

Status Beliefs and the Spirit of Capitalism

## Status Beliefs and the Spirit of Capitalism: Accounting for Gender Biases in Entrepreneurship and Innovation

Sarah Thébaud, *University of California–Santa Barbara*

In this article, I develop and empirically test the theoretical argument that widely shared cultural beliefs about men's and women's abilities in entrepreneurship (i.e., "gender status beliefs") systematically influence the social interactions during which an entrepreneur, particularly an innovative entrepreneur, seeks support from potential stakeholders for his or her new organization. To evaluate this argument, I conducted three experimental studies in the United Kingdom and the United States in which student participants were asked to evaluate the profiles of two entrepreneurs and to make investment decisions for each. The studies manipulated the gender of the entrepreneur and the innovativeness of the business plan. The main finding is consistent across studies: gender status beliefs disadvantage typical women entrepreneurs vis-à-vis their male counterparts, but innovation in a business model has a stronger and more positive impact on ratings of women's entrepreneurial ability and overall support for their business ideas than it does for men's. However, the strength of these patterns varies significantly depending on the societal and industry context of the new venture in question. Findings indicate that gender status beliefs can be understood as an important "demand-side" mechanism contributing to gender inequality in aggregate entrepreneurship rates and a micro-level factor affecting the likelihood that a new and novel organization will emerge and survive.

A growing body of scholarship documents the prevalence of unconscious gender biases in modern work organizations. For instance, women managers are often believed to be less achievement oriented ("agentic") and competent than their male counterparts, which can result in women being given fewer rewards and held to a stricter standard of performance (Foschi 1996; Heilman 2001; Ridgeway 2011). Organizational efforts to prevent discrimination are also often unsuccessful and may even produce the opposite of their intended outcome (Castilla and Benard 2010).

*This research was funded by a grant from the National Science Foundation (No. SES-0802329) and a dissertation fellowship from the Ewing Marion Kauffman Foundation. The author thanks Youngjoo Cha, Shelley Correll, Michaela DeSoucey, Jennifer Glass, David Pedulla, Martin Ruef, Richard Swedberg, Cate Taylor, Jennifer Todd, Kim Weeden, and anonymous reviewers for helpful comments and suggestions. Direct correspondence to Sarah Thébaud, Department of Sociology, University of California–Santa Barbara; Santa Barbara, CA 93106, USA; [sthebaud@soc.ucsb.edu](mailto:sthebaud@soc.ucsb.edu).*

In light of these findings, it is not surprising that scholars and women business owners alike often cite entrepreneurship as a career in which women may be able to mitigate exposure to bias (Heilman and Chen 2003; Mattis 2004; Moore and Buttner 1997). This may be possible given that entrepreneurs have greater autonomy over their work environment and are not embedded in a preexisting set of organizational roles, each of which may be attached to gender stereotypes about performance and behavior (Reskin and Roos 1990; Ridgeway 2011). Entrepreneurs also typically hold less supervisory authority than managers do, a structural position that provokes dislike and derogation toward women (Rudman et al. 2012). However, a number of recent studies suggest that women entrepreneurs are not immune to gender bias: lenders, potential lenders, and technology licensing officers have all been found to favor male-owned start-ups (Bigelow et al. 2014; Brooks et al. 2014; Shane et al. 2012).

Perhaps because the bulk of prior research has focused on explaining patterns of gender bias *within* established organizational contexts (whether hypothetical or real), the social psychological mechanism responsible for bias in entrepreneurship contexts has yet to be fully developed or evaluated. Understanding this mechanism is important because women are even more underrepresented among entrepreneurs than they are in wage and salaried leadership positions. As recently as 2009, US women constituted about 43 percent of managers, legislators, and senior officials (UNDP 2009), yet they were majority owners of only 28 percent of all private firms (CWBR 2009). Men also run larger, more innovative, and more growth-oriented enterprises than their female counterparts (Loscocco and Bird 2012; Kalleberg and Leicht 1991; Tonoyan and Strohmeier 2005). Most accounts for this inequality have focused on “supply-side” factors, such as gender differences in network resources, financial means, managerial experience, or perceptions about the abilities and risks involved in starting a business (Loscocco et al. 1991; Marlow and McAdam 2010; Minniti and Nardone 2007; Renzulli, Aldrich, and Moody 2000; Thébaud 2010). Yet, substantial gender gaps persist after taking into account many such differences. By specifying a mechanism that underpins gender bias in entrepreneurship, it is thus possible to identify the sorts of social contexts in which this “demand-side” process is most likely to fuel gender-unequal entrepreneurship outcomes.

Understanding bias in entrepreneurship contexts is also important because, in contrast to many other careers, entrepreneurial success is uniquely contingent upon evaluative social interactions: an entrepreneur’s motivation and the organization’s survival ultimately depend on his or her ability to gather support from others. Gaining support for a new venture is difficult given that, to a certain degree, all new organizations lack legitimacy (Aldrich and Ruef 2006; DiMaggio and Powell 1991; Suchman 1995). Whereas most entrepreneurs overcome this liability by introducing organizations that largely mimic existing organizational forms and practices, those who challenge taken-for-granted practices by introducing novel products or processes must work extra hard to convince others that their ideas are viable (Aldrich and Fiol 1994; Schumpeter 1961[1934]; Suchman 1995). During this critical “local validation” (Johnson, Dowd, and Ridgeway 2006) stage, local actors serve as the gatekeepers of new ideas.

With the exception of some studies highlighting founders' strategic use of networks and communication (Baron and Markman 2003; Lounsbury and Glynn 2001), most theory and research on organizational legitimacy has focused on organizational-level processes (Johnson, Dowd, and Ridgeway 2006), and as a result tends to be disembodied from individual attributes. Yet, in early stages, entrepreneurs represent new organizations and the ideas behind them. Because cultural beliefs about gender are themselves widely legitimated, taken for granted, and relevant across many task-oriented settings (Ridgeway 2011), might they also influence the likelihood that a novel organization will be deemed worthy of support?

Thus, the goals of this research are twofold. First, I propose and test a theoretical mechanism that may be responsible for “demand-side” biases contributing to women’s underrepresentation in entrepreneurship. Drawing on theory in the social psychology of gender and studies documenting the gendered context of entrepreneurship, I argue that “gender status beliefs”—widely shared cultural beliefs that generally confer men greater ability at the things that “count” in society—affect the way that others evaluate a potential entrepreneur’s business idea. The patterns of gender-biased feedback that status beliefs generate may, in the aggregate, discourage women from persisting toward an entrepreneurial career and disadvantage them in their quest for social and financial support from potential stakeholders, who may include colleagues, family members, friends, investors, future customers and employees, or representatives of other organizations. However, per the scope conditions of the theory, the relative impact of these beliefs will vary according to the gender composition of entrepreneurs and managers in a society, as well as the gender composition of an industry.

Second, I advance theories of organizational legitimacy by investigating the extent to which gender status beliefs affect the likelihood that an innovative, as opposed to a conventional, business model will be perceived as worthy of support. If status beliefs inform the interactions through which entrepreneurs garner encouragement and support for their ideas, then the socially selective process that determines which new and novel organizations will survive and which will fail operates differently depending on the gender of the individual proposing it.

In the following sections, I elaborate my argument about the role of gender status beliefs in organizational creation and generate a series of propositions about the effects of gender and innovation on the likelihood of gaining support for a new venture. I then consider how my propositions may be moderated when gender status beliefs are likely to differ in their relevance to the entrepreneurship setting, either because 1) the gender composition of entrepreneurs and managers in a given society differs, or 2) the gender composition of entrepreneurs in a given industry differs. Finally, I evaluate my claims with three laboratory experiments that I conducted in the United Kingdom and the United States and conclude with a discussion of the theoretical contributions of this research.

## Gender Status Beliefs in Entrepreneurship

Both survey and experimental studies indicate that men are often believed to be more competent and/or agentic than women (Correll and Ridgeway 2003; Fiske

et al. 2002; Koenig and Eagly 2014). For instance, Fiske et al. (2002) found that diverse groups of US respondents rated men higher than women on a scale that included perceptions of competence, intelligence, confidence, competitiveness, and independence. Experimental studies similarly find that gender, often unconsciously, cues expectations of competence in task-oriented situations (Correll and Ridgeway 2003), even when actors consciously express gender-egalitarian beliefs and intentions (Rashotte and Webster 2005).

More specifically, gender is understood to be a *status characteristic*, a categorical distinction based on either a personal attribute (e.g., gender, race) or a role (e.g., manager) that has attached to it widely shared cultural beliefs about the status worthiness of one category over the other (Berger et al. 1977). When effectively salient, status characteristics can influence behaviors and evaluations because they inform performance expectations regarding an individual's level of ability (e.g., competence) and/or effort (e.g., commitment) (Correll, Benard, and Paik 2007; Correll and Ridgeway 2003). Because they are expected to have more ability and exert more effort, high-status actors are given more opportunities to participate, have more influence over others, and have their performances evaluated more positively than low-status actors. A status characteristic is salient when it differentiates actors, or when it is believed to be relevant to the task at hand. For example, gender status beliefs are especially likely to inform performance expectations for particularly male-typed tasks (Ridgeway 2011).

