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

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ABSTRACT

In this article, I develop and empirically test the theoretical argument that widely shared cultural beliefs about men’s and women’s abilities in the area of 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.
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A growing body of scholarship documents the prevalence of unconscious gender biases in modern work organizations. For instance, studies suggest that 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 for their successes, taken less seriously as a source of ideas, and held to a stricter standard of performance (Foschi 2008; Heilman 2001; Ridgeway 2011). Organizational efforts to mitigate discrimination are also often unsuccessful and may even produce the opposite of their intended outcome (Castilla and Benard 2010).

In light of these findings, it is not surprising that scholars and women business owners alike often cite entrepreneurship as a career strategy by which women may be able to limit their exposure to workplace biases (Heilman and Chen 2003; Maniero and Sullivan, 2006; Mattis 2004; Moore and Buttner 1997). And indeed, when compared to managers, entrepreneurs have greater autonomy over their work environment and are not embedded in a preexisting set of organizational roles, each of which are attached to stereotypes about performance and behavior (Reskin and Roos 1990; Ridgeway 2011). Entrepreneurs also do not typically hold the same degree of supervisory authority that most managers do, a structural position that provokes interpersonal dislike and derogation toward women (Rudman et al. 2012). But evidence suggests 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, a finding that is consistent with some women entrepreneurs’ sense that their credibility is questioned (Bigelow et al. 2011; Brooks et al. 2014; Shane et al. 2011; Tinkler et al. 2014; see Jennings and Brush 2013 for a review).
Perhaps because the bulk of prior research has focused on identifying and explaining patterns of gender bias within established organizational contexts (whether hypothetical or real), the social psychological mechanism responsible for gender bias in the entrepreneurial context 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. For instance, in the late 2000s in the 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 continue to run larger, more innovative and growth-oriented enterprises than their female counterparts (Loscocco and Bird 2012; Kalleberg and Leicht 1991; Tonoyan and Strohmeyer 2005). Most accounts for this form of inequality have focused on “supply-side” factors, such as gender differences in social 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 of these disparities in resources and perceptions. By specifying a mechanism that underpins gender biases in entrepreneurship, it is thus possible to identify the sorts of social contexts in which this “demand side” process may be relatively more or less likely to fuel to gender-unequal entrepreneurship outcomes.

The entrepreneurship context also differs from other organizational contexts because 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 encouragement and support from others. Scholars have long argued that 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). To overcome this liability, many new organizations frame their goals within widely shared cultural beliefs and/or mimic accepted organizational forms and practices. Because organizations that introduce novel products and/or processes challenge taken-for-granted ways of doing things, the individuals who found them must work extra hard to convince others that their ideas are viable (Aldrich and Fiol 1994; Schumpeter [1934] 1961; 2000; 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 interpersonal communication (Baron and Markman 2003; Lounsbury and Glynn 2001), most theory and research on organizational legitimacy has focused on organizational-level processes (Johnson et al. 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 build on studies documenting the gendered context of entrepreneurship to 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 (Ridgeway 2011; Ridgeway and Correll 2004), I argue that “gender status beliefs”—widely shared cultural beliefs which 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, acquaintances, investors, potential 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 aggregate gender composition of business owners and managers in a given societal context, as well as the gender composition of the industry.

Second, I advance theories of organizational legitimacy by investigating the extent to which gender status beliefs affect the likelihood that an innovative business idea 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 first elaborate my arguments about the role of gender status beliefs in the creation of new organizations and generate a series of propositions about the effects of gender and innovativeness on the likelihood of gaining support for a new venture. I then consider how my propositions may be moderated when gender status beliefs differ in their relevance to the entrepreneurship setting (i.e. national contexts where gender inequalities at the macro-level differ), and where the industry in question is more strongly male-typed (i.e. high-tech). I evaluate my claims with three laboratory experiments that I conducted in the United Kingdom and the United States, and then conclude with a discussion of the theoretical contributions of this research to the areas of gender, organizations, and social psychology.
GENDER STATUS BELIEFS IN ENTREPRENEURSHIP

Both survey and experimental studies indicate that men are widely believed to be more competent than women (Correll and Ridgeway 2003; Fiske et al. 2002; Williams and Best 1990). For instance, Fiske et al. (2002) found that diverse groups of US respondents rated men higher than women on a multidimensional scale of competence. This finding is echoed in experimental research suggesting that gender operates as a cue for general expectations of competence in task-oriented situations (Correll and Ridgeway 2003). This often occurs as an unconscious process. For example, gender status beliefs have been found to persist even when actors consciously express gender-egalitarian beliefs and intentions (Rashotte and Webster 2005).

