

**AN EMPIRICAL STUDY OF CANADIAN NASCENT ENTREPRENEURS'  
ATTRIBUTIONS AND THEIR RELATIONSHIP TO SUCCESS IN CREATING A  
NEW BUSINESS**

Submitted to:

**22<sup>th</sup> Annual CCSBE Conference  
Waterloo, October 27-29, 2005**

Submitted by:

**Dr. Monica Diochon**, Schwartz School of Business Administration and Information Systems, St. Francis Xavier University, Antigonish, Nova Scotia, Canada B2G 2W5  
Tel: 902 867-5412; email: [mdiochon@stfx.ca](mailto:mdiochon@stfx.ca)

**Dr. Teresa V. Menzies**, Faculty of Business, Brock University, St. Catharines, Ontario, Canada L2S 3A1  
Tel: 905 688 5550x4118; email: [tmenzies@brocku.ca](mailto:tmenzies@brocku.ca)

**Dr. Yvon Gasse**, Faculté des sciences de l'administration, Université Laval, Sainte-Foy, PQ, Canada G1K 7P4  
Tel: 418 656 7960; email: [yvon.gasse@mng.ulaval.ca](mailto:yvon.gasse@mng.ulaval.ca)

## **AN EMPIRICAL STUDY OF CANADIAN NASCENT ENTREPRENEURS' ATTRIBUTIONS AND THEIR RELATIONSHIP TO SUCCESS IN CREATING A NEW BUSINESS<sup>1</sup>**

The research reported in this paper is part of a longitudinal study that tracked the activities and outcomes of a representative sample of Canadian nascent entrepreneurs over four years. Drawing on the attributional literature, we propose hypotheses that suggest a self-serving bias will lead to internal stable attributions in describing positive situations and external variable attributions in describing negative situations; and that those who are successful in forming a firm will be less susceptible to the self-serving bias than those whose start-up efforts have been abandoned. Responses to five open-ended questions were coded and analyzed in conjunction with self-reports of success at the time of the fourth year follow-up. A self-serving bias was neither associated with success nor generally evident. Rather, a quite distinctive attributional style was found among Canadian nascent entrepreneurs.

The question of why some new ventures are successfully brought to fruition while others are not is one that continues to elude researchers. Generally, we know that the rate of firm failure is inversely related to age (Thornhill and Amit, 2003; Sapienza, 1991). While Beaver (2003) claims that failure rates among new businesses are ten times as high as those of larger established firms, other estimates of failure range anywhere from 50 to 95 percent. Not surprisingly, the high rate of failure among small businesses, particularly new ones, has been a concern among policymakers for some time (Storey, 1994). Over the past decade, the importance of this concern has increased as policymakers focus their efforts on encouraging new firm formation.

In light of the relationship between a firm's age and failure, nascent ventures – those in the gestation stage of start-up - would be expected to have the highest rate of demise. Yet, gestation is an aspect of the entrepreneurial process about which very little is known (Gartner et al. 2004). One of the major stumbling blocks in acquiring more knowledge of business formation has been the lack of “real time” study of the start-up process. Currently, the Entrepreneurial

---

<sup>1</sup> The authors are most grateful for the generous financial support of the Social Sciences and Humanities Research Council of Canada and Industry Canada.

Research Consortium (ERC) – comprised of researchers in nine countries - is addressing this issue (For further details on the consortium see Gartner et al., 2004).

Given how little is known about the factors influencing firm formation, there is a pressing need for research. Since entrepreneurs have been shown to differ from other people with regard to certain aspects of cognition (Baron 1998), specifically, this paper explores whether individual differences in attributional style are associated with later success in bringing a business to fruition. Drawing on the attributional framework presented by Shaver (2004), we investigate this issue using four years of real time data collected from Canadian nascent entrepreneurs. The results of this investigation should be valuable to policymakers. Without a better understanding of firm formation, how can policy measures aimed at encouraging new firm formation be effective? Prospective entrepreneurs, too, have a vested interest in knowing more about what contributes to “success” and “failure.”

The paper begins by reviewing what we know about success and failure in a start-up context. It then explores the usefulness of attribution theory in explaining events and behaviour. Next it assesses the conceptual framework proposed by Shaver (2004) as a means of predicting the success and failure of nascent entrepreneurs in establishing new ventures. Hypotheses are proposed. The method section describes the sampling and data collection process as well as the measures and analysis employed. Results are then presented and discussed.

