Chapter 14
The Social Psychology of Entrepreneurial Behavior

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Introduction

The purpose of this chapter is to describe four major areas of theory and research in social psychology, and to indicate how each has found its place in the study of entrepreneurial activity. Economic conditions in an industry may favor the emergence of new entrants, venture capital may be readily available, technological advances may create market opportunities, but as Shaver and Scott (1991) have noted, there will be no new companies created without focused and sustained entrepreneurial *behavior*. Such entrepreneurial action may be the work of an individual, or it may be the work of a team. In either case, the behavioral processes involved are ones normally considered within the domain of social psychology. As team-based entrepreneurship is often treated separately from individual entrepreneurship (see, for example, Cooper & Daily, 1997; Stewart, 1989), this chapter will concentrate on what social psychology refers to as the "intrapersonal" processes of an individual entrepreneur. These include social cognition, attribution, attitudes, and the self. The specific topics to be discussed were selected because (a) they are traditional concerns of social psychology and (b) they have been the subject of numerous papers in entrepreneurship. Our review is necessarily selective, but will still advance a strong case for further consideration of the social psychological processes that guide the entrepreneur's venture-organizing activities.

Some Initial Distinctions

Social psychology is "the scientific study of the personal and situational factors that affect individual social behavior" (Shaver, 1987, 18). The field is traditionally distinguished from psychology on the one hand and from sociology on the other, by the level of analysis inherent in most work in each field. Social psychology concentrates

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Z.J. Acs, D.B. Audretsch (eds.), *Handbook of Entrepreneurship Research*, International Handbook Series on Entrepreneurship 5, DOI 10.1007/978-1-4419-1191-9_14,

on the *socially meaningful actions* of an individual person (actions, for example, like those associated with starting a new venture). In contrast, the "dependent variable" for much of psychology is at a more molecular level. How much change must there be in the wavelength of a projected colored light for a person to shift from calling the light "blue" to calling it "green?" Is there a "critical period" among humans during which the person must hear other human speech in order to develop a full and sophisticated vocabulary? What does reaction time tell us about the internal structure of the cognitive apparatus? These questions, and others at a comparable level of analysis, have engaged psychological researchers for years, and have contributed to our overall understanding of human beings. But in virtually all of such studies, the dependent variables are not socially meaningful chunks of behavior.

As psychology concentrates on dependent variables "smaller" than the individual person, sociology concentrates on structures and processes that are larger than any *particular* individual. A business school consists of a Dean, area or department heads, faculty members, support staff, and students at various levels. Each participant in this system behaves in large part according to role expectations and social status. Of course, there are individual variations, but replacing one, or several, particular faculty members with other people whose training is comparable does not convert the business school to an art school. Demographics matter, culture matters, the structure matters; particular individuals typically do not matter.

Through the years of entrepreneurship as a separate field of inquiry, more than a few definitions have been offered for entrepreneurial action. Indeed, the diversity of chapters in this volume provides eloquent testimony to the intellectual eclecticism of the field. Yet there are important common threads – opportunity seeking and recognition, innovation, creation of value, assumption of risk, disregard for resources controlled (see, for example, Hisrich & Peters, 1998; Timmons, 1994). In a refreshingly open approach to the problem of definition, Mitton (1989) noted that "Entrepreneurship and pornography have a lot in common: they are both hard to define" (p. 9). He continued the analogy, building on Justice Potter Stewart's comment, by saying "I can't define it – at least not to everyone else's satisfaction – but I know it when I see it" (p. 9). The reason that Mitton, and many of the rest of us, can "know it when we see it," is that entrepreneurial behavior involves precisely the *socially meaningful actions of individuals* that are the province of social psychology.

Methodological Approach

Although one of the early extensive studies of entrepreneurial behavior was conducted by the psychologist David McClelland (1961) it is fair to say that, on balance, most research in entrepreneurship has not been informed by the extensive methodological contributions of experimental social psychology. Management scholars are well aware of classics like the "Hawthorne" experiments (Roethlisberger & Dickson, 1939), but have rarely conducted the sort of laboratory research that is the stock in trade of social psychologists. As a consequence, entrepreneurship

researchers trained in the management tradition are less likely to be skeptical about some of the traditional means of examining entrepreneurial behavior.

Because their research involves the meaningful actions of individuals capable of problem-solving and intentional action, social psychologists often talk about the "experimenter-subject interaction" as a particular sort of scripted interchange. This is especially true in a traditional laboratory setting, but applies with nearly equal force to other research venues as well. Regardless of where the work is conducted, the researcher begins a project with what Rosenthal (1966, 1994) called *experimenter expectancies* – a sort of personal prediction about what the data will likely show. Given that most experimental work involves hypothesis testing, rather than hypothesis generation, it is not at all surprising that the person conducting the research should have expectations about the outcome. The difficulty comes in the ease by which these experimenter expectancies can be communicated to the research participants, often in ways so subtle that they are well outside the conscious awareness of either party. Patterns of speech by the experimenter, degree and timing of eye contact, changes in body position, can all convey the "right answer" to a research participant. Expectancies have been implicated in everything from behavioral medicine studies of stress (Krantz & Ratliff-Crain, 1989) to police line-ups (Wells, 1993). The production of expected responses is not limited to interactions between researchers and participants, nor is it limited to face-to-face interactions. For example, in one early study of a domain that has become known as *behavioral confirmation* (Snyder, 1984) researchers produced important behavioral differences during telephone interviews (Snyder et al., 1977). In this study, male undergraduates were asked to conduct a 10 minute telephone conversation with female undergraduates, ostensibly for the purpose of getting acquainted. Before the conversation began, each male was given a folder containing biographical information about the female he was to call, and a Polaroid picture purported to be her photograph. In fact, the photographs had been pre-selected to be either highly attractive or unattractive (but in neither case were they the actual picture of the target female). The telephone conversations were unstructured and done through headphones and microphones so that each party's side of the conversation could be recorded on a separate channel. The conversations of the female targets were later rated by judges who had no idea about the nature of the experiment (and who did not hear the males' sides of the conversations). These ratings showed that females who had been talking to males who *thought* they were highly attractive were rated to be more attractive and socially skilled than females who had been talking to males who thought they were less attractive. The expectations of the male callers had somehow produced the very behavior they expected. In social interaction, what you get may be what you expect to see.