More specifically, gender can be understood as a status characteristic, which is 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 in group tasks, have more influence over others, and have their performances evaluated more positively than low status actors. A status characteristic is made salient when it differentiates the actors involved, or when the characteristic is believed to be relevant to the task at hand. For example, it is in contexts where the task in question is particularly male-typed that gender status beliefs are especially likely to inform performance expectations (Ridgeway 2011).
Research widely confirms that entrepreneurship is one such male-typed task (Bird and Brush 2002; Bruni, Gerhardi, and Poggio 2004; Gupta et. al. 2009). For instance, Gupta et al. (2009) found that business students in the US, India and Turkey strongly associate entrepreneurship with “masculinity” and stereotypically masculine traits. Buttner and Rosen (1988) similarly found that American loan officers rated women as significantly less like “successful” entrepreneurs on the dimensions of leadership, autonomy, risk-taking, readiness for change, endurance, lack of emotionalism and low need for support when compared to equivalent men. Moreover, characteristics stereotypically associated with entrepreneurship (e.g. willingness to take risks, competitiveness, aggressiveness, ambition, leadership ability, business sense) are not only perceived to be more typical among men than women, but are also seen as much 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 conventional management contexts, entrepreneurship is also fraught with a high degree of uncertainty because information about the past performance of the entrepreneur and the business is lacking. Research suggests that people are more likely to rely on stereotypes in situations with high uncertainty and a lack of information (Gorman 2006; Ridgeway 2011).

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

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

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

**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; p. 67). The vast majority of organizations are reproducers: their routines and competencies largely mimic those of existing organizations. In contrast, innovator organizations depart from the standard way of doing things. Schumpeter’s widely used approach defines innovator organizations as those that introduce 1) a new product/service 2) a new method of production 3) a new market 4) a new source of supply of raw materials or 5) a new organization of an industry (Schumpeter [1934] 1961). In this section, I theorize how organizational innovation on one or more of these dimensions may moderate the effect that gender status beliefs have on evaluations of entrepreneurs and their business ideas. To do so, it is necessary to consider both 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, may 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, double standards theory posits that, as lower status group members, women tend to have their performances judged by a stricter standard than men (Foschi 1996; 2008; Foschi, Lai and Sigerson 1994). This occurs because when women perform a male-typed task well, their performances are inconsistent with expectations for women in general; as a result, their performances are more highly scrutinized. This means that women often need to 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 businesses to be perceived as being equally worthy of support.

What signals entrepreneurial ability? In addition to human capital indicators such as management, industry, or prior start-up experience, factors associated with organizational survival that are typically theorized at the organizational-level, such as organizational innovation, may also signal an entrepreneur’s ability given that, in the early stages, individual entrepreneurs effectively embody a new organization and the ideas behind it. Organization theorists argue that innovative organizations tend to encounter more social resistance than reproducer organizations (Lounsbury and Glynn 2001; Knudsen and Swedberg 2009; Schumpeter [1934] 1961; 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 or 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 (Alrich 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 (Khaire 2010; Singh et al 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 who are already disadvantaged in terms of status characteristics, and whose performances are therefore more highly scrutinized, may be at an even greater disadvantage when proposing an innovative plan because innovation is inherently 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 ways of doing things. This leads to the expectation that:

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

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

Because stereotypes about women in general don’t fit this image of the entrepreneur, 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
By better fitting this 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. In 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 stereotypical expectations 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 entrepreneurs than for men entrepreneurs, all else being equal.

Finally, if innovation has a differential impact on ratings of men’s and women’s businesses because gender is salient as a status characteristic in the setting, then ability and effort ratings should mediate the interaction effect between gender and innovation.

**CONTEXTUAL FACTORS**

As discussed, one important scope condition of status characteristics theory maintains that gender will be salient as a status characteristic in a setting when the task (i.e. entrepreneurship) is male-typed. It is plausible however that the extent to which this scope condition holds varies according to two key contextual factors: 1) the degree to which individuals in a society associate entrepreneurship and business management in general with men and 2) the degree to which individuals associate the industry of a given start-up with men.

**Societal Context**

Operationally, the first factor can be informed by the gender composition of entrepreneurship and management 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 at the macro-level. 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 with less macro-level gender inequality than in a context with more macro-level gender inequality.

In order to gain variance on macro-level inequality, I employ comparative case method 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 to one another in their levels of economic development, reliance on a “liberal” capitalist model, and shared Anglo Saxon cultural history (Esping-Anderson 1990; O’Connor et al. 1999). Laws pertaining to business start-up and ownership (World Bank 2010) as well as rates of early-stage entrepreneurial activity (Kelley et al. 2010) are also very similar.

Yet, women’s aggregate representation in entrepreneurship and managerial roles varies between the two contexts. First, gender gaps in business start-up activity are larger in the UK than in the US (Kelley et al. 2010); only 15 percent of businesses in the UK are majority female-owned, compared to 28 percent in the US (CWBR 2009; ISBE 2009). Second, women’s representation in professional and managerial positions, as well as in full-time employment overall, is higher in the US than in the UK (Mandel and Semyonov 2006; Pettit and Hook 2009). These patterns may be supported in some measure by the differing work-family policy arrangements and cultural attitudes in the two countries. For instance, mothers in the UK have
access to longer periods of paid and unpaid leave and more attractive part-time employment opportunities, both of which can limit career prospects because they interrupt and/or decrease women’s likelihood of being employed full-time (Gornick and Meyers 2009; Mandel and Semyonov 2005; O’Connor et al. 1999; Petit and Hook 2009). There is also less ideological support for married women’s, especially mothers’, full-time employment in the UK than in the US (Scott and Duncombe 1991; Treas and Widmer 2000; Treas and Tai 2011). Some have argued that these differences stem in part from the fact that, historically, Equal Opportunity lawsuits have been more frequent and more widely publicized in the US (Dex and Shaw 1986).