## **Literature Review**

### ***New Venture “Success” and “Failure”: What Does it Mean?***

Researchers have been attempting to explain the “success” and “failure” of new ventures for some time. However, investigations have been criticized for focusing largely on post-

founding activities, for focusing only on those who succeeded in forming a business, and for hindsight bias (recollections of pre-founding). Definitions, or lack thereof, also have been problematic (Diochon, Menzies and Gasse, 2005).

“Success” is a term that means different things to different people (Rogoff, Lee and Suh 2004; Beaver 2003). Within the context of starting a business, entrepreneurs are likely to define success differently than the venture’s external stakeholders, such as lenders or customers. For example, one entrepreneur might define success in terms of whether the business can generate an income of \$25,000, another might define it according to whether (s)he achieves personal fulfilment, while a lender might define it according to whether the business can service its debt. “Failure,” being the antonym of “success,” also would mean different things to different people.

In the literature, many terms are used synonymously with both “success” (“survival” or “continued viability”) and “failure” (“closure” or “bankruptcy”) even though they do not mean the same thing (Rogoff, Lee and Suh, 2004; Beaver, 2003). Indeed, a business can be abandoned without failing such as when an owner becomes ill. Given the wide range of meanings employed, it is not surprising that the literature has come under attack for being full of misinformation or for making inferences that are unjustified (Stokes and Blackburn, 2002).

Our aim, here, is not to engage in a definitional debate. Rather, it is to clearly define what we mean by successfully establishing a business within the context of the start-up process. Accordingly, we have adopted a definition of a new business proposed elsewhere (Diochon, Menzies and Gasse, 2005): “a recently formed commercial organization that provides goods and/or services for sale.” Arguably, it is not only important to start the business but to stay in business. Doing so would constitute success.

To address the question of why some people “succeed” in establishing a new firm while others do not, we turn to the psychology literature. People, generally, attempt to develop explanations of their own and others’ behaviour (Shaver et al. 2001; Weiner, 1985; Heider, 1958). Broadly, efforts to answer the question “why” are described in the field of social psychology by the term attribution - the processes through which an individual seeks to identify the causes of events, others’ behaviour, or practically anything that is encompassed by their experience (e.g. Pittman 1993).

With the *interpretation* of a situation often more important as a determinant of future action than the *facts* (Robbins, Coulter, and Stuart-Kotze 2003; Martocchio and Ford 1985), the meaning people give to events and behaviour is of heightened significance. Since we know that each person experiences a somewhat different reality, it is important to try and understand what that person’s perceived reality is, how it is being interpreted, and the implications for action. One theoretical framework that enables us to do that is attributional theory. In the next section, we review the usefulness of this theory in a new venture context.

### ***Attribution Theory in a New Venture Context***

Attribution theory was originally proposed by Heider (1958). With regard to task success, he argued that three things were required: an intention to perform the task, exertion in the direction of the intention, and a personal ability that exceeded the difficulty of the task. Weiner (1985) later represented these elements by two dimensions: locus of causality and stability of the cause. As shown in Table 1, the *locus of causality* refers to whether the cause(s) of events or behaviour is considered to be internal or external (to the person). The *stability of the cause* refers to whether the cause is capable of rather immediate change. For example, a person’s ability is

deemed internal and stable since it does not really change quickly. However, effort is considered internal and variable since the extent to which a person tries can change from one situation to another. Among the major external causes, task difficulty is the relatively stable factor whereas luck is, by definition, variable.

*Table 1 about here*

Given attribution theory's usefulness in explaining intentional behaviour, Shaver (2004) has argued it is particularly appropriate in understanding firm formation which involves domain-specific intentional action that is focused on achieving a desired outcome. The activities engaged in during the start-up process reflect a series of choices (Shaver and Scott 1991). Therefore, the reasons entrepreneurs give for their choices are likely to provide insight into, success (or failure), among other things.

In examining his/her behaviour or an event, a person will try to determine if its "successful" accomplishment (or "failure") was due to personal factors, such as ability or external factors, such as luck; and whether the cause was stable or unstable (Weiner 1985). Ultimately, the outcome could be attributed to ability, task difficulty, effort, or luck (as illustrated in the table). Whether "success" or "failure" is attributed to internal causes or external causes will have implications for the future (Shaver et al. 1996).