Not all of the potential biases in a research interchange are introduced by the experimenter; some are situationally induced and others are inherent in the participants. Whether they are undergraduates in a social psychological laboratory or presidents of start-up companies being interviewed in their offices, people who know that their behavior is being scrutinized are susceptible to several important biases. One of the situational biases is the presence of *demand characteristics*, the

sum total of cues that a participant uses to discover the "true purpose" of the research (Orne, 1959). The magical phrase "this is an experiment," legitimizes almost any request, from the mindless turning of pegs in a board (Festinger & Carlsmith, 1959), through providing what were believed to be painful electric shocks to a hapless victim (Milgram, 1963) to being asked how much one likes the feel of a sex partner's "sweat on my body" after having previously responded to a series of true–false questions about death (Goldenberg et al., 1999). In "research" apparently, anything goes, regardless of how dull, frightening, or intensely personal it might be in normal everyday life. And for their part, the problem-solving research subjects use whatever information is available to try to "understand" the interviewer's objectives and help achieve them.

Unless, of course, helping the researcher conflicts with maintaining or enhancing one's own self-esteem. This particular problem begins with what Rosenberg (1965) called *evaluation apprehension:* concern about the impression one is making with a researcher. This concern is so pervasive that it has almost attained the status of a ritual. When introduced as "a psychologist," one can see the micromomentary expression – "Oh, my God! He's *analyzing* me!" – on the other person's face. One almost feels the need to put the person at ease either by pointing out that "No, I'm not *that* kind of psychologist" or by making the standard joke, "Yes, I *can* read your mind and you should be ashamed!" Having in one way or another acknowledged the person's unease, you can then continue the conversation on a much more routine basis. When the interchange occurs in the structured setting that typifies most studies of human behavior, the research participant's concern is likely to be greater than it would be in the context of everyday social exchange. And the researcher does not need to be a psychologist for evaluation apprehension to occur: a business professor (or even graduate student) with any extensive functional expertise will likely know more about his or her specialty than does the entrepreneur being interviewed. More importantly, the researcher has made the contact, structured the setting, constructed questions in advance, and (presumably) considered what the "right" answers might be. To borrow a term from the venture capital literature, there is "information asymmetry" between scholar and research participant.

How does a research participant behave when placed at this sort of disadvantage? He or she emphasizes the positive, minimizes the negative, and omits any details that would complicate the picture, thus falling into a *social desirability* response set (Crowne & Marlowe, 1964). The interviewee takes credit for success and deflects responsibility for failure, a frequent form of self-serving attributional bias (Bradley, 1978). Or falls prey to the "hindsight bias" (Fischhoff, 1975), evaluating the likelihood of choices on the basis of their known effects, regardless of whether those effects could have been anticipated at the time the original choice was made. If the research subject is led to feel inadequate in some area, he or she may attempt what Wicklund and Gollwitzer (1982) have called "symbolic self-completion," the tendency to increase one's self-esteem through associations with valued entities and people. It is important to note that none of these biases is the result of *deliberation* on the part of the research participant. On the contrary, most are so non-conscious

that the participant would be legitimately offended if the response sets, errors, and biases were pointed out.

Nearly, all of these complicating factors were originally identified by social psychologists (demand characteristics being the notable exception). For this reason, social psychologists have developed strong disciplinary preferences about which sorts of research techniques are least susceptible to the many potential complications. We prefer experiments to non-experimental methods, because the former permit random assignment of participants to conditions, thereby virtually eliminating subject-based response biases. Whether the method is experimental or non-experimental, we prefer to have the data collected by assistants who are unaware of the specific hypotheses of the research. We prefer closed-ended questions, designed using scales and adverbs with known psychometric properties, to open-ended questions that by their very nature are more likely to facilitate the appearance of unwanted biases. If we must resort to open-ended questions, we prefer to have them coded according to clear theoretical principles specified in advance, and to have the coding done by people who do not know the predictions to which those theoretical principles would lead. Taken together, these methodological preferences lead social psychologists to be highly skeptical of the results, for example, of a series of "in-depth interviews" conducted over time with a few haphazardly selected successful entrepreneurs by a researcher who has some preconceived opinion about what the data might, or might not, show. To no small degree, social psychology's methodological preferences also influence my choice of what content to include in the remainder of the present chapter.

Social Cognition

Social cognition has been defined as "thinking about people" (Fiske, 1995, 151). This definition suggests that *social* cognition can be distinguished from abstract conceptual reasoning, problem-solving, or thinking about inanimate objects, all of which are surely cognitive processes, but none of which necessarily involve people as a critical part of the content. Thus, for example, an entrepreneur's memory of an encounter with a venture capitalist would be a topic for social cognition, whereas the entrepreneur's memory for the factors that affect first-year cash flow would not be. Social *cognition* is also described as a "cold" process, distinguished from internal processes that are "hot" – such as emotion and motivation – regardless of whether the content relates to people. So an entrepreneur's beliefs about the industry preferences of a venture capital firm would be a topic for social cognition, but the entrepreneur's disappointment at learning of this preference during a meeting in which a plan was rejected would not be.

In many respects, processes of social cognition are similar to those of *non*social cognition. Both involve cognitive categorization (Bruner, 1957), internal representations of the external world (see Carlston & Smith, 1996) such as prototypes and schemata, and what Fiske (1995) calls "unabashed mentalism" (p. 154). This latter

focus on psychological processes that are not directly observable is a return to some of psychology's early roots in the study of sensation and mental states (see, for example, the "structuralism" of Edward Titchener, or the extensive theorizing of William James, both admirably described by Hilgard, 1987). Now, in the midst of "the cognitive revolution," it is difficult to believe that the prevailing ideology in psychological science was, for years, guided by Skinner's version of behaviorism (e.g., 1938) that denied the importance, if not the existence, of the mental.

Biases in Social Cognition

The processes of social cognition that have received the most attention within entrepreneurship are the cognitive biases and heuristics, and the principles of attribution. Cognitive heuristics were first identified by Kahneman and Tversky (1973) in a more general discussion of why people are poor intuitive statisticians. People, as opposed to statisticians (who happen to be thinking like statisticians rather than like people), have a proclivity to make judgments on the basis of particular individual cases rather than on the basis of base rate probabilities, even though those probabilities might be stated explicitly. For example, in one of Kahneman and Tversky's best-known examples, people were asked to judge the likelihood that a particular individual was either a lawyer or an engineer. Half of the research participants received a description of a gathering said to contain 30% lawyers, and 70% engineers, the other half received a description that claimed there were 70% lawyers and only 30% engineers. Then both sets of participants were given a series of brief descriptions, such as "Dick is a 30-year-old man. He is married with children. A man of high ability and high motivation, he promises to be quite successful in his field" (p. 242). After each description, the participants were asked to estimate the likelihood that the target person was either a lawyer or an engineer. Obviously, the "correct" guess, regardless of the description, is either 30 or 70%, depending on the condition or the question. The results showed why "cognitive heuristics" are often considered in the domain of *social* cognition: With no individuating information, the answers followed the base rates; when there was individuating information, however, the judgments differed significantly from the appropriate base rate.

