



The Role of Social Self-Concept in the Relationship Between Gender, Sexual Orientation, and Entrepreneurial Intentions

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Abstract. Most research on gender and entrepreneurship has found that women tend to express lower levels of entrepreneurial intentions than their male counterparts. However, studies have not been conclusive regarding the mechanism explaining this gender difference. The purpose of our study is to present and empirically test a model that identifies students' social self-concept, defined as perceptions about their abilities and confidence in social situations, as a critical intervening factor in the relationship between gender and entrepreneurship intentions. In a study of university students in the western U.S., we found that having a strong, positive social self-concept acted as a buffer in the relationship between gender and entrepreneurial intentions for heterosexual persons. In contrast, we did not find such a buffer effect for sexual minorities. We discuss how interventions aimed at boosting individuals' interest in entrepreneurship could target minority groups differently than majority groups.

Keywords: social self-concept, entrepreneurial intentions, gender, sexual orientation.

1. Introduction

Entrepreneurship, particularly in the U.S., has exhibited a downward trend in recent years, due to a variety of factors, including competition from corporations, rising debt, and increased government regulation (Guzman & Stern, 2020; Lambert, 2019). Given entrepreneurship's well-regarded socio-economic benefits, research has investigated the set of factors associated with individuals' desire to become an entrepreneur (Maes et al., 2014). The relationship between gender and entrepreneurship has received considerable attention in recent years, as increasing numbers of women and sexual minorities, i.e. those whose sexual identity, orientation or practices differ from the majority of society (Math & Seshadri, 2013), have become entrepreneurs in the past several decades (Camelo-Ordaz et al., 2016; Deutsch, 2016; Schindehutte et al., 2005). Research has shown that female and non-heterosexual entrepreneurs play a key role in economic

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growth and poverty reduction (Deutsch, 2016; Shinnar et al., 2018). Yet, due to the unique challenges experienced by minority entrepreneurs, fewer women and non-heterosexuals are interested in starting a business (Schindehutte et al., 2005; Shinnar et al., 2018).

Intentions to start one's own business have been widely regarded as a first step in the entrepreneurial sequence, and have been found to be good predictors of future behavior (Sánchez & Licciardello, 2012; Shinnar et al., 2018). Given that entrepreneurship is a carefully planned behavior, examining individuals' entrepreneurial intentions is especially relevant (Sánchez & Licciardello, 2012). In this study, we examine gender differences in the entrepreneurial motivations of university students. This focus on young adults is thought to be particularly appropriate to the examination of entrepreneurial motivations, given that, in a short time, these individuals will need to make a career choice and their intentions are, thus, premeditated (Caro-González et al., 2017).

Most research on the issue has found that women tend to express lower levels of entrepreneurial intentions than their male counterparts (e.g., Camelo-Ordaz et al., 2016). However, studies have not been conclusive regarding the mechanism explaining this gender difference. The purpose of our study is to present and empirically test a model that identifies university students' social self-concept (Byrne & Shavelson, 1996; Shavelson et al., 1976; Zorich & Reynolds, 1988), defined as perceptions about their abilities and confidence in social situations, as a critical intervening factor in the relationship between gender, sexual orientation, and entrepreneurial intentions. In particular, we expect that having a strong, positive social self-concept will act as a buffer in the relationship between gender and entrepreneurial intentions. In addition, we examine the role of sexual orientation in this relationship. Specifically, we propose that, given the severity of the discrimination and harassment that sexual minorities endure in the workplace (e.g., Howell, 2002; Galloway, 2007) and in society at-large (e.g., Herek, 2009; Swim et al., 2009), social self-concept will not be sufficient to mitigate the effects of gender issues on entrepreneurial intentions for this group.

2. Literature Review and Hypotheses

2.1. Gender and Entrepreneurship

Research has found that significantly fewer women than men become entrepreneurs (Camelo-Ordaz et al., 2016; Sánchez & Licciardello, 2012; Santos et al., 2016; Shinnar et al., 2018). In a study of entrepreneurial motivations, Cromie (1987) found that both men and women in Northern Ireland desired autonomy, achievement, job satisfaction, and other non-economic rewards. However, women, in particular, assigned a lower priority to making money and

wanted to own their own business as a way to escape job dissatisfaction. In addition, a growing body of research has found that many women chose entrepreneurship as a way to balance work and family demands (Bögenhold & Klinglmair, 2015; Cho et al., 2021; Cromie, 1987; Maes et al., 2014).