Attribution theory is said to be one of the few psychological theories that can deal with a key characteristic of entrepreneurs - persistence after setbacks or failure (Shaver 2004). If an entrepreneur attributes the cause of setbacks or failure to external factors (such as size of the market or the number of competitors), there is no reason not to try again. However, if the cause is attributed to internal factors - specifically stable ones such as ability - then the entrepreneur

would be unlikely to view starting a second venture as appealing (Cardon and McGrath 1999). Alternatively, if the cause is an internal variable one, such as insufficient effort or poor strategy, a failure to establish a business need not imply that another attempt will also fail. Rather than feeling helpless in the face of the problem, the entrepreneur is motivated to solve it. In this case, the individual wants to learn from his/her mistakes, and to apply that learning so future problems can be avoided.

According to Shaver (2004), the utility of an attributional approach in explaining current (as opposed to past) activity lies in the fact that there are reliable individual differences in attributional style. Since events like establishing a new venture would have more than one cause, it would be reasonable to expect that people would disagree about what might be *the* cause. “In such a case, people whose predilections lead them to look for causes internal to people may concentrate on the enduring personal characteristics. Alternatively, people whose predilections lead them to look for changeable external causes are more likely to concentrate on factors outside the person.” (Shaver 2004, 207)

Shaver (2004) argues that individual differences in attributional style, coupled with the notion that attributions may be related to entrepreneurial persistence, suggest that an entrepreneur’s reasons for entering business might be related to later success (or lack thereof) in establishing a new venture.

Like every process, business start-up takes place over time, involving both positive and negative situations. Indeed, it is well known that entrepreneurs face high levels of uncertainty, novelty and time pressure – factors which tend to overload information-processing capacity and increase entrepreneurs’ susceptibility to a number of cognitive biases (Baron 1998). In particular, entrepreneurs may be more susceptible to the *self serving bias* than others (Baron

1998). The self-serving bias refers to a tendency for individuals to offer internal attributions for positive events and provide external attributions for negative events. Indeed, Gartner and Shaver (2002) report evidence of a self-serving bias among nascent entrepreneurs in the US Panel Study of Entrepreneurial Dynamics (PSED). The evidence showed that nascent entrepreneurs described opportunities as internal and stable while problems were described as external and variable.

This suggests that nascent entrepreneurs would have a tendency to perceive starting a business positively and would be more likely to offer internal (and stable) attributions in describing their reasons for starting a business. On the other hand, problems or setbacks would be perceived negatively, and would be afforded attributions that are external (and variable). Many researchers refer to the “contrasting patterns of attribution (the typical “self-serving” pattern shown by most people and its opposite) as discrete attributional styles” (Baron 1998, 284).

However, Baron (1998) suggests that among entrepreneurs, one factor that might differentiate those who are successful from those who are not is that “successful” entrepreneurs are less susceptible to the self-serving bias. Accordingly, they are better able to establish the key interpersonal relationships necessary for survival and growth.

Based on the preceding discussion, we propose the following hypotheses:

*H1: Nascent entrepreneurs will be more likely to offer internal, stable attributions in describing positive situations.*

*H2: Nascent entrepreneurs will be more likely to offer external, variable attributions in describing negative situations.*

*H3: Nascent entrepreneurs who are successful in starting a business will be less susceptible to the self-serving bias than nascent entrepreneurs who have given up on their efforts to start a business.*

*H4: Nascent entrepreneurs who do not persist in their efforts to start a business will be more likely to provide internal and stable reasons for giving up.*

## **Method**

### ***Sample and Data Collection***

The data for this article were obtained from a national longitudinal study of business start-ups being conducted by the Canadian members of the Entrepreneurial Research Consortium (ERC). Detailed descriptions of the methods and sampling can be found in Gartner et al. (2004).

In accordance with the procedures established by the ERC, we engaged SOM, a national polling firm, to select a representative sample of people engaged in the start-up process (nascent entrepreneurs) in Canada during the winter of 2000. From the initial 49,763 randomly selected telephone numbers, there were 29,855 usable numbers. Using a Computer Assisted Telephone Interviewing System (CATIS) interviews were completed with individuals in 21,116 households.

The initial screening interview produced a sample of 593 as some households had multiple nascent entrepreneurs. Out of these, 463 qualified for the longer telephone interview by answering affirmatively to all three screening questions and 416 agreed to participate in the follow-up interview. In June 2000 detailed data collection began, using phone and mail survey instruments, covering a wide range of topics (which are detailed in Gartner et al., 2004). At this point, the respondent's status as a nascent entrepreneur was double-checked. This involved determining whether the respondent was still in the gestation phase of the start-up process.

