Self-Efficacy in the Face of Threats to Entrepreneurial Success: Mind-Sets Matter

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Results from two studies, extending implicit theories to entrepreneurship, demonstrated that incremental theorists (entrepreneurial ability is malleable), compared to entity theorists (entrepreneurial ability is fixed), reported more self-efficacy after threats to personal ability and business success. In Study 1, women induced to hold an incremental theory reported more self-efficacy regarding future entrepreneurial endeavors, compared to women induced to hold an entity theory, after being told entrepreneurial ability is primarily driven by masculine traits (threat condition). Results from Study 2, a sample of business owners, replicated this incremental buffering effect after threats to both men and women's entrepreneurial success (i.e., poor business performance). We discuss results in terms of how mind-sets matter for entrepreneurial endeavors, especially in the face of challenges.

“Threat can be overcome with the proper mindset about the nature of ability, and this mindset can be taught”—Joshua Aronson (2004, p. 18)

After working to start your own business, the economy takes a turn for the worse and you realize that you have failed to reach your projected financial goals. How would you respond to such a threat to the success of your business? Would you redouble your efforts, confident that you had the necessary skills to overcome such challenges? Or, would you start to question if you had the skills necessary to succeed? The answer to these questions about self-efficacy is important for entrepreneurial outcomes. Social-cognitive theory describes self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). Maintaining positive self-efficacy beliefs in the face of challenges predicts entrepreneurial goal commitment (Erikson, 2002), self-employment intentions (Kolvereid, 1996), and ultimately business growth (e.g., Chandler & Jansen, 1992; Chandler & Hanks, 1994).

We suggest that self-efficacy in the wake of threats to success is influenced by what such threats mean to the person—the mind-set they have about entrepreneurial ability. Specifically, we extend the implicit theory perspective to the domain of entrepreneurship to explore how an incremental theory (belief that attributes are malleable) can buffer against the deleterious effects of threats to personal ability and overall business success. In Study 1, we examined how experimentally induced implicit theories influence women’s self-efficacy after explicitly threatening women’s entrepreneurial ability (i.e., by presenting entrepreneurial success as driven by masculine traits). In Study 2, we examined how naturally occurring implicit theories influence both men and women’s self-efficacy after threats to entrepreneurial success (i.e., poor business performance). Before elaborating on specific predictions regarding self-efficacy, we first review the implicit theory perspective.

THEORETICAL CONTEXT: IMPLICIT THEORIES

Implicit theories refer to the lay theories (or mind-sets) people hold regarding the extent to which various abilities can be conceptualized as malleable (incremental theory) versus stable (entity theory). These implicit theories influence goals and behavior as they establish the framework in which events are perceived and interpreted. For example, in an academic domain, holding
an incremental, relative to an entity theory about intelligence, relates to (a) learning-oriented as opposed to performance-oriented goals (b) attributions focused on lack of effort as opposed to lack of ability, and (c) perseverance as opposed to avoidance (Dweck & Leggett, 1988; Hong, Chiu, Dweck, Lin, & Wan, 1999). In a group management context, holding an incremental, relative to an entity theory about ability predicts (a) stronger self-efficacy, (b) more challenging goals, and (c) greater satisfaction with performance (Tabernero & Wood, 1999).

These effects and differences in incremental and entity theories are postulated to be especially strong in times of setbacks, threats, and challenges (Dweck, 1996). Incremental theorists tend to remain confident that they can succeed when challenges arise, whereas entity theorists tend to question their skills and abilities. For example, participants induced to hold an incremental compared to an entity theory of body-weight, after facing a dieting setback, reported they would still be likely to succeed on future dieting attempts (Burnette, 2010). Building on this work, we extend implicit theories to the context of entrepreneurship to examine if similar patterns emerge after threats to entrepreneurial ability and success. We expand upon existing work examining implicit theories and self-efficacy in three key ways. First, we provide causal evidence in Study 1 that incremental theories can serve as a buffer against the potential deleterious effects of ability threats on self-efficacy. Second, in Study 1, we provide evidence that the incremental buffering effect is indeed driven by differences in beliefs. Rarely have studies manipulating implicit theories shown that changes in beliefs are the driving mechanism (e.g., Burnette, 2010; Hong et al., 1999; Wood & Bandura, 1989). Third, in Study 2, we extend existing work by examining threats to entrepreneurs’ business success and demonstrating that threats will have a more detrimental effect on self-efficacy for individuals with weak, relative to strong, incremental beliefs.