Even though researchers have suggested that men and women entrepreneurs have similar levels of performance (Marlow & McAdam, 2013; Marlow & Martinez Dy, 2018), women entrepreneurs tend to experience more financial (Santos et al., 2016) and discriminatory (Conti et al., 2018) barriers than men, and tend to be less visible (Harrison et al., 2015). For instance, in a study of funding outcomes, prospective women entrepreneurs in the U.S. encountered significantly more discrimination from banks and loan officers than their male counterparts (Thébaud & Sharkey, 2016). In a recent literature review, Krieger et al. (2018) proposed that women may have less work-related skill variety needed for entrepreneurship as a result of discrimination in the labor market.

One of the reasons for the discrimination and gender differences in entrepreneurial intentions is that entrepreneurship is often stereotyped as a career for men, rather than women, according to a recent study conducted in the Netherlands (Bloemen-Bekx et al., 2019). People tend to perceive entrepreneurship with traits associated with men, such as competitiveness and rational thinking whereas traits that are perceived as female, such as sensitivity and intuition (Bruni et al., 2004; Hamilton, 2013) or community and expression (Sánchez & Licciardello, 2012; Wang et al., 2016; Zisser et al., 2019), do not tend to be associated with perceptions of entrepreneurship. These stereotypes are powerful because research has found that people tend to seek jobs that are viewed as socially acceptable for their gender, while avoiding those considered less suitable for their gender (Shinnar et al., 2018).

Research has also shown that some women's entrepreneurial intentions are lower due to their lower self-efficacy perceptions, or a perceived lack of control (Maes et al., 2014). In a study of Belgian management students, Maes et al. (2014) found that women assign a greater priority to having sufficient knowledge and abilities than men. In particular, they found that women exhibited lower internal perceptions of control than men. The researchers explained this finding by suggesting that, because entrepreneurial skills are often stereotyped as those of males, women perceive lower levels of self-confidence. A key implication of their findings is that internal, instead of external, perceptions of control appear to influence gender differences in entrepreneurial intentions.

Caro-González et al. (2017) suggested that social norms can also help explain the gender differences in entrepreneurial intentions. In a study of journalism students in Spain, they found that women's entrepreneurial intentions were driven by whether their immediate environment viewed entrepreneurship favorably. This finding may be due to the fact that women's lower levels of self-concept lead them to seek support beyond the perception of their own abilities. Based on a review of the literature, we offer the following:

Hypothesis 1: Women will have lower entrepreneurial intentions than men.

2.2. Gender and Social Self-Concept

An individual's self-concept is believed to be made up of general, academic, social, emotional, and physical factors (Shavelson et al., 1976). As noted earlier, social self-concept (Byrne & Shavelson, 1996; Shavelson et al., 1976; Zorich & Reynolds, 1988) refers to students' beliefs about their abilities and confidence in social situations. In terms of general or overall self-concept, most research has found that males tend to have higher self-concepts than females (Kling et al., 1999; Nolen-Hoeksema, 2001). In a review of this literature, Harter (2006) found that girls report lower self-concept than boys beginning in middle to late childhood, with differences reaching the highest point in middle to late adolescence. In a longitudinal study of gender differences in general self-concept among students in grades 7 to 12, De Fraine et al. (2007) found that all students' self-concept scores decreased over time due to their growing ability to realistically assess their own abilities, but females' perceptions decreased significantly more quickly than males' perceptions. In addition, a study of gifted adolescents, defined as those with high academic ability, found that males did not exhibit changes in self-concept across grades, but females exhibited a decline in almost every domain of self-concept as the grade increased from 8 to 11 (Rudasill et al., 2009).

It should be noted that not all studies involving gender and self-concept have yielded consistent results, and more studies have focused on general self-concept rather than social self-concept specifically. Some research did not detect a significant gender difference in the social self-concept perceptions of primary and high school students (Au et al., 2009; Cross, 2013; Rinn, 2006). Further, a study by Worrell et al. (1998) found that gifted girls aged 12-18 had higher social self-concept than their male counterparts. Another study by Blomfield Neira and Barber (2014) also found that girls in a diverse set of Australian high schools had higher social self-concept than boys. However, it has been argued that some of these findings may be due to the younger age of the sample (Rinn, 2006), given that general self-concept has been found to decline as females age (Rudasill et al., 2009). Taking this into account, and the fact that our current sample includes students in an older age group than most of the existing studies, we hypothesize the following:

Hypothesis 2: Women will have lower social self-concept perceptions than men.