Notwithstanding these potential sources of variation in macro-level inequality between the two contexts, it suffices to say that because entrepreneurship and management is less male-dominated in the US than in the UK, gender should be relatively less salient as a status characteristic for entrepreneurs in a US setting than in a UK setting.¹

Industry

A 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 both 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, the task of entrepreneurship can be expected to be more strongly male-typed 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

¹Because my samples are not generalizable to the US and UK populations, I cannot evaluate the degree to which any differences in bias I detect might account for differences in aggregate gender gaps in entrepreneurship. Instead, the goal is to provide insight into why I may find different levels of support for the theoretical mechanism of status-based gender bias in each context.
compounded with status beliefs about their abilities in other male-typed domains. By comparing industry contexts, I can evaluate the extent to which any gender effects I find may be attributed to the salience of entrepreneurship as a male-typed task independently of the male-typed occupations/industries that are often endemic to it. Therefore, I propose that:

H4: There will be stronger evidence for H1 and H2 when the industry is male-dominated and requires male-typed technological skills than when the industry is gender-neutral.

METHOD

In order to evaluate my hypotheses, I conducted three experimental studies. Study 1 evaluates the effects of gender status beliefs and innovation (H1 and H2) in a UK setting. Study 2 evaluates these effects in a US setting, thus generating a cross-cultural comparison to Study 1 (H3). Finally, Study 3 evaluates these effects in a high-tech industry setting in the US, which provides a comparison to Study 2 (H4).

Laboratory experiments are particularly 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 the entrepreneurial context. Understanding this mechanism is important if a goal is to find ways to reduce the biases that women entrepreneurs have been found to experience.

I rely on university students to evaluate my theoretical claims. There were 178 participants in total (21-41 per condition). Each study was conducted at a large research university that is ranked in the top-tier of universities in its country. Studies 2 and 3 were conducted at the same university in the US, which is located in the Northeast. Participants
represented a wide range of majors, including arts and sciences, business, engineering and interdisciplinary studies. 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.  

This participant pool provides a useful test of my theoretical propositions for a number of reasons. First, my theory posits that widely shared cultural beliefs about gender systematically influence the way that the average person will react to a new business idea. If this is the case, women are less likely to receive positive feedback and support for their business ideas, and more likely to be discouraged from pursuing them further. A study based on students serves as a first step toward evaluating this general social process. This sample may also offer a conservative test of my theory given that younger, university educated people in both countries hold 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 business ideas (Entrepreneur 2013). 

This population does present limitations, however. Importantly, students are not trained to evaluate business proposals. Moreover, gender is a particularly salient aspect of the college experience. For these reasons, students may have a greater tendency to react on the basis of gender stereotypes than other adults, especially formal investors who have more experience and/or knowledge about a particular industry. Though my study cannot evaluate this possibility, it can nevertheless speak to entrepreneurship outcomes given that, in practice, formal investments are not the primary source of financial support for most new businesses (Gartner, Frid and Alexander 2012; Ruef 2010). Rather, a substantial amount of the feedback and support

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2 In supplementary analyses (not shown), I included the gender of the respondent in the models and tested the two-way interaction of participant gender and entrepreneur gender and the three-way interaction of participant gender, entrepreneur gender, and innovativeness. These effects were not significant.
that entrepreneurs receive comes from various individuals in their social network, many of whom are not formally trained to evaluate business proposals. This is increasingly the case given the rise of crowdfunding websites, where millions of untrained individuals offer support for new ventures (Mollick 2014). It also bears noting that, despite their lack of formal training in hiring practices, research comparing students’ ratings of employment applications to those of managers have found them to be quite similar (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, same level of qualifications (same age, education, occupation and managerial experience), and whose business ideas were in the same industry. Each study employed a 2x2 mixed factorial design that manipulated 1) the innovativeness of the business plan (innovative or non-innovative, within subjects) and 2) the gender of the entrepreneur (man or woman, between subjects). Therefore, each participant was asked to read about and evaluate one non-innovative entrepreneur and one innovative entrepreneur who were both either men or women. Participants were randomly assigned to one of these conditions.

