THE PROACTIVE PERSONALITY SCALE AS A PREDICTOR OF ENTREPRENEURIAL INTENTIONS

Abstract

This study explored the relationship between individual differences and behavioral intentions toward entrepreneurial careers, defined here as owning one's own business. Of particular interest was a recent innovation in the individual differences literature -- the proactive personality scale. Using a sample of 181 students, entrepreneurial intentions were found to be significantly associated with gender, education, having an entrepreneurial parent, and possessing a proactive personality. The strongest association was found between entrepreneurial intentions and the proactive personality scale. Hierarchical regression analysis showed that proactivity explained significant incremental variance in entrepreneurial intentions above and beyond that explained by the other variables.

In a review of trends in the entrepreneurship literature, Gartner (1990) identified eight themes characterizing the major issues of entrepreneurship. One of these themes focused on the entrepreneur as an individual, and the notion that entrepreneurship involves individuals with unique personality characteristics and abilities. Within this domain of research, five attributes have consistently been found to covary with entrepreneurship: need for achievement, locus of control, risk-taking propensity, tolerance for ambiguity, and Type-A behavior (Brockhans 1982; Brockhans and Horwitz 1986; Furnham 1992).

Despite these findings, a number of scholars have expressed dissatisfaction with extant knowledge of the personality-entrepreneurship relationship. Chell, Haworth, and Brearley (1991) suggested that disagreement on the meaning of "entrepreneurship" has impeded research progress; moreover, these authors advocated using trait terms which describe natural categories accessible to lay persons. Gartner (1988) noted that theoretical models seeking to explain the broad phenomenon of entrepreneurship would benefit by including variables beyond traits alone. Robinson et al. (1991) argued for more dynamic models of the entrepreneurship process. Shaver and Scott (1991) identified the methodological weaknesses of much entrepreneurial trait
research (including the research that generated the attributes listed above) and argued for consistency between the specificity of measures and underlying constructs.

Perhaps as a result of criticisms such as these, recently little research has been published examining the relationship between personality traits and entrepreneurship. Considerable attention has been devoted to creating ambitious models of various entrepreneurial processes, such as new venture initiation (Herron and Sapienza 1992), entrepreneurial potential (Krueger and Brazeal 1994), and entrepreneurial motivation (Naffziger, Hornsby, and Kuratko 1994). These conceptual frameworks have significantly enhanced the precision of theory surrounding the entrepreneurship process. However, the death knell for the study of personality and entrepreneurship may have sounded prematurely.

The proactive personality scale, a recent addition to the literature on individual differences, appears to have the potential for providing further insight into the personality trait-entrepreneurship relationship. The proactive personality scale measures a personal disposition toward proactive behavior, an idea that intuitively appears to be related to entrepreneurship. The purpose of this paper is to examine empirically the extent to which having a proactive personality is associated with entrepreneurial intentions.

Because a common definition of entrepreneurship is lacking, it is incumbent upon researchers to define explicitly the meaning they ascribe to the term (Gartner 1989; 1990). The central variable in this paper, entrepreneurial intentions, will be defined as one's judgements about the likelihood of owning one's own business. For the research questions in this paper, differences in specific tactics and themes of entrepreneurship (for example, creating a new venture vs. buying an existing business) will not be explored. Defining entrepreneurial intentions broadly is consistent with the objectives of this research in that it avoids delimiting subjects' expression of entrepreneurial intentions.

The study of behavioral intentions has a rich history in psychology (for example, Ajzen and Fishbein 1980), and has begun to appear in both conceptual (Bird 1988; Katz and Gartner 1988; Krueger and Brazeal 1994) and empirical (Brenner, Pringle, and Greenhaus 1991; Krueger 1993a; 1993b; Scott and Twomey 1988) entrepreneurship research. Krueger (1993b) argued that entrepreneurial intentions are central to understanding the entrepreneurship process because they form the underpinnings of new organizations. Because entrepreneurship occurs over time (Gartner et al. 1994), entrepreneurial intentions might be viewed as the first step in an evolving, long-term process.

The Proactive Dimension of Personality

Bateman and Grant (1993) discussed the proactive component of organizational behavior and introduced a measure of the "proactive personality." This measure of a personal disposition toward proactive behavior is intended to identify differences among people in the extent to which they take action to influence their environments. Bateman and Grant defined the prototypic "proactive personality" as one who is relatively unconstrained by situational forces and who effects environmental change. Proactive personalities identify opportunities and act on them; they show initiative, take action, and persevere until they bring about meaningful change. In
contrast, people who are not proactive exhibit the opposite patterns: they fail to identify, let alone seize, opportunities to change things.