Approximately one fifth (19%) of the respondents were dropped at this stage as they were too far advanced to be considered in the gestation phase of the entrepreneurial process. Among the remaining respondents, it was not possible to locate and contact about 24%. Another 17% of the remaining group would not or could not complete the phone interview.

One hundred and fifty one verified and accessible nascent entrepreneurs completed the initial detailed telephone interview. This represents a 59% response rate of those that could be contacted and were eligible. Follow-up interviews were completed at 12 month intervals - 2001 (n=132), 2002 (n=119), 2003 (n=104), and 2004 (n= 91). The follow-up interviews enabled us to track activities and determine whether a firm was founded.

In this article we analyze attributional data from the detailed phone interviews along with business start-up success data from a self-reported measure of start-up status provided in the 2004 (48 month) follow-up interview. The 48 month follow-up data was chosen as a basis for measuring success since the outcomes of start-up efforts largely would be determined by then. As noted above, our sample in 2004 consisted of 91 of the original 151 (60%). Among these 91, the distribution of start-up status responses is: operating business (22 responses, 24%), active startup (6 responses, 7%), inactive startup (4 responses, 4%), abandoned start-up (59 responses, 65%). Since 10 out of the 91 reported their status to be active (still trying to start) or inactive (no current start-up efforts but venture not abandoned), we excluded these respondents from our analysis since the final outcome of their start-up efforts is yet to be determined. Consequently, our results are based on the 81 of the original 151 (54%) that had either succeeded in establishing an operating business or abandoned their start-up efforts. Considering that the data for our analysis involved four phone interviews, each a year apart, this is a very good response rate. In

comparison, Gartner and Shaver (2002) report a response rate of 55% with only two follow up interviews.

### *Initial Attributional Coding*

To examine the relationship between attributions and success at starting a business, the present article draws on data collected from five open-ended questions included in the phone interview:

“Why are you starting this business?”

“Why do you expect your business to be successful?”

“What major problems have you had in starting this business?”

“What major problems do you expect in the future?”

“What is the most important reason why you gave up?”

All responses were coded by one of the principle researchers and an undergraduate research assistant according to the protocol developed and documented by Shaver et al. (2001). Prior to coding the sample’s responses, training (which took about five hours) in the coding process was conducted using item sets provided by Shaver et al. (2001).

The coding procedure involved the following three steps. Acting independently, each coder first parsed every answer into the number of separate explanations it contained. Then for each separate explanation, the coder first decided whether the explanation identified a factor internal to the person or a factor in the external environment. Once the internal/external decision had been made, the coder then decided whether the explanation identified a stable characteristic (one that would not, or could not, change in the immediate short term) or a variable characteristic

(one that would, or could, change in the immediate short term). For example, “Have more independence” is an internal-stable attribution for a reason to start, whereas “competition” is an external-variable attribution for a problem.

Reliability testing was based on the complete sample and was determined separately for each step in the process. Cohen’s kappa was used to assess intercoder reliability since it accounts for agreement that could be expected to occur by chance. Despite the simplicity and widespread use of percent agreement, we did not use this measure as it is known to be a misleading and inappropriately liberal measure of intercoder agreement for nominal-level variables. (It overestimates true intercoder agreement.) Since the kappa index tends to be more conservative than other indices, a kappa coefficient of 0.61 is said to represent reasonably good overall agreement (Kvalseth, 1989; Wheelock et al., 2000; Landis & Koch, 1977).

The Cohen kappa index assessing intercoder reliability for parsing answers into separate explanations for why start was .808; reliability for the external/internal step was .766; reliability for the stable/variable step was .517. The Cohen kappa index assessing intercoder reliability for parsing answers into separate explanations for why the respondent expects the business to be successful was .792; reliability for the external/internal step was .677; reliability for the stable/variable step was .691. The Cohen kappa index assessing intercoder reliability for parsing answers into separate explanations for problems experienced was .942; reliability for the external/internal step was .745; reliability for the stable/variable step was .623. The Cohen kappa index assessing intercoder reliability for parsing answers into separate explanations for expected problems was .908; reliability for the external/internal step was .867; reliability for the stable/variable step was .701. Finally, the Cohen kappa index assessing intercoder reliability for parsing answers into separate explanations for giving up was .791; reliability for the

external/internal step was .860; reliability for the stable/variable step was .862. With one exception (kappa of .517 for the stable/variable step of reasons for starting), these reliabilities show a reasonably strong degree of interrater reliability. Indeed, the exception does fall with the range (between 0.41– 0.60) that some scholars (Landis & Koch 1977) contend provide a moderate level of agreement. The few disagreements in coding that did arise were resolved by discussions among the two coders. We confined our analyses to the first-mentioned reason cited and coded this element into the four attributional categories.