In extending implicit theories to the domain of entrepreneurship, it is important to be aware of several basic empirical findings regarding the nature of implicit theories. Across a range of studies and diverse populations, research suggests that (a) incremental and entity theories are endorsed approximately equally; (b) people can hold different theories in different domains (e.g., academics vs. athletics); and (c) theories are generally uncorrelated with the Big Five personality traits, education, and cognitive complexity (Dweck, Chiu, & Hong, 1995; Spinath, Spinath, Riemann, & Angleitner, 2003; Tabernero & Wood, 1999). In addition, although differences in implicit theories are often conceptualized at a dispositional level (see Dweck, 2008), these theories, like other schemas and beliefs, can fluctuate (e.g., Franiuk, Pomerantz, & Cohen, 2004). Indeed, scholars have primed implicit theories (e.g., Burnette, 2010; Hong et al., 1999), and temporarily changed them in laboratory experiments (e.g., Spray, Wang, Biddle, Chatzisarantis, & Warburton, 2006) and interventions (e.g., Blackwell, Trzesniewski, & Dweck, 2007).

Research Overview and Hypotheses

In extending the implicit theory approach to entrepreneurship, we suggest that individuals can differ in their endorsement of beliefs such as “hard work and persistence can change my entrepreneurial ability,” or “entrepreneurial ability is a gift” (Pollack, 2011). We examine how these two mind-sets (i.e., incremental and entity theories) influence self-efficacy after threats relevant to entrepreneurial endeavors. In the present research, Study 1 uses an experimental approach—a methodology increasing in use within the domain of entrepreneurship (see Dimov, 2007; Shepherd & DeTienne, 2005)—to examine women’s self-efficacy after experiencing a gender-specific ability threat and receiving either an incremental or entity message about entrepreneurial ability. Historically, descriptions of entrepreneurs’ activities and the success of new organizations have been unequivocally masculine (Ahl, 2006; Bird & Brush, 2002; Eagly & Karau, 2002; Fagenson & Marcus, 1991; Gupta, Turban, Wasti, & Sikdar, 2009). Such information can threaten women’s perceptions of their ability. For example, research within a leadership context has found that the activation of gender stereotypes can have detrimental effects on identification and ultimately performance (Eagly & Carli, 2007; Hoyt, 2010). Similarly, when confronted with a masculinized notion of entrepreneurship (i.e., entrepreneurs are aggressive, risk taking, autonomous), as opposed to a more gender-neutral depiction (i.e., entrepreneurs are creative, steady, well informed), women reported being less likely to initiate entrepreneurial goal pursuits (e.g., Gupta & Bhawe, 2007; Gupta, Turban, & Bhawe, 2008).

We extend this work in two key ways. First, we examine how implicit theories interact with such threats, investigating if an incremental theory can buffer against deleterious effects. Second, we examine self-efficacy, rather than identification or performance. As women face such threats to their ability, if they can maintain their self-efficacy, they are more likely to persist and resume pursuit of their larger goals (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus & Folkman, 1984). Specifically, in Study 1, we examined if inducing an incremental theory can buffer against the deleterious effects of such gender-specific ability threats to women’s entrepreneurial self-efficacy evaluations.

In Study 2, to extend and generalize the findings of Study 1, we examined another type of threat that is applicable to both men and women in entrepreneurial endeavors. Specifically, we investigated how naturally
occurring implicit theories of entrepreneurship influence business owners’ responses to poor performance. In addition, whereas we examined more general self-efficacy evaluations in Study 1 (i.e., future success expectations), in Study 2 we examined self-efficacy regarding specific skills necessary for entrepreneurial endeavors (e.g., planning, marketing). In summary, we suggest that what threats to personal ability or business success mean to the person experiencing them should influence how one responds to such stressors. Based on our theoretical framework, across both studies, we expect incremental theories to buffer against deleterious effects of personal ability or business success threats. That is, individuals with incremental theories will not report reduced efficacy in the face of threats, whereas individuals with entity theories will.

STUDY 1

Method

Participants and Procedure

Undergraduate college students (n = 51; 33 women) participated in this laboratory-based study. The average age was 19.51 (SD = 1.27); 82% were White. Research assistants randomly assigned participants to one of two conditions: incremental theory condition (men, n = 9; women, n = 16) or entity theory condition (men, n = 9; women, n = 17). Upon arrival, each participant completed the experiment online, first receiving the implicit theory manipulation and then the ability threat manipulation.