This design generates a valuable test of my hypotheses for a number of reasons. First, the purpose of this project is to assess gender differences in the effect of innovativeness on evaluations of entrepreneurs. Therefore, it is important that innovativeness 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 business plans across gender (see Correll, Benard and Paik 2007 for a similar approach).
Procedure

Participants came into the lab individually and read descriptions of two entrepreneurs and their business ideas. They examined each description one at a time and I counterbalanced which business description, innovative or non-innovative, they viewed first. After reading about each entrepreneur, participants immediately completed a survey with a range of evaluation measures about the entrepreneur and the business idea and were asked to allocate investment points to each business (see “dependent measures”). Before leaving the lab, they were briefly interviewed to assess whether the experimental manipulation was successful and to determine if they had any suspicions about some aspect of 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 researchers were interested in how university students evaluate new business plans because students are increasingly starting new businesses. They were informed that the summaries were of submissions to a small business 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 opened, and that they have allocated each participant 100 points (equivalent to 100 GBP or 100 USD) to “invest” in each company as one sees fit. Each participant was told they could potentially earn a maximum of £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. They were also told they would be asked to explain their reasoning behind their decision.
The Descriptions

Each participant read two descriptions that were identical across condition, except for varying first names to manipulate gender (see below). Both entrepreneurs were described as holding undergraduate degrees from large, upper-tier universities in the UK or US (but different universities than where the study was conducted), were the same age, had five years of management experience in the industry of the start-up, and had a credit rating that met the minimum requirements for a business loan from a major UK or US bank. They were also both self-described as confident and goal-oriented.

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

Gender Manipulation—Gender was manipulated by altering the first names of the entrepreneurs. The following names were used: Laura/Julie (women) and David/ Jason (men).

Innovation Manipulation—The innovation manipulation was designed to capture the theoretical dichotomy between a business model that effectively replicates an existing organization versus one that departs from existing practices by introducing a new product or process. To make these differing levels of cognitive legitimacy explicit, the non-innovative proposals were described as “common” business plans that have “been shown to work in the
past”, whereas innovative business summaries were described as being “especially innovative”. In the gender-neutral industry descriptions (Studies 1 and 2), 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. In the male-typed industry descriptions (Study 3), 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.

Pre-tests 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. Study participants were also asked to rate how innovative they thought each business idea was on a scale ranging from 1 (“not at all”) to 5 (“extremely”). These manipulation checks confirmed that respondents perceived the innovative business summaries to be significantly more “innovative” than the non-innovative summaries ($p<0.001$ in all three studies). Most participants also described the innovative plans as more “innovative” and/or “risky” in an open response item at the end of the study. One participant in Study 1 and one participant in Study 2 were eliminated due to failed manipulation checks.

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3 The “innovative” business idea is based on a small business in Southern California that won awards for innovative business practices from its local chamber of commerce.

4 The geothermal energy description is adapted from the winning business model of an investment competition for undergraduate entrepreneurs at Princeton University.

5 These perceptions did not vary by gender of entrepreneur. Additionally, innovativeness ratings of the wine vignettes did not vary significantly by study setting.
Dependent Measures

After reading the descriptions of the entrepreneurs and their businesses, participants rated them on a series of measures.

Status Beliefs Measures—Three items capture ratings of ability and effort. These include how competent they thought the entrepreneur was overall, how skilled they were, and how committed they were to the venture. Each item was measured on a scale ranging from 1 (“not at all”) to 5 (“extremely”). After reading and rating both business summaries, participants were also asked to compare the competence of the entrepreneurs to one another. Answers ranged on a seven point scale, with 1 indicating that the entrepreneur was much less competent than the other, and 7 indicating that the entrepreneur was much more competent.

Business Evaluation Measures—Two key indicators capture perceptions of the quality of the business proposal. First, participants rated the extent to which they thought the idea was generally viable and worthy of support. Specifically, they rated how profitable they thought the enterprise would be, how competitive it would be, the extent to which it could be turned into a successful business in the long-term, and the extent to which they would personally be 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 reflecting the participant’s overall level of confidence in and support for the business idea (α = 0.75 in Study 1, α = 0.78 in Study 2, and α = 0.76 in Study 3).

The second indicator of perceived business quality reflects the number of investment points allocated to each business. (Participants were asked to divide 100 points between the two businesses). This provides a behavioral measure of support for the business model (since participants were told that their payment for participation in the study was dependent upon the
accuracy of their decision) and also serves as an indicator of the relative support for an innovative versus non-innovative business plan.

RESULTS

Study 1: Gender Status Beliefs and Innovation

Study 1 was conducted in the UK and examines my first two hypotheses about the salience of gender status beliefs in entrepreneurship (H1 and H2). Both business descriptions are in a gender-neutral industry.

Table 1 shows means by condition for Study 1. First, men are penalized for innovation: not only are male innovative entrepreneurs rated less competent than their non-innovative counterparts \((p<0.001)\), their businesses are deemed less worthy of support by both the business support index \((p<0.001)\) and the investment point allocation \((p<0.001)\). This supports the theoretical notion that individuals who start novel organizations may encounter greater resistance and may even be perceived as foolhardy. By contrast, these patterns do not hold in the female condition. Innovative women entrepreneurs are perceived to be more competent \((p<0.05; \text{relative measure}: p<0.001)\) 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 and to more robustly test for differences by experimental condition, 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. Research suggests that, even with a small sample, random effects standard errors are more efficient and less biased than standard OLS regression with robust standard errors clustered by participant ID.
(Wooldridge 2003). However, analyses using the clustered OLS strategy (see Correll, Benard and Paik 2007) produced very similar standard errors.