### *Success in Starting a Business*

A self-reported measure was used to assess success in starting a business. During each follow-up phone interview, the respondents were asked: “How would you describe the current status of this start-up effort? Is it now an operating business, still in an active start-up phase, still a start-up but currently inactive, no longer being worked on by anyone, or something else?” A categorical variable was used to classify respondents according to whether their start-up was: operating, active, inactive, no longer worked on by anyone, or something else. As indicated earlier, we confined our analysis to those reporting an operating business and those reporting abandoning their efforts to start a business.

## **Results**

### *Attributions*

Table 2 presents the coding results for the first mentioned responses to the attributional questions. As predicted, an internal stable attribution was the type of response most frequently provided in explaining positive situations – why they are starting a business (44.4%) and why they expect to be successful (35.4%). This evidence supports Hypothesis 1. In terms of how the

two negative situations were described – current problems and expected problems – both were most frequently ascribed internal variable attributions (50.0% and 61.6% respectively).

Therefore, Hypothesis 2 was not supported. Although the next most frequently cited main reason for current and expected problems was external and variable, the evidence indicates that, overall, the sample does not appear to be very susceptible to the self-serving bias. These results contrast with those reported in Gartner and Shaver's (2002) investigation of nascent entrepreneurs in the United States (US). In their study the most frequently cited cause of problems was external and variable, with internal and variable the next most-used category. Interestingly, though, respondents from both studies attributed problems to variable (external and internal) reasons.

*Table 2 about here*

A 4x4 crosstabulation to test for the self-serving bias produced too many cells with expected values less than 5. Considering the previous results, we considered it appropriate to focus on examining the locus of causality for the first mentioned reason for starting a business by the first mentioned problem. Table 3 shows that internal attributions were the most frequently offered first response to both questions, with no significant relationship between the attributions:  $\chi^2 (df=1) = .425, p=.515$ . In other words, there was no difference between respondents' locus of causality for starting a business and for the problems encountered. Generally, Canadian nascent entrepreneurs are not very susceptible to the self-serving bias. Instead, their attributions tend to demonstrate a distinctly internal pattern. Indeed, the evidence suggests there may be a cultural difference between Canadian and US entrepreneurs, whereby Canadians are more likely to blame themselves for setbacks or failures.

*Table 3 about here*

Overall, the attributions reflect the sample's predilection to look for internal causes for both positive and negative situations. For the two positive situations, the vast majority of the sample provided internal attributions for each (62.9% and 56.9% respectively). In describing the two negative situations a similar pattern was noted (61.3% and 72.6%). This same pattern was evident when the responses for "why start a business" were cross-tabulated with "problems experienced." Respondents were almost twice as likely to attribute the cause of both to internal factors (see Table 3). Based on this evidence, it would appear that respondents' descriptions of positive and negative situations are, to some extent, determined by the cognitive structures of the respondents, as opposed to the data.

***Attributions and Success in Firm Formation***

A key objective of this article was to determine whether nascent entrepreneurs' attributions were related to success in forming a firm. Table 4 presents the results of analysis for testing whether nascent entrepreneurs who were successful in starting a business were less susceptible to the self-serving bias than nascent entrepreneurs who have given up on their efforts to start a business. Among those who successfully formed a firm too many cells had expected counts less than 5. Therefore, Hypothesis 3 could not be tested. However, it is interesting to note that the data presented in Table 4 indicates more of a susceptibility to self-serving bias among those who were successful in creating a firm than among those who were unsuccessful. Indeed, among those who were successful in starting a business, 28.6% offered an internal locus of

causality in describing why they started and an external locus of causality in describing problems. Among those who had abandoned their efforts to start a business, 20.3% were similarly categorized.

*Table 4 about here*

In light of the previous results, we explored whether success in forming a firm was related to the locus of causality for any of the first four attributional questions. Only one significant relationship was found – between success and the first reason given for starting a business (see Table 5). Nascent entrepreneurs who succeeded in starting a business were more likely to have an internal locus of causality than those who were unsuccessful in starting a firm. When describing their first reason for starting a business, about 40% of those reporting an internal locus of causality had succeeded in establishing a new business while only about seven percent of those with an external locus of causality succeeded in doing so. This suggests that personal reasons, rather than external market opportunities, are the primary drivers of decisions to create new ventures that eventually are successful. Tests of whether a stable internal pattern for “why start”, and a variable internal pattern for problems, would be related to success in starting showed no significance.