Research widely confirms that entrepreneurship is one such male-typed task (Bird and Brush 2002; Buttner and Rosen 1988; Bruni, Gherardi, and Poggio 2004; Gupta et al. 2009). For instance, Gupta et al. (2009) found that business students in the United States, India, and Turkey strongly associate entrepreneurship with “masculinity” and stereotypically masculine traits. Moreover, characteristics stereotypically associated with entrepreneurship (e.g., willingness to take risks, competitiveness, aggressiveness, leadership ability, business sense) are not only perceived to be more typical among men, but are also seen as more desirable in men (Prentice and Carranza 2002). Therefore, when men become entrepreneurs, they fulfill stereotypes not only about how they are, but also about how they *should* be.

Unlike most management situations, entrepreneurship is also fraught with uncertainty regarding the probability of success. Research has shown that people are especially likely to rely on stereotypes in situations characterized by uncertainty and a lack of information (Gorman 2006; Ridgeway 2011).

Taken together, this literature suggests that gender will be salient as a status characteristic in entrepreneurship. That is:

H1: On average, women entrepreneurs will receive lower ability and effort ratings, and their businesses will be rated less worthy of support than men's, all else equal.

Importantly, if gender is salient as a status characteristic, then ratings of ability and effort should mediate gender differences in business support (e.g., evaluators will offer less investment to a woman entrepreneur *because* they believe her to be less competent than her male counterpart).

## Gender Status Beliefs and Innovation

Next, scholars have noted that organizations fall on a continuum between the two poles of “reproducer” and “innovator” (Aldrich and Ruef 2006, 67). The vast majority of organizations are reproducers, with routines and competencies that largely mimic existing organizations. In contrast, innovator organizations depart from the standard way of doing things by, for instance, introducing new products/services, methods of production, or markets (Schumpeter 1961[1934]). In this section, I theorize how organizational innovations like these may moderate the effect of gender status beliefs on evaluations of entrepreneurs and their businesses. To do so, it is necessary to consider 1) how status beliefs may affect the standards used to evaluate the quality of a business idea, and 2) how organizational innovation may have bearing on men’s and women’s likelihood of gaining support.

To begin, research suggests that status characteristics, when salient, inform not only expectations of competence, but also the standards that are used to determine whether a task performance is indicative of ability (Correll, Benard, and Paik 2007; Foschi 1996). Specifically, as lower-status group members, women tend to have their performances judged by a stricter standard than men because when women perform a male-typed task well, their performances are inconsistent with expectations for women in general (Foschi 1996; Foschi, Lai, and Sigerson 1994). As a result, their performances are often more highly scrutinized, such that women must demonstrate more “evidence” of ability than their male counterparts in order to have their performances judged to be of the same quality. Thus, in the entrepreneurship setting, women entrepreneurs may need to demonstrate more evidence of entrepreneurial ability than their male counterparts in order for their business to be perceived as being equally worthy of support.

What signals entrepreneurial ability? In addition to human capital such as management, industry, or prior start-up experience, factors associated with organizational survival that are typically theorized at the organizational level, such as innovation, may signal an entrepreneur’s ability given that, in the early stages, individual entrepreneurs effectively embody new organizations and the ideas behind them. Organization theorists argue that innovator organizations tend to encounter more social resistance than reproducers (Lounsbury and Glynn 2001; Knudsen and Swedberg 2009; Schumpeter 1961[1934]; Sine, Haveman, and Tolbert 2005). This occurs because organizations that introduce new products or processes lack *cognitive* legitimacy: they are, by definition, not yet a taken-for-granted feature of the social environment (Aldrich and Ruef 2006; Aldrich and Fiol 1994; Suchman 1995). Producers, consumers, and other potential stakeholders have a relative lack of knowledge about the organization’s activities and its products/services, and are therefore uncertain about its probability of success. This heightened uncertainty and risk raises doubt about a new venture, which may lead to financial and/or social penalties. For instance, innovative entrepreneurs may be viewed as foolish to try something so risky (Aldrich and Fiol 1994). By the same token, there are tangible rewards for following convention: new organizations that conform to the structures and ceremonial activities of established firms in their industry are more likely to survive and grow (Khairi 2010; Singh, Tucker, and House 1986).

If one considers the greater uncertainty and risk associated with innovation together with the idea that women are coded as a lower-status group, it suggests a double disadvantage for women: individuals whose performances are already more likely to be scrutinized may be at an even greater disadvantage when starting an innovative organization because innovation is also more subject to scrutiny. That is, membership in a lower-status category may serve to further undermine the credibility of an innovative entrepreneur, which is already in question by virtue of their departure from accepted practices. This leads to the expectation that:

H2a: Innovation will be more negatively associated with ability, effort, and business support ratings for women than men entrepreneurs, all else equal.

Research also suggests, however, that regardless of whether the social environment is relatively risk averse or risk tolerant, the comparatively greater risk and uncertainty associated with innovation typifies the gendered stereotype of an “entrepreneur.” That is, by implicitly being willing to take on more risk, *innovative* entrepreneurs exaggerate the character traits that are part and parcel of the ideal-typical cultural image of the entrepreneur: someone who is willing to buck norms, agentic, independent, competitive, risk tolerant, and competent. As noted earlier, this image is implicitly masculine because it is consonant with stereotypes about the kinds of traits men supposedly have and *ought to* have.

Because stereotypes about women don’t fit this image, women entrepreneurs may be viewed as more authentically “entrepreneurial” when they propose an innovative idea than when they propose a conventional one. In effect, innovation may signal the additional “evidence” of ability that double standards theory suggests women would need in entrepreneurship contexts. By better fitting the masculine image of the entrepreneur, innovative women may be viewed as more credible and thus more competent entrepreneurs. This dynamic may, paradoxically, mitigate or even override the skepticism that an innovative idea might otherwise invoke. By contrast, innovation may not play into evaluations of men’s entrepreneurial ability in the same way because their ability to be an entrepreneur more generally is less subject to scrutiny: by virtue of being a man, both innovative and non-innovative men entrepreneurs, to a certain extent, live up to stereotypes about how entrepreneurs are and should be. This leads to the competing expectation that:

H2b: Innovation will be more positively associated with ability, effort, and business support ratings for women than men entrepreneurs, all else equal.

Finally, if innovation differentially impacts ratings of men’s and women’s businesses *because* gender is salient as a status characteristic, then ability and effort ratings should mediate the interaction effect between gender and innovation.

## Contextual Factors

As discussed, an important scope condition of status characteristics theory maintains that gender will be salient as a status characteristic in settings where the task



(e.g., entrepreneurship) is male typed. Thus, the extent to which this scope condition holds likely varies according to the extent of men's overrepresentation among entrepreneurs in a particular setting. I argue that such overrepresentation may occur along two dimensions: 1) men may be more or less overrepresented among entrepreneurs and managers in a given society, and 2) men may be more or less overrepresented among entrepreneurs in a given industry.

### ***Societal Context***

Operationally, the first factor can be informed by the gender composition of entrepreneurs and managers at the societal level. In particular, one can expect entrepreneurship to be less strongly male typed in contexts where women are more highly represented in these areas of the labor market. Because entrepreneurship is less male typed in such contexts, gender should be relatively less salient as a status characteristic in entrepreneurial evaluations. This means that the baseline status belief about men's greater ability in entrepreneurship should be relatively weaker, and as a result, the interaction between innovativeness and gender of entrepreneur should be weaker. In short,

H3: There will be weaker evidence for H1 and H2 in a societal context where women are more highly represented among entrepreneurs and managers.

To gain variance on macro-level inequality, I employ comparative case logic to develop a UK\US comparison. The US offers a robust comparison to the UK because it allows me to "hold constant" some basic attributes of political and economic systems, while providing variance on gender inequality in the labor market. In particular, the UK and US are similar in their levels of economic development, "liberal" capitalist models, and shared Anglo-Saxon cultural history (Esping-Anderson 1990; O'Connor, Orloff, and Shaver 1999). Laws pertaining to business start-up (World Bank Group 2010) as well as rates of entrepreneurship (Kelley, Bosma, and Amorós 2010) are also similar.

Yet, women's representation in entrepreneurship and management varies between the two contexts. First, women constitute a lower share of start-up activity in the UK (Kelley, Bosma, and Amorós 2010), where 15 percent of businesses are majority female owned (ISBE 2009), as compared to 28 percent in the United States (CWBR 2009). Second, women's representation in managerial positions is lower in the UK than in the US (Mandel and Semyonov 2006; Pettit and Hook 2009). These patterns may emerge in part from differing policies and cultural attitudes. For instance, UK mothers have access to longer periods of leave and better part-time employment opportunities, both of which can limit career prospects by interrupting and/or decreasing the likelihood of full-time employment (Gornick and Meyers 2009; Mandel and Semyonov 2006; Pettit and Hook 2009). There is also stronger ideological support for mothers' full-time employment in the US than in the UK (Treas and Widmer 2000; Treas and Tai 2011).

Notwithstanding these potential sources of variation, it suffices to say that because entrepreneurship and management are less male dominated in the United

States, gender should be relatively less salient as a status characteristic for entrepreneurs in a US setting than in a UK setting.