2.3. Social Self-Concept and Entrepreneurial Intentions

In order to demonstrate that social self-concept acts as a mediator in the relationship between gender and entrepreneurial intentions, we must first offer evidence of an association between social self-concept and entrepreneurship intentions. Research has found that perceptual factors play a major role in the formation of entrepreneurial intentions (Camelo-Ordaz et al., 2016; Koellinger et al., 2013). For instance, as noted earlier, research has suggested that self-efficacy perceptions influence entrepreneurial intentions (Maes et al., 2014). Pihie and Bagheri (2013), in a study of Malaysian university students, found that entrepreneurial self-efficacy, i.e. perceptions of one's ability to successfully perform entrepreneurial tasks, was positively related to entrepreneurial intentions. Similarly, in a study of unemployed individuals in Poland, Laguna (2013) found that entrepreneurial self-efficacy, general self-efficacy, and global self-esteem were positively associated with entrepreneurial intentions.

Perceptions about one's abilities, such as these, have been linked with entrepreneurship because those with high self-concepts believe they can bring about change, a key feature of entrepreneurship (Wang et al., 2016). When would-be entrepreneurs believe that their abilities are greater than those of others, they are likely to perceive that they have a superior likelihood of being able to achieve change outcomes required in entrepreneurship (Wang et al., 2016). Conversely, people with low self-concepts avoid tasks that involve risks, such as those required for entrepreneurship (Laguna, 2013).

We propose that one's social self-concept is a particularly relevant element of the self that drives entrepreneurial intentions. Research has begun to recognize that social capital is just as important to becoming an entrepreneur as financial capital (Zisser et al., 2019). In a study of young entrepreneurs who recently started a business, Garaika and Margahana (2019) found that self-personality, which encompasses an individual's ability to manage social networks, was positively associated with individuals' entrepreneurial intentions. Although scant existing research has examined the relationship between having a strong social self-concept and entrepreneurial intentions, it has been suggested that individuals who have a close network of family, friends, and acquaintances enjoy the advantages of mentoring and legitimacy that might influence entrepreneurship intentions (Santos et al., 2016). Feeling comfortable in social situations and perceiving that social support exists should offer individuals the confidence that is needed to start a business. Accordingly, we propose the following:

Hypothesis 3: Social self-concept perceptions will positively influence entrepreneurial intentions for all subjects.

2.4. The Role of Social Self-Concept in the Relationship Between Gender and Entrepreneurial Intentions

As suggested earlier, we believe that a key explanation for gender differences in entrepreneurial intentions may be that social self-concept is intervening in the relationship between gender and entrepreneurial intentions. In a related study, Camelo-Ordaz et al. (2016) reported that entrepreneurial self-efficacy, the ability to recognize opportunities, and a fear of failure mediated the relationship between gender and entrepreneurial intentions. The researchers explained their findings by suggesting that, because women do not have as many early career experiences, social support, or entrepreneurial role models as men, they have lower entrepreneurial self-efficacy levels, which drive their entrepreneurial intentions. Similarly, Noguera et al. (2013) suggested that women's entrepreneurial intentions were associated with their self-assessment of whether their skillset was sufficient. However, it is interesting to note that, in a study of university students in Spain, Ward et al. (2019) did not find gender differences in entrepreneurial knowledge perceptions. It may be that other elements of the self, rather than perceptions of one's knowledge of entrepreneurship concepts, are driving gender differences in entrepreneurial intentions.

As mentioned earlier, Maes et al. (2014) found that women exhibited lower internal perceptions of control than men. They argued that, because entrepreneurial skills are often stereotyped as those of males, women perceive lower levels of self-confidence. Likewise, Sánchez and Licciardello (2012) suggested that being a woman or a man prompts different gender expectations, which can result in women and men experiencing different opportunities and treatment in their careers.

Thus, we propose that social self-concept may act as a buffer in the relationship between gender and entrepreneurial intentions. Although we are not aware of any previous research that has examined social self-concept as a mediator in this relationship, there is research in the social persuasion area from which to make predictions. Bloemen-Bekx et al. (2019) found that greater social persuasion was positively associated with the entrepreneurial intentions of young adults with entrepreneurial parents. The researchers defined social persuasion as the degree of encouragement parents offer to their kids concerning a specific career path. Hence, parents learn and then tell/persuade their children that they possess the capabilities to become an entrepreneur. It may be that social self-concept acts in a similar way as social persuasion. If women have a strong social self-concept, they may be less likely to believe the stereotype that males have stronger entrepreneurial skills, and should exhibit higher entrepreneurial intentions. This line of thinking is consistent with that of Santos et al. (2016), who suggested that social support would be particularly important to women considering entrepreneurship because they are more concerned about access to social resources due to gender stereotypes and barriers to starting a business.