Proactivity differs fundamentally from affective traits like well-being and from cognitive traits like locus of control. The proactive disposition is a tendency to initiate and maintain actions that directly alter the surrounding environment (Bateman and Grant 1993). Using the language of Buss and Finn (1987), proactivity is an instrumental trait because it is part of a class of behaviors that impact the environment.

Rooted in the interactionist perspective (Bandura 1977; Schneider 1983), the proactive approach considers the possibility that individuals create their environments. In the psychology and organizational behavior literatures, the theme of interactionism holds that behavior is both internally and externally controlled, and that situations are as much a function of persons as vice versa (Schneider 1983). Reciprocal causal links exist between person, environment, and behavior (Bandura 1977). Accordingly, individuals can intentionally and directly change their current circumstances, such as by choosing vocations for which they are best suited. Thus, based on interactionist theory, and the behaviors associated with the proactive personality, it seems reasonable that proactive personalities may be drawn to entrepreneurial careers.

This notion of a proactive orientation has been discussed in other theoretical treatments of the entrepreneurship process. Shapero and Sokol (1982) spoke of a tendency toward action and initiative in their discussion of the social dimensions of entrepreneurial events. Krueger and his colleagues (1993b; Krueger and Brazeal 1994) have included the concept of "propensity to act" in their work on entrepreneurial intentions and potential. Krueger (1993b) used the desirability of control scale (Burger 1985) as a proxy for propensity to act; however, Krueger and Brazeal (1994) suggested that other measures of propensity may be useful. The proactive personality scale may be such a measure.

Bateman and Crant (1993) argued that the proactive personality scale may have implications for vocational choice and entrepreneurship in particular. Given the definition of proactive personality and previous research on the correlates of entrepreneurship, such an assertion is intuitively appealing. Consistent with the theoretical domain that entrepreneurs may possess certain personality dimensions, the following hypothesis is offered:

Hypothesis 1: The extent to which people possess a proactive personality will be positively associated with entrepreneurial intentions.

Other Individual Differences

In addition to personality traits, several additional individual difference variables have been found to predict entrepreneurial behaviors. In a review of the literature, Brockhaus and Horwitz (1986) identified several pertinent personal characteristics, including age, gender, education, and role models. Findings regarding gender differences in entrepreneurship (particularly, that males are more likely than females to be entrepreneurs) have been explained in terms of work value differences (Brenner, Pringle, and Greenhaus 1991) and psychological characteristics (Sexton and Bowman-Upton 1990). Evidence from a sample of over 181,000 people culled from the
1980 U.S. Census indicated that education is positively related to entrepreneurship and self-employment (Robinson and Sexton 1994). Finally, studies have shown that people having a parent who is an entrepreneur are more likely to express entrepreneurial intentions themselves (Krueger 1993a; 1993b; Scott and Twomey 1988). Thus, based on previous findings the following hypotheses are offered:

Hypothesis 2: Females will express lower entrepreneurial intentions than males.
Hypothesis 3: Education will be positively associated with entrepreneurial intentions.
Hypothesis 4: Subjects with a parent who is an entrepreneur will have higher entrepreneurial intentions than those whose parents are not entrepreneurs.

The focus of this study is the extent to which the proactive personality scale is associated with entrepreneurial intentions. A rigorous test of this relationship will control for the effects of other variables on entrepreneurial intentions. Given the divergent theories and perspectives on entrepreneurship, it would be difficult if not impossible to control for all possible effects on entrepreneurial intentions. However, the previous discussion suggests that gender, education, and parental role models are appropriate control variables for a study of individual differences in entrepreneurial intentions. If the proactive personality scale explains unique amounts of variance above and beyond these other variables, then it may be of some incremental value in understanding entrepreneurial intentions. It seems reasonable that the proactive personality construct captures some unique element of entrepreneurial intentions not accounted for by demographic variables. Thus:

Hypothesis 5: The proactive personality scale will explain a significant amount of variance in entrepreneurial intentions after controlling for the effects of gender, education, and parental role models.

Method

Sample and Procedure

A sample of 181 students from a medium-sized Midwestern university provided data for this study. One-half the students were undergraduates (n = 91) and half were MBA students (n = 90). The average age of the sample was 23 years; 33 percent were female. The undergraduate students had little or no full-time work experience; the MBA students averaged three years of work experience.

All subjects completed the same survey; however, data were collected in two ways. The undergraduates received extra course credit for participating in a research project. They attended a session outside of class for purposes of completing the project. The MBA students did not receive extra credit; the author placed surveys in the mailboxes of 225 currently enrolled MBA students, along with a cover memo asking them to complete the materials. The response rate was 40 percent.