*Table 5 about here*

Among those who did not persist in their efforts to start a business, the most frequently provided response was an internal stable attribution [ $\chi^2 (df=1) = 3.872, p=.049$ ] (see Table 2).

Therefore, Hypothesis 4 – nascent entrepreneurs who do not persist in their efforts to start a business will be more likely to provide internal and stable reasons for giving up - is supported. This evidence is consistent with the theory. In terms of the three requirements for task success, the intention to start a business was present, as was exertion in the direction of the intention. However, personal ability was not perceived to exceed the difficulty of the task (starting a business).

It is interesting to consider the results of this study in light of two noted tendencies among entrepreneurs: perceiving their own abilities, dedication, and efforts as crucial to success; and overestimating the odds for success (Baron 1998). While the first tendency is evident, the second is less so. These Canadian nascent entrepreneurs were less likely to provide internal attributions for future success than they were for current and future problems (Table 2).

### **Conclusions**

Generally, Canadian nascent entrepreneurs were found to have an internal locus of causality. While positive situations tended to be viewed as a result of their *abilities* (internal/stable), problems were considered a result of their *effort* (internal/variable). In terms of the attributional framework, overcoming these problems would require greater effort.

While attributional theory appears to be of limited usefulness in explaining why some nascent entrepreneurs are successful in creating a business while others are not, the findings of this research do have implications for policy. Indeed, among those who abandoned their efforts to establish a new firm - close to 75% of the sample - almost 40% gave internal stable reasons for doing so. This suggests that training might increase ability and, therefore, the odds for

success. For example, those citing “disagreements with partner” might benefit from interpersonal skills training.

The fact that Canadian nascent entrepreneurs have a proclivity to provide internal explanations coupled with the absence of a significant relationship between success in creating a business and the self-serving bias merits further study, particularly on an international comparative basis. With respect to explaining success, perhaps other theoretical frameworks, such as expectancy theory, might be more useful in analyzing the open-ended questions.

No research is without limitations, and ours is no exception. Clearly, the sample size and its attrition rate constrains the nature and extent of analysis that could be conducted. For example, attributions could not be assessed according to demographic factors. Furthermore, in basing our conclusions about success on the fourth year follow-up data, the sample became too small to conduct separate analyses for those who started but did not stay in business as compared to those who never started a business and those who started and stayed in business. In future, research based on a larger sample is recommended.

Despite its weaknesses, this research does contribute to the literature. Many scholars have argued that attribution style might be useful in explaining the success of entrepreneurs. However, this is the first empirical study to investigate the issue among a representative sample of nascent entrepreneurs whose success was determined according to whether they started and stayed in business. Moreover, by assessing the reasons people gave for abandoning their efforts to start a business, valuable insight is provided about participants in the entrepreneurial process that we know very little about.

## References

- Baron, R. A. (1998). "Cognitive Mechanisms in Entrepreneurship: Why and When Entrepreneurs Think Differently Than Other People," *Journal of Business Venturing*, 12, 275-294.
- Beaver, G. (2003) "Small business: success and failure," *Strategic Change*, 12,3, 115-122.
- Cardon, M. S. and R. G. McGrath (1999). "When the Going Gets Tough...Toward a Psychology of Entrepreneurial Failure and Re-Motivation," [http://www.babson.edu/entrep/fer/papers99/I/I\\_B/I\\_B%20Text.htm](http://www.babson.edu/entrep/fer/papers99/I/I_B/I_B%20Text.htm) accessed on July 16, 2004.
- Diochon, M., T. Menzies and Y. Gasse (2005). "From Becoming To Being: Measuring Firm Creation," paper presented at the Enterprise Development Growth & Expansion (EDGE) Conference, Singapore, July 11-13.
- Ford, J. D. (1985). "The Effects of Causal Attributions on Decision Makers' Responses to Performance Downturns," *Academy of Management Review*, 10, 770-786.
- Gartner, W. B. and K. G. Shaver (2002). "The Attributional Characteristics of Opportunities and Problems Described by Nascent Entrepreneurs in the PSED," Paper Presented at the Babson-Kauffman Entrepreneurship Research Conference, Boulder, Co.
- Gartner, W.B., K.G. Shaver, N. M.Carter, and P.D. Reynolds (Eds.). (2004). *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*. Thousand Oaks, Calif.: Sage.
- Gray, C. (1998). *Enterprise and Culture*. Routledge: London.
- Heider, F. (1958). *The Psychology of Interpersonal Relations*. New York: Wiley.
- Kvalseth, T. O. (1989). "Note on Cohen's Kappa," *Psychological reports*, 65, 223– 26.
- Kelley, H. H. and J. L. Michela (1980). "Attribution theory and research." *Annual Review of Psychology*, 31, 457-501.
- Landis, J. R. and G. G. Koch (1977). "The Measurement Of Observer Agreement For Categorical Data," *Biometrics*, 33, 159-174.
- Martocchio, M. J. and W. L. Gardner (1987). "The Leader/Member Attribution Process," *Academy of Management Review*, 12, 235-49.
- Miller, A. G. and T. Lawson (1989). "The Effect of an Informational Option on the Fundamental Attribution Error," *Personality and Social Psychology Bulletin*, June 1989, 194-204.

