspectives (Shane, 2000). We have learned that entrepreneurial thoughts and behaviors are not stable characteristics that differentiate some people from others across all situations (Shane & Venkatraman, 2000). Instead, developing an understanding of how the individual interacts with different environments may be key to understanding “why, when and how different modes of action are used to exploit entrepreneurial opportunities” (Shane & Venkatraman, 2000: 218). In this article we summarize and critique extant research about the role of individuals in entrepreneurship, and we suggest directions for future research on venture creation by enterprising individuals. Our goal is to suggest at least one path for answering questions of why, when and how individuals use different modes of action in creating ventures.

An Organizing Model

New ventures are neither coerced into being nor random, passive byproducts of environmental conditions. Instead, new ventures are the direct outcome of individuals’ intentions and consequent actions (Bird, 1992). The creation of an organization is not instantaneous; it is evolutionary (Gartner, 1985). It is a *process* of conceptualization and execution. Figure 1 presents an organizing framework that guides our discussion. This framework draws on the work of Learned (1992), and Shane and Venkatraman (2000). Environmental context is noticeably absent from our framework. This does not imply that the environment is not important as a source of opportunities (Gartner, 1985; Kirzner, 1973), or that there is not an interaction between environmental context and the individual (Shane & Venkatraman, 2000), instead, our focus is on the individual’s role in the formation of entrepreneurial intent, opportunity search and discovery, the decision to exploit, and the activities involved in exploitation until the first sale. While some have included activities occurring after the founding of an organization in the study of venture creation (e.g., Forbes, 1999), we believe doing so could blur the line between the activities of venture creation and those of an ongoing business. Thus, our model considers a new venture “created” upon its first sale (e.g., Gatewood, Shaver & Gartner, 1995).

Our model starts with entrepreneurial intentions. This construct represents an individual’s intent to start a new business (Krueger, 1993; Krueger & Brazeal, 1994). Such intention is a conscious state of mind that precedes action but directs attention toward the goal of establishing a new business (Bird, 1988, 1992; Gartner, 1985; Learned, 1992). The process

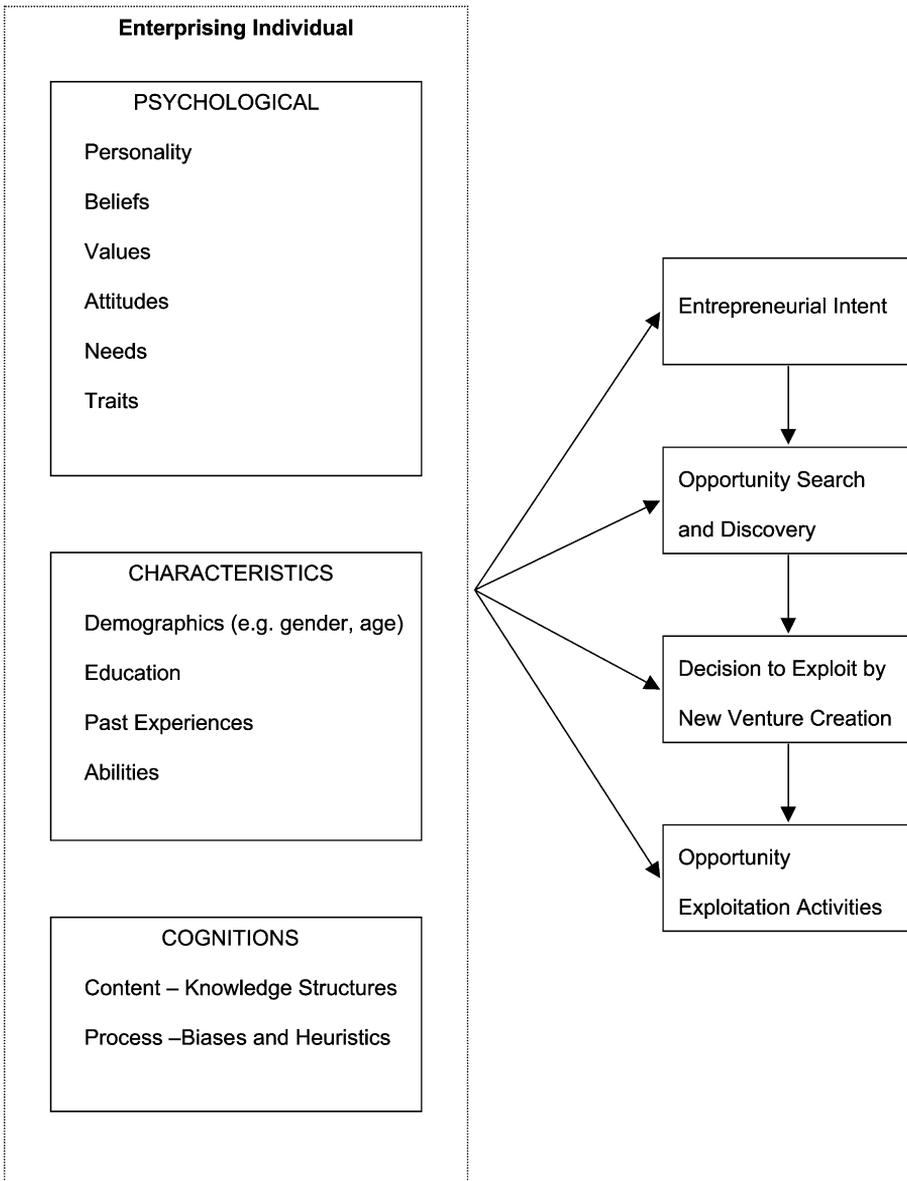


Figure 1. Organizing model.

of venture creation begins when an individual develops intent; the placement of this construct first in the model is consistent with the notion that an individual’s intent to create a venture precedes the search for and discovery of new venture opportunities (Krueger, 1993).