Measures
Proactive personality. Proactive personality was measured using Bateman and Crant's (1993) 17-item measure. These items are summed to arrive at a proactive personality score. Responses are indicated on a seven-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"), with such items as "I excel at identifying opportunities" and "No matter what the odds, if I believe in something I will make it happen."

Bateman and Crant (1993) presented the results of three studies assessing the scale's psychometric properties. The uni-dimensionality of the scale was supported via factor analysis and reliability estimates across the three samples (ranging from 0.87 to 0.89). Convergent validity was demonstrated via moderate correlations with need for achievement and need for dominance. Proactive personality was not significantly associated with locus of control, providing some evidence of discriminant validity. To establish criterion validity, Bateman and Crant demonstrated that the proactive personality scale was associated with involvement in proactive community service activities, the degree of constructive environmental change revealed in essays of subjects' most significant personal achievements, and with peer ratings of transformational leadership. Crant (1995) investigated the criterion validity of the proactive personality scale using a sample of 131 real estate agents. Proactive personality predicted objective measures of job performance culled from archival records of the agents' houses sold, listings obtained, and commission income earned.

Entrepreneurial intentions. Three items, including "I will probably own my own business one day" and "It is likely that I will personally own a small business in the relatively near future," were developed to measure this variable using a seven-point Likert format.

Demographic data. The survey included items inquiring about the subjects' age, gender, and work experience. Gender was dummy coded 0 for female subjects and 1 for male subjects. Education was dummy coded 0 for undergraduate students and 1 for MBA students. A dichotomous item asked whether one or both of the subjects' parents owned their own full-time business most of the time while they were growing up. Responses were dummy coded 0 for no and 1 for yes.

Results

Means, standard deviations, reliabilities, and correlations for all variables are reported in Table 1. Chronbach's alpha for entrepreneurial intentions and the proactive personality scale were 0.93 and 0.88, respectively; thus, the continuous measures achieved acceptable levels of reliability. Thirty-four percent of the subjects reported having at least one parent who owned a business.

Looking at the correlations between entrepreneurial intentions and the other variables, the strongest relationship is with the proactive personality scale (r=0.48, p<.01). Significant correlations also were obtained between entrepreneurial intentions and gender (r= 0.21, p<.01), education (r=0.24, p<.01) and parental role models (r = 0.22, p<.01).

To further examine the effects of the dichotomous variables on entrepreneurial intentions, a series of one-way ANOVAs were performed and the cell means examined to determine the direction of the effects. The dichotomous variables (gender, education, entrepreneurial parents)
served as the independent variables, and the dependent measure was entrepreneurial intentions. A significant effect was found for gender (F(1,180)=8.33, p<.01): Males reported higher entrepreneurial intentions (M=14.43) than did females (M=12.07). A main effect also was found for education (F(1,180)=10.99, p<.01): MBA students reported higher entrepreneurial intentions (M=14.92) than did undergraduate students (M=12.38). The main effect of the presence of entrepreneurial parents was also significant (F(1,180)=9.35, p<.01): Subjects with role models reported higher entrepreneurial intentions (M=15.30) than did those without such role models (M=12.81). Together, these results provide support for Hypotheses 1, 2, 3, and 4.

To test Hypothesis 5, which predicted that the proactive personality scale would explain additional variance in entrepreneurial intentions beyond that accounted for by the demographic variables, a hierarchical regression analysis was performed. Following the recommendations of Cohen and Cohen (1983), the control variables - gender, education, and entrepreneurial parents -- were entered into the regression equation first. The proactive personality scale was the last variable entered into the equation.

The results of the hierarchical regression analysis are displayed in Table 2. Together, the three control variables accounted for 14 percent (p<.01) of the variance in entrepreneurial intentions. The proactive personality scale explained an additional 17 percent (p<.01) of the variance in entrepreneurial intentions over and above variance accounted for by gender, education, and entrepreneurial parents. Thus, Hypothesis 5 was supported. The complete model accounted for 31 percent of the variance in entrepreneurial intentions.

**Discussion**

The results of the present study indicated that a variety of individual difference variables are associated with entrepreneurial intentions. Gender, education, and entrepreneurial parents were all associated with entrepreneurial intentions. Students who reported higher entrepreneurial intentions tended to be male rather than female, MBA students rather than undergraduates, and had at least one parent who owned a business. The central findings of this study concerned the relationship between the proactive personality scale and entrepreneurial intentions. Proactivity was positively associated with entrepreneurial intentions; furthermore, the proactive personality scale explained a significant amount of additional variance in entrepreneurial intentions even after all other variables were entered into a regression model.