- Nisbett, R. E., C. Caputa, P. Legant and J. Maracek (1973). "Behavior as Seen by the Actor and as Seen by the Observer," *Journal of Personality and Social Psychology*, 27, 154-64.
- Pittman, T. S. (1993). "Control Motivation and Attitude Change," in *Control Motivation and Social Cognition*. Eds. G. Weary, F. Gleichner, and K. L. Marsh. New York: Springer-Verlag.
- Rogoff, E. G., M-S. Lee and D-C Suh (2004). "Who Done It? Attributions by Entrepreneurs and Experts of the Factors that Cause and Impede Small Business Success," *Journal of Small Business Management* 42 (4), 364-376.
- Robbins, S. P., M. Coulter, and R. Stuart-Kotze (2003). *Management: Canadian Seventh Edition*, Toronto: Pearson Education Canada Inc., 323.
- Sapienza, H. J. (1991). "Comets and Duds: Characteristics Distinguishing High-and Low-Performing High-Potential Ventures," *Frontiers of Entrepreneurial Research*, 6, 124-138.
- Schermerhorn, J. R. (2005). *Management* 8<sup>th</sup> Edition, NY, New York: John Wiley & Sons, Inc.
- Shaver, K. G. (2004). "Attributions and Locus of Control," in *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*. Eds. Gartner, W.B., K.G. Shaver, N. M. Carter, and P.D. Reynolds. Thousand Oaks, Calif.: Sage, 205-213.
- Shaver, K. G., W. B. Gartner, E. J. Gatewood, and L. H. Vos (1996). "Psychological factors in success at getting into business," in *Frontiers of entrepreneurship research 1996*. Eds. P. Reynolds, S. Birley, J. E. Butler, W. D. Bygrave, P. Davidsson, W. B. Gartner, and P. P. McDougall. Babson Park, MA: Babson College, 77-90.  
[http://www.babson.edu/entrep/fer/AWARDS/NFIB/html/nfib\\_paper.htm](http://www.babson.edu/entrep/fer/AWARDS/NFIB/html/nfib_paper.htm)  
accessed on June 21, 2005.
- Shaver, K.G. and L.R. Scott (1991). "Person, Process, Choice: The Psychology of New Venture Creation," *Entrepreneurship Theory and Practice* 16(2), 23-45.
- Shaver, K. G., W. B. Gartner, E. Crosby, K. Bakalarova, and E. J. Gatewood (2001). "Attributions About Entrepreneurship: A Framework and Process for Analyzing Reasons for Starting a Business," in *Entrepreneurship Theory and Practice* 26(2), 5-32.
- Stokes, D. and R. Blackburn (2002). "Learning the Hard Way: The Lessons of Owner Managers Who Have Closed Their Businesses," *Journal of Small Business and Enterprise Development* 9 (1), 17-27.
- Storey, D. J. (1994). *Understanding the Small Business Sector*. London: Routledge.
- Thomson, A. and C. Gray (1999). "The Determinants of Management Development in Small Business," *Journal of Small Business and Enterprise Development* 6(2), 113-127.

- Thornhill, S. and R. Amit (2003). "Learning from Failure: Organizational Mortality and the Resource-Based View," *Analytical Studies Branch Research Paper Series*. Ottawa, Ontario: Statistics Canada.
- Wheelock, A., W. Haney, and D. Bebell (2000). "What Can Student Drawings Tell Us About High-Stakes Testing In Massachusetts?" *TCRecord.org*. Available: <http://www.tcrecord.org/Content.asp?ContentID=10634>.
- Weiner, B. (1985). "An attributional theory of achievement motivation and emotion." *Psychological Review* 92, 548-573.

