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THE IMPACT OF ROLE MODELS ON
GENDER-STEREOTYPES AND ENTREPRENEURIAL INTENT

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The Impact of Role Models on Gender-Stereotypes and Entrepreneurial Intent

ABSTRACT: *Entrepreneurship is a male-stereotyped domain, known for limited female activity. This research examines the impact of role models on gender-stereotypes and how this affects entrepreneurial intent, to understand if they can help to overcome gender-stereotypes and promote female entrepreneurship. An experimental study was conducted, employing a scenario-based approach where participants were exposed to biographies of entrepreneurs. It revealed that role model gender and success don't affect entrepreneurial intent. However, extremely successful female role models can reduce male entrepreneurial stereotypes and while men's personal attitude is raised by extremely successful role models, moderately successful, female entrepreneurs are most effective for women.*

Keywords: Entrepreneurial intent, gender-stereotypes, theory of planned behavior, assimilation and contrast

Introduction

Entrepreneurship is an effective source of job creation, innovation and economic growth (Global Entrepreneurship Monitor (GEM), 2018). However, in innovation-driven economies (highest economic development level, e.g. Germany, USA) on average there are only six female entrepreneurs for every ten men, considering early-stage entrepreneurial activity (GEM, 2018). According to the European Commission (2018), only 30% of start-up entrepreneurs are women. Although the gap is decreasing (Kelley et al., 2017), women present a resource for economic growth and jobs that has not been capitalized on fully. The gender gap has prompted many researchers in recent years to identify the factors responsible for it, such as gender-differences in individual's personality traits (Furdas and Kohn, 2010) and motivations (Scott, 1986, Taylor and Newcomer, 2005, Kepler and Shane, 2007), as well as barriers keeping women from

pursuing entrepreneurship (Raghuvanshi, Agrawal and Ghosh, 2017) – one of which are gender-stereotypes. In other words, people tend to attribute male stereotyped characteristics to entrepreneurs rather than female ones, such as individualistic or risk-taking, which women identify less with than men (Gupta et al., 2009). Subsequently, I propose that because women are unable to picture themselves in this role they perceive it as a less attainable and desirable career choice. Surprisingly, research on how to reduce gender-stereotype effects and actively decrease the gender gap in entrepreneurship is limited. A high share of nascent entrepreneurs has role models (Bosma et al., 2011) and a study found that students who were working with entrepreneurs increased their entrepreneurial intent (Bechthold and Huber, 2018). Still, there is a lack of research investigating potentially mediating factors in this relationship. No prior research investigated whether the exposure to role models can alter individuals' gender-stereotypes about entrepreneurs or their own gender-identification. Thus, this research examines exactly that and aims to further explore the relationship of gender-stereotypes and entrepreneurial intent. Two controlling variables regarding the type of role model are considered: The role model's gender on one hand and role model's level success on the other hand. If role models were to influence gender-stereotypes and thereby increase the likelihood of entrepreneurial intent, this could be the origin for important actionable policy and educational instruments to promote entrepreneurial activity amongst women. Entrepreneurial intent is a common proxy for such (Thompson, 2009) and has been used by multiple researchers (Krueger, 1993, Lee and Wong, 2004, Liñán and Chen, 2009, Thompson, 2009, Zhao, Seibert and Hills, 2005). Furthermore, the study results will enable the selection of role models who are likely more effective, regarding the controlling variables gender and level of success.

Literature Review

The Gender-Gap in Entrepreneurship: Particularly potential social, cultural and economic factors that are responsible for gender-differences in entrepreneurship have been

researched extensively in the past decade. In terms of social factors, previous research found that gender differences in socio-demographic variables, motivation, individuals' perceptual factors and characteristics affect women's likelihood of becoming an entrepreneur. On average, women are still less educated than men, while higher education increases the probability of entrepreneurship significantly (Caliendo et al., 2014). Regarding the initial motivation to start a business, men seem to be more driven by economic factors, while women prioritize social factors, such as work-life balance – often with regards to parenthood and childcare concerns – and recognition by others (Scott, 1986, Taylor and Newcomer, 2005, Kepler and Shane, 2007). Furthermore, women lack certain characteristics that increase the probability of entering self-employment, such as competitiveness (Bönte and Piegeler, 2013), entrepreneurial self-efficacy and risk tolerance (Camelo-Ordaz, Diáñez-González and Ruiz-Navarro, 2015, Wagner, 2007).

Gender-Stereotypes: Other important factors are gender-stereotypes, which are commonly defined as shared beliefs about men and women based on characteristics typically attributed