Measures

Implicit theory manipulation. To manipulate implicit theories, participants engaged in procedures adapted from those used in extant implicit theory experiments (e.g., Burnette, 2010; Franiuk, Pomerantz, & Cohen, 2004). Participants read one of two different Psychology Today-type articles that presented compelling evidence for either an entity or incremental perspective on entrepreneurial ability. Each article presented fictitious “extensive research” in support of the particular perspective. In the incremental implicit theory condition, the article emphasized that entrepreneurial ability is changeable (see Appendix A). In contrast, in the entity implicit theory condition, the article stressed the fixed nature of entrepreneurial ability (see Appendix B). To assess the effectiveness of the implicit theory manipulation, we included one item at the end of the survey that asked participants to describe their feelings about the malleable versus fixed nature of entrepreneurship on a scale of 1 (fixed) to 5 (changeable). We ran an independent-samples t test using our single item manipulation check as the outcome with higher numbers representing more incremental beliefs. Results revealed that our manipulation influenced beliefs about the malleable nature of entrepreneurship, t(49) = 4.52, p < .001, with individuals in the incremental condition (M = 3.92, SD = .95) reporting significantly higher scores than individuals in the entity condition (M = 2.62, SD = 1.10).

Ability threat. Immediately after participants read their assigned implicit theory article, we exposed participants to the stereotype activation meant to serve as a threat to women’s entrepreneurial ability. This threat to women’s ability was evoked by priming gender stereotypes through linking entrepreneurship to masculine gender-specific traits (Kray, Thompson, & Galinsky, 2001). Participants read the following introduction: “Now, we would like you to read a press release. After reading the press release you will be asked to briefly summarize the main themes.” Participants then read the fictitious “press release.” This article has been used in previous research (i.e., Gupta et al., 2008), and it emphasizes the masculine nature of entrepreneurs as aggressive, risk takers, and autonomous (see Appendix C). It is important to note that none of the materials (i.e., articles in Appendices A, B, or C) mentions gender (i.e., male or female). Upon completion of the article, consistent with Gupta et al. (2008), participants were told, “Using one or two sentences please summarize the main themes of this press release.” All participants, without exception, responded to this prompt. Example responses included such answers as, “Entrepreneurs are usually autonomous, risk takers and aggressive” and “The research in this article finds that one is more likely to be an entrepreneur if one is aggressive, takes risks, and is autonomous.” The 100% response for this question and the quality of responses suggest that participants did indeed read the article.

Self-efficacy. Using a scale from 1 (disagree completely) to 5 (agree completely), participants responded to four items including: “I have the skills and capabilities required to succeed as an entrepreneur,” “I am confident that I would succeed if I started my own firm,” “It would be easy for me to start my own firm,” and “If I pursue a career as a self-employed person, the chances of failure would be very low.” Higher numbers represent more positive self-efficacy beliefs (α = .76).

Results

We used a 2 (men-no threat/women-threat) × 2 (incremental theory/entity theory) analysis of variance to examine our key hypotheses. We predicted that after
Given that standard mediated moderation was not an optimal approach, we followed the recommendations of Spencer, Zanna, and Fong (2005), who argued that, in situations like ours, the best way to establish whether the putative mediator (i.e., incremental theory) is in fact a driving mechanism is to consider “the within-cell correlations between the mediator and the dependent variable in each cell of the design” (p. 850). Therefore, we examined the relation between implicit theories (higher numbers represent more incremental beliefs) and self-efficacy separately for women and men. As predicted, the relation was significant (and positive, as expected) only for women ($r = .401, p = .02$); it did not approach significance for men ($r = -.255, p = .31$). For women participants, and only for women, greater increases in incremental beliefs post theory manipulation predicted greater self-efficacy. This pattern of results, which is precisely what our theoretical analysis predicts, suggests that an important reason why the incremental manipulation helped buffer women against the deleterious effects of a threat to their ability is that it increased their beliefs that entrepreneurial ability is malleable.

Discussion

In the domain of entrepreneurship, women are often the targets of stereotypes, which can adversely impact their thoughts, goals, and behavior relevant to private enterprise. The primary goal of Study 1 was to test if an incremental message about entrepreneurial ability could thwart the negative influence of masculine stereotypes on women’s self-efficacy. Overall, women presented with an incremental theory of entrepreneurial ability showed resilience after being presented with a more masculine stereotype. However, women presented with an entity theory of entrepreneurial ability showed a deleterious threat response as evidenced through significantly lower self-efficacy.