Once an entrepreneurial intention is formed, the search for and ultimate discovery of opportunities begins. The terms *search* and *discovery* may be somewhat misleading, because

the opportunity does not yet exist to be discovered; instead the entrepreneur has to imagine or speculate about the likely market values of goods and services in the future (Kaish & Gilad, 1991). Entrepreneurial opportunities are those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold for more than their costs of production (Casson, 1982). These opportunities exist because individuals have different beliefs about the value of goods and services and their marginal cost of production (Schumpeter, 1934). Researchers have proposed two reasons for these differences in beliefs among individuals. First, markets are composed of people who possess idiosyncratic information, which leads individuals to assign different values to a given good or service and to offer different prices to obtain it (Kirzner, 1973). Secondly, economies operate in a constant state of disequilibrium; technological, political and social changes are constantly changing resources' values (Schumpeter, 1934).

Once an opportunity is discovered, a choice must be made whether or not to exploit the opportunity (Shane & Venkatraman, 2000) and, if the choice is made to exploit it, another decision involves how best to exploit it. There are two major institutional arrangements for exploiting opportunities: (1) hierarchies—i.e., venture creation and (2) markets—i.e., the sale of opportunities to existing firms (Shane & Venkatraman, 2000; Williamson, 1985). Both venture creation and the sale of opportunities to existing firms are entrepreneurial actions. Our focus, however, is on venture creation.

Once the decision to pursue a new venture is made, action must translate intent into a new venture (Bird, 1988). The accumulation of proper resources is one key action. An entrepreneur typically doesn't initially control all the resources (e.g., location, facilities, human resources, supplies) required to develop the market, to establish the value-chain infrastructure, and eventually to profit from knowledge of the opportunity. Most of these resources must come from other people and institutions (Venkatraman, 1997).

The last component of our organizing framework is the enterprising individual. Individuals or groups of individuals create new firms. Clearly, new ventures cannot be created without an individual or group of individuals. Early research examining enterprising individuals followed from neoclassical economics, which assumes perfect information and markets that are in equilibrium (e.g., Kihlstrom & Laffont, 1979). The equilibrium framework assumes that no individual could discover a misalignment that would generate an entrepreneurial profit because, at any point in time, all opportunities have been recognized and all transactions perfectly coordinated. Thus, neoclassical economic theories explain entrepreneurship by identifying those individuals who prefer to become entrepreneurs (Shane, 2000). Accordingly, work investigating the individual and entrepreneurship focused on psychological variables that may distinguish entrepreneurs from non-entrepreneurs. Such work examined personality factors such as: (1) need for achievement (e.g., McClelland, 1961; McClelland & Winter, 1969); (2) locus of control (e.g., Brockhaus, 1980; Liles, 1974); and (3) risk-taking propensity (e.g., Brockhaus, 1980; Liles, 1974).

This early work implicitly assumed that entrepreneurs possess unique personality characteristics, and that these characteristics can be identified (Romanelli, 1989). Another assumption was that an entrepreneur is a "state of being" that doesn't change (Gartner, 1988). Accordingly, this early work examined characteristics without linking them to entrepreneurial actions. The search for an entrepreneurial personality profile was largely unsuccessful, in part because many of the investigated factors are common to successful individuals (Boyd &

Vozikis, 1994). Moreover, personality traits were not reliable predictors of future behavior (Ajzen, 1987, 1988; Gartner, 1989). This literature has been reviewed by Gartner (1988), and is not examined here.

Another aspect of the enterprising individual that has been studied is his or her demographic characteristics such as gender, age, education, and past experiences. Early work in entrepreneurship also tried to establish a stable entrepreneurial profile along these individual characteristics, but again was largely unsuccessful (Cooper & Bruno, 1977; DeCarlo & Lyons, 1979; Hornaday & Aboud, 1971; Roure & Maidique, 1986; Stuart & Abetti, 1990). This early work also will not be reviewed this article. Instead, the scope of our review is limited to individual characteristics as they pertain to venture creation.

Cognition is an important, yet understudied, aspect of the enterprising individual. Individuals approach information processing in one of two dominant ways: “top-down” or “theory-driven.” With top-down information processing, the current information guides the information processing. In contrast, with theory-driven processing, previous experiences in similar circumstances guide information processing (Walsh, 1995). Theory-driven information processing is thought to be the dominant response in all but novel situations (Louis & Sutton, 1991). In the following sections, we review and critique literature examining entrepreneurs’ decisional roles in each step of venture creation.

Venture Creation Review and Critique

How does the individual impact the processes in venture creation? Individual differences (e.g., attitudes, predispositions, traits, skills and abilities, and cognitive differences) influence the development of entrepreneurial intentions, opportunity search and discovery, decision processes and subsequent action. In the following sections, we take each step in the venture creation process and briefly review the literature to synthesize what we know about the individual’s role. We then offer a critique and suggestions for future research.