Indeed, in a longitudinal study of management students, Shinnar et al. (2018) found that less social support made women who intended to become an entrepreneur less likely to actually do so.

Koellinger et al. (2013) argued that, when perceptual variables are considered, the explanatory capabilities of demographic variables such as age, education, work status, and household income in the relationship with entrepreneurial intentions decrease significantly. However, other research has contradicted this finding. For instance, in a study of adolescents, Wilson et al. (2009) found that entrepreneurial self-efficacy did not mediate the relationship between gender and entrepreneurial intentions. Indeed, research on the effect of perceptual factors in explaining the gender differences in entrepreneurial intentions remains limited and inconclusive (Camelo-Ordaz et al., 2016). However, we propose that a key reason that entrepreneurial self-efficacy (Wilson et al., 2009) and perceptions of entrepreneurial knowledge (Ward et al., 2019) did not mediate the relationship between gender and entrepreneurial intentions in previous research is that social self-concept instead is the critical variable intervening in this relationship.

Hypothesis 4: Social self-concept perceptions will mediate the influence of gender on entrepreneurial intentions for heterosexual subjects.

2.5. The Role of Sexual Orientation in Entrepreneurial Intentions

Galloway (2007) has argued that research should examine the role of sexual orientation in entrepreneurial intentions. Research has argued that sexual minorities tend to conceal their sexual orientation at work out of fear of repercussions from management and co-workers (Galloway, 2007). Indeed, a recent U.S. study by Cipriakis et al. (2020) revealed significant employment and wage inequalities for sexual minorities. Concealing one's identity is associated with significant levels of stress, and anxiety, and lower levels of satisfaction and performance (Galloway, 2007). As a result, sexual minorities may be less likely to desire to become an entrepreneur, due to the greater potential challenges associated with concealing one's identity while being required to interact with a greater number of individuals, in their role as the head of the organization. Howell (2002) argued that sexual minorities experience particular difficulties as entrepreneurs when their main consumer base is heterosexual. Specifically, she suggested that they are susceptible to losing business or even face vandalism if they do not conceal their sexual orientation. A large study of gay entrepreneurs in the U.S. found that these concerns rang true in the study's sample (Schindehutte et al., 2005). In addition, Deutsch (2016) found that it is particularly challenging for sexual minority entrepreneurs to raise money from early-stage angel and venture-capital investors. Interestingly, her study revealed that when sexual

minorities conceal their sexual orientation, it can be self-defeating because being authentic is a key factor in building trusting relationships with investors.

In contrast with the research identifying the unique challenges of entrepreneurship for sexual minorities, others have argued that non-heterosexuals may actually be more likely to become self-employed in order to gain some autonomy from harassment or discrimination in the workplace (Varnell, 2001). Yet, in Schindehutte et al.'s (2005) study, they found no evidence of negative motivations related to entrepreneurship intentions. Interestingly, Conti et al. (2018) found that workplace antidiscrimination policies discourage entry into entrepreneurship because they increase the desirability of one's current job and increase the opportunity cost of entrepreneurship. In a study in France, Germon et al. (2019) found that sexual minorities had higher levels of entrepreneurial intentions than heterosexuals; however, the authors noted that their finding may have been affected by the study's LGB-friendly location. It is important to note that, even in the LGB-friendly location of Germon et al.'s (2019) study, sexual minorities expressed significantly lower levels of self-esteem than heterosexuals. Clearly, more research is needed in the area of sexual orientation and entrepreneurship intentions to further clarify this relationship.

Given the severity of the discrimination and harassment that sexual minorities endure in the workplace, we propose that having a strong, positive social self-concept will not be enough to mitigate the effects of sexual orientation on entrepreneurial intentions.

Hypothesis 5: Social self-concept perceptions will not mediate the influence of gender on entrepreneurial intentions for non-heterosexual subjects.