In some ways, it is easy to suggest a very social explanation for studies involving failures of base rates. Assume for the moment that one asks, as social psychologists do, "What does the research participant think his or her task really is?" A research participant, concerned about what the researcher might think of his or her performance, would scour the demand characteristics of the study for the answer, assuming all the while that the answer sought could not *possibly* be mere repetition of the percentage value just mentioned. "This is really a test of my interpersonal perception ability . . .." Participants who had this view would attend to every detail of the description, and would respond on the basis of whatever personal cognitive structures were activated. So, for example, a person who believes (outside the laboratory) in a stereotyped view of engineers as computer-geeks who have no social

life would use that stereotype as justification for the assumption that, because Dick is married, he *must* be a lawyer. In this way, what began as an exercise in applied cognition concludes as a judgment adversely affected by a social stereotype.

Two other failures of the intuitive statistician may have played a part in the findings of a number of recent studies in entrepreneurship. These particular cognitive biases are the *availability heuristic* (Kahneman & Tversky, 1973) and the idea of *illusory correlation* (Chapman, 1967). As we have seen, people make mistakes in estimating relative frequency even when they have all of the information needed for the judgment. When there is uncertainty about the "truth," estimates of relative frequency are likely to be based on the particular cases that can easily be recalled, ones that are "available" without a lot of detailed searching. Though availability affects thought in a wide variety of domains, its reliability in the entrepreneurship domain has turned it into a classroom exercise. Ask students in any undergraduate or MBA entrepreneurship course to write down the name of "the first entrepreneur who comes to your mind." There will be lots of "Bill Gates," some "Richard Branson," some "Steve Jobs," and perhaps some "Ted Turner." What there will *not* be is a different person for every student in the class. This kind of demonstration of availability assumes greater importance when one realizes the number of people who – in order to decide whether they personally have "what it takes" – adopt one of these highly available targets as their standard of comparison.

Just as surely as availability compromises the selection of cases for review, illusory correlation can compromise the inferences made from those cases. Especially when (a) a data pattern is incomplete and (b) a perceiver brings his or her prior theories to the examination of that data pattern, the perceiver is likely to "find" an association that does not actually exist. Theory-confirming examples are noted, theory-disconfirming features of the situation are ignored.

For example, a venture capitalist might say "we've always had excellent success when we've gone with the management and the idea, instead of relying exclusively on the numbers." Such an assertion could, in fact, be true. On the other hand, the statement ignores two blunt facts of the venture capital business. The first of these is that entrepreneurs whose business plans do not contain the right numbers will rarely, if ever, get to the point of an interview with a venture capital partner, so the sample of firms the partner sees is necessarily limited. The second fact, to put it mildly, is that some VC-backed firms fail to become roaring successes. It is within the realm of possibility that the particular venture capitalist may be associated with a firm that has never lost money on one of those good business ideas proposed by an excellent management team. On the other hand, to learn from the prior discussion of base rates, it is more likely that the venture investor is just not remembering the failures, or the good ideas and management teams that were rejected. From the combination of availability and illusory correlation, the venture capitalist has become *overconfident*.

Support for this speculation comes from recent research by Zacharakis and Shepherd (2001). These investigators asked venture capitalists to make two judgments – estimated likelihood of venture success and personal confidence in this likelihood estimate – for each of 50 brief investment cases. The cases had been

created with the assistance of venture capitalists not involved in the study, and all identifying information (entrepreneur identity, industry, even financial cues) had been purged from the cases. What remained as cues in the case differed across three experimental conditions. In the "base cognitive cues" condition, cases contained information about market familiarity, leadership experience, level of proprietary protection, market size, and market growth. In the "additional cognitive cues" condition the base cues were supplemented by information concerning start-up team track record, and the number and strength of direct competitors. Finally, in a "task cues" condition, the material from the other two conditions was replaced by four statistically derived index variables previously discovered (by Roure & Keeley, 1990).

Differences among the three conditions were used to test several of Zacharakis and Shepherd's hypotheses, but for our purposes, it is more important to describe the overall outcome. Of the 50 cases presented to each venture capitalist, 25 had been based on actual funded ventures that, at the time of the research, had a known outcome. The "successful" venture with the smallest return on investment (ROI) had achieved a 31% ROI, the "failed" venture with the highest ROI had achieved a 6% ROI. The existence of these very clear cases allowed the investigators to compare the VC predictions to the actual outcomes, thus establishing the accuracy of the predictions (percentage of correct predictions out of 25). Now, in a perfect world, a venture capitalist's confidence in his or her predictions ought to correlate perfectly with accuracy. After all, if your predictions are consistently faulty, you ought not be very confident in your ability. Not surprisingly, however, across the three treatment conditions, some 96% of the VCs were *over*confident (percentage confidence exceeding percentage accuracy), with 29 VCs having at least 60% confidence in their judgments, regardless of their level of accuracy. Moreover, there were no differences in overconfidence based on years of experience in the business – VCs with years of experience were just as overconfident as VCs new to the business. The availability heuristic, and perhaps also illusory correlation, appears to be alive and well in the venture investor community.

It is important to note that similar findings of overconfidence have also been obtained in studies of entrepreneurs by Busenitz and Barney (1997) and Simon, Houghton, and Aquino (1999). The first of these is especially interesting from our perspective, primarily because of a metatheoretical assumption to which we shall return in a moment. Busenitz and Barney selected their entrepreneur sample from the records of a state comptroller's office, limiting the search to seven SIC codes that included the manufacturing of plastics, electronics, and instruments, on the premise that these industries would represent a higher percentage of new firms. The managers were selected, with participation by their publicly traded parent companies, from five SIC codes, three of which were the same as those in the entrepreneur sample (62% of entrepreneurs, and 86% of managers came fro these three industries). Once the data had been collected, the entrepreneur sample was further restricted to those who had (a) founded the firm and (b) done so within the past 2 years (or were planning another start-up). Managers had to have responsibility for at least two functional areas.

To assess overconfidence, all respondents were asked to answer a series of five questions used by Fischhoff and his associates (Fischhoff et al., 1977; Lichtenstein & Fischhoff, 1977). Each item is a two-choice question about what sorts of diseases and accidents produce the most fatalities. In addition to making the choice, respondents use a separate scale to indicate their confidence in the judgment. This scale ran from 50% (in a two-choice setting, this is clearly the value for "just guessing") to 100%. Scores were transformed so that confidence could be compared to a "perfect calibration" line like that used by Zacharakis and Shepherd (2001). The results were as expected: Not only were entrepreneurs more highly overconfident than managers, the level of overconfidence was able to separate the two groups quite reliably (when some standard control variables were not). Comparable results were also obtained for the representativeness heuristic, with entrepreneurs falling into its trap more frequently than did managers.