The results of this study contain several implications. First, these results contribute to the literature concerning individual differences in entrepreneurship and entrepreneurial intentions. Other researchers have hinted at the connections between proactivity and entrepreneurship, but this paper is the first to empirically demonstrate that proactivity is associated with entrepreneurial intentions. Second, consistent with Gartner's (1988) concerns, this study did not look at a personality trait in isolation; rather, an effect was shown for proactive personality above and beyond several demographic variables.

The findings regarding the proactive personality scale are consistent with the interactional psychology perspective (Bandura 1977; Schneider 1983), which postulates that people influence their environments as well as vice versa. Individuals select, interpret, and alter situations. People
may be expected to seek out environments that offer opportunities to capitalize on individual strengths and needs (Schneider 1983), and the characteristics of an environment are in part determined by the types of people who dominate that environment (Holland 1985). Thus, one explanation for these findings is that more proactive people tend to envision creating situations—such as forming or buying a business—that will allow them to capitalize on their personality.

These results also provide further evidence for the utility of the proactive personality scale. Coupled with recent findings regarding associations between the proactive personality scale and transformational leadership (Bateman and Crant 1993) and the criterion validity of the proactive personality scale (Crant 1995), this relatively new construct appears to have the potential for explaining variance in organizational phenomena. Moreover, these findings are consistent with prior research suggesting the importance of a "propensity to act" in judgments about entrepreneurial careers. Having a proactive personality may be an important element of this propensity toward action.

In considering the generalizability of the findings, potential limitations should be addressed. First, the cross-sectional design focusing on behavioral intentions weakens the explanatory power of the study. While the intention-behavior linkage is well established (for example, Ajzen and Fishbein 1980), and entrepreneurial intentions have been studied previously (for example, Krueger 1993a and 1993b), a longitudinal design following the students' career choices over time would be preferable. While this study provides compelling evidence for the relationship between proactivity and entrepreneurial intentions, it would be inappropriate to generalize these results to actual entrepreneurial behaviors like starting a new business until such a relationship is confirmed by empirical research. Second, the sample chosen did not vary significantly across some important dimensions. For example, the range of possible educational levels and exposure to entrepreneurship courses was restricted in the present sample. Relatedly, age was not included as a control variable because of sample homogeneity. Third, some may criticize the use of a student sample beyond the restriction of range issues described above. However, because the appropriateness of a given sample is a function of the type of theory explored and the major constructs of the model (Gartner 1989), students may be more appropriate for research into individual differences and vocational intentions than for other research questions. Krueger (1993b) provided a number of cogent arguments supporting the use of student samples to study entrepreneurial intentions.

Regarding opportunities for future research, studies might profitably employ other definitions of entrepreneurial intentions. For example, proactivity may be more strongly associated with intentions to start one's own business—a significant environmental change—than with intentions to purchase an existing operation. Furthermore, it would be useful to examine the relative importance of proactivity compared to the entrepreneurial traits listed earlier (for example, need for achievement or risk-taking propensity). Perhaps most importantly, future research should assess the relationship between proactivity and entrepreneurship by using more heterogeneous samples and studying various entrepreneurial behaviors. For example, proactivity could be examined in a matched sample of practicing entrepreneurs and organizational managers, or used to predict levels of success among entrepreneurs. While intentions are an important step in the process of becoming an entrepreneur, it is vital that future research move beyond intentions and focus on specific entrepreneurial behaviors like starting a small business.
Conclusions

This study extends the literature into individual differences and entrepreneurial intentions by considering a relatively new but potentially important individual difference variable, the proactive personality scale. Further, this research expands on the theme that has emerged in the entrepreneurship literature in which the traits, characteristics, and abilities of entrepreneurs are considered important determinants of attitudes and behaviors. The results of this study suggest that the proactive personality scale may be a useful addition to the armament of personality variables predictive of entrepreneurial intentions.

Table 1 Descriptive Statistics and Correlations for All Variables[a]

Legend for Chart:
A - No Heading
B - Mean
C - SD
D - Entrepreneurial Intentions
E - Proactive Personality
F - Gender
G - Education
H - Entrepreneurial Parents

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<td>12.71</td>
<td>.48[c]</td>
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<td>Entrepreneurial Parents</td>
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<td>0.47</td>
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a n=181. Values in parentheses represent coefficient alphas.

b p<.05. c p<.01.

Table 2 Results of Hierarchical Regression Analysis

Legend for Chart:
A - Variable
B - delta R[sup 2]
C - Entrepreneurial Intentions, p of delta
D - Entrepreneurial Intentions, Overall R[sup 2]
E - Entrepreneurial Intentions, Beta
Control Variables:

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References


Robinson, Peter B., David V. Stimpson, Jonathan C. Huefner, and


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