3. Methods

3.1. Sample

Nine hundred sixty-four first-year students (51.8% women, 90% heterosexual, 30.4% white/Caucasian) at a small, private university in California completed the Cooperative Institutional Research Program (CIRP) survey at the start of the school year. Social science research comparing student samples with non-student samples has recommended considering whether a student sample offers an appropriate perspective for the particular area of interest (Ashraf & Merunka, 2017). As noted earlier, we sought a university student sample because, in a short time, these individuals will need to make a career choice and their intentions are, thus, premeditated (Caro-González et al., 2017). The CIRP survey has been used by universities for over 50 years to reveal first-year students' background attributes, high school experiences, perceptions, behaviors, and anticipations

about college. Managed by the Higher Education Research Institute at UCLA, the survey has been administered to more than 15 million students at over 1,900 institutions of higher education. Its goal is to inform educational policy and promote continuous improvement by promoting an understanding of the impact of higher education on college students. The items, devised by the Higher Education Research Institute, are often used to make comparisons across universities. Thus, we did not have the opportunity to modify the items in any way. The CIRP survey does not ask about the respondent's age, but 87.6% graduated from high school in 2018, the year the survey was administered.

3.2. Measures

Gender. Gender was assessed by "What is your current gender identity?" (1 = "Man," 2 = "Woman").

Sexual Orientation. Sexual orientation was assessed by "What is your sexual orientation?" Options included "heterosexual/straight," "gay," "lesbian," "bisexual," "queer," "pansexual," "asexual," and "not listed above." Given the small number of participants in each of the categories other than heterosexual, responses were combined into two categories: (1 = "heterosexual/straight," 2 = "non-heterosexual") so that there would be adequate statistical power to test the model.

Social self-concept. Social self-concept represents one's perception of his or her social competence with respect to social interaction with others and derives from the assessment of one's behavior within a given social context. A scale ($\alpha = 0.80$) similar to that used by Au et al. (2009) was created to measure social self-concept. For example, "Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself: Self-confidence (Social)." Each item was rated on a scale of: 1 = "lowest 10%," 2 = "below average," 3 = "average," 4 = "above average," and 5 = "highest 10%."

Entrepreneurial intentions. An entrepreneur is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards. One item, similar to items used in previous research (e.g., Bloemen-Bekx et al., 2019; Ward et al., 2019) was used to measure entrepreneurial intentions: "Please indicate the importance to you personally of each of the following: Becoming successful in a business of my own." The item was rated on a scale of: 1 = "not important," 2 = "somewhat important," 3 = "very important," 4 = "essential."

4. Results

Means, standard deviations, and zero-order correlations are reported in Table 1. Cronbach's alpha reliability coefficient was 0.80 for the social self-concept scale created for the current study, which exceeds the recommended minimum of 0.70. In Hypothesis 1, we predicted that women would have lower entrepreneurial intentions than will men. The ANOVA test revealed that, for all subjects, significant differences were found in entrepreneurial intentions between men and women, $F(3, 927) = 3.023, p < 0.05$. Men were found to have higher entrepreneurial intentions ($M = 2.54, SD = 1.06$) than were women ($M = 2.34, SD = 1.05$), so Hypothesis 1 was supported.

Table 1: Pearson Correlations^a

Variable	Mean	St. dev.	1	2	3
1. Gender	1.52	0.50			
2. Sexual orientation	1.10	0.30	0.09		
3. Social self-concept	1.88	0.81	-0.27**	-0.16**	(0.80)
4. Entrepreneurial intentions	3.01	0.95	-0.09**	-0.10**	0.18**

^a Cronbach's alpha reliability coefficient appears in parentheses.

$N = 964$.

* $p < 0.05$; ** $p < 0.01$

Although not specifically hypothesized, heterosexual men were found to have higher entrepreneurial intentions, ($M = 2.57, SD = 1.06$), than non-heterosexual men, ($M = 2.21, SD = 1.23$), than heterosexual women, ($M = 2.39, SD = 1.05$), and non-heterosexual women, ($M = 2.11, SD = 1.01$). Means scores for entrepreneurship between heterosexual and non-heterosexual women were not significantly different, $F(3, 476) = 1.52, ns$. Means scores for entrepreneurship between non-heterosexual men and women were not significantly different, $F(3, 84) = 1.26, ns$. Please see Figure 1.

In Hypothesis 2, we predicted that women would have lower social self-concept perceptions than men. For all subjects, significant differences were found in self-reported social self-concept between men and women, $F(2, 950) = 39.07, p < 0.001$. Women were found to have lower self-perceptions of social self-concept ($M = 1.67, SD = 0.74$) than were men ($M = 2.11, SD = 0.81$), so Hypothesis 2 was supported. Figure 2 depicts social self-concept scores by gender and sexual orientation.