The estimated regression coefficients are presented in Table 2. For most of the models, the gender coefficient and the interaction between gender and innovativeness are in the opposite direction. Overall, these effects indicate that women are far less likely than men to experience a penalty for being innovative, but that participants also assign relatively lower baseline ratings to women entrepreneurs.

In support of H1, the effects for Woman Entrepreneur indicate that non-innovative women entrepreneurs are rated significantly less competent than their male counterparts ($\beta=-0.69, p<.001$). This reflects the finding that, on average, non-innovative women entrepreneurs were rated about 0.7 points lower on the 5-point competence scale than their male counterparts (mean for men=3.86; mean for women=3.17). The coefficient for the relative measure ($\beta=-1.01, p<.01$) further indicates that non-innovative women were, on average, rated less competent than their innovative female counterpart (mean=3.04), whereas non-innovative men were rated as having about the same level of competence as their innovative male counterpart (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 5-point validation index (Business Validation Index: $\beta=-0.46, p<.01$) and receive about twenty fewer investment points (investment points: $\beta=-18.96, p<.01$) when compared to their non-innovative male counterpart.

The effect of an innovative business plan on these ratings differs considerably however by gender of entrepreneur. Whereas innovative men entrepreneurs receive significantly lower competence, business validation, and business investment ratings than their non-innovative male counterparts, the significant and positive innovative*woman interaction for these measures
indicates that innovative women entrepreneurs do not experience such penalties. This supports the theory that by better fitting the agentically masculine stereotype of an entrepreneur, innovative women may signal additional “evidence” of entrepreneurial ability (H2b). This dynamic appears to buffer them from the skepticism that innovation might otherwise trigger.

*Mediation Analysis*

In order to complete my argument that gender status beliefs play a role in explaining gender-differentiated patterns in levels of support for a new enterprise, I need to give evidence that these discrepancies arise because gender differentially informs the performance expectations that people hold for a given entrepreneur. According to status characteristics theory, people have lower expectations for women’s competence at the male-typed task of entrepreneurship. It is these lower expectations that lead them to be less likely to support women’s non-innovative businesses than men’s non-innovative businesses, and also to rate women more positively when innovative ideas are considered. If the theory is correct, then evaluations of competence should mediate these gender effects. To evaluate this argument, I add the competence measure as an independent variable to the models predicting business evaluations in Table 3. Because the investment point measure reflects the relative amount invested in each business plan, I use the relative competence measure to mediate this variable.

Not surprisingly, higher competence ratings lead to 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 magnitude of the interaction effect between gender and innovativeness
was reduced by 43 percent for business support and 48 percent for investment points. These models suggest that the participants rated women’s businesses differently from men’s largely because women entrepreneurs were believed to be 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 and suggests 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) appear to 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 which ideas) come to be selected into the surviving organizational population.

These results also support H2b: innovation is more positively associated with ability ratings for women than for men. This suggests that women entrepreneurs may need to demonstrate more evidence of entrepreneurial ability than their male counterparts do. By introducing an innovative business model, 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 that they might otherwise experience.

6 Alternative models that further included the interaction between the competence measures and innovation produced highly similar results. These interactions are not statistically significant.
Though these findings tend to 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. Addressing this issue is the objective of Study 2.

**Study 2: Comparing Study Settings**

Study 2 evaluates my third hypothesis that the salience of gender status beliefs in the area of entrepreneurship will vary across settings where the activity of entrepreneurship is more male-typed at the macro-level (i.e. where there is more macro-level inequality). In this study, the business descriptions and procedures were identical to those of Study 1, but the setting was at a US rather than a UK 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 appears to garner some social (though not financial) rewards, given that innovative men are rated more competent ($p<.01$) and committed ($p<.01$) than their 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. These significance tests 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, innovativeness and gender of entrepreneur (pooled models not shown but available upon request).
These models show that, consistent with H3, the gender effects in Study 2 follow the same pattern as Study 1, but many are smaller in magnitude than in Study 1. For example, similar to the competence ratings in Study 1, non-innovative women entrepreneurs were perceived to be significantly less skilled than their male counterparts ($\beta=-0.32, p<.05$) (a penalty of about a third of a point on a 5-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 in general, rating them to be 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.

**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 entrepreneurs than men entrepreneurs (H2b).
The significantly weaker gender effects in the US setting versus the UK setting (H3) suggests 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. Nevertheless, bias in entrepreneurial ability was detected with the skill measure in the US setting, but the competence measure in the UK setting. Although this discrepancy was unexpected, it is possible that “competence” is interpreted as a general indicator of ability, whereas “skill” implies a level of specific know-how that has been learned. If so, UK respondents may be more likely to view women as generally less able to be entrepreneurs, whereas US respondents may be more likely to view women as less technically 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 levels of business viability, whereas participants in the US setting produced biased evaluations of women’s skills, but far less biased ratings on the business evaluation variables.