Entrepreneurs change their behaviors over time (e.g., information seeking—Kaish & Gilad, 1991). Thus, the enterprising individual is likely changed by the experience of starting a venture. Accordingly, although we have noted some studies that examined entrepreneurs without linking the individual and entrepreneurial actions, the insights from such studies are excluded from the following review.¹

Entrepreneurial Intent

Intention-based models examine the intent, but not the timing, of venture creation (Krueger, Reilly & Carsrud, 2000). It may be a relatively long or short time after intent develops before a new venture opportunity is even identified. Nonetheless, intention-based models contend that venture creation must be preceded by the development of intentions to create a new venture, and that by understanding intentions we can better predict venture creation.

Our understanding of the role of psychological variables in the development of entrepreneurial intentions has been guided primarily by three models: (1) Bird’s (1988) model of implementing entrepreneurial ideas (IEI); (2) Shaper’s (1982) model of the entrepreneurial event (SEE); and (3) Ajzen’s (1987) theory of planned behavior (TPB). In

Bird's IEI model, personal and social contexts interact with rational and intuitive thinking during the formation of entrepreneurial intentions, which are defined as either venture creation or creating new values for existing ventures. Social contexts are comprised of an individual's social, political, and economic context, and personal context is conceptualized as an individual's personal history, personality and abilities. New venture intentions can be the result of either rational, analytic, and cause-and-effect thinking processes or intuitive, holistic, and contextual thinking. With the passage of time, entrepreneurial intent results in entrepreneurial actions.

Bird's (1988) IEI model has yet to be validated empirically. Nonetheless, Boyd and Vozikis (1994) modified the model to include the effects of self-efficacy, which they theorized to be influenced by previous career experiences, entrepreneurial role models and social support. In turn, entrepreneurial self-efficacy influences the development of entrepreneurial intentions and moderates the relationship between entrepreneurial intentions and entrepreneurial behaviors.

In the SEE model (Shapero, 1982), entrepreneurial intentions are derived from perceptions of feasibility and desirability, and a propensity to act upon opportunities. In this model, inertia is assumed to guide human behavior until something (e.g., job loss, receiving an inheritance) occurs to interrupt the inertia. The interruption causes the decision maker to seek the best opportunity available and to evaluate opportunities based on their feasibility and desirability. In addition to perceptions of feasibility and desirability, intentions are influenced by an individual's propensity to act. Shapero (1982) defined perceived desirability as the attractiveness (both intra-personal and extra-personal) of starting a business, and perceived feasibility as the degree to which an individual feels capable of starting a business. He conceptualized propensity to act as the personal disposition to act on one's decisions.

Empirical evidence generally has supported the SEE model. Krueger (1993), for example, found that perceived feasibility and desirability, and the propensity to act, explained over half of the variance in intentions toward entrepreneurship, with feasibility perceptions explaining most of the variance. Subsequently, Krueger and Brazeal (1994) used the SEE model as a basis to develop a model of entrepreneurial potential. They suggest that perceived desirability and feasibility affect credibility in entrepreneurship. In turn, credibility and propensity to act determine entrepreneurial potential. Entrepreneurial potential does not result in entrepreneurial intentions until a precipitating event triggers the intentions.

Ajzen's TPB has received recent empirical attention. Whereas the SEE was developed specifically to explain the impact of intentions on venture creation, the TPB was developed to explain individual behavior in general, and was subsequently adapted by entrepreneurship scholars. The TPB identifies three attitudinal antecedents of intention: (1) attitude toward the act; (2) subjective norms; and (3) perceived feasibility. Attitude toward the act reflects the individual's assessment of the personal desirability of creating a new venture. Subjective norms reflect an individual's perceptions of what important people in an individual's life think about venture creation. Finally, perceived feasibility reflects the individual's perception of his or her ability to successfully initiate a new venture, which is largely synonymous with entrepreneurial self-efficacy (Boyd & Vozikis, 1994). Empirical testing has supported this model. Kolvereid (1996b), for example, found that attitude toward the act, favorable social norms, and entrepreneurial self-efficacy positively influenced the intention to be

self-employed. Moreover, [Krueger et al. \(2000\)](#) tested both the TPB and SEE, and found support for both models.

Several other, less theoretically integrated constructs have also been employed to predict entrepreneurial intent. Individual motives, for example, have received some attention. [Herron and Sapienza \(1992\)](#) theorized that individual motivation is an important determinant of venture creation, and that motivation is affected by individual values and traits. They suggested that the desire for autonomy interacts with skills to initiate search behavior. Security, workload, and autonomy are the most important drivers for those intending to be self-employed ([Kolvereid, 1996a](#)).

Demographic characteristics may relate indirectly to entrepreneurial intentions. Having a successful entrepreneurial parent is associated with entrepreneurial intent ([Crant, 1996](#)), likely because it leads to a higher entrepreneurial self-efficacy ([Scherer, Adams, Carley & Wiebe, 1989](#)). [Kolvereid \(1996b\)](#) found that demographic characteristics influence employment status choice indirectly, through the effects of those characteristics on attitudes, norms and self-efficacy. [Crant \(1996\)](#) found that males are more likely to have entrepreneurial intent.

Finally, the role of individual cognition in forming entrepreneurial intent has received limited attention. [Busenitz and Lau \(1996\)](#) proposed that cognitions precede entrepreneurial start-up intentions and that entrepreneurs and non-entrepreneurs have different schemas regarding venture creation. They also theorized that entrepreneurs make greater use of biases and heuristics, which allows for quicker information processing, and that cultural values, socio-economic factors and personal variables are related to entrepreneurial cognitions.