Figure 1: Entrepreneurial Intentions by Gender and Sexual Orientation

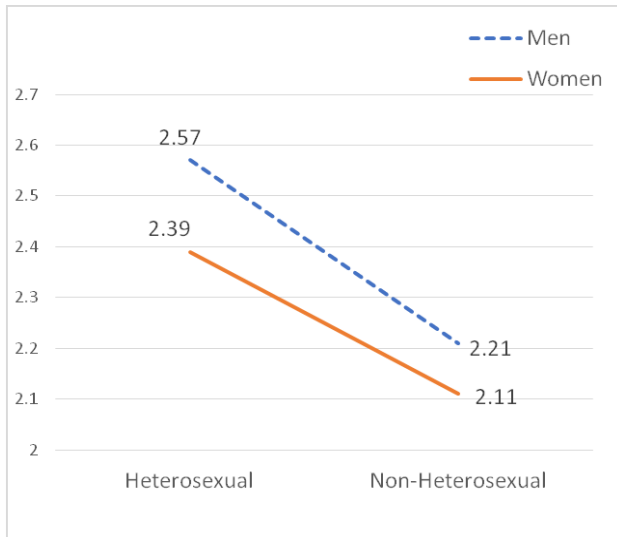
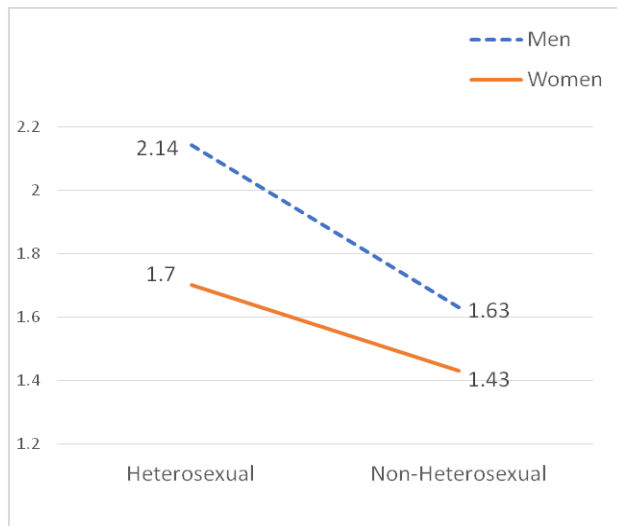


Figure 2: Social Self-Concept by Gender and Sexual Orientation



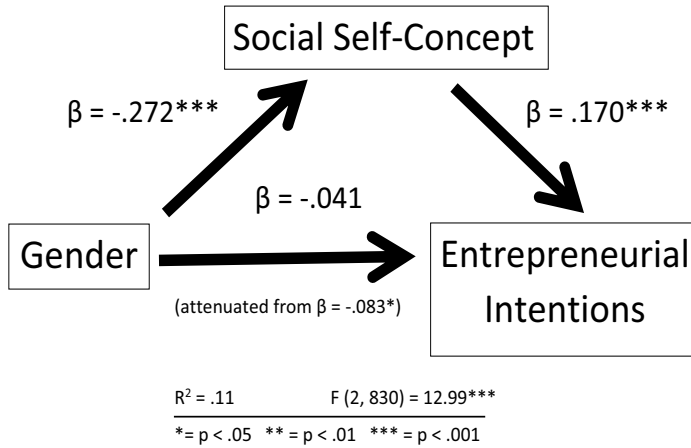
In Hypothesis 3, we predicted that social self-concept perceptions will positively influence entrepreneurial intentions for all subjects. Social self-concept perceptions were found to be significantly and positively associated with entrepreneurial intentions, $\beta = 0.176$, $t(926) = 5.43$, $p < 0.001$. Social self-concept perceptions also explained a proportion of variance in entrepreneurship scores, $R^2 = 0.03$, $F(1, 926) = 29.55$, $p < 0.001$, so Hypothesis 3 was supported.

In Hypothesis 4, we predicted that social self-concept perceptions will mediate the influence of gender on entrepreneurial intentions for heterosexual subjects. This hypothesis was analyzed following the test of mediation methods recommended by Baron and Kenny (1986) and by Hayes' (2018) (PROCESS module in SPSS) method. As described by Baron and Kenny (1986), mediation is established when three regression equations meet the following conditions: the independent variable exhibits an effect on the proposed mediator, the independent variable affects the dependent variable, and, finally, the mediator affects the dependent variable when taken together with the independent variable. PROCESS produces bias-corrected and accelerated 95% confidence intervals (CI) based on 10,000 bootstrap samples to examine mediation hypotheses (Hayes, 2018). When both the lower and upper 95% CIs are below or above zero, the statistically significant mediation effects are supported. The mediation analysis requires the data to meet the regular assumptions of OLS regression (normality, independence and homoscedasticity; Hayes, 2018).