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 generally higher status and lower level of skepticism associated with innovative entrepreneurs in the US may not be surprising in light of the fact that American culture is characterized by a uniquely strong tradition of entrepreneurship and innovation (Schumpeter [1934] 1961; Shane 1993; Weber [1904] 1930).

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

**Study 3: Industry Effects**

Study 3, which was conducted at the same university as Study 2, was designed to test my fourth hypothesis about whether findings differ when the industry of the businesses being considered is male-dominated and requires male-typed technological skills. Accordingly, the design for Study 3 was identical to Studies 1 and 2, but the business descriptions were in a high-tech industry.

Table 6 shows means by condition for Study 3. Similar to Study 2, innovative male entrepreneurs are perceived to be relatively more competent ($p<.05$) and committed ($p<.01$) 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 are actually more likely to think an innovative versus a non-innovative woman’s company is worthy of support ($p<.05$), which reflects a bonus of about a third of a point on the 5-point Business Validation Index.

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

Overall, the patterns of effects in Table 7 are in many ways 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 for men. This finding is similar to both business evaluation measures in Study 1 and the investment point measure in Study 2. Also, like Study 2, gender bias is most apparent in ratings of entrepreneurial skill: participants find 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 gender effects would be larger in a high-tech industry (H4). In Study 3, women entrepreneurs received somewhat lower competence ratings than their male counterparts, 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 likelihood is also 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 and research, 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 or not. 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, in 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). Second, innovation was more strongly and positively associated with performance expectations for women than men. This finding supports the theoretical proposition that innovativeness may provide additional evidence of entrepreneurial ability for women: rather than exacerbating disadvantage (H2a), innovativeness mitigates gender bias by counteracting, to some extent, lower expectations for women’s ability to be a successful entrepreneur (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 agentically 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 viewed as less competent and worthy of support than their non-innovative male counterparts. In the US studies, innovative men were viewed as more competent and committed, though they were not rated as any more or less worthy of support than their male 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 that 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 ability in the domain of entrepreneurship.

Third, micro-level gender biases were more salient in settings where macro-level gender inequality was more pronounced. Specifically, gender effects were stronger in study settings
where gender could be expected to be more salient as a status characteristic: the UK, a context where there is more gender inequality in entrepreneurship and business management in general, and a high-tech industry, which is male-dominated and requires male-typed skills. As the comparisons in effect sizes between studies indicate, the societal context substantially affected the salience of gender status beliefs in the entrepreneurship setting, whereas differences by industry composition were less pronounced. This suggests that gender status beliefs about the activity of entrepreneurship \textit{in general} likely carry greater responsibility for gender bias in entrepreneurship than do status beliefs about industry-specific skills.

Because most social interactions are complicated by a multitude of factors, it is difficult to use observational techniques to systematically assess status-based cognitive biases. In this regard, testing the theory in a controlled laboratory setting was advantageous. This method also avoids the problem of sampling on the dependent variable (e.g. interviewing successful entrepreneurs). One limitation however is that experiments 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 \textit{vis-à-vis} other factors.

Additionally, although the general 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, while this study’s objective was to investigate the effect of organizational innovations within broad 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 any existing products, processes, and organizations in the economy. It is also possible that participants may have reacted differently had the organizational innovations centered on novel processes, such as methods of production or supply chains, rather than new products and services. Investigating how differing degrees and forms of innovativeness trigger differing levels of skepticism would be a key question for future research.

THEORETICAL CONTRIBUTIONS AND NEXT STEPS

This research makes several important theoretical contributions in the areas of gender inequality, organizations, and social psychology. To begin, I show that, despite being less constrained by preexisting organizational roles and hierarchies, 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. These status beliefs not only distort the perceived quality and viability of new business ideas, but are also more likely to disadvantage women entrepreneurs in the societal and industry contexts where they are most underrepresented at the aggregate-level. 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
domain of entrepreneurship.

The broader 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 Strohmeyer 2005) and 2) women are vastly underrepresented among entrepreneurs in most societal contexts (Kelley et al. 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. As such, 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.

If a goal is to reduce inequality, my findings imply that, net of human, social or financial capital, women could mitigate their vulnerability to status biases by strategically highlighting their innovativeness. However, this strategy would not address the underlying root of status beliefs themselves given that macro-level inequality conditions their degree of relevance. From this perspective, solutions would have to come from changes in the interrelated social and economic institutions that lend support to stereotyping processes. Therefore, the problem of gender inequality in entrepreneurship should be understood as a problem of how the cognitive frameworks through which people think about the activity of entrepreneurship are embedded in a larger system of gender inequality in the labor market.

This study also introduces a new method of evaluating how certain forms of gender inequality are produced and 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 the gender structure in part through their influence on micro-level social interactions (Ridgeway and Correll 2004; Risman 1998).