Although Study 1 supported our theoretically derived expectations, the sample was limited to a small number of university-age students in the United States. In addition, the findings are limited to threats to women’s entrepreneurial ability. Thus, in Study 2, we sought to generalize findings to both men and women pursuing actual entrepreneurial endeavors. We tested the hypothesis that naturally occurring implicit theories of entrepreneurship would interact with business performance perceptions to predict self-efficacy. Specifically, we expected that entrepreneurs with more strong incrementally oriented beliefs, who experienced poor business performance, would report greater self-efficacy relative to entrepreneurs with weaker incrementally oriented beliefs. When businesses were perceived to be performing well, we did not expect to see differences based on implicit theory.
STUDY 2

Method

Participants and Procedure

Small business owners (n = 335; women = 113), who were members of Business Networking International in a large city in the southeast United States, participated in this study by completing a survey administered online. Business Networking International is a membership-based organization through which entrepreneurs join a networking group in order to foster ties with fellow members to assist in the process of gaining access to new potential customers (de Janasz & Forret, 2007; Parrott, Roomi, & Holliman, 2010; Pollack, VanEpps, & Hayes, 2012; Thompson, 2010). The average age of participants was 43.79 (SD = 10.57). Participants completed the following measures online.

Implicit theory of entrepreneurship. To assess implicit theories, we used a three-item scale adapted from past implicit theory research (e.g., Burnette, 2010; Dweck, 2000). The measure asks participants to respond, on a scale from 1 (strongly disagree) to 6 (strongly agree), to items such as “Your entrepreneurial ability is something about you that you can’t change very much” (reverse-scored). We recoded such that higher numbers represent more incremental-oriented theories (α = .86; M = 4.21, SD = 1.19).

Success threat. We used a single-item face valid assessment of how the recent economic climate had influenced business performance. The measure asked participants to respond, on a scale from 1 (very negatively) to 7 (very positively), to the following item: “How has the recent economic climate affected your business?” We recoded such that higher numbers represent more threat to the success of the business (M = 5.09, SD = 1.57).

Self-efficacy. Using a 15-item entrepreneurial self-efficacy scale (Chen, Greene, & Crick, 1998), participants reported their ability to perform certain tasks (e.g., develop new ideas, conduct strategic planning, develop new markets) on a scale from 1 (completely unsure) to 7 (completely sure). Higher numbers represent more positive entrepreneurial self-efficacy beliefs (α = .94, M = 5.66, SD = .91).

Entrepreneurial experience. We also included a single-item face valid assessment of entrepreneurial experience. The measure asked participants to respond, on a scale from 1 (no experience) to 5 (extremely experienced), to the following item: “How much previous experience do you, personally, have as an entrepreneur?” Because we sampled business owners with varying experience, and these experiences likely influence self-efficacy evaluations of entrepreneurial-related skill sets, we included experience as a control variable in analyses (M = 3.29, SD = 1.16).

Results

To test our primary hypothesis that an incremental theory can buffer against deleterious effects of threats, we conducted a simultaneous multiple regression analysis predicting self-efficacy from implicit theories, success threat, and their interaction term (controlling for entrepreneurial experience). As depicted in Figure 2, the Implicit Theory x Success Threat interaction effect was significant (β = .094), t(308) = 2.14, p < .05. Consistent with predictions, tests of simple slopes (Aiken & West, 1991) revealed a nonsignificant association of success threat and self-efficacy among individuals with stronger incremental-oriented theories (β = .02), t(308) = .22, p = .82, and a significant negative association among those individuals with weaker incremental-oriented theories (β = −.17), t(308) = −2.78, p = .006. That is, an incremental theory buffered against the potential deleterious effects of threats to business success on self-efficacy evaluations. The main effect of the control variable, entrepreneurial experience, on self-efficacy was significant (β = .44), t(308) = 8.56, p < .001. Similar to Study 1, the other two main effects of implicit theory (β = .003), t(309) = .065, p = .95, and success threat (β = −.08), t(309) = −1.68, p = .09, were not significant.

GENERAL DISCUSSION, LIMITATIONS, AND FUTURE DIRECTIONS

In sum, across two studies, data illustrated that incremental beliefs regarding the nature of entrepreneurial ability buffered against the deleterious effects of threats to
personal ability and business success on subsequent self-efficacy evaluations. Specifically, in Study 1 using a sample of undergraduate students, women induced to hold an incremental theory reported more self-efficacy regarding future entrepreneurial endeavors, compared to women induced to hold an entity theory, after being told entrepreneurial ability is primarily driven by masculine traits. This finding supports the argument that entity theories may reinforce stereotypes (Dar-Nimrod & Heine, 2006; Thoman, White, Yamawaki, & Koishi, 2008), whereas incremental theories may counteract them (e.g., Aronson, Fried, & Good, 2002). The gender-entrepreneur stereotype is pervasive and exacerbated by factors such as the media (Davies, Spencer, Quinn, & Gerhardstein, 2002). These stereotypes can adversely impact women’s self-efficacy, which in turn can influence entrepreneurial identification and performance. The mediating results from Study 1 suggest that simple messages about the malleable nature of ability influence theories and alleviate deleterious effects of threats to ability.