**Table 1**  
**Intentional Behaviour:**  
**Dimensions of Causal Attributions**

| Locus of Causality | Stability of the Cause |          |
|--------------------|------------------------|----------|
|                    | Stable                 | Variable |
| Internal           | Ability                | Effort   |
| External           | Task Difficulty        | Luck     |

**Table 2**  
**Coding Results for Attributions**

| Attributions for:         | Sample (n=81) | Average Number of Elements | First Elements External Stable | First Elements External Variable | First Elements Internal Stable | First Elements Internal Variable |
|---------------------------|---------------|----------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Why start (n=81)          | N             | 1.75                       | 13                             | 17                               | 36                             | 15                               |
|                           | %             |                            | 16.0                           | 21.0                             | 44.4                           | 18.5                             |
| Why expect success (n=79) | N             | 1.85                       | 21                             | 13                               | 28                             | 17                               |
|                           | %             |                            | 26.6                           | 16.5                             | 35.4                           | 21.5                             |
| Current problems (n=80)   | N             | 1.39                       | 6                              | 25                               | 9                              | 40                               |
|                           | %             |                            | 7.5                            | 31.3                             | 11.3                           | 50.0                             |
| Expected problems (n=73)  | N             | 1.37                       | 6                              | 14                               | 8                              | 45                               |
|                           | %             |                            | 8.2                            | 19.2                             | 11.0                           | 61.6                             |
| Why give up (n=58)        | N             | 1.41                       | 10                             | 14                               | 23                             | 11                               |
|                           | %             |                            | 17.2                           | 24.1                             | 39.7                           | 19.0                             |

**Table 3**  
**Locus of Causality Attributions for Reasons for Starting a Business by the Reasons for Problems**

| Why Start | Problems |       |          |       |       |       |
|-----------|----------|-------|----------|-------|-------|-------|
|           | Internal |       | External |       | Total |       |
|           | N        | %     | N        | %     | N     | %     |
| Internal  | 32       | 65.3  | 18       | 58.1  | 50    | 62.5  |
| External  | 17       | 34.7  | 13       | 41.9  | 30    | 37.5  |
| Total     | 49       | 100.0 | 31       | 100.0 | 80    | 100.0 |

$\chi^2 (df=1) = .425, p = .515$  n.s

**Table 4**  
**Locus of Causality Attributions for Reasons for Starting a Business and Reasons for Problems by Firm Formation Status**

| Firm Formation Status                            |            | Current Problems |    |          |    | Total |    |       |
|--|------------|------------------|----|----------|----|-------|----|-------|
|  |            | Internal         |    | External |    | N     | %  |       |
| Successful <sup>a</sup><br>(operating)           | Why Start? | Internal         | 13 | 92.9     | 6  | 85.7  | 19 | 90.5  |
|  |            | External         | 1  | 7.1      | 1  | 14.3  | 2  | 9.5   |
|  | Total      |                  | 14 | 100.0    | 7  | 100.0 | 21 | 100.0 |
| Unsuccessful <sup>b</sup><br>(efforts abandoned) | Why Start? | Internal         | 19 | 54.3     | 12 | 50.0  | 31 | 52.5  |
|  |            | External         | 16 | 45.7     | 12 | 50.0  | 28 | 47.5  |
|  | Total      |                  | 35 | 100.0    | 24 | 100.0 | 59 | 100.0 |

a. too many cells had expected counts less than 5.

b.  $\chi^2 (df=1) = .105$   $\rho = .746$  n.s.

**Table 5**  
**Firm Formation Success by Locus of Causality for Starting a Business**

| Formation Status                 | Locus of Causality |       |          |       | Total |       |
|----------------------------------|--------------------|-------|----------|-------|-------|-------|
|                                  | Internal           |       | External |       | N     | %     |
| Successful (operating)           | 20                 | 39.2  | 2        | 6.7   | 22    | 27.2  |
| Unsuccessful (efforts abandoned) | 31                 | 60.8  | 28       | 93.3  | 59    | 72.8  |
| Total                            | 51                 | 100.0 | 30       | 100.0 | 81    | 100.0 |

$\chi^2 (df=1) = 10.115$ ,  $\rho = .001$