In summary, the bulk of empirical work on entrepreneurial intentions has focused on individual perceptions of feasibility, desirability and social support as determinants of entrepreneurial intentions. Entrepreneurial self-efficacy is widely regarded as a moderator of the relationship between individual perceptions and the development of entrepreneurial intent. Demographic characteristics appear to influence perceptions of feasibility, desirability and social support, and entrepreneurial self-efficacy. Recently, the role of individual cognition has received theoretical attention, but empirical work has yet to be done.

Critique and future directions. Research on entrepreneurial intent has suffered from both methodological and theoretical limitations. First, extant empirical research has relied generally on student samples and cross-sectional data. As a result, both generalizability and validity remain less than desirable. Future research should establish the generalizability of the findings to actual creators of new ventures by studying new venture creators rather than students. Because the majority of the empirical literature on entrepreneurial intent has used cross-sectional data, future researchers must obtain longitudinal data to establish causal order ([Gartner, Shaver, Gatewood & Katz, 1994](#)). Entrepreneurial intentions have not been empirically linked to opportunity search or to subsequent venture creation; thus, this research stream's validity remains untested.

Although not unique to this step of the venture creation process, the majority of the studies reviewed here were gathered using surveys. While surveys are a valuable tool in the entrepreneurship researcher's toolbox, it appears that entrepreneurship researchers may be relying too much on this method of gathering data, possibly to the detriment of knowledge accumulation. Being involved in venture creation changes people ([Gartner, 1989](#)). Thus, the

retrospective accounts provided by surveys may differ from “during the process” accounts. We encourage the use of more simulations, scenarios and laboratory experiments. Given that field research methods have different strengths and weaknesses (Snow & Thomas, 1994), we encourage entrepreneurship researchers to triangulate their findings with multimethod studies.

With regard to theoretical limitations, the entrepreneurial intent literature has not resulted in cumulative knowledge because the various perspectives have been pursued in isolation from the other perspectives. Scientific progress is made when the number of alternative explanations is reduced (Kuhn, 1962). Future work on entrepreneurial intentions should attempt to integrate and reduce the number of alternative intention models. Krueger et al. (2000) took an important first step in consolidating the theories of intention by testing both the TPB and SEE models, but, unfortunately, they did not integrate the two models.

Another issue is the inconsistent definition of entrepreneurial intent across studies. In some studies, entrepreneurial intent was defined as intent to own one’s own business (Crant, 1996; Kolvereid, 1996a, 1996b), while in other studies, entrepreneurial intent was defined as intent to start a business (Bird, 1992; Krueger et al., 2000; Scherer et al., 1989). Other studies never clearly defined what they meant by entrepreneurial intent, but instead hinted at their conceptualization by citing previous works (e.g., Boyd & Vozikis, 1994; Krueger & Brazeal, 1994). The intent to own one’s own business is clearly a more encompassing concept than just the intention to create a new venture. Indeed, one can purchase an ongoing concern and still own one’s own business. Given that purchasing an ongoing concern may involve less risk than creating a new venture, our subsequent understanding of the individual’s role in either venture creation or existing business purchase is blurred when entrepreneurial intent is not clearly defined.

One approach to disentangling the intent of those who wish to purchase an existing business vs. those who wish to start a new venture would be to use causal mapping techniques to identify consistent differences in attitudes across the two groups. Markóczy’s (1997) study of managers’ attitudes is one example of how this might be done. She performed a multistep study that evaluated the causal beliefs of 91 international managers in Hungary. She first identified 49 constructs important to success in Hungary by interviewing a separate sample of 30 Hungarian managers. The 91 participating managers then, via a grouping technique, individually selected the 10 constructs that they believed were most important to the performance of their firms. Each manager then developed a cause map by a pair-wise comparison process wherein a causal direction was identified for each construct pair. The resulting causal maps were then compared across managers through a distance algorithm to identify “like-thinking” managers (i.e., managers whose judgments of “how the world works” were similar). A similar study of potential entrepreneurs could, for example, identify cause maps that favor new ventures vs. existing business purchase, and vice versa, and subsequently test for cause map differences for those who actually implement their plans vs. those who do not.

Opportunity Search and Discovery

The role of the entrepreneurial individual in opportunity search and discovery is controversial. On one hand, the intentions models posit that entrepreneurs intend to be

entrepreneurs before they locate opportunities (Krueger, 1993). Thus, potential entrepreneurs must search for and discover opportunities. Indeed, opportunities are seized by those prepared to seize them (Krueger & Brazeal, 1994). On the other hand, Austrian economists assume that markets are composed of people who possess different information (Hayek, 1945). The possession of this idiosyncratic information may allow some people, even if they are not actively searching for opportunities, to see particular opportunities others cannot see. This discovery of opportunities without actively searching for them is an integral part of the Austrian framework, because it explains why entrepreneurship is not solely a function of differences in human abilities or willingness to take action (Kirzner, 1997). According to the Austrian perspective, it is information about opportunities, rather than fundamental attributes of people, that determines who becomes an entrepreneur (Shane, 2000).

There is relatively little extant research on opportunity search and discovery. Both the opportunity search and opportunity discovery perspectives, however, have received empirical attention. First, individuals' alertness to new opportunities and their past experiences have been studied as predictors of opportunity search. Kaish and Gilad (1991), for example, found that managers and entrepreneurs search for opportunities differently. In comparison to managers, entrepreneurs exhibit more general alertness and read and introspect more. Over time, however, entrepreneurs search less for information. Busenitz (1996) replicated the finding that entrepreneurs spend more non-business time searching for opportunities and ideas than do managers.