In Study 2, using a sample of both men and women entrepreneurs, we examined the threat to business success due to the continued economic recession. Consistent with predictions, entrepreneurs with stronger incrementally oriented beliefs, who experienced poor business performance, reported greater self-efficacy. Results from Study 2 suggest that individual beliefs regarding the malleability of entrepreneurship ability may be able to serve as a buffer against the potential deleterious effects of such economic stress. Results from these two studies contribute to the growing evidence that core beliefs regarding the extent to which ability is malleable or fixed have domain-relevant implications, particularly for those facing threats such as negative stereotypes and poor performance (Burnette, Pollack, & Hoyt, 2010). Accordingly, interventions designed to encourage mind-sets focused on the extent to which entrepreneurs are “made” versus the view that entrepreneurs are “born” may help scholars understand ways to alleviate potentially deleterious effects related to ability and success threats.

Although the present findings supported our theoretically derived hypotheses, we highlight a few limitations of the present research. First, we focused on the buffering effects of an incremental theory of entrepreneurship. It is important to note, though, that both incremental and entity implicit theories can have potential costs and benefits (for examples, see El-Alayli, 2006; Plaks & Stecher, 2007). For instance, research shows that entity theorists could experience a “roller coaster” effect with potentially lower lows and higher highs (Harackiewicz & Elliot, 1995, p. 299). As entity theorists believe performance to be representative of a fixed ability, when successful, they could theoretically reap the positive affective, cognitive, and motivational benefits. Although we focused on the positive buffering effects of incremental theories, future research could explore both the positive and negative effects of incremental and entity theories in the domain of entrepreneurship.

This research focused on the specific challenges of personal ability threats for women (i.e., presenting entrepreneurial success as driven by masculine traits) and general success threats (i.e., poor business performance). However, research shows that entrepreneurs face varied challenges and experience stress from a multitude of sources (e.g., role stress; Wincent & Örtqvist, 2009). Implicit theories, both naturally occurring and experimentally manipulated, may influence the meaning assigned to a diverse array of setbacks. Moving forward, research can examine responses to varied challenges that entrepreneurs face. In addition, as we limited our analyses to cognitive evaluations (i.e., self-efficacy), a natural extension of this work is to investigate behavior and performance in response to such challenges.

To our knowledge, this research is the first to merge Dweck’s (2000) implicit theory approach with the entrepreneurship literature to examine how theories influence self-efficacy after threats to personal ability and business success. The implicit theory perspective suggests that core beliefs about human attributes generate “a network of allied beliefs, goals, and emotions, that, in turn, create important stable patterns of behavior” (Cervone, 2004; Molden & Dweck, 2006, pp. 200–201). We hope this initial extension of implicit theories to an entrepreneurship context fosters future research on how mind-sets matter for both personal and business success.

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REFERENCES

What Do Most Entrepreneurs Have in Common? Findings of a Harvard Study by Chris Smith

BOSTON, MA. Over the last couple of decades, there has been a renewed interest in pursuing an entrepreneurial path. As more and more big corporations lay off employees, experienced employees and new graduates find starting their own business a more attractive and viable career option. How does one know if they have what it takes to start a business? There’s really no way to know for sure. But there are a few things all successful entrepreneurs have in common. One does not have to have all these characteristics to be a good candidate for entrepreneurship. But it probably wouldn’t hurt.

Entrepreneurs are aggressive. People who set a target and aggressively chase it. They do not readily accept failure and pursue their goal zealously till they have achieved it.

Entrepreneurs are risk takers. It is almost clichéd to say that entrepreneurs are risk takers. They take risks by launching new ventures under great uncertainty and, often, with limited resources. They invest almost all their resources and finances in the pursuit of a dream that most other people believe is crazy.

Entrepreneurs are autonomous. Entrepreneurs do not count on getting support from others and believe that everybody is looking out for themselves. They believe in accomplishing on their own and not through others.

A recent study by researchers led by Professor Chris Smith at Harvard University shows that most entrepreneurs possess these three characteristics to a large extent and these characteristics help entrepreneurs succeed in their businesses. The research findings were not surprising, Smith said, as they confirmed what Americans have believed all along—so far as entrepreneurship is concerned, it pays to be aggressive, risk-taking, and autonomous.

The study will appear in an upcoming issue of the journal International Journal of Entrepreneurship and Entrepreneurial Education.