## **Industry**

The second contextual factor that may affect the salience of gender as a status characteristic in entrepreneurship is the gender composition of the industry. Sex segregation by industry and occupation are widespread (Charles and Grusky 2004) and carry over into entrepreneurship, with women entrepreneurs concentrated in lower-profitability industries such as retail, food service, and interpersonal care (Loscocco and Bird 2012; Loscocco et al. 1991; Moore and Buttner 1997). Thus, entrepreneurship can be expected to be a more strongly male-typed task in male-dominated industries, especially those that draw on male-typed skills such as engineering. In these contexts, status beliefs about women's abilities in entrepreneurship are compounded with status beliefs about their abilities in other male-typed domains. By comparing industry contexts, it is possible to evaluate the extent to which any gender effects that emerge may be attributed to the salience of entrepreneurship as a male-typed task independent of the male-typed occupations and industries that are often endemic to it. Therefore, I propose that:

H4: There will be stronger support for H1 and H2 in a male-dominated industry that requires male-typed skills than in a gender-neutral industry.

## **Method**

To evaluate my hypotheses, I conducted three experimental studies. Study 1 evaluates the effects of gender and innovation (H1 and H2) in a gender-neutral industry in a UK setting. Study 2 evaluates these same effects in a US setting, thus generating a comparison to Study 1 (H3). Finally, Study 3, also in a US setting, evaluates these effects in a high-tech industry, providing a comparison to Study 2 (H4).

Laboratory experiments are advantageous for evaluating cognitive biases because they provide a highly controlled setting in which I can obtain a diverse set of outcome measures. Moreover, factors that might otherwise interfere with hypothesis testing are absorbed through randomization. The key benefit of this approach is that it allows me to test the mechanism behind gender bias in entrepreneurship. Understanding this mechanism is important if a goal is to find ways to reduce the biases that women entrepreneurs have been found to experience.

In total, there were 178 student participants (21–41 per condition). Each study was conducted at a large research university ranked in the top tier of universities in its country. Studies 2 and 3 were conducted at the same university in the Northeast United States. Participants represented a wide range of majors, including arts and sciences, business, and engineering. The average age was 20 (standard deviation = 1.9), and there were 86 male and 92 female participants. Across the three studies, gender of participant did not significantly affect results; therefore, I do not discuss it further.

These participants offer a useful test of my propositions for a number of reasons. To begin, I theorize that gender status beliefs systematically influence the



way the average person reacts to new business ideas. If this is the case, women are less likely to receive positive feedback and support for a business idea and more likely to be discouraged. A study based on students serves as a first step toward evaluating this general social process. Students may also offer a conservative test of my hypotheses given that younger, university-educated people in both countries express more progressive gender ideologies (Bolzendahl and Meyers 2004; Knudsen and Waerness 2001). And, with the recent rise of entrepreneurship programs and competitions on college campuses, students increasingly have opportunities to weigh in on new ventures (*Entrepreneur* 2013).

Students are limited, however, in that they are not trained to evaluate business proposals. Therefore, they may have a greater tendency to react on the basis of stereotypes than individuals who have more experience and/or knowledge. Though my study cannot evaluate this possibility, it can nevertheless speak to entrepreneurship outcomes given that, in practice, experienced investors are not the primary source of support for most new businesses (Gartner, Frid, and Alexander 2012; Ruef 2010). Rather, a substantial amount of the feedback and support that entrepreneurs receive comes from individuals in their social network, many of whom are not trained to evaluate business proposals. This is increasingly the case given the rise of web-based crowdfunding, where thousands of untrained individuals support new ventures (Mollick 2014). Additionally, despite a lack of training in hiring practices, studies find that students' ratings of employment applications are similar to managers' (Correll, Benard, and Paik 2007; Olian and Schwab 1988).

## **Design**

In all three studies, participants rated a pair of fictitious entrepreneurs, presented as real, of the same gender, age, and level of qualifications, and whose organizations were in the same industry. Each study employed a 2×2 mixed factorial design that manipulated 1) the innovativeness of the business (innovative or non-innovative, within subjects), and 2) the gender of the entrepreneur (man or woman, between subjects). Therefore, each participant read about and evaluated one non-innovative entrepreneur and one innovative entrepreneur who were both men or women. Participants were randomly assigned to one of these conditions.

This design generates a valuable test of my hypotheses for two reasons. First, because the purpose of this project is to assess how the effect of innovation varies by gender of entrepreneur, it is important that innovation be measured as a within-subjects comparison, as it is more efficient than between-pair comparisons (Cohen 1988). Second, estimating gender effects between subjects minimizes suspicion about the study's hypotheses and produces unbiased comparisons of ratings of the same businesses across gender.

## **Procedure**

Participants came into the lab individually and read about and evaluated descriptions of two entrepreneurs and their businesses. I counterbalanced which organization, innovative or non-innovative, they viewed first. Before leaving, they were

interviewed to assess whether the experimental manipulation was successful and to determine whether they had any suspicions about the study. Then they were debriefed and paid.

### ***Cover Story***

The studies simulated an investment scenario in order to increase task engagement and to measure bias. Participants were told that the summaries were submissions to an investment competition for young entrepreneurs that occurred four years prior. To encourage participants to put themselves in the role of what others would do, they were told that the researchers have data about each of these businesses' rates of profit and loss in the time since they launched, and that they have allocated each participant a total of 100 points (equivalent to 100 GBP or 100 USD) to "invest" in the two businesses. Participants were told they could earn £5/\$5 in returns above the £5/\$5 participation payment already promised, depending on the accuracy of their decision when compared to existing performance data.

### ***The Descriptions***

Descriptions were identical across condition, except for varying first names to manipulate gender (see below). Both entrepreneurs were described as holding undergraduate degrees from a large, upper-tier university, were the same age, had five years of management experience in the industry of their start-up, and had a credit rating that met requirements for a business loan from a major bank.

In Studies 1 and 2 (conducted in the UK and US, respectively), participants evaluated plans in a gender-neutral industry, whereas in Study 3 (US), participants evaluated plans in a high-tech industry. The gender-neutral proposals were in "the wine industry," described as an upper-middle-class, gender-neutral industry. ("Approximately 90% of owners in the industry hold at least a bachelor's degree and about 50% are women.") Both entrepreneurs held degrees in Business Management. In contrast, the high-tech proposals were both in the energy industry and proposed by individuals with degrees in Environmental Engineering.

### **Gender manipulation**

Gender was manipulated by altering first names: Laura/Julie (women) and David/Jason (men).

### **Innovation manipulation**

The innovation manipulation was designed to capture the theoretical dichotomy between a business model that replicates existing organizations versus one that departs from existing practices by introducing a new product or process. To make differing levels of cognitive legitimacy explicit, the non-innovative proposals were described as "common" and "shown to work in the past," whereas innovative proposals were described as "especially innovative." In the gender-neutral descriptions, the non-innovative summary described a typical wine store, whereas the innovative summary described a store that provides customers the ingredients,

tools, and guidance to make and bottle their own wine.<sup>1</sup> In the male-typed industry descriptions, the non-innovative entrepreneur plans to start a typical consulting firm in which “engineers and technicians would consult with clients to increase the energy efficiency of homes and businesses.” In contrast, the innovative entrepreneur has designed a new geothermal energy system that is far more efficient and cost effective than current ones and is in the process of patenting the design.<sup>2</sup>

Pretests indicated that the innovative descriptions were perceived to be significantly more innovative than the non-innovative descriptions when no information was provided about the entrepreneur. Manipulation checks during the studies also confirmed that participants rated the “innovative” plans to be significantly more innovative than the non-innovative plans ( $p < 0.001$  in all three studies).<sup>3</sup> Most participants also described the innovative plans as “innovative” and/or “risky” in an open-response item at the end of the study. Two participants were eliminated due to failed manipulation checks.

## **Dependent Measures**

### **Status beliefs measures**

Participants rated how competent, skilled, and committed they thought each entrepreneur was. Each item was measured on a scale ranging from 1 (“not at all”) to 5 (“extremely”). After rating each proposal, participants compared the competence of the entrepreneurs to each other. Answers ranged on a seven-point scale, with 1 indicating the entrepreneur was much less competent than the other, and 7 indicating the entrepreneur was much more competent.

### **Business evaluation measures**

Participants began by rating how profitable and competitive each enterprise would be, the extent to which it could be made successful in the long term, and the extent to which they would be personally interested in investing in it. Each item was measured on a scale ranging from 1 (“not at all”) to 5 (“extremely”). Because these items closely map onto one another, I created a single “Business Validation” index that reflects a participant’s overall level of confidence in and support for the business idea ( $\alpha = 0.75$  in Study 1,  $\alpha = 0.78$  in Study 2, and  $\alpha = 0.76$  in Study 3). Then, participants divided 100 “investment points” between the two businesses. This item serves as a behavioral measure of support (since participants were told that their payment depended on the accuracy of their decision) and also reflects their *relative* level of support for the innovative versus non-innovative organization.