Second, Shane (2000) applied insights from the Austrian framework to eight case studies of technology-oriented new ventures from the discovery perspective. He found that individuals can and do discover entrepreneurial opportunities without searching for them, and that all individuals are not equally likely to recognize a given opportunity. Shane also found evidence of theory-driven information processing (Walsh, 1995). More specifically, he found that an individual's prior knowledge about: (1) markets influences his or her discovery of which markets to enter to exploit a new technology; (2) how to serve markets influences an individual's discovery of how to use a new technology to serve a market; and (3) customer problems will influence an individual's discovery of products and services to exploit a new technology.

Critique and future directions. Despite its obvious importance and some promising findings, relatively little theoretical or empirical work has examined either opportunity search or discovery in venture creation. Thus, this area of study has considerable promise for future research. There appears to be an important research opportunity in reconciling the disparate views regarding opportunity search and discovery. Whereas some view opportunity search as a natural activity of entrepreneurs (e.g., Busenitz, 1996; Kaish & Gilad, 1991), others follow the Austrian school of economics in viewing search as unnecessary (e.g., Shane, 2000). Future research should examine the conditions in which potential entrepreneurs actively search for opportunities vs. the conditions where potential entrepreneurs discover opportunities without an active search. Shane's case studies all involved new technology. This may be a clue to a theoretical boundary on opportunity discovery without search, but there may be other important contextual factors as well. Future research is necessary to test the generalizability of Shane's findings to other settings.

Psychological variables and individual characteristics are generally absent from our understanding of opportunity search and discovery. The dialogue to date appears to have ignored subjects such as previous training, education, and abilities. Indeed, although education has been found to increase entrepreneurial intentions (Clark, Davis & Harnisch, 1984; Crant, 1996), and presumably opportunity search, the effects of specific, entrepreneurial education warrant detailed examination.

Managerial cognitions research on information processing and sense-making suggests a number of directions for future research on venture creation. Managerial information processing research examines how organization members—including top managers—scan, interpret and extract meanings from the environment (Meindl, Stubbart & Porac 1996; Thomas, Gioia & Ketchen, 1997). Studies from this perspective have included themes such as biases affecting decision-making (Busenitz & Barney, 1997; Tversky & Kahnemann, 1974); information processing (Daft & Weick, 1984; Milliken, 1990); strategic issue diagnosis (Dutton, Fahey & Narayanan, 1983; Dutton & Jackson, 1987); and the mental structures of managers and causal mapping (Barr, Stimpert & Huff, 1992; Huff, 1990). Each of these example studies asked questions and used techniques that could be helpful in evaluating the questions of whether potential entrepreneurs actively search for opportunities, or whether anyone can become an entrepreneur if presented with the right opportunity.

The Decision to Exploit by Venture Creation

Research on the decision to exploit an entrepreneurial opportunity through venture creation has emphasized individuals' psychological attributes and cognitive processes. In this section, our attention first is focused on psychological attributes, and then on cognitive processes.

The psychological attributes that have been examined as possible influences on the decision to exploit an entrepreneurial opportunity include: (1) risk propensity, (2) motives, and (3) attitudes. The findings on risk preferences of entrepreneurs have been inconsistent. Begley and Boyd (1987) determined that organization founders exhibit a stronger risk-taking propensity, as well as a higher tolerance for ambiguity, than do non-entrepreneurial individuals. In contrast, Forlani and Mullins (2000) found that entrepreneurs tend to choose ventures with low degrees of variability, but are more willing to accept downside risk. Simon, Houghton and Aquino (1999), on the other hand, found that enterprising individuals start ventures not because they knowingly accept high levels of risk, but because they do not accurately perceive the risk involved in venture creations. Thus, individuals who decide to exploit opportunities may possess cognitive biases, but overall the results of risk preferences research are equivocal.

Only two studies have examined the role of motives in the decision to create a new venture. Shane, Kolvereid and Westhead (1991) examined the motives of new venture initiators across three countries and found that motivations differed by country. Entrepreneurs from New Zealand and Britain were motivated by the status and prestige associated with venture creation. In contrast, Norwegians were motivated by a desire to develop an idea and continue learning. Zapalska (1997) examined venture creation motives across gender, and found similar motivations for male and female entrepreneurs in Poland.

Attitudes also have received empirical attention. Robinson, Stimpson, Huefner and Hunt (1991) developed an attitudinal approach to predicting venture creation. They learned that attitudes regarding: the desirability of innovation in business, perceived personal control over business outcomes, and perceived self-esteem in business (i.e., self-confidence and perceived competency) distinguish those who have created a new venture from those who have not. Optimism is another attitude that has received attention. Entrepreneurs perceive that their prospects are better than other similar businesses, even though they have no apparent objective reasons for such optimism (Cooper, Woo & Dunkelberg, 1988).

Research on cognitive processes in the decision to exploit opportunities through venture creation has focused on the decision process in general or on specific biases of the decision maker. We first direct our attention toward the decision process research. Data-driven information processing is used only in novel decision situations (Louis & Sutton, 1991; Walsh, 1995). Moreover, the decision to create a new venture is a novel situation for most individuals. Thus, enterprising individuals use a data-driven decision-making process in decisions to exploit opportunities. Learned (1992), for example, theorized that the decision to create a new venture is triggered by the accumulation of confirming or disconfirming evidence. Cooper, Folta and Woo's (1995) findings also are consistent with data-driven decision-making processes. They found that inexperienced entrepreneurs search more intensively for information than do experienced entrepreneurs, and search more intensively when in unfamiliar domains than when in familiar domains. In contrast, more recent research has focused on a theory-driven decision-making approach. Minniti and Bygrave (1999) theorized that entrepreneurs draw heavily on their past experiences. More specifically, they argued that entrepreneurs either branch out in markets closely related to ones in which they already operate or start ventures in different markets, but in either case they use existing knowledge (i.e., theory) of a specific market or existing knowledge of how to be entrepreneurial.