Hypothesis 4 implied that, when controlling for social self-concept, the negative relationship between gender and entrepreneurial intentions will be significantly attenuated. To test this hypothesis, three regression equations were estimated. First, social self-concept was regressed on gender. It was found that gender influenced social self-concept ($\beta = -0.272, p < 0.001$). Second, entrepreneurial intentions were regressed on gender. It was found that gender influenced entrepreneurial intentions ($\beta = -0.083, p < 0.01$). Third, entrepreneurial intentions were regressed on both gender and social self-concept together. It was found that social self-concept influenced entrepreneurial intentions ($\beta = 0.170, p < 0.001$). Additionally, it was found that the relationship of gender with entrepreneurial intentions was significantly attenuated in the third regression equation ($\beta = -0.041, ns$) compared to the second equation ($\beta = -0.083, p < 0.05$; see Figure 3).

Following the test for mediation method recommended by Hayes (2018), there was a significant indirect effect of gender on entrepreneurial intentions through social self-concept, $ab = -0.09, BCa\ CI [-0.1408, -0.0476]$. The bootstrapping CI for social self-concept did not include zero, indicating support for social self-concept mediating the relationship between gender and entrepreneurial intentions. These findings provide support for Hypothesis 4 that social self-concept mediated the influence of gender on entrepreneurial intentions for heterosexual subjects. Please see Figure 3.

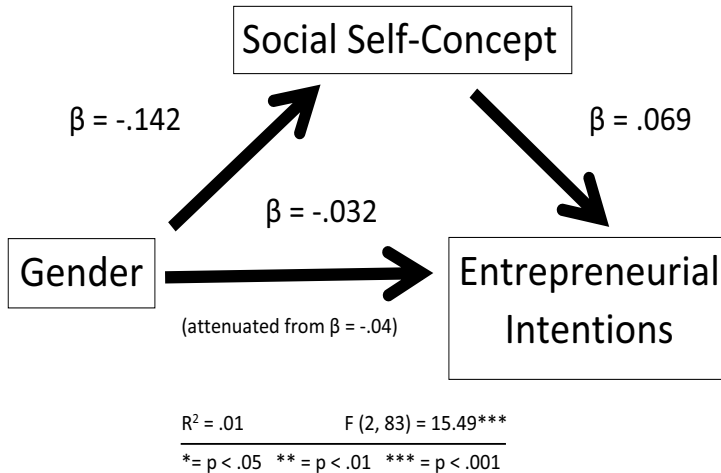
Figure 3: Mediation Analysis for Gender, Social Self-Concept, and Entrepreneurial Intentions for Heterosexual Students



In Hypothesis 5, we predicted that social self-concept perceptions will not mediate the influence of gender on entrepreneurial intentions for non-heterosexual subjects. This hypothesis was analyzed using the same methodology to test Hypothesis 4. Again, three regression equations were estimated. First, the proposed mediator, social self-concept, was regressed on gender, the independent variable. It was found that gender did not influence social self-concept ($\beta = -0.142, ns$). Second, the dependent variable, entrepreneurial intentions, were regressed on gender, the independent variable. It was found that gender did not influence entrepreneurial intentions ($\beta = -0.04, ns$). Third, we examined whether the mediator affects the dependent variable when taken together with the independent variable. Specifically, entrepreneurship was regressed on both gender and social self-concept together. It was found that social self-concept did not influence entrepreneurial intentions ($\beta = 0.069, ns$). Additionally, it was found that the relationship of gender with entrepreneurial intentions was not significantly attenuated in the third regression equation ($\beta = -0.032, ns$) compared to the second equation ($\beta = -0.040 ns$; see Figure 4).

Following the test for mediation method recommended by Hayes (2018), there was no evidence for a significant indirect effect of gender on entrepreneurial intentions through social self-concept, $ab = -0.017, BCa CI [-0.1158, 0.0845]$. The bootstrapping CI for social self-concept did include zero, indicating no support for social self-concept mediating the relationship between gender and entrepreneurial intentions. These findings provide support for Hypothesis 5 that social self-concept did not mediate the influence of gender on entrepreneurial intentions for non-heterosexual subjects.