## **Results**

### **Study 1: Gender Status Beliefs and Innovation**

Study 1, conducted in the UK, examines my first two hypotheses about the salience of gender status beliefs in entrepreneurship (H1 and H2). Table 1 shows means by condition. The first two columns indicate that men are penalized for

**Table 1. Means for Status and Evaluation Variables by Gender and Innovativeness of Business Plan, Study 1**

|                             | Male entrepreneurs |                     | Female entrepreneurs |                   |
|-----------------------------|--------------------|---------------------|----------------------|-------------------|
|                             | Non-innovative     | Innovative          | Non-innovative       | Innovative        |
| <i>Status variables</i>     |                    |                     |                      |                   |
| Competence                  | 3.86<br>(0.57)     | 3.14<br>(0.79)***   | 3.17<br>(0.64)       | 3.54<br>(0.51)*   |
| Relative competence         | 4.05<br>(1.32)     | 3.95<br>(1.32)      | 3.04<br>(1.16)       | 4.96<br>(1.16)*** |
| Skill                       | 3.29<br>(0.56)     | 3.05<br>(0.92)      | 3.08<br>(0.83)       | 3.13<br>(0.74)    |
| Commitment                  | 3.90<br>(0.62)     | 4.10<br>(0.88)      | 3.71<br>(0.62)       | 4.00<br>(0.66)    |
| <i>Evaluation variables</i> |                    |                     |                      |                   |
| Business validation index   | 3.31<br>(0.67)     | 2.49<br>(0.69)***   | 2.84<br>(0.48)       | 2.91<br>(0.67)    |
| Investment points           | 68.33<br>(19.65)   | 31.67<br>(19.65)*** | 49.38<br>(25.80)     | 50.63<br>(25.80)  |

**Note:** Standard deviations shown in parentheses.

\* $p < .05$  one-tailed test for means between innovators and non-innovators; \*\*\* $p < .001$

innovation: not only are male innovative entrepreneurs rated less competent than their non-innovative counterparts ( $p < 0.001$ ), but their businesses are deemed less worthy of support by both the business validation index ( $p < 0.001$ ) and investment points ( $p < 0.001$ ). This finding supports the theoretical notion that innovative entrepreneurs encounter social resistance and may even be perceived as foolhardy. However, these patterns do not hold in the female condition. Innovative women entrepreneurs are perceived to be more competent ( $p < 0.05$ ; relative measure:  $p < 0.001$ ) than their non-innovative counterparts, and innovation is not associated with the level of support their businesses receive.

In order to more fully evaluate my hypotheses, I turn to regression models that estimate the effects of gender, innovativeness, and the interaction between gender and innovativeness on each dependent measure. I use random intercepts regression models to take into account the nonindependence of observations that results from asking participants to evaluate entrepreneurs in pairs.

Estimated regression coefficients are presented in table 2. In most models, the gender coefficient and the interaction between gender and innovativeness are in the opposite direction, indicating that participants assign relatively low baseline ratings to women entrepreneurs, but are far less likely to penalize women for innovation.

In support of H1, the effects for Woman Entrepreneur indicate that non-innovative women entrepreneurs are rated significantly less competent than their male counterparts ( $\beta = -0.69$ ,  $p < .001$ ). Specifically, non-innovative women entrepreneurs are rated about 0.7 points lower on the five-point competence scale (mean for men = 3.86; mean for women = 3.17). The coefficient for the relative

**Table 2. Estimated Regression Coefficients for the Effects of Gender and Innovation on Status and Business Evaluation Variables, Study 1**

|                                 | Status variables   |                     |                   |                   | Evaluation variables |                     |
|---------------------------------|--------------------|---------------------|-------------------|-------------------|----------------------|---------------------|
|                                 | Competence         | Relative competence | Skill             | Commitment        | Validation index     | Investment points   |
| Innovative entrepreneur         | -0.71***<br>(0.17) | -0.10<br>(0.38)     | -0.24<br>(0.24)   | 0.19<br>(0.21)    | -0.82***<br>(0.19)   | -36.67***<br>(7.14) |
| Woman entrepreneur              | -0.69***<br>(0.19) | -1.01**<br>(0.37)   | -0.20<br>(0.22)   | -0.20<br>(0.21)   | -0.46**<br>(0.18)    | -18.96**<br>(6.75)  |
| Innovative × Woman entrepreneur | 1.09***<br>(0.23)  | 2.01***<br>(0.52)   | 0.28<br>(0.32)    | 0.10<br>(0.28)    | 0.89***<br>(0.26)    | 37.92***<br>(9.78)  |
| Intercept                       | 3.86***<br>(0.14)  | 4.05***<br>(0.27)   | 3.29***<br>(0.17) | 3.90***<br>(0.15) | 3.31***<br>(0.13)    | 68.33***<br>(5.05)  |

**Notes:** Standard errors shown in parentheses.

\*\* $p < .01$ , \*\*\* $p < .001$

measure ( $\beta = -1.01$ ,  $p < .01$ ) further indicates that non-innovative women are, on average, rated less competent than their innovative female counterparts (mean = 3.04), whereas non-innovative men are rated as having about the same level of competence as their innovative male counterparts (mean = 4.05). Non-innovative women's businesses are also significantly penalized on the business evaluation variables: they are rated about half a point lower on the five-point validation index (business validation index:  $\beta = -0.46$ ,  $p < .01$ ) and receive about 20 fewer investment points (investment points:  $\beta = -18.96$ ,  $p < .01$ ) when compared to their non-innovative male counterparts.

However, the effects of organizational innovation differ considerably by gender of entrepreneur. Whereas innovative men entrepreneurs receive significantly lower competence, business validation, and investment ratings than their non-innovative male counterparts, the significant and positive innovative\*woman interactions indicate that innovative women entrepreneurs do not experience such penalties. This finding supports the theory that by better fitting the agentically masculine entrepreneur stereotype, innovative women may signal additional "evidence" of entrepreneurial ability (H2b), a dynamic that buffers them from the skepticism that innovation might otherwise trigger.

### Mediation analysis

To complete my argument that gender status beliefs help explain gender disparities in support for new enterprises, I need to give evidence that these disparities arise *because* gender informs the performance expectations that people hold for entrepreneurs. Specifically, if people have lower expectations for women entrepreneurs' competence, and these lower expectations prompt them to both favor men's non-innovative businesses over women's and rate women more positively when innovative ideas are considered, then evaluations of competence should mediate these gender effects. I evaluate this argument in table 3, where I include the competence measure as an independent variable in the models predicting

**Table 3. Estimated Regression Coefficients for the Mediation of Competence on the Impact of Gender and Innovation on Business Evaluations, Study 1**

|                                 | Validation index   | Investment points            |
|---------------------------------|--------------------|------------------------------|
| Innovative entrepreneur         | -0.57<br>(0.19)*** | -35.80<br>(6.27)***          |
| Woman entrepreneur              | -0.22<br>(0.19)    | -9.77<br>(6.33) <sup>+</sup> |
| Innovative × Woman entrepreneur | 0.51<br>(0.27)*    | 19.53<br>(9.29)*             |
| Competence                      | 0.35<br>(0.09)***  |                              |
| Relative competence             |                    | 9.14<br>(1.77)***            |
| Intercept                       | 1.95<br>(0.40)***  | 31.34<br>(8.42)***           |

**Note:** Standard errors shown in parentheses.

<sup>+</sup> $p < .10$ ; \* $p < .05$ ; \*\*\* $p < .001$

business evaluations. Because the investment point measure reflects the *relative* amount of support for each business, I use the relative competence measure to mediate this variable.

Not surprisingly, higher competence ratings predict significantly higher business quality ratings. More importantly, however, including ratings of competence in the models substantially reduces (and in most cases eliminates) the significant gender effects found in the business validation index and investment point measures. Specifically, the magnitude of the main effect for woman entrepreneur was reduced by 52 percent for business validation and 48 percent for investment points; the size of the interaction effect between gender and innovativeness was reduced by 43 percent for business validation and 48 percent for investment points.<sup>4</sup> These findings suggest that participants rated women's businesses differently from men's largely *because* they believed women entrepreneurs were less competent than men entrepreneurs (i.e., because gender was salient as a status characteristic in this setting).

## Discussion

This study examined my first two hypotheses. Findings suggest that, in a setting where gender can be expected to be quite salient as a status characteristic for entrepreneurs, the interactions through which entrepreneurs seek encouragement and support for a new business are likely influenced by gender status beliefs. Specifically, status-based performance expectations regarding competence (but not commitment) disadvantage women entrepreneurs and distort the perceived viability of an innovative plan. Thus, gender status beliefs likely play a role in determining which entrepreneurs and ideas come to be selected into the surviving organizational population.



Consistent with H2b, innovation is more positively associated with ability ratings for women than men, suggesting that women entrepreneurs may need to demonstrate more evidence of entrepreneurial ability than their male counterparts. By introducing an innovative organization, a woman entrepreneur signals a level of agency that is not expected for women in general, but that better fits the masculine stereotype of the “entrepreneur.” As a result, women are less likely than their male counterparts to be penalized for being (unexpectedly) innovative, and in doing so, end up partially compensating for the status-based biases they might otherwise experience.

Though these findings align with theoretical predictions, it is not yet clear whether these patterns would hold in a setting where the scope condition of entrepreneurship as a male-typed task is relatively less valid. Study 2 addresses this question.

### **Study 2: Comparing Study Settings**

Study 2 evaluates my third hypothesis that the salience of gender status beliefs will vary across settings in which the aggregate gender composition of entrepreneurs and managers differ. This study is identical to Study 1, but was conducted at a US university.