Other researchers have focused on the specific biases that entrepreneurs exhibit in their decision-making. Baron (1998) theorized that entrepreneurs think differently than non-entrepreneurs because of their unique context. As a result of the unique context, Baron (1998) posited that entrepreneurs are more likely to: engage in counterfactual thinking; experience greater regret over missed opportunities; be impacted by affect infusion; and be prone to attribution biases, the planning fallacy, and escalation of commitment. Subsequent empirical testing, however, found that entrepreneurs engage in counterfactual thinking less and experience less regret than non-entrepreneurs (Baron, 2000). Other biases exhibited by entrepreneurs include the belief in the law of small numbers and the illusion of control (Simon et al., 1999).

Critique and future direction. Despite receiving significant attention, much remains to be learned about the role of the enterprising individual in the decision to exploit opportunity by venture creation. Although decision-making processes and specific biases have received attention, research on entrepreneurial schemas (i.e., knowledge structures) is sparse. Entrepreneurial schemas are the cognitive structures, generated from past experiences, that individuals use to interpret new information (Walsh, 1995). Extant research has hinted at the impact of past experiences (e.g., Krueger, 1993; Shane, 2000), but has not explicitly tied them to entrepreneurial schemas. An extension of this research would be to ascertain when

entrepreneurial schemas accurately mirror the information environment. Researchers need to understand how entrepreneurial knowledge structures develop, so that they can guide training or remedial change efforts if the use of a particular knowledge structure is found to promote either beneficial or deleterious consequences (Walsh, 1995). Finally, feedback loops between entrepreneurial outcomes and subsequent knowledge structures should be studied. Minniti and Bygrave (2001) have provided a good start by modeling the impact of entrepreneurial outcomes on learning. However, empirical work and further development of the research topic is needed.

Priem and Rosenstein (2000) conducted a study that may be a useful exemplar for future studies examining the opportunity exploitation decision. Their study linked CEO-perceived relationships between strategy–structure–environment “fit” and firm performance. This study built upon a previous study (Priem, 1994) that had found associations between 33 manufacturing firm CEOs’ strategy–structure–environment “fit” judgment policies, their firms’ realized fit, and their firms’ performance. Priem and Rosenstein compared the judgment policies of those 33 CEOs to the judgment policies of graduating MBAs, to the judgment policies of a liberal arts graduate students (i.e., educated “lay persons”), and to the prescriptions of business level contingency theory (e.g., Miller, 1987).

The Priem and Rosenstein study found that the judgment policies of the graduating MBAs most closely followed the prescriptions of business level contingency theory. The judgment policies of the practicing CEOs and the liberal arts graduate students were much less consistent with the prescribed contingencies than were those of the graduating MBAs. Thus, Priem and Rosenstein (2000) showed that the prescriptions of at least one well-known organization theory are not already “obvious” to, or widely known by, practicing CEOs. Clearly, similar studies could evaluate those factors and fit relationships associated with venture opportunities selected for exploitation by successful entrepreneurs vs. those common to opportunities that are ultimately unsuccessful.

Opportunity Exploitation Activities

Most work on the activities involved in venture creation has centered on the activities themselves (e.g., planning, networking, selling, finding resources), rather than on the role of the individual in carrying out the activities (e.g., Cooper, 1993; Duchesneau & Gartner, 1992; Van de Ven, Hudson & Schroeder, 1984; Vesper, 1990). One exception is a study by Gatewood et al. (1995). They found an interaction between gender and motivation for starting a business on the performance of opportunity exploitation activities. Women with stable internal attributions for starting their own business were more likely to persist in venture creation activities. In contrast, men with stable external attributions were more likely to persist in venture creation activities. Gatewood et al. (1995) also examined the impact of locus of control (personal efficacy), but found no relationship between locus of control and opportunity exploitation activities.

Critique and future directions. Perhaps the most under-researched aspect of the individual and venture creation is exploitation activities. We know very little about the role of the individual in acquiring resources and organizing the company. For example, how do an individual’s characteristics (e.g., gender, age, education) affect acquisition of resources?

Another research opportunity regarding the decision to exploit opportunities by venture creation is to examine the role of individual factors on choice between markets and hierarchies. More specifically, do individual factors help to explain why individuals choose to create a new venture instead of selling the innovation to an existing organization? This is why linking enterprising individuals' judgment differences, through organization design outcomes (i.e., exploitation activities), to new venture performance (e.g., Markóczy, 1997; Melone, 1994; Priem, 1994) may be especially worthwhile. Applied work in entrepreneurs' new venture cognitions must emphasize individual differences for maximum usefulness to building researchers' understanding of venture-creating individuals. Stimpert (1999) has insisted, for example, that the worthwhile questions in cognitive research relate to "how cognitive tools will allow managers to analyze and alter their beliefs to improve real time strategy-making efforts" (p. 362). We agree, and believe that the same comment applies equally well to cognitive research on enterprising individuals. Perhaps a good first step simply would be more effort toward directly measuring the causal beliefs of enterprising individuals who are actively contemplating venture creation.