Figure 4: Mediational Analysis for Gender, Social Self-Concept, and Entrepreneurial Intentions for Non-Heterosexual Students



5. Discussion

Our study responds to researchers' calls for an examination of how and why gender and sexual orientation affect entrepreneurial intentions (e.g., Galloway, 2007). Most research on gender and entrepreneurship has found that women tend to express lower levels of entrepreneurial intentions than their male counterparts. The purpose of our study was to present and empirically test a model that identifies social self-concept as a critical intervening factor in the relationship between gender and entrepreneurship intentions. In our sample of university students in the western U.S., we found that social self-concept mediated the relationship between gender and entrepreneurial intentions for heterosexual persons. In addition, we found that social self-concept did not mediate the relationship between gender and entrepreneurial intentions for sexual minorities.

With regard to our mediation finding, previous studies have been equivocal concerning the mechanism explaining gender differences in entrepreneurial intentions. We believe that a key explanation for why entrepreneurial self-efficacy (Wilson et al., 2009) and perceptions of entrepreneurial knowledge (Ward et al., 2019) did not mediate the relationship between gender and entrepreneurial intentions in previous research is that social self-concept instead is the critical variable intervening in this relationship. Our mediation finding is similar to that of Poon et al. (2006), who found that self-attributed achievement motive was not associated with firm performance after self-concept variables were taken into account. The authors called for future research to identify other mediators of the relationship between traits and entrepreneurship, such as social networking perceptions. Specifically, the authors argued that future studies

should examine whether entrepreneurs who perceive that they can effectively foster social networks are more likely to become entrepreneurs. Our study responds to this call and shows that having a strong, positive social self-concept acts as a buffer in the relationship between gender and entrepreneurial intentions. Our finding that social self-concept did not mediate the relationship between gender and entrepreneurial intentions for sexual minorities suggests that social self-concept was not enough to mitigate the negative effects for this group, given the severity of the discrimination and harassment that they endure in the workplace and in society at-large.

5.1. Practical Implications

Our results indicate that interventions aimed at boosting individuals' interest in entrepreneurship should consider targeting minority groups differently than majority groups. For instance, efforts could be directed at boosting female students' social self-concepts. Our study suggests that if women have a strong social self-concept in college, they may be less likely to believe the stereotype that males have stronger entrepreneurial skills, and should exhibit higher entrepreneurial intentions. Santos et al. (2016) noted that higher education is especially suited to the promotion of female entrepreneurship. As such, entrepreneurship education should not only address discrimination in knowledge or access to resources, but should also consider the unique perceptions and motivations of prospective women and non-heterosexual entrepreneurs (Santos et al., 2016). Guest speakers could serve as female entrepreneurship role models and offer networking opportunities to boost students' social self-concepts. Interventions at boosting sexual minorities' interest in entrepreneurship should be aimed at preventing the potential direct causes of lower entrepreneurial intentions such as marginalization, social exclusion, victimization, anti-sexual minority hatred, institutionalized prejudice, and discrimination.

5.2. Limitations and Areas for Future Research

As with all research, our study has some limitations. It involved self-report questionnaire data collected at a single point in time. However, because some of our main variables are objective by nature and were collected anonymously (i.e., gender and sexual orientation), we do not believe that common method bias was a serious problem in these data. Still, if future researchers could examine our hypotheses with longitudinal or multi-source designs, more confidence could be placed in our findings and their causal nature. For example, future research could assess college students' perceptions at the start and end of their degree programs. In addition, measuring future entrepreneurship would clarify the relationship

between entrepreneurial intentions and behavior for women and underrepresented groups.

Second, our study was limited to college students in one university in the U.S. It would be interesting to collect data in other universities and other countries to examine the generalizability of the findings. In addition, our study examined college students, and as such, our findings may not generalize to entrepreneurs. However, as noted earlier, research has found that entrepreneurial intentions are good predictors of future behavior (Sánchez & Licciardello, 2012; Shinnar et al., 2018). Still, future research should test the applicability of our model in other types of organizational settings.

Third, our study should be considered exploratory, as our model did not include a broad range of control variables. Future research should consider employing a multivariate econometric model. Notwithstanding the above, because our hypotheses were grounded in theory and our data were unbiased, more confidence may be placed in our findings.

Future research may also explore whether and how additional factors may influence the proposed mediational model. In particular, we believe that examining the factors that could moderate the relationships between social self-concept, gender, sexual orientation, and entrepreneurial intentions might be promising avenues for future research. It would be interesting to examine, for instance, whether there is an intersectional effect for non-heterosexual women. Our results contribute to a better understanding of the roles that gender, sexual orientation, and social self-concept play in entrepreneurial intentions.

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