Table 4 compares means by condition for all dependent measures. In contrast to Study 1, male entrepreneurs are not penalized for innovation. In fact, innovation confers some social (though not financial) rewards, given that innovative men are rated more competent ( $p < .01$ ) and committed ( $p < .01$ ) than their

**Table 4. Means for Status and Evaluation Variables by Gender and Innovativeness of Business Plan, Study 2**

|                             | Male entrepreneurs |                  | Female entrepreneurs |                   |
|-----------------------------|--------------------|------------------|----------------------|-------------------|
|                             | Non-innovative     | Innovative       | Non-innovative       | Innovative        |
| <i>Status variables</i>     |                    |                  |                      |                   |
| Competence                  | 3.68<br>(0.72)     | 3.93<br>(0.77)   | 3.91<br>(0.69)       | 4.22<br>(0.71)*   |
| Relative competence         | 3.46<br>(1.50)     | 4.54<br>(1.50)** | 3.53<br>(1.50)       | 4.47<br>(1.50)**  |
| Skill                       | 3.57<br>(0.74)     | 3.68<br>(0.47)   | 3.25<br>(0.57)       | 3.72<br>(0.68)**  |
| Commitment                  | 3.68<br>(0.72)     | 4.21<br>(0.68)** | 3.66<br>(0.65)       | 4.28<br>(0.63)*** |
| <i>Evaluation variables</i> |                    |                  |                      |                   |
| Business validation index   | 3.07<br>(0.10)     | 2.94<br>(0.13)   | 3.04<br>(0.72)       | 2.95<br>(0.75)    |
| Investment points           | 53.57<br>(24.72)   | 46.43<br>(24.72) | 46.41<br>(26.28)     | 53.59<br>(26.28)  |

**Note:** Standard deviations shown in parentheses.

\* $p < .05$  one-tailed test for means between innovators and non-innovators; \*\* $p < .01$ ; \*\*\* $p < .001$

non-innovative counterparts. However, innovation is again more positively associated with status measures for women than for men: innovative women entrepreneurs are rated significantly more competent ( $p < .05$  and  $p < .01$  for both measures, respectively), skilled ( $p < .01$ ), and committed ( $p < .001$ ) than their non-innovative female counterpart.

Table 5 presents regression estimates for each dependent variable for Study 2 and includes significance tests for differences between coefficients for Study 1 and Study 2, which were obtained through a pooled model that included a Study 1 dummy variable, as well as the two-way and three-way interactions between Study 1, innovation and gender (not shown).

Consistent with H3, the gender effects in Study 2 follow the same pattern as Study 1, but are smaller in magnitude than in Study 1. For example, similar to the competence ratings in Study 1, non-innovative women entrepreneurs are rated significantly less skilled than their male counterparts ( $\beta = -0.32$ ,  $p < .05$ ) (a penalty of about a third of a point on a five-point scale), but this bias disappears when women present an innovative idea ( $\beta = 0.36$ ,  $p < .05$ ). The modestly significant interaction effect between Innovative and Woman Entrepreneur also indicates that the allocation of investment points is reversed for men and women: whereas innovative men received relatively fewer investment points than their non-innovative counterparts, innovative women received more ( $\beta = 14.33$ ,  $p < .10$ ). In fact, innovative women entrepreneurs receive approximately the same amount of investment points as non-innovative men entrepreneurs. Unlike Study 1, however, competence and business validation ratings do not differ significantly by gender.

US participants also held higher performance expectations for innovative men and women entrepreneurs, rating them more competent ( $\beta = 0.25$ ,  $p < .05$ ; relative measure:  $\beta = 1.07$ ,  $p < .01$ ) and committed ( $\beta = 0.52$ ,  $p < .001$ ) than their non-innovative counterparts.

**Table 5. Estimated Regression Coefficients for the Effects of Gender and Innovation on Status and Business Evaluation Variables, Study 2**

|                                 | Status variables              |                               |                               |                               | Evaluation variables          |                                |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
|                                 | Competence                    | Relative competence           | Skill                         | Commitment                    | Validation index              | Investment points              |
| Innovative entrepreneur         | 0.25 <sup>***</sup><br>(0.15) | 1.07 <sup>**†</sup><br>(0.40) | 0.11<br>(0.14)                | 0.52 <sup>***</sup><br>(0.15) | -0.13 <sup>††</sup><br>(0.18) | -7.14 <sup>††</sup><br>(6.83)  |
| Woman entrepreneur              | 0.23 <sup>†††</sup><br>(0.19) | 0.07 <sup>†</sup><br>(0.39)   | -0.32 <sup>*</sup><br>(0.16)  | -0.02<br>(0.17)               | -0.03 <sup>†</sup><br>(0.18)  | -7.17<br>(6.62)                |
| Innovative × Woman entrepreneur | 0.06 <sup>†††</sup><br>(0.20) | -0.13 <sup>††</sup><br>(0.55) | 0.36 <sup>*</sup><br>(0.19)   | 0.09<br>(0.21)                | 0.03 <sup>††</sup><br>(0.25)  | 14.33 <sup>††</sup><br>(9.96)  |
| Intercept                       | 3.68 <sup>***</sup><br>(0.14) | 3.46 <sup>***</sup><br>(0.28) | 3.57 <sup>***</sup><br>(0.12) | 3.68 <sup>***</sup><br>(0.13) | 3.07 <sup>***</sup><br>(0.13) | 53.57 <sup>***</sup><br>(4.83) |

**Note:** Standard errors shown in parentheses.

<sup>\*</sup> $p < .10$ ; <sup>\*</sup> $p < .05$ ; <sup>\*\*</sup> $p < .01$ ; <sup>\*\*\*</sup> $p < .001$ ; <sup>†</sup>Coefficients differ significantly from Study 1 at  $p < .05$ ;

<sup>††</sup> $p < .01$ ; <sup>†††</sup> $p < .001$

## Discussion

Study 2 offered a more conservative test of my hypotheses than Study 1 because gender could be expected to be less salient as a status characteristic for entrepreneurs in a US context. And indeed, results showed only modest support for my hypotheses. Participants held lower baseline expectations for women entrepreneurs' skills (but not competence or commitment) (H1), and women entrepreneurs appeared to be more skilled when they presented an innovative idea (H2b). Moreover, resistance to investing in innovative ideas was moderately weaker for women than men entrepreneurs (H2b).

The weaker gender effects in the US versus UK setting (H3) suggest that the relevance of gender status beliefs at the micro level may be at least partly conditional upon patterns of inequality at the macro level. Yet, bias in entrepreneurial ability was detected with the skill measure in the US setting, but with the competence measure in the UK setting. Although this discrepancy was unexpected, it is possible that "competence" may be interpreted as a general indicator of ability, whereas "skill" implies a level of specific know-how that may be learned. If so, UK respondents may be more likely to view women as generally less capable of entrepreneurship, whereas US respondents may be more likely to view women as less prepared for entrepreneurship. This interpretation is consistent with the finding that in the UK setting, participants produced substantially biased ratings of competence as well as business viability, whereas participants in the US setting produced biased evaluations of women's skills, but less biased ratings of business viability.

In the US setting, participants also associated innovation with greater ability and effort, and innovative men experienced smaller penalties on the business validation and investment measures than in the UK. This finding suggests that there is generally greater status and less skepticism associated with innovation in the United States, which is not surprising in light of the uniquely strong tradition of entrepreneurship and innovation in American culture (Schumpeter 1961[1934]; Shane 1993; Weber 1930[1904]).

One limitation of these two studies is that findings could be an artifact of the particular vignettes used. For example, findings could have been influenced by unobserved cultural or gendered associations that respondents made with the wine industry, over and above the gender-neutral information that was provided. Moreover, as theorized above, the salience of gender status beliefs in entrepreneurship likely varies according to industry context. Study 3 addresses these issues.

### **Study 3: Industry Effects**

Study 3, conducted at the same US university as Study 2, tests my fourth hypothesis that findings will differ when the industry of a start-up is male dominated and requires male-typed skills. Accordingly, the design for Study 3 is identical to Studies 1 and 2, but the business descriptions are in a high-tech industry.

Table 6 shows means for Study 3. Similar to Study 2, innovative male entrepreneurs are perceived to be relatively more competent ( $p < .05$ ) and committed

**Table 6. Means for Status and Evaluation Variables by Gender and Innovativeness of Business Plan, Study 3**

|                             | Male entrepreneurs |                  | Female entrepreneurs |                  |
|-----------------------------|--------------------|------------------|----------------------|------------------|
|                             | Non-innovative     | Innovative       | Non-innovative       | Innovative       |
| <i>Status variables</i>     |                    |                  |                      |                  |
| Competence                  | 3.88<br>(0.55)     | 4.03<br>(0.47)   | 3.73<br>(0.59)       | 4.02<br>(0.57)*  |
| Relative competence         | 3.66<br>(1.26)     | 4.34<br>(1.26)*  | 3.88<br>(1.33)       | 4.12<br>(1.33)   |
| Skill                       | 3.81<br>(0.64)     | 3.88<br>(0.66)   | 3.46<br>(0.67)       | 3.82<br>(0.67)** |
| Commitment                  | 3.81<br>(0.59)     | 4.25<br>(0.67)** | 3.66<br>(0.85)       | 4.12<br>(0.75)** |
| <i>Evaluation variables</i> |                    |                  |                      |                  |
| Business validation index   | 3.23<br>(0.49)     | 3.20<br>(0.11)   | 3.14<br>(0.65)       | 3.49<br>(0.69)*  |
| Investment points           | 48.34<br>(3.84)    | 51.53<br>(3.86)  | 46.90<br>(3.63)      | 52.85<br>(3.65)  |

**Note:** Standard deviations shown in parentheses.

\* $p < .05$  one-tailed test for means between innovators and non-innovators; \*\* $p < .01$

( $p < .01$ ) than their non-innovative counterparts, and they do not experience penalties in the evaluations of their businesses. Innovative women entrepreneurs also receive higher competence ( $p < .05$ ), skill ( $p < .01$ ), and commitment ( $p < .01$ ) ratings than their non-innovative counterparts. Yet, unlike the other studies, participants in this setting rate innovative women's businesses *more* worthy of support than non-innovative women's businesses ( $p < .05$ ), a reward of about a third of a point on the five-point business validation index.