Alternative or hybrid methods of opportunity exploitation also should be examined. Extant research has considered markets and hierarchies as the primary mechanisms for exploiting opportunities (Shane & Venkatraman, 2000). However, alternative mechanisms such as venture acquisition and subsequent transformation may exist. As a way to reduce the perceived risks involved in creating a venture, an entrepreneur might intentionally acquire an existing business to transform the business to exploit a new opportunity. Hence, the role of the individual and this alternative method of opportunity exploitation could be a fruitful avenue for future research.²

More Future Directions

Although there is much to be learned about the individual and venture creation within the context of the United States, future research also should examine the generalizability of findings to other countries. McGrath and MacMillan (1992) demonstrated that entrepreneurs across countries with Anglo, Nordic and Chinese cultures varied significantly on their psychological characteristics (e.g., beliefs, values, attitudes). It is also likely that demographics (e.g., education, past experiences, abilities) and cognitions (i.e., content and process) vary among cultural contexts. Hence, enterprising individuals may be impacted differently by their national context. Indeed, we believe that a country's cultural context may impact all four "steps" of the venture creation process (i.e., entrepreneurial intent, opportunity search and discovery, the decision to exploit by new venture creation, and opportunity exploitation activities). Busenitz and Lau (1996) developed a theoretical model that relates social conditions, cultural values, and personal variables to individual cognitions and entrepreneurial intent. A study by Vincent (1996) hints at the explanatory power of culture on the decision to exploit an opportunity by venture creation. It shows that Mexican-American entrepreneurs' decision-making policies may differ from those of entrepreneurs in general (Vincent, 1996). Thus, cross-cultural research may show that insights gained solely from American samples may not be applicable to venture creation in other countries. Incorporating the cultural contexts as they relate to psychological characteristics (e.g., beliefs, values, and needs),

demographic characteristics (e.g., education, past experiences), and cognition (i.e., content and process) appears to be a fruitful avenue for future research.

We would like to see more integration between the psychological, individual characteristics and cognitions of the enterprising individual. For example, although studies may have explored both psychological and individual characteristics within the same study, there has not been an attempt to describe how individual characteristics (e.g., education) may influence individual entrepreneurial cognitions. We suspect that individual cognitions may intervene in the relationships of psychological variables to venture creation processes, and of individual characteristics to the venture creation process.

Finally, we encourage entrepreneurship researchers to explore the role of individuals' judgments in venture creation. The role of judgment in new venture decisions has been examined from the perspective of venture capitalists (Hisrich & Jankowicz, 1990). The role of judgment has not been examined, however, from the perspective of the individual who is most directly engaged in new venture decision-making: the entrepreneur. Yet, sound entrepreneurial judgment is required in each phase of venture creation process. Therefore, we identify in the next section aspects of entrepreneurial judgments in venture creation, and review some techniques for examining such individual judgments.

Analyzing Individuals' Venture Creation Judgments

Priem and Cycyota define strategic judgment as: “the ability to identify, perceive, and attend to [important] variables, to form objective opinions about the present quantities (or levels) of the variables, to identify the likely form and strength of simple bivariate relationships that may exist among these variables, and to estimate the effects that multivariate contingencies (i.e., configurations) of these variables would likely have on performance in the context of a particular firm (i.e., a specific though uncertain view of ‘how the world works’)” (Priem & Cycyota, 2001: 494). Potential entrepreneurs considering venture creation must make similar judgments (i.e., of which factors are important, their levels, causal relationships, and so on) in each phase of the venture creation process. Moreover, their perceptions and cognitive schemas may influence both: whether or not they pursue a new venture; and whether or not that new venture is ultimately successful. Thus, examining judgments made during the venture creation process may help us to understand key issues associated with starting and succeeding in a new venture.

The literature in management on quantitative approaches to studying individuals' judgments is growing rapidly. Priem and Harrison (1994), for example, described decomposition methods and composition methods for analyzing strategic judgments. Decomposition methods focus on an individual's choices in responding to a series of decision scenarios (i.e., behavioral simulations). The variance in the individual's choices is evaluated against the factors of interest in the study, which are manipulated across scenarios, using the error theory of analysis of variance. Decomposition methods include axiomatic conjoint analysis, non-metric conjoint analysis, metric conjoint analysis, and policy capturing. For these methods, an individual's judgment policy (or “rule for decision”) is determined by “backing it out” from a series of decision scenarios.

Composition methods, on the other hand, focus on the process an individual goes through in forming a judgment. In these methods, the individual is presented with a behavioral

scenario, and her thinking is tracked (via her verbalizations, actions, or self-reports) as she moves toward a decision concerning that scenario. Composition methods include verbal protocol analysis, information search, and cause mapping. For these methods, an individual's judgment process is determined by "following along" while the judgment is being made.

Other management scholars have suggested still more approaches for studying managerial judgments. [Markóczy and Goldberg \(1995\)](#), for example, presented a conjoint-based technique for eliciting executives' beliefs. [Gist, Hopper and Daniels \(1998\)](#) suggested steps for designing simulations, and criteria for effective use of simulation techniques. [Mohammed, Klimoski and Rentsch \(2000\)](#) evaluated four additional techniques for measuring team mental models—pathfinder, multidimensional scaling, interactively elicited cognitive mapping, and text-based cognitive mapping—some of which could be applied to enterprising individuals.