Taking Busenitz and Barney's (1997) results a step further, and combining overconfidence with two other biases – the illusion of control and the belief in the law of small numbers – Simon, Houghton, and Aquino (1999) tested the influences of cognitive biases on risk perception. These researchers asked MBA students to evaluate the well-known "contact lenses for chickens" case (Clarke, 1988). The "revolutionary" contact lenses are said to reduce the tendency to fight, and the reduction in injuries among confined chickens has substantial economic implications. To increase the risk involved, Simon, Houghton, and Aquino doubled the original product costs and made the claimed market demand less predictable. Respondents completed measures of three cognitive biases, estimated the risk of the venture, stated their willingness to start, and answered a number of control variables.

The results showed that as the perception of risk associated with beginning the venture decreased, likelihood of proceeding increased. This perception of venture risk, in turn, was decreased (a) as the illusion of control (being able to control events that others might not be able to control) increased and (b) by a belief in small numbers (e.g., the market can be assessed adequately by asking one or two people). Interestingly, the overconfidence bias did not affect perceived risk, nor did it affect willingness to begin the venture. The Simon, Houghton, and Aquino (1999) study, like many of its predecessors, measured overconfidence *outside* the domain of entrepreneurship. The authors argued that this should not have been a problem, "because people are overconfident across domains, . . . suggesting the items do not need to reflect the case. Furthermore, entrepreneurs' decisions stem from a wide range of non-business and untraditional information, indicating that it is appropriate to use diverse items. . ." (p. 126).

Emotion and Cognition

As it happens, however, there may be a much more *social* and much less purely cognitive explanation. A recent review by Lowenstein, Weber, Hsee, and Welch (2001) argues that risk, and the perception of risk, involve hefty doses of *emotional*

content. Lowenstein, et al. point out that the study of judgments under risk grew out of economics and cognitive psychology, two disciplines that share an assumption that human decision-making is essentially rational. Rational decision-making may sometimes be in error, but it is not presumed to be affected adversely by feelings, emotions, or motivation. (This, of course, is not a widespread assumption in social psychology, despite the popularity of research in social cognition.) Drawing on literature from social psychology (e.g., Clore et al., 1994; Zajonc, 1980, 1998) and neuroscience (LeDoux, 1996) the authors present a "risk as feelings" model of decision-making. In this model, the emotions generated either by the fact of having to make the decision or by the nature of the consequences are given the same weight as the more cognitive features of the judgment task.

One statement from Lowenstein et al. (2001) that is especially relevant in the present context is the fact that the factors influencing people's emotional reactions to risks "include the vividness with which consequences can be imagined, *personal exposure* to or experience with outcomes, and *past history* of conditioning. Cognitive assessments of risk, on the other hand, tend to depend more on objective features of the risky situation, such as probabilities of outcomes and assessments of outcome severity" (p. 271, emphasis added). This view has two implications for entrepreneurship research. First, on the methodological side, it might not be possible to obtain accurate estimates of overconfidence among entrepreneurs by asking the traditional questions that have nothing whatsoever to do with starting a new venture. Second, a related point is that because of entrepreneurs' prior experience, the possibility of failure might simply carry less emotional content than it would for managers. Especially, in the case of "serial entrepreneurs" (Westhead & Wright, 1998), there might be very little real fear associated with the possibility of failure. One is reminded here of the often heard entrepreneurial claim "I've been poor, I've been rich, I'm poor again, but I'll be rich again." Such a claim might be nothing more than an elaborate form of self-deception, but it might also be an accurate expression of the very "routine-ness" of entrepreneurial behavior. In the language of another recent study, an entrepreneur's beliefs concerning future success may be "comparative optimism" rather than "unrealistic optimism" (Radcliffe & Klein, 2002).

Person and Situation

As noted above, an interesting feature of Busenitz and Barney's (1997) study is one of its implicit metatheoretical assumptions. The authors begin their paper by describing the decision environments facing entrepreneurs, and managers in large corporations (the two groups of people subsequently compared). Managers exist in a corporate environment where historical data provide a backdrop for decisions, the cost of gathering additional information is relatively low, and the time frame for most decisions is relatively forgiving. By contrast, entrepreneurs have limited "people resources," essentially no hard historical data, cannot obtain (or afford) additional information, and must decide quickly. Appropriate research is cited to support both of these quite reasonable characterizations. Then they go on to say

"Thus, we argue that those who are more susceptible to the use of biases and heuristics in decision-making are the very ones who are most likely to become entrepreneurs. The more cautious decision-makers will tend to be attracted to larger organizations where more methodical information tends to be more readily available. Entrepreneurial activities simply become too overwhelming to those who are less willing to generalize through the use of heuristics and biases" (p. 14).

Without knowing that they have done so, Busenitz and Barney (1997) have just taken a position on one of the long-standing debates within social and personality psychology (Bowers, 1973; Funder & Colvin, 1991; Mischel, 1968; Pervin, 1989). In the early years of research on individual differences in behavior, personality theorists asserted that people could be characterized by their location on a variety of relatively enduring "traits" (see, for example, Allport, 1937). Identify the primary traits that describe a person, and you have gone a long way toward being able to predict what the individual will do in a novel setting.

Unfortunately, research examining the correlation between assessed personality traits and behavior in different settings began to find that traits were not very helpful in predicting "cross-situational consistency" in behavior (see reviews by Bem & Allen, 1974; Bem & Funder, 1978; Mischel & Peake, 1982). The failure of the "pure personality" approach led one highly influential writer to suggest that the study of personality be supplanted by the study of variations in situations (Mischel, 1968). The response was immediate and highly critical (see Bowers, 1973). Indeed, in the late 1970s the Society for Personality and Social Psychology (Division 8 of the American Psychological Association) nearly split into two armed camps – the "personological" personality researchers versus the "situational" social psychologists. The Society managed to avoid splintering apart, and its journal is still called the *Personality and Social Psychology Bulletin*. As for the conceptual controversy, most social and personality psychologists subscribe to some version of *interactionism*, a view that behavior in a given setting is a function of *both* the more personological individual differences and the more social features of the situation.

Returning to entrepreneurship, the interactionist position has been the basis for an argument against the existence of an "entrepreneurial personality" whose behavior is presumed to be constant regardless of the situation (Shaver, 1995). What is a bit surprising is that the myth of the entrepreneurial personality survived as long as it did. After all, the leadership literature – the topical focus of which is at least a first cousin to entrepreneurship – has subscribed to an interactionist view for over 30 years (at least since Fiedler, 1964).