Table 7 presents regression estimates for each dependent variable. Tests for significant differences between Study 3 and Study 2 coefficients were obtained from pooled models that included a Study 3 dummy variable, as well as the two-way and three-way interactions between Study 2, innovativeness and gender (not shown).

The overall patterns of effects in table 7 are similar to the previous studies. For instance, the interaction effect between Innovative and Woman Entrepreneur on the business validation index is significant and positive ( $\beta = 0.54$ ,  $p < .05$ ), indicating that innovation is associated with more favorable perceptions of business potential for women entrepreneurs than men. This finding parallels both business evaluation measures in Study 1 and the investment point measure in Study 2. Also, like Study 2, gender bias emerges in ratings of entrepreneurial skill: participants rate non-innovative high-tech women entrepreneurs to be significantly less skilled than their male counterparts ( $\beta = -0.32$ ,  $p < .05$ ), though this bias diminishes when women entrepreneurs demonstrate innovativeness ( $\beta = 0.26$ ,  $p < .10$ ).

Despite these similarities, there are a few key differences between the high-tech and the gender-neutral settings, showing modest evidence for the prediction that

**Table 7. Estimated Regression Coefficients for the Effects of Gender and Innovation on Status and Business Evaluation Variables, Study 3**

|                                 | Status variables             |                     |                             |                   | Evaluation variables                     |                    |
|---------------------------------|------------------------------|---------------------|-----------------------------|-------------------|--|--------------------|
|                                 | Competence                   | Relative competence | Skill                       | Commitment        | Validation index                         | Investment points  |
| Innovative entrepreneur         | 0.20*<br>(0.10)              | 0.65*<br>(0.32)     | 0.09<br>(0.13)              | 0.47***<br>(0.14) | 0.04<br>(0.15)                           | 3.76<br>(5.50)     |
| Woman entrepreneur              | -0.11 <sup>b</sup><br>(0.13) | 0.19<br>(0.29)      | -0.32*<br>(0.15)            | -0.12<br>(0.17)   | -0.03<br>(0.14)                          | -0.93<br>(5.21)    |
| Innovative × Woman entrepreneur | 0.07<br>(0.13)               | -0.40<br>(0.42)     | 0.26 <sup>+</sup><br>(0.18) | -0.04<br>(0.19)   | 0.26 <sup>+</sup> <sup>a</sup><br>(0.19) | 1.79<br>(7.34)     |
| Intercept                       | 3.85***<br>(0.10)            | 3.67***<br>(0.23)   | 3.80***<br>(0.12)           | 3.80***<br>(0.13) | 3.19***<br>(0.11)                        | 48.06***<br>(3.95) |

**Note:** Standard errors shown in parentheses.

<sup>+</sup>  $p < .10$ ; \* $p < .05$ ; \*\*\* $p < .001$

<sup>a</sup> Coefficients differ significantly from Study 2 at  $p < .10$ ; <sup>b</sup>  $p < .05$

gender effects would be larger in a high-tech industry (H4). In Study 3, women entrepreneurs received somewhat lower competence ratings than men, whereas this was not the case in Study 2 (coefficients for “Woman entrepreneur” are significantly different at the  $p < .05$  level). These somewhat lower baseline expectations for women are consistent with the finding that the positive interaction effect between gender and innovativeness on investment is modestly larger in a male-dominated, high-tech industry than in a gender-neutral industry ( $p < .10$ ).

## General Discussion

Both classical and contemporary theorists of organizations and entrepreneurship have posited that cultural beliefs matter in the formation of new and novel organizations. By drawing on social psychological theory, this article is the first to specify and empirically test how certain cultural beliefs about gender may frame the social interactions that ultimately determine whether a new organization will survive. Findings from three experimental studies across two cultural contexts indicate that gender status beliefs play a key role in determining the likelihood that a new organization will be deemed worthy of support.

First, across all three studies, participants held lower expectations for women entrepreneurs’ abilities and the viability of their business plans than for men entrepreneurs’ *in general* (i.e., for non-innovative entrepreneurs). This finding underscores the theoretical notion that gender status beliefs—specifically as they pertain to entrepreneurial ability rather than effort—are a plausible mechanism that fuels gender biases in entrepreneurship. Second, innovation was more strongly and positively associated with performance expectations for women than men. This finding supports the theoretical proposition that innovation can signal additional evidence of entrepreneurial ability for women: rather than exacerbating disadvantage (H2a), innovation mitigates gender bias by counteracting,

to some extent, lower expectations for women's abilities in entrepreneurship (H2b). In short, women entrepreneurs had less to lose and more to gain by introducing an innovative business model; by doing so, they signaled personal qualities that better fit with the agentially masculine stereotype of the entrepreneur.

In contrast, the effects of innovation on evaluations of men entrepreneurs' abilities and ideas were less consistent across the studies. In the UK study, innovative men were rated less competent and worthy of support than their non-innovative counterparts. In the US studies, innovative men were rated more competent and committed, but not any more or less worthy of support than their non-innovative counterparts. These patterns suggest that when organizational innovations are introduced by men, they may be more subject to cultural variability in attitudes toward innovation and risk-taking. This is because, for men, innovation does not simultaneously signal evidence of a particular ability they are generally thought to lack. In effect, men's innovations appear to be judged more on their perceived legitimacy (or lack thereof), whereas women's innovations appear to be judged as partial compensation for their perceived lack of entrepreneurial ability.

Third, the pattern of gender bias was similar across study settings, but effects were larger in the settings where entrepreneurship was more male typed, and thus where gender could be expected to be more salient as a status characteristic: the UK, where men's aggregate representation in entrepreneurship and business leadership roles in general is higher, and a high-tech industry, where men's representation is also higher. The US/UK comparison in particular highlights how the basic content of gender stereotypes—such as women's presumed lack of competence or agency in a male-typed domain—is similar across these societal contexts, but that the relative impact of such stereotypes on individuals' propensity to discriminate may be conditional upon the extent of men's overrepresentation in a given male-typed domain. Furthermore, as the comparisons in effect sizes between studies indicate, the differences in findings between societal contexts were also substantially larger than the differences in findings between industries. This pattern suggests that gender status beliefs about entrepreneurial activity *in general* likely carry greater responsibility for gender bias in entrepreneurship than do status beliefs about industry-specific skills.

Because social interactions are complicated by a multitude of factors, it is difficult to use observational techniques to systematically assess status-driven biases. In this regard, testing the theory in a controlled laboratory setting was advantageous. This method also avoids sampling on the dependent variable (e.g., interviewing successful entrepreneurs). Experiments are limited, however, in that they cannot address the extent to which gender status beliefs influence the interactions of actual entrepreneurs. Thus, although I can evaluate status beliefs as one possible mechanism responsible for patterns of inequality in entrepreneurship, I cannot assess the relative importance of this mechanism vis-à-vis other factors.

Additionally, although the pattern of gender and innovativeness effects is consistent across all three studies, my study design does not allow me to evaluate the possibility that participants rated innovative women's ability higher than non-innovative women's in order to compensate for biasing against non-innovative women. Some research has shown that individuals are more likely to express



prejudiced viewpoints when they also have the opportunity to demonstrate non-prejudicial attitudes (Monin and Miller 2001). By making this compensation, individuals retain their “moral credentials.” Because participants directly compared non-innovative women to innovative women, they may have unconsciously embellished their ratings of the innovative entrepreneur to make up for low ratings of the non-innovative entrepreneur.

Finally, whereas this study examined the effect of organizational innovations within existing industry categories, it is possible that participants would have penalized innovative organizations more strongly had they introduced something that is more unfamiliar and unrelated to existing products and services. Participants may have also reacted differently had the innovations centered on novel processes, such as methods of production or supply chains. Investigating how differing degrees and forms of innovation trigger differing levels of skepticism and bias would be a key question for future research.

## Theoretical Contributions and Next Steps

This research makes important contributions to the areas of gender, organizations, and social psychology. To begin, this study develops status beliefs as a “demand-side” mechanism for understanding women’s underrepresentation in entrepreneurship, a form of gender inequality that has typically been understood through a “supply-side” lens. I show that, despite being less constrained by pre-existing organizational roles, gender status beliefs are salient in the context of entrepreneurship and are responsible, at least in part, for the disadvantages that women entrepreneurs are known to experience. Status beliefs bias the perceived viability of new organizations, producing larger disadvantages for women entrepreneurs in societal and industry contexts where their representation among entrepreneurs at the aggregate level is lower. This finding indicates that the long-held theoretical claim—that the gender composition of a woman’s occupation, workplace, and/or job matters for the way she is perceived and evaluated in day-to-day interactions (e.g., Kanter 1977)—also applies in the entrepreneurship domain.

The implication of these findings is that gender status beliefs likely disadvantage most women entrepreneurs, given that 1) most entrepreneurs (especially women) do not start businesses that are particularly innovative (Ruef 2010; Tonoyan and Strohmeier 2005), and 2) women are vastly underrepresented among entrepreneurs in most societies (Kelley, Bosma, and Amorós 2010). If status beliefs lead most people to doubt women’s entrepreneurial ability, even subtly, women may be discouraged from pursuing entrepreneurship in the first place, less likely to persist in an entrepreneurial career, and/or disadvantaged when they seek support for their venture. Although these findings suggest that women may be able to strategically mitigate their vulnerability to bias by being innovative, this strategy would not fundamentally challenge gender beliefs given that they are conditioned on macro-level inequality. Therefore, the problem of gender inequality in entrepreneurship should be understood as a problem that is rooted in the interrelated social and economic institutions that lend support to gender inequality in the labor market more broadly.