Next, my findings contribute to organizational theory by suggesting that the rise of novel organizations, and in the aggregate, market change, can be understood to be, at least in part, a function of status beliefs. This not only offers a micro-level mechanism for understanding why some innovative 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). While 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 theoretical perspectives on 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, the organizational populations that eventually become 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 research on status beliefs to nascent entrepreneurship, a situation fraught with a high degree of uncertainty. This is in contrast to most previous work, which focuses 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 these gendered patterns of feedback persist in field settings, if possible, and among different samples of study participants, especially those that provide formal sources of feedback to entrepreneurs, such as investors or educators. This 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. 2014). Another important step would be to broaden the scope conditions of my account. For instance, Yang and Aldrich’s (2014) findings suggest that women need to demonstrate more consistent evidence of merit before they take the lead on entrepreneurial teams, a dynamic which may be fueled by gender status beliefs. Status beliefs may also influence the degree to which individuals are able to garner support for innovative ideas within organizations.
Lastly, although I evaluated gender as one relevant status characteristic in the context of entrepreneurship, similar processes may occur along the lines of other diffuse status characteristics, such as age, nationality, class, and race. Thus, status beliefs may be one common lens for understanding the micro-level processes that underpin macro-level patterns of stratification in entrepreneurship.
REFERENCES


Entrepreneurship: An Ethnographic Account of Intertwined Practices.” Gender, Work

Buttner, E. Holly, and B. Rosen. 1988 “Bank loan officers’ perceptions of the characteristics of


Center for Women’s Business Research (CWBR). 2009. The Economic Impact of Women-
Owned Businesses in the United States. McLean, VA: CWBR.


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.

Academic Press.


Institutionalism in Organizational Analysis, edited by W. W. Powell and P. J. DiMaggio.
Chicago: University of Chicago Press.

http://www.entrepreneur.com/article/228405


http://www.isbe.org.uk/facts


Prentice, Deborah 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): 269-281.

Rashotte, Lisa S. and Murray Webster, Jr. 2005. “Gender Status Beliefs.” *Social Science Research.* 34: 618-633.


Reskin, Barbara and Patricia Roos. 1990 *Job Queues, Gender Queues.* Temple University.


Shane, Scott, Sharon Dolmans, Joseph Jankowski, Isabelle Reymen, and Georges Romme. 2012. "Which Inventors do Technology Licensing Officers Favor for Start-Ups?" *Frontiers of*


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

<table>
<thead>
<tr>
<th>Status Variables</th>
<th>Male Entrepreneurs</th>
<th>Female Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Innovative</td>
<td>Innovative</td>
</tr>
<tr>
<td>Competence</td>
<td>3.86 (0.57)</td>
<td>3.14 (0.79)**</td>
</tr>
<tr>
<td>Relative Competence</td>
<td>4.05 (1.32)</td>
<td>3.95 (1.32)</td>
</tr>
<tr>
<td>Skill</td>
<td>3.29 (0.56)</td>
<td>3.05 (0.92)</td>
</tr>
<tr>
<td>Commitment</td>
<td>3.90 (0.62)</td>
<td>4.10 (0.88)</td>
</tr>
<tr>
<td>Evaluation Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Validation Index</td>
<td>3.31 (0.67)</td>
<td>2.49 (0.69)***</td>
</tr>
<tr>
<td>Investment Points</td>
<td>68.33 (19.65)</td>
<td>31.67 (19.65)***</td>
</tr>
</tbody>
</table>

**Notes:** Standard deviations shown in parentheses.  
*p < .05 one-tailed test for means between innovators and non-innovators; **p < .01, ***p < .001

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

<table>
<thead>
<tr>
<th>Status Variables</th>
<th>Evaluation Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence</td>
<td>Validation Index</td>
</tr>
<tr>
<td>Innovative Entrepreneur</td>
<td>-0.71***</td>
</tr>
<tr>
<td>Woman Entrepreneur</td>
<td>-0.69***</td>
</tr>
<tr>
<td>Innovative*Woman Entrepreneur</td>
<td>1.09***</td>
</tr>
<tr>
<td>Intercept</td>
<td>Investment Points</td>
</tr>
<tr>
<td>Innovative Entrepreneur</td>
<td>3.86***</td>
</tr>
<tr>
<td>Woman Entrepreneur</td>
<td>4.05***</td>
</tr>
</tbody>
</table>

**Notes:** Standard errors shown in parentheses.  
*p < .05; **p < .01; ***p < .001

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

<table>
<thead>
<tr>
<th>Validation Index</th>
<th>Investment Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative Entrepreneur</td>
<td>-0.57 (0.19)***</td>
</tr>
<tr>
<td>Woman Entrepreneur</td>
<td>-0.22 (0.19)</td>
</tr>
<tr>
<td>Innovative*Woman Entrepreneur</td>
<td>0.51 (0.27)*</td>
</tr>
<tr>
<td>Competence</td>
<td>0.35 (0.09)***</td>
</tr>
<tr>
<td>Relative Competence</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.95 (0.40)***</td>
</tr>
</tbody>
</table>