Attribution Processes

The person and the situation can both be seen in the social psychological literature on *attribution*, the cognitive processes by which people explain their own behavior, the actions of others, and events in the world. Indeed, in the work that provided the foundation for attribution theory, Heider (1958) explicitly argued that behavior was a function of both person and external environment:

$$B = f(P,\ E).$$

For any particular behavior or event the perceiver's task is to determine the relative contributions of person and environment to the production of the effects observed. People bother to explain causes because doing so presumably helps them predict behavior and events in the future. If we can identify particular "dispositional properties" – enduring characteristics – of either persons or the environment, we are better able to predict what might happen in a novel setting. The possibility of distinguishing situational effects from personal effects has recently increased with the use in social psychology of statistical techniques for multilevel modeling (see, for example, Nezlek, 2001).

In Heider's view the "naïve" (really meaning "non-scientific") perceiver begins with an observed action or event, and then reasons backward to decide why the action or event occurred. For a person to have accomplished an action, the person's internal ability must typically have had to exceed the difficulty of the task (in Heider's terms, the person "can" perform the action). The qualifier, "typically," is there because opportunity or luck might have made the success possible this time, though it would not be possible in the future. Working still farther backward in the explanatory chain, being able to complete a task does not mean that the task will necessarily be accomplished. In addition to "can," there must be an intention to complete the task, and effort must be expended in order to reach the goal contained within the intention. Thus we believe that a successful performance will most often have involved some intention on the part of the actor, effort expended in the service of that intention, and a level of ability sufficient to overcome the natural difficulty of the task. When an action has moral overtones, we will hold the person "responsible" for the outcome only to the extent of the person's contribution to the occurrence.

Attributions of Causality

Because Heider's (1958) theory included both the determination of causality and the moral judgment of responsibility, its conceptual and empirical descendants have diverged into two separate literatures. Research on the attribution of causality is normally traced to Kelley's formalization of some of Heider's observations (Kelley, 1967, 1973), whereas research on the attribution of responsibility is usually traced to Jones's specification of how perceivers might determine *why* an action was undertaken (Jones & Davis, 1965; Jones & McGillis, 1976). Relationships among the three theories have been outlined in detail by Shaver (1975), who has also developed a comprehensive theory of the attribution of blame (Shaver, 1985).

Because entrepreneurship deals with positive outcomes (or, even in the case of venture failure, *unintended* negative ones) questions of responsibility are less frequent than questions of causality. So I shall concentrate on Kelley's (1967, 1973)

theory and research that follows in its tradition. Fundamentally, the theory argues that people have two different ways of coming to understand the causes of events. In one of these, multiple observations of the behavior or event are possible – starting a second or third company, conducting successive waves of market research, the daily (or more frequent) fluctuations in the financial markets. When multiple observations are possible, people rely on a principle of *covariation*. If there are no repeated occurrences, then people rely on the second way of deriving attributions, *schemata*.

First, consider covariation. Specifically, an event or behavior is attributed to presumed causes that vary with the occurrence of the presumed effect, rather than to presumed causes that remain constant over the multiple observations. Kelley's theory lists three attributional dimensions: entities (targets for the attribution), time/modality (the circumstances under which the multiple observations take place), and persons (the number of observers who share the perceiver's view of the situation. Whether the behavior or event will be attributed to the target individual with it depends on the status of three attributional criteria, one associated with each dimension. If the behavior is "distinctive" (not all entities perform it), if it is "consistent" over circumstances, and if there is consensus among the persons who view the behavior, then the action will most likely be attributed to the person. Alternatively, if the behavior is not at all distinctive (everyone does it), and there is consistency and consensus, then the action will be attributed to forces within the situation.

Turning to schemata (or "schemas" in some places), Kelley's use of the term is essentially the same as the original (Bartlett, 1932): a schema is a cognitive structure that serves as a template for organizing incoming information. How the cause is identified for a one-time occurrence depends on the features of the information. If there is only one cause of an event, the attribution problem is trivial. When there are multiple sufficient causes, the problem is much more difficult. Any one of the multiple sufficient causes might have produced the effect, or collections of them might have combined to do so (how this happens has been a matter of some debate). Because of these multiple possibilities, the *discounting* principle comes into play: the more plausible potential causes there are, the less certain the perceiver can be that any selected one of them is *the* cause. Did the new venture fail because there was insufficient cash? Because the development time was much longer than expected? Because the market evaporated? Because general economic conditions became unfavorable? Because the venture investor wielded too much (or not enough) weight in his or her position on the Board? Because the firm's management just was not up to the task? And the list goes on.

Causal Dimensions

Rather than attempt to identify specific causal patterns for every sort of event or action, attribution researchers have concentrated on dimensions, derived from Heider (1958), that simplify the judgment required. Specifically, potential causes of

events and behaviors can be separated on a dimension known as "locus of causality" into those that are *internal* to the person, and those that are *external*. Within these categories, potential causes can be separated along a dimension known as "stability" into those that are *stable* and those that are *variable*. The result is a fourfold table whose cells are the familiar ability (internal, stable), effort (internal, variable), task difficulty (external, stable), and luck (external, variable). It is important here to note that locus of causality, as used in the attribution literature, is *not* the same as "locus of control" (Rotter, 1966). The former characterizes events and behaviors, whether or not any individual person might be able to exert effective control over them. In contrast, the latter is regarded as an individual-differences variable that represents the extent to which people believe that they are able to produce outcomes – in social, political, and personal domains among others – that they seek. Although locus of control has been popular in the entrepreneurship literature, very few studies (such as Mueller & Thomas, 2001) have made certain that their versions of the scale were *uni*dimensional (see Shaver & Scott, 1991, for a detailed critique). Because the social psychological approach concentrates more on situational variables than on individual difference variables, we shall not discuss locus of control further.

Returning to locus of causality, other attributional dimensions have been suggested, such as "globality" – the number of different domains across which a judgment is made (Abramson et al., 1978) – and "controllability" (Anderson, 1991). But these two are not likely to contribute added value to our understanding of entrepreneurship. In theoretical terms, new venture creation is an intentional act that involves repeated attempts to exercise control over the process in a specific domain, in order to achieve the desired outcome. This is exactly the sort of activity that Malle (1999) has argued ought to be described as "reason-based," not "cause-based." Whether true control *can* be exerted is not the issue. Indeed, it is entirely possible that for some activities, the environment's contribution to success may exceed that of the person. But this particular empirical fact would not change the conceptual point: In principle, the act of business creation is *a* domain-specific intentional action (see Bird, 1988; Krueger et al., 2000) that requires control.