This study also introduces a new method for evaluating how forms of gender inequality are reproduced in modern societies. In particular, it is the first to employ a controlled experiment across two cultural contexts with the goal of identifying how gender status beliefs about women's abilities in a particular domain play out differently when there are differing levels of gender inequality in that domain at the macro level. By doing so, this study contributes to multilevel theories of gender, which posit that distributions of resources at the macro level sustain gender inequality in part through their influence on micro-level social interactions (Ridgeway and Correll 2004; Risman 1998).

Next, my findings contribute to organization theory by suggesting that the emergence of novel organizations can be understood to be, at least in part, a function of status beliefs. This finding not only offers a micro-level mechanism for understanding why some organizations survive whereas others fail, but it also integrates social psychological perspectives on status processes with cultural-cognitive institutional approaches (e.g., DiMaggio and Powell 1991). Whereas experimental methods have been broadly applied to address the formation and legitimation of status beliefs, this is the first study to use them to investigate how cultural-cognitive processes affect perceptions of new organizational forms.

By linking the macro-social and organizational context to micro-level cognitive processes, I also underscore multilevel theories of entrepreneurship (Ruef and Lounsbury 2007) and organizational theorists' understanding of cognitive legitimacy (Suchman 1995). For instance, while cognitive legitimacy is often understood to be contingent on macro-level conditions, such as the size of an industry, my work suggests that perceptions of cognitive legitimacy may be affected by status beliefs at the micro level. Therefore, organizational populations that come to be taken for granted should be understood as being shaped in part by status beliefs. This is important given that the characteristics of individual founders play a role in determining the types of organizational structures and practices that firms adopt (Baron, Hannan, and Burton 1999).

Finally, this work extends social psychological research on status beliefs to the context of nascent entrepreneurship. This approach contrasts with most previous work, which has focused on how status-based performance expectations operate in task-oriented small groups or employment settings.

One important avenue of future work will be to examine the extent to which gendered patterns of feedback persist in field settings and among different samples of study participants, especially those involved in providing formal feedback to entrepreneurs, such as investors or educators. Such samples would help provide a broader picture of the extent to which gender status beliefs actually affect the day-to-day experiences of entrepreneurs.

It would also be productive to examine in greater detail the different ability standards to which men and women entrepreneurs appear to be held. For instance, aside from demonstrating greater ingenuity, women entrepreneurs may also need more human or social capital to convince stakeholders that their businesses are equally worthy of support. Indeed, a recent study suggests that technical knowledge and social ties may be more beneficial for women than men in high-tech entrepreneurship (Tinkler et al. 2015). Another important step would be to broaden the scope conditions of my account. For instance, Yang and Aldrich

(2014) find that women need to demonstrate more consistent evidence of merit before they take the lead on entrepreneurial teams, a dynamic that may be fueled by gender status beliefs. Status beliefs may also affect the degree to which individuals are able to garner support for innovative ventures *within* established organizational contexts.

Finally, although I evaluated gender as one relevant status characteristic in the context of entrepreneurship, similar processes may occur along the lines of other status characteristics, such as age, nationality, class, and race/ethnicity. Thus, status beliefs may be one common lens for understanding the micro-level processes that underpin macro-level patterns of stratification in entrepreneurship.

## Notes

1. The “innovative” idea is based on a small Southern California business that won awards for innovation from its chamber of commerce.
2. This description is adapted from the winner of an investment competition for undergraduate entrepreneurs at Princeton University.
3. These perceptions did not vary by gender of entrepreneur. Additionally, innovativeness ratings of the wine vignettes did not vary significantly by study setting.
4. Alternative models that further included interactions between competence and innovation produced similar results. These interactions are not statistically significant.

## About the Author

**Sarah Thébaud** is Assistant Professor of Sociology at the University of California–Santa Barbara and a faculty research associate of the Broom Center for Demography. Her research investigates social psychological and macro-institutional sources of gender inequality in the new economy. In addition to research on gender stratification in entrepreneurial activity, her recent publications and current projects examine the sources of persistent gender biases and inequalities in families, work, investment markets, science, and higher education.

## References

- Aldrich, Howard E., and Marlene C. Fiol. 1994. “Fools Rush In: The Institutional Context of Industry Creation.” *Academy of Management Review* 19:645–70.
- Aldrich, Howard E., and Martin Ruef. 2006. *Organizations Evolving*, 2nd ed. Thousand Oaks, CA: Sage.
- Baron, James N., Michael T. Hannan, and M. Diane Burton. 1999. “Building the Iron Cage: Determinants of Managerial Intensity during the Early Years of Organizations.” *American Sociological Review* 64:527–47.
- Baron, Robert A., and Gideon D. Markman. 2003. “Beyond Social Capital: the Role of Entrepreneurs’ Social Competence in Their Financial Success.” *Journal of Business Venturing* 18:41–60.
- Berger, Joseph, M. H. Fisek, R. Z. Norman, and Morris Zelditch Jr. 1977. *Status Characteristics and Social Interaction: An Expectation States Approach*. Amsterdam: Elsevier.
- Bigelow, Lyda, Leif Lundmark, Judi McLean Parks, and Robert Wuebker. 2014. “Skirting the Issues? Experimental Evidence of Gender Bias in Ipo Prospectus Evaluations.” *Journal of Management* 40(6):1732–59.
- Bird, Barbara, and Candidia G. Brush. 2002. “A Gendered Perspective on Organizational Creation.” *Entrepreneurship Theory & Practice* 26:41–50.
- Bolzendahl, Catherine I., and Daniel J. Myers. 2004. “Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974–1998.” *Social Forces* 83(2):759–90.

- Brooks, Allison Wood, Laura Huang, Sarah Wood Kearney, and Fiona Murray. 2014. "Investors Prefer Entrepreneurial Ventures Pitched by Attractive Men." *Proceedings of the National Academy of the Sciences* 111(12):4427–4431.
- Bruni, Attila, Silvia Gherardi, and Barbara Poggio. 2004. "Doing Gender, Doing Entrepreneurship: An Ethnographic Account of Intertwined Practices." *Gender, Work, and Organization* 11(4):406–29.
- Buttner, E. Holly, and B. Rosen. 1988. "Bank Loan Officers' Perceptions of the Characteristics of Men, Women, and Successful Entrepreneurs." *Journal of Business Venturing* 3:249–58.
- Castilla, Emilio J., and Stephen Benard. 2010. "The Paradox of Meritocracy in Organizations." *Administrative Science Quarterly* 55:543–76.
- Center for Women's Business Research (CWBR). 2009. *The Economic Impact of Women-Owned Businesses in the United States*. McLean, VA: CWBR.
- Charles, Maria, and David B. Grusky. 2004. *Occupational Ghettos: The Worldwide Segregation of Men and Women*. Palo Alto, CA: Stanford University Press.
- Cohen, Jacob. 1988. *Statistical Power Analysis for the Behavioral Sciences*. Hillsdale, NJ: Erlbaum Associates.
- Correll, Shelley J., Stephen Benard, and In Paik. 2007. "Getting a Job: Is There a Motherhood Penalty?" *American Journal of Sociology* 112:1297–1338.
- Correll, Shelley J., and Cecilia Ridgeway. 2003. "Expectation States Theory." In *The Handbook of Social Psychology*, edited by Delamater, John, 29–51. New York: Kluwer Academic Press.
- DiMaggio, Paul J., and Walter W. Powell. 1991. "Introduction." In *The New Institutionalism in Organizational Analysis*, edited by Powell, W. W., and P. J. DiMaggio, 1–38. Chicago: University of Chicago Press.
- Entrepreneur. 2013. "Top Colleges for Entrepreneurship 2013." September 18. <http://www.entrepreneur.com/article/228405>.
- Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Fiske, Susan T., Amy J. C. Cuddy, Peter Glick, and Jun Xu. 2002. "A Model of (Often Mixed) Stereotype Content: Competence and Warmth Respectively Follow from Perceived Status and Competition." *Journal of Personality and Social Psychology* 82:878–902.
- Foschi, Martha. 1996. "Double Standards in the Evaluation of Men and Women." *Social Psychology Quarterly* 59:237–54.
- Foschi, Martha, Larissa Lai, and Kirsten Sigerson. 1994. "Gender and Double Standards in the Assessment of Job Applicants." *Social Psychological Quarterly* 57(4):326–39.
- Gartner, William B., Casey J. Frid, and John C. Alexander. 2012. "Financing the Emerging Firm." *Small Business Economics* 39(3):745–61.
- Gorman, Elizabeth H. 2006. "Work Uncertainty and the Promotion of Professional Women: The Case of Law Firm Partnership." *Social Forces* 85(2):865–89.
- Gornick, Janet C., and Marcia Meyers. 2009. "Institutions That Support Gender Equality in Parenthood and Employment." In *Gender Equality: Transforming Family Divisions of Labor*, edited by Gornick, J. C., and M. Meyers, 3–64. London: Verso.
- Gupta, Vishal K., Daniel B. Turban, S. Arzu Wasti, and Arijit Sikdar. 2009. "The Role of Gender Stereotypes in Perceptions of Entrepreneurs and Intentions to Become an Entrepreneur." *Entrepreneurship, Theory and Practice* (March):397–417.
- Heilman, Madeline E. 2001. "Description and Prescription: How Gender Stereotypes Prevent Women's Ascent Up the Organizational Ladder." *Journal of Social Issues* 57(4):657–74.
- Heilman, Madeline E., and Julie J. Chen. 2003. "Entrepreneurship as a Solution: The Allure of Self-Employment for Women and Minorities." *Human Resource Management Review* 13(2):347–64.
- Institute for Small Business and Entrepreneurship (ISBE). 2009. "Women's Enterprise: Some Facts and Figures." *Enterprise Matters: Gender*, Spring. <http://www.isbe.org.uk/facts>.
- Johnson, Cathryn, Timothy J. Dowd, and Cecilia L. Ridgeway. 2006. "Legitimacy as a Social Process." *Annual Review of Sociology* 32:53–78.