**Notes:** Standard errors shown in parentheses.  
+p < .10; *p < .05; **p < .01; ***p < .001
### Table 4. Means for Status and Evaluation Variables by Gender and Innovativeness of Business Plan, Study 2

<table>
<thead>
<tr>
<th></th>
<th>Male Entrepreneurs</th>
<th>Female Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Innovative</td>
<td>Innovative</td>
</tr>
<tr>
<td><strong>Status Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>3.68 (0.72)</td>
<td>3.93 (0.77)</td>
</tr>
<tr>
<td>Relative Competence</td>
<td>3.46 (1.50)</td>
<td>4.54 (1.50)**</td>
</tr>
<tr>
<td>Skill</td>
<td>3.57 (0.74)</td>
<td>3.68 (0.47)</td>
</tr>
<tr>
<td>Commitment</td>
<td>3.68 (0.72)</td>
<td>4.21 (0.68)**</td>
</tr>
<tr>
<td><strong>Evaluation Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Validation Index</td>
<td>3.07 (0.10)</td>
<td>2.94 (0.13)</td>
</tr>
<tr>
<td>Investment Points</td>
<td>53.57 (24.72)</td>
<td>46.43 (24.72)</td>
</tr>
</tbody>
</table>

*Notes: Standard deviations shown in parentheses.
*p < .05 one-tailed test for means between innovators and non-innovators; **p < .01, ***p < .001

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

<table>
<thead>
<tr>
<th></th>
<th>Status Variables</th>
<th>Evaluation Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competence</td>
<td>Relative Competence</td>
</tr>
<tr>
<td>Innovative Entrepreneur</td>
<td>0.25***†††</td>
<td>1.07***††</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Woman Entrepreneur</td>
<td>0.23†††</td>
<td>0.07†</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>Innovative*Woman Entrepreneur</td>
<td>0.06†††</td>
<td>-0.13††</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.55)</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.68***</td>
<td>3.46***</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.28)</td>
</tr>
</tbody>
</table>

*Notes: Standard errors shown in parentheses.
+p < .10; *p < .05; **p < .01, ***p < .001; †Coefficients differ significantly from Study 1 at p<.05; †† p<.01; ††† p< .001
Table 6. Means for Status and Evaluation Variables by Gender and Innovativeness of Business Plan, Study 3

<table>
<thead>
<tr>
<th></th>
<th>Male Entrepreneurs</th>
<th></th>
<th>Female Entrepreneurs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Innovative</td>
<td>Innovative</td>
<td>Non-Innovative</td>
<td>Innovative</td>
</tr>
<tr>
<td><strong>Status Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>3.88 (0.55)</td>
<td>4.03 (0.47)</td>
<td>3.73 (0.59)</td>
<td>4.02 (0.57)*</td>
</tr>
<tr>
<td>Relative Competence</td>
<td>3.66 (1.26)</td>
<td>4.34 (1.26)*</td>
<td>3.88 (1.33)</td>
<td>4.12 (1.33)</td>
</tr>
<tr>
<td>Skill</td>
<td>3.81 (0.64)</td>
<td>3.88 (0.66)</td>
<td>3.46 (0.67)</td>
<td>3.82 (0.67)**</td>
</tr>
<tr>
<td>Commitment</td>
<td>3.81 (0.59)</td>
<td>4.25 (0.67)**</td>
<td>3.66 (0.85)</td>
<td>4.12 (0.75)**</td>
</tr>
<tr>
<td><strong>Evaluation Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Validation Index</td>
<td>3.23 (0.49)</td>
<td>3.20 (0.11)</td>
<td>3.14 (0.65)</td>
<td>3.49 (0.69)*</td>
</tr>
<tr>
<td>Investment Points</td>
<td>48.34 (3.84)</td>
<td>51.53 (3.86)</td>
<td>46.90 (3.63)</td>
<td>52.85 (3.65)</td>
</tr>
</tbody>
</table>

Notes: Standard deviations shown in parentheses.
* p < .05 one-tailed test for means between innovators and non-innovators; ** p < .01, *** p < .001

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

<table>
<thead>
<tr>
<th></th>
<th>Status Variables</th>
<th>Evaluation Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competence</td>
<td>Relative Competence</td>
</tr>
<tr>
<td>Innovative Entrepreneur</td>
<td>0.20*</td>
<td>0.65*</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Woman Entrepreneur</td>
<td>-0.11 b</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.29)</td>
</tr>
<tr>
<td>Innovative*Woman</td>
<td>0.07</td>
<td>-0.40</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>(0.13)</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.85***</td>
<td>3.67***</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.23)</td>
</tr>
</tbody>
</table>

Notes: Standard errors shown in parentheses.
+ p < .10; * p < .05; ** p < .01; *** p < .001; a Coefficients differ significantly from Study 2 at p < .10; b p < .05