Just as the locus of causality and stability dimensions can be used to characterize an event that has already happened, they can also be used to help understand the reasons an entrepreneur might offer for going into business in the first place. The first entrepreneurship study to do an attributional classification of reasons to go into business was a study conducted among clients of a small business development center (SBDC) by Gatewood, Shaver, and Gartner (1995). At their first meeting with the SBDC staff, clients were asked why they wanted to go into business. Although this question was open-ended, and could have produced any number of responses, the modal number was only two. The four most frequently cited answers were (a) identified market need, (b) desire for autonomy and independence, (c) desire to make more money, and (d) desire to use existing knowledge and experience. All answers were first parsed into separate elements, then categorized as either external or internal, then as either stable or variable (details of attributional coding are described for another data set by Shaver et al., 2001).

A year after the initial testing, 85 of the original 142 clients estimated the amount of time they had put into each of 29 organizing activities during the intervening year. These activities included gathering market information, estimating potential profits, completing the groundwork, developing the structure of the company, and actually getting into business. Results showed that entrepreneurs whose reasons were internal and stable had spent more time on structuring their companies than had people with other attribution patterns. When only those respondents who had made a sale were considered, there was a sex difference in the attributional patterns. Women who had made sales had, a year earlier, provided primarily internal reasons for wanting to start. By contrast, men who had made sales had, a year earlier, provided primarily external reasons for wanting to start. So the "why" of entering seems to make a difference in the "what" is later accomplished, though the particular reasons differ across sex.

Within social (and indeed, clinical) psychology, the locus of causality dimension has known implications for self-esteem. The well-known "self-serving bias" (Bradley, 1978) in attribution is the tendency to attribute one's successes internally, and one's failures externally. By contrast, the alternative, attributing one's successes to luck, and one's failures internally (if this is across many domains) is a recipe for depression (Abramson et al., 1978). Consequently, people engage in "self-handicapping," by attempting to create conditions for behavior that will favor externalization of failure and internalization of success (Berglas & Jones, 1978). After a failure, people offer excuses designed to absolve them of responsibility, if not of causal participation (Snyder & Higgins, 1988). Even the possibility of being held accountable is threatening, leading to *defensive* attributions of responsibility (Shaver, 1970). Given all of this evidence, we should not be surprised when an entrepreneur chooses to explain venture failure by pointing to uncontrollable external conditions, whereas the venture capitalist who has lost a great deal of money places the cause of failure squarely on the shoulders of the entrepreneur. Self-serving biases have been noted both in the management literature (Clapham & Schwenk, 1991) and in the entrepreneurship literature (Baron, 1998).

If the locus of causality dimension is implicated in feelings of self-worth, the stability dimension is implicated in the expectations for future success (Anderson et al., 1996). Specifically, one can hope to change the course of the future only if it can be considered malleable. In entrepreneurship the importance of the stability dimension has recently been shown by Gartner, Shaver, and Aggarwal (2001). As part of a large-scale survey of small business firms conducted by the Los Angeles *Times*, these investigators asked business owner/managers to identify what they considered to be the opportunities and problems facing their enterprises. In the overall sample of 1,686, 1,300 people answered the question about problems and 1,024 answered the question about opportunities (a total of 806 provided answers to both questions). The first opportunity mentioned and the first problem mentioned were each coded according to the two dimensions – locus of causality and stability. Thus for anyone who answered both questions, there are 16 possible attribution patterns (the combination of four codes for opportunities with four codes for problems). More than half of the people who answered both items gave descriptions of opportunities

that were external and *stable*. Similarly, more than half who answered both items gave descriptions of problems that were external, but *variable*. There were, however, only 261 people whose answers fit the modal response to both questions (external stable opportunities plus external variable problems). This *enterprise-serving* pattern makes it possible for the owner/manger to believe that (a) opportunities exist for the taking, now and in the future, and (b) problems are external, but solvable. The past growth obtained and the future growth expected were higher for the 261 people with the enterprise-serving pattern than they were for people with any of the 15 other patterns, or for people who had not mentioned both an opportunity and a problem. This is a good demonstration, in the entrepreneurship domain, of the traditional attribution theory view that changes in stability are implicated in expectancies for future success.

Attitudes

The concept of an attitude has been a central element of social psychology throughout most of the discipline's history. The first volume with the title, *Handbook of social psychology*, was published in 1935 (Murchison, 1935), but few of its topics have been retained in subsequent versions. The exception is a chapter on attitudes. The next *Handbook of Social Psychology*, published in 1954, did not call itself the second edition (Lindzey, 1954), and was to contain two chapters on attitudes (one omitted at the last minute). Subsequent editions have been numbered from the Lindzey version: the 2nd edition (Lindzey & Aronson, 1968–1969), the 3rd edition (Lindzey & Aronson, 1985), and most recently the 4th edition (Gilbert et al., 1998). The concept of an attitude assumes a prominent place in every edition. Beyond its content, attitude research has also contributed to the development of methodology in social psychology. Thurstone scaling (Thurstone & Chave, 1929), Likert scaling (Likert, 1932), and semantic differential scaling (Osgood et al., 1957) were all developed as attitude measurement techniques. In the 1960s the controversy between cognitive dissonance (Festinger, 1957) and incentive theory views of attitude change gave us the notion of evaluation apprehension (Rosenberg, 1965), the technique of "balanced replication" (Linder et al., 1967), and one of the very first physiological measures of a social psychological process (Brehm et al., 1964).

Components of Attitudes

It is easy to see why attitude research and theory have been at the core of social psychology. Traditional definitions of the concept divide an attitude into three components – a cognitive component, an affective component, and a behavioral component. The first represents one's beliefs about the attitude object, and many of these are organized according to processes of social cognition. The second component is evaluative, involving both judgments of the attitude target and one's own

reasons for holding the attitude (what Katz & Stotland, 1959, described as the "functions" of an attitude). The third component is often regarded as a general tendency to respond in a favorable or unfavorable manner toward the attitude object, represented more precisely by the notion of "behavioral intentions" (Fishbein & Ajzen, 1975). Including cognition, emotion, and behavior within a single concept makes that concept sound very much like the stated domain of the field: the socially meaningful actions of particular individuals. In entrepreneurship, this tripartite representation of attitudes is the basis for the Entrepreneurial Attitude Orientation (EAO) scale developed by Robinson, Stimpson, Huefner, and Hunt (1991). These investigators included dimensions such as innovation and achievement, but were particularly careful to tap behaviors as well as beliefs and values, thus covering all three of the elements of an attitude.

Cognitive Consistency

Recent treatments of attitudes have tended to concentrate on the evaluative or emotional elements (Tesser & Martin, 1996) particularly when the topic is limited to attitude change (Petty, 1995). This, too, is not surprising. After all, people rarely change their beliefs and attitudes unless there is some reason to do so. A long-standing tradition in attitude theory is that a primary motivation for change comes from an inconsistency between one's expressed attitudes and one's actual behavior. "If I believe that, why am I doing *this*?" The search for consistency between thought and action is best represented by *cognitive dissonance theory* (Cooper & Fazio, 1984; Festinger, 1957).