- Kalleberg, Arne L., and Kevin T. Leicht. 1991. "Gender and Organizational Performance: Determinants of Small Business Survival and Success." *Academy of Management Journal* 34(1):136–61.
- Kanter, Rosabeth Moss. 1977. *Men and Women of the Corporation*. New York: Basic Books.
- Kelley, Donna J., Niels Bosma, and Jose Ernesto Amorós. 2010. *Global Entrepreneurship Monitor 2010 Global Report*. Global Entrepreneurship Research Association.
- Khaire, Mukti. 2010. "Young and No Money? Never Mind: The Material Impact of Social Resources on New Venture Growth." *Organization Science* 21:168–85.
- Knudsen, Knud, and Kari Waerness. 2001. "National Context, Individual Characteristics, and Attitudes on Mothers' Employment: A Comparative Analysis of Great Britain, Sweden, and Norway." *Acta Sociologica* 44(1):68–79.
- Knudsen, Thorbjorn, and Richard Swedberg. 2009. "Capitalist Entrepreneurship: Making Profit Through the Unmaking of Economic Orders." *Capitalism and Society* 4(2):Article 3.
- Koenig, Ann M., and Alice H. Eagly. 2014. "Evidence for the Social Role Theory of Stereotype Content: Observations of Groups' Roles Shape Stereotypes." *Journal of Personality and Social Psychology* 107(3):371–92.
- Loscocco, Karyn, and Sharon R. Bird. 2012. "Gendered Paths: Why Women Lag Behind Men in Small Business Success." *Work and Occupations* 39(2):183–219.
- Loscocco, Karyn A., Joyce Robinson, Richard H. Hall, and John K. Allen. 1991. "Gender and Small Business Success: An Inquiry into Women's Relative Disadvantage." *Social Forces* 70(1):65–85.
- Lounsbury, Michael, and Mary Ann Glynn. 2001. "Cultural Entrepreneurship: Stories, Legitimacy, and the Acquisition of Resources." *Strategic Management Journal* 22:545–64.
- Mandel, Hadas, and Moeshe Semyonov. 2006. "A Welfare State Paradox: State Interventions and Women's Employment Opportunities in 22 Countries." *American Journal of Sociology* 111:1910–1949.
- Marlow, Susan, and Maura McAdam. 2010. "United Kingdom." In *International Research Handbook on Successful Women Entrepreneurs*, edited by Fielden, Sandra L., and Marilyn J. Davidson, 204–15. Cheltenham, UK: Edward Elgar.
- Mattis, Mary C. 2004. "Women Entrepreneurs: Out from under the Glass Ceiling." *Women in Management Review* 19(3):154–63.
- Minniti, Maria, and Carlo Nardone. 2007. "Being in Someone Else's Shoes: The Role of Gender in Nascent Entrepreneurship." *Small Business Economics* 28:223–38.
- Mollick, Ethan. 2014. "The Dynamics of Crowdfunding: An Exploratory Study." *Journal of Business Venturing* 29(1):1–16.
- Monin, Benoit, and Dale T. Miller. 2001. "Moral Credentials and the Expression of Prejudice." *Journal of Personality and Social Psychology* 81(1):33–43.
- Moore, Dorothy P., and E. Holly Buttner. 1997. *Women Entrepreneurs: Moving Beyond the Glass Ceiling*. Thousand Oaks, CA: Sage.
- O'Connor, Julia S., Ann Shola Orloff, and Shelia Shaver. 1999. *States, Markets, Families: Gender, Liberalism, and Social Policy in Australia, Canada, Great Britain, and the United States*. Cambridge, UK: Cambridge University Press.
- Olian, Judy D., and Donald P. Schwab. 1988. "The Impact of Applicant Gender Compared to Qualifications on Hiring Recommendations: A Meta-Analysis of Experiment Studies." *Organizational Behavior and Human Decision Processes* 41:180–95.
- Pettit, Becky, and Jennifer L. Hook. 2009. *Gendered Tradeoffs: Family, Social Policy, and Economic Inequality in Twenty-One Countries*. New York: Russell Sage.
- Prentice, Deborah A., and Erica Carranza. 2002. "What Women and Men Should Be, Shouldn't Be, Are Allowed to Be, and Don't Have to Be: The Contents of Prescriptive Gender Stereotypes." *Psychology of Women Quarterly* 26(4):269–81.
- Rashotte, Lisa S., and Murray Webster Jr. 2005. "Gender Status Beliefs." *Social Science Research* 34:618–33.

- Renzulli, Linda A., Howard Aldrich, and James Moody. 2000. "Family Matters: Gender, Networks, and Entrepreneurial Outcomes." *Social Forces* 79(2):523–46.
- Reskin, Barbara F., and Patricia A. Roos. 1990. *Job Queues, Gender Queues*. Philadelphia: Temple University.
- Ridgeway, Cecilia L. 2011. *Framed by Gender: How Gender Inequality Persists in the Modern World*. Oxford: Oxford University Press.
- Ridgeway, Cecilia, and Shelley J. Correll. 2004. "Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations." *Gender and Society* 18(4):510–31.
- Risman, Barbara J. 1998. *Gender Vertigo*. New Haven, CT: Yale University Press.
- Rudman, Laurie A., Corrine A. Moss-Racusin, Julie E. Phelan, and Sanne Nauts. 2012. "Status Incongruity and Backlash Effects: Defending the Gender Hierarchy Motivates Prejudice toward Female Leaders." *Journal of Experimental Social Psychology* 48:165–79.
- Ruef, Martin. 2010. *The Entrepreneurial Group*. Princeton, NJ: Princeton University Press.
- Ruef, Martin, and Michael Lounsbury. 2007. "Introduction: The Sociology of Entrepreneurship." In *The Sociology of Entrepreneurship*, edited by Ruef, Martin, and Michael Lounsbury, 1–29. Emerald Group Publishing.
- Schumpeter, Joseph A. 1961[1934]. *The Theory of Economic Development*. New York: Oxford University Press.
- Shane, Scott. 1993. "Cultural Influences in National Rates of Innovation." *Journal of Business Venturing* 8:59–73.
- Shane, Scott, Sharon Dolmans, Joseph Jankowski, Isabelle Reymen, and Georges Romme. 2012. "Which Inventors Do Technology Licensing Officers Favor for Start-Ups?" *Frontiers of Entrepreneurship Research* 32(18):Article 1.
- Sine, Wesley D., Heather A. Haveman, and Pamela S. Tolbert. 2005. "Risky Business? Entrepreneurship in the New Independent-Power Sector." *Administrative Science Quarterly* 50:200–232.
- Singh, Jitendra V., David J. Tucker, and Robert J. House. 1986. "Organizational Legitimacy and the Liability of Newness." *Administrative Science Quarterly* 31:171–93.
- Suchman, Mark C. 1995. "Managing Legitimacy: Strategic and Institutional Approaches." *Academy of Management Review* 20(3):571–610.
- Thébaud, Sarah. 2010. "Gender and Entrepreneurship as a Career Choice: Do Self-Assessments of Ability Matter?" *Social Psychology Quarterly* 73(2):288–304.
- Tinkler, Justine E., Kjersten Bunker Whittington, Manwai C. Ku, and Andrea Rees Davies. 2015. "Gender and Venture Capital Decision-Making: The Effects of Technical Background and Social Capital on Entrepreneurial Evaluations." *Social Science Research* 51:(Forthcoming).
- Tonoyan, Vartuhi, and Richard Strohmeier. 2005. "Bridging the Gender Gap in Employment Growth: On the Role of Innovativeness and Occupational Segregation." *International Journal of Entrepreneurship and Innovation* 6(4):259–73.
- Treas, Judith, and Tsui-o Tai. 2011. "Cross-National Evidence on Trends in Support for Working Mothers." *EurAmerica* 41(4):917–47.
- Treas, Judith, and Eric D. Widmer. 2000. "Married Women's Employment over the Life Course: Attitudes in Cross-National Perspective." *Social Forces* 78(4):1409–1436.
- United Nations Development Programme (UNDP). 2009. *Human Development Report*. New York: Oxford University Press.
- Weber, Max. 1930. *The Protestant Ethic and the Spirit of Capitalism*. London: Routledge.
- World Bank Group. 2010. *International Finance Corporation: Doing Business Database*. <http://www.doingbusiness.org/economyrankings/>.
- Yang, Tiantian, and Howard E. Aldrich. 2014. "Who's the Boss? Explaining Gender Inequality in Entrepreneurial Teams." *American Sociological Review* 79(2):303–27.