Thus, established quantitative techniques are available for the applied study of individual judgment and, more specifically, for the study of judgments associated with venture creation. Moreover, some type of judgment is involved in each phase of the venture creation process: in developing entrepreneurial intent, in opportunity search and discovery, in the decision to exploit an opportunity, and in the activities required for exploitation (i.e., actual venture creation).

Accessing Entrepreneurs

There is one important caveat concerning the study of entrepreneurial judgment. Entrepreneurs clearly are the most knowledgeable sources of information about their own venture creation intentions and activities; student samples are insufficient and inappropriate proxies. We believe that primary data, gathered via direct contacts with entrepreneurs, are far preferable for determining the cognitive processes of enterprising individuals.

Organizational researchers clearly face obstacles, however, when contemplating the direct study of entrepreneurs. One is access. Like top executives, entrepreneurs are often assumed to be difficult to access due to the demands on their time ([Mintzberg, 1973](#)) or reluctance to discuss proprietary operating strategies ([D'Aveni, 1995](#)).

Researchers have suggested ways to overcome barriers to access to top executives, and many of these may also be useful for accessing entrepreneurs. They include: contact through industry, trade, or professional groups; university contact with visiting professors and alumnae ([Thomas, 1993](#)); and personal and professional contacts ([Hirsch, 1995](#)). Some researchers have found the salience of the research topic, particularly when framed to appeal to "hot topics" relevant to the executive, to be especially useful in gaining access ([Heberlein & Baumgartner, 1978](#); [Yeager & Kram, 1990](#)). The same is likely true for entrepreneurs. Anthropology researchers have provided considerable insight and "how to" information on the study of "elite" groups such as entrepreneurs ([Hertz & Imber, 1995](#)). For venture creation entrepreneurs specifically, Service Corps of Retired Executives (SCORE) workshops or new venture "expos" may be good sources for locating individuals who are contemplating venture creation.

Our experience is that a salient topic, an introductory letter promising results that will show how the entrepreneur's venture compares to similar ventures on the particular topic, phone calls several days later to schedule a short meeting, aggressive follow-up phone calls,

a second letter to non-respondents, and a willingness to meet “anywhere, anytime,” combine to produce success. Response rates between 30 percent and 40 percent are achievable.

Conclusion

Our review has demonstrated that important research has been done over the last two decades on the role of the individual in venture creation. Still, this research has been focused on certain samples and methods, while inadvertently neglecting others. We have offered a friendly critique, and have provided some suggestions for future research on venture-creating individuals that we hope will expand the variety of research approaches in this area. [Table 1](#) serves as a summary of our ideas.

Clearly, the enterprising individual is a critical component of venture creation. Thus, understanding the effects of individuals’ psychological characteristics, demographic char-

Table 1
Summary of suggestions for future research

Step	Suggestion
Entrepreneurial intent	<ul style="list-style-type: none"> • Study venture creators rather than students. • Use longitudinal samples to empirically link intentions to opportunity search and subsequent venture creation. • Integrate and reduce the number of alternative intention models. • Utilize a consistent definition of entrepreneurial intent. • Utilize causal mapping techniques to: (1) identify differences between those desiring to create a venture and those desiring to purchase an existing business and (2) identify those who implement their plans and those who don't.
Opportunity search and discovery	<ul style="list-style-type: none"> • Reconcile disparate views regarding opportunity search and discovery by investigating theoretical boundaries of opportunity discovery. • Incorporate psychological variables and individual characteristics as influences on opportunity search and discovery. • Apply managerial cognition research on information processing and sense-making to the investigation of opportunity search and discovery.
Decision to exploit by new venture creation	<ul style="list-style-type: none"> • Investigate the development and impact of entrepreneurial schemas on the decision to create new ventures. • Investigate feedback loops between entrepreneurial outcomes and subsequent entrepreneurial schemas. • Examine judgment policies of successful and unsuccessful entrepreneurs.
Opportunity exploitation activities	<ul style="list-style-type: none"> • Examine influence of individual characteristics on resource acquisition and other exploitation activities. • Examine role of individual factors in choice between markets and hierarchies. • Link individual judgment differences through exploitation activities to new venture performance. • Explore alternative or hybrid methods of opportunity exploitation.
All steps	<ul style="list-style-type: none"> • Use simulations, scenarios and laboratory experiments. • Examine cultural influences on individuals and venture creation. • Integrate psychological, individual characteristics and cognitions.

acteristics and, especially, their causal beliefs is key to furthering our understanding of venture creation. Although much has been learned, much remains to be learned. New study designs and methods, and particularly those related to individual judgments, are critical to future success. The importance of the topic is well worth the effort.

Notes

1. For example, Allinson, Chell and Hayes (2000) found that Scottish entrepreneurs are more intuitive than managers in general, but equally intuitive to upper managers. We eschew consideration of those insights, however, because that study did not specify the situations under which entrepreneurs were expected to be more intuitive. The conundrum of how to apply the results of Allinson et al. (2000) to the new venture situation is exacerbated by the fact that their sample of entrepreneurs had been in business for an average of 8.7 years. Thus, the applicability of the insights from the Allinson et al. sample to venture creation or entrepreneurship is questionable. We agree with Gartner (1988), who encouraged entrepreneurship researchers to ensure that their samples reflect their theory and major constructs. He also cautioned that the characteristics of the sample might say more about the researcher's idea of entrepreneurship than any *a priori* definition (Gartner, 1989). Thus, we encourage researchers to be extremely cautious and explicit about their definition of entrepreneurs and the step of venture creation they are examining in future research.
2. We wish to thank an anonymous reviewer for this insight.

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