Typical of the cognitive consistency theories of attitude change, dissonance theory partitions the mental landscape into cognitive elements and the relations among them. Three such relationships are possible: consonance (agreement in content), dissonance (one implies the opposite of another), and irrelevance. The elements can represent emotions, beliefs, or behaviors, though the latter two are by far the most frequently studied. According to the more recent version of the theory (Cooper & Fazio, 1984), dissonance will occur if (a) one's actions produce consequences one considers negative, (b) one cannot avoid personal responsibility for the consequences, and (c) the resulting general motivational arousal cannot be attributed to some external source. Because it is easier to change an attitude than to change a behavior (indeed, a person's past public actions cannot be changed), the usual result of dissonance is attitude change.

Cognitive dissonance, and its first cousin, *escalation of commitment* (Brockner, 1992; Staw, 1981) would appear to have widespread applications in entrepreneurship. What is "single-mindedness of purpose" in the organizing phase of a new venture may become "unwillingness to listen to constructive advice" should trouble develop. Venture investors may continue to put cash into an enterprise that is well on its way to becoming one of the "living dead." Members of advisory boards sometimes take strong public positions that effectively prevent them from modifying their

views in response to changing circumstances. Indeed, a recent study by Blanton, Pelham, DeHart, and Carvallo (2001) suggests a dissonance-based explanation of the overconfidence bias.

But those who would look for dissonance as an explanation for venture continuance need to be careful in their search. A first caution concerns the target chosen for study. Dissonance exists within the mind (based on the behavior) of one person. So, for example, to study dissonance as an explanation for continuation despite clear indications that the venture should be scrapped, all the data must be collected from the original *founder*. A manager will not do as a substitute, because dissonance is person-based, not firm-based. A second caution is based on the Cooper and Fazio (1984) revision of the theory. Merely having a bad outcome is not enough. Dissonance will result only if the bad outcome should have been anticipated, and there are few alternatives to accepting personal responsibility.

Planned Behavior

Although the components of attitudes and the motivation involved in attitude change have parallels in the entrepreneurship literature, by far the most influential attitude theory has been the theory of reasoned action (Fishbein & Ajzen, 1975) and its successor, the *theory of planned behavior* (Ajzen, 1991, 1996). The theory of planned behavior (TPB) begins with an assumption quite congenial to entrepreneurship, namely, that most important behavior is volitional. Such volitional behavior is presumed to be the product of intentions, which are themselves a function of the person's overall attitude and the "subjective norms" that represent social pressure either to perform or not perform the action. Regardless of attitude and subjective norms, intentions will be exercised only if the individual believes that he or she has perceived behavioral control.

In formal terms, the TPB holds that

$$B \simeq I \propto [\omega_1 A_b + \omega_2 SN + \omega_3 PBC]$$

where B is the behavior, I is the behavioral intention, A_b is the attitude toward the action, SN is the set of social norms, and PBC is the perceived behavioral control. The three weights are empirically determined.

Although the model is simple in principle, testing its implications requires substantial detail. The attitude toward the behavior or object (A_b) is often considered the sum of beliefs about the object, with each belief multiplied by its perceived goodness. So the question, "what is your attitude toward (some new product)?" really reduces to a series of smaller questions about its design, the likelihood that it will meet its market need, whether it can be produced with sufficient margins to make a profit, and so forth. Similarly, the social norms component (SN) is also a sum, this time of the judgments of any person whose opinion matters, with each judgment multiplied by the motivation to comply with the opinion. Finally, even the perceived

control component (PBC) is subdivided into the constraints as they exist, and as they are perceived.

As Ajzen (1996) notes, there is a sizable volume of research in social psychology that supports the overall predictions of the TPB. But perhaps for understandable reasons, the theory's influence in entrepreneurship has been more apparent in theorizing than in research. Social psychologists who are interested in testing the TPB often do not have a content objective beyond understanding the nature of attitude structure. So it is in their interest to identify all of the relevant beliefs about an attitude object and obtain evaluative ratings of each; to identify all the people who might contribute normative pressure and estimate the likelihood of compliance; to create relatively precise measures of perceived control in experimental settings where the range of possible values for actual control is either limited or nonexistent. For entrepreneurship scholars, however, the situation is quite different. If the attitude to be measured is one concerning a new process or product – or worse, a new industry – some of the "beliefs" are not likely to be known. The subjective norms involved are seldom those imposed by individual people, rather they are estimated by proxy from categories of targets (e.g., customers, suppliers, or the financial community). And the number of factors that can (and often do) limit the entrepreneur's freedom of action is quite large. Nevertheless, the TPB has made its way into entrepreneurship, primarily in the work of Krueger and his associates (Krueger, 2000, Krueger & Brazeal, 1994; Krueger et al., 2000). Much of this work has taken the position that perceived behavioral control is best estimated with measures of self-efficacy (Bandura, 1986), so its discussion will occur later in the chapter.

The Self

Who are you, and how did you get that way? This question covers more than your beliefs, biases, attributions, and attitudes. Indeed, searching a psychological data base for all "self-" compounds is a guarantee of eye strain. Part of the reason that the topic covers so much ground is that the self both "is" and "does" (a distinction originally made by William James, 1892). James considered the self-as-object (the "Me") to include the material self (physical being and possessions), the spiritual self (personality traits, verbal skills, attitudes, inner experience), and the social *selves* (the plural indicates that we have, at minimum, a slightly different social self for every category of people with whom we come in contact). In contrast, James argued that there is only one self who "does." This self-as-subject (the "I"), does the knowing, does the thinking, is the sum of our conscious processes. If all of this sounds like a version of the mind/body problem, that is because psychology's origins derive from a philosophy contrasting Hobbesian materialist identity theory with Cartesian dualism (see, for example, Churchland, 1988; Robinson, 1979). Not surprisingly, devising ways to study ongoing conscious processes has been a technical problem for scientific psychology ever since Wilhelm Wundt established what many consider the first psychological laboratory in 1879. But with modern advances

in neuroscience, this problem may be getting more tractable (see, for example, Zillmann & Zillmann, 1996). Despite the increasing contact between social psychology and neuroscience, most researchers have not yet had broad access to procedures (such as magnetic resonance tomography) now used to study the conscious mind as it thinks. As a consequence, a majority of the social psychological inquiry into the self has emphasized either the contents or processes of the "self-as-does." And in entrepreneurship, there has been the most interest in what social psychology would describe as issues of self-evaluation.

Self-Evaluation

In the development of our social selves, we must often choose between accuracy and distortion. We need to know our capabilities, but we would like them to be more extensive than they are. We need to know what our core as a person might be, but we would also like people to think well of us. This conflict between accuracy and distortion can be seen in a great deal of theorizing about the self (Shaver, 1987).

One place where the tension is clear is in the case of *social comparison theory* (Festinger, 1954; Kruglanski & Mayseless, 1990, Suls & Wills, 1991). This theory has three fundamental elements. First, it holds that people have a drive to evaluate their opinions and abilities. Second, it claims that people will prefer objective standards for evaluation, when those standards are available. And finally, when there are no objective standards, people will use social comparison with others who are similar to them in ways relevant to the comparison. The original statement of the theory was not clear on the precise meaning of "evaluate." Specifically, does it mean "locate relative to others" or does it mean "place a value upon." Later work shows clearly that when people are faced with learning their "location" in a manner that might reduce their self-esteem, they will engage in "downward" social comparison, finding their location relative to people who are expected to be worse off (Wills, 1991).

At this point, social comparison theory has not made its way into entrepreneurship research. But a real opportunity exists. Consider the various organizations to which many entrepreneurs belong – local technology councils, breakfast roundtables sponsored by entrepreneurship centers, even more formal and expensive options like the Entrepreneur's Edge or The Executive Committee. Why would an entrepreneur take time away from his or her business to "attend a bunch of meetings?" Certainly, part of the answer is that business networks provide sources of competitive intelligence, access to capital and suppliers, and the opportunity to get one's business known in the local community. But there may be more. If it is lonely at the top of a large organization, it is every bit as lonely at the top of a small one. Worse, if you have started at the top of the small one, you lack the years of relevant company experience that can provide some comfort to the CEO of a large corporation. Not only can entrepreneurs learn "facts" from one another about how to solve problems facing their firms, they can also get a sense of how well they are performing in their role as CEO.

There is a practical research implication of considering "networking" from the standpoint of social comparison. To return to the issue of the "overconfidence bias," suppose that a researcher attempts to collect performance expectations from all businesses within a narrow industry sector. Further suppose that the number of such businesses can be identified with confidence from local tax or unemployment records, but that for convenience the research is conducted at meetings of a local network organization for the industry sector. Finally, suppose that only 30% of the local companies belong to the organization. Then if the respondents say that their firms are in some way "better" than 70% of firms in the sector, this response could be "overconfidence bias," or it could only be an accurate reflection of their belief that the organization members perform at a higher level than the remainder of the local firms in the sector. In short, social comparison theory would urge us to be careful in the specification of potential reference groups.

Consequences of Self-Concept

Social comparison processes describe the ways in which we come to understand just how well we do. Certainly, there are some objective benchmarks as well: firm size, revenue growth, market penetration. But what exactly does it *mean* to say that one's firm has 15% of the market? Is that a lot? Is it a little? Is it enough to justify a large venture investment? The answer, of course, depends on the size of the market segment, the number of other firms in the segment, and on what their level of market share might be. In other words, there must be a kind of social comparison of the objective information. The question now is what we do with the performance information we glean. How does it enter into our self-concepts, and more particularly, how does it affect our behavior?

Although there are several theories in social psychology about the relationship between self-maintaining processes and social behavior, the one that has received most attention in entrepreneurship is *self-efficacy* (Bandura, 1986, 1997). Fundamentally, Bandura's theory is one of personal causation, involving "the origins of efficacy beliefs, their structure and function, the processes through which they produce diverse effects, and their modifiability" (1997, 10), and is presumed to operate at both the individual level and the collective level. In a nutshell, perceived self-efficacy is a set of domain-specific beliefs about whether one can produce a certain action. In that sense it can be distinguished from locus of control beliefs and expectancies that presume to summarize the relationship between action, once performed, and outcomes or consequences of that action. A person's self-efficacy increases as a result of his or her mastery experiences, modeling or "vicarious experience" (often obtained through a form of social comparison), verbal persuasion from others, and even from close monitoring of internal affective states during a performance or activity (how much does it really hurt to be a "weekend quarterback?"). The self-efficacy cues derived from all of these sources guide behavior in the future.

In one sense, the notion of self-efficacy has an interesting status as a concept. It is at once an individual difference variable and a capability susceptible to outside influence or training. This joint status makes it quite different from more than a few related ideas. For example, the usual connotation of "individual difference variable" is something equivalent to a personality trait – a relatively enduring, cross-situationally consistent, feature of the person. True, personality traits are clearly shaped during socialization, but over a long period of years. They are not regarded (at least by the therapeutic community) as changeable in the short term without truly dramatic interventions. On the other hand, a person's beliefs can be shifted by persuasive communication, often with only minimal effort. So the idea of a set of beliefs – open to change through verbal persuasion – that nevertheless constitute an individual difference variable – on which people will be relatively normally distributed – is not always easy to translate into research practice.

Despite this obstacle, self-efficacy has found a home in entrepreneurship, largely through the work of Krueger and his associates (Krueger, 2000; Krueger & Brazeal, 1994; Krueger et al., 2000). Specifically, Krueger has used self-efficacy in the entrepreneurial domain as a replacement for the "perceived behavioral control" that is part of the theory of planned behavior (TPB). For example, Krueger (2000) describes self-efficacy as a personal estimate of venture feasibility, and extends the analysis to include the "collective efficacy" in an organization that might act to support or inhibit the perceived control of individual members of the team. Experiences that provide the opportunity for mastery will, of course, enhance perceived venture feasibility. In Krueger's work self-efficacy is then combined with perceived desirability of entrepreneurial action (the social norms component of TPB) and with a version of the "entrepreneurial event" outlined by Shapero (1982) to create intentions for entrepreneurial action.

Conclusion

The creation of a new venture is a truly social enterprise. It begins with the recognition of an opportunity (an act of social perception), continues through an organizing process that necessarily involves interaction with others, and culminates in a business that will reflect a "corporate culture" derived (intentionally or not) from its founders. For this reason, the theories and methods of social psychology would seem to be especially appropriate as ways to help understand the process. When the discipline of social psychology requires nearly 2,000 pages to capture (the size of the 4th edition of the Handbook), it is clearly impossible to bring all of social psychology to bear on the phenomenon of entrepreneurial behavior. To do justice to the concepts involved, and to describe at least some of the resulting entrepreneurship research, this chapter has concentrated on the intrapersonal processes involved prior to the existence of an organization. To our consideration of social cognition, attribution, attitudes, and self-beliefs, many social psychologists might hope to add topics like equity, bargaining and negotiation, investments in close relationships, to

name a few. At this point in the development of the discipline of entrepreneurship, social psychological theories and methods have already had a significant impact. The sheer amount of what is *not* covered here suggests that social psychology's value to entrepreneurship can only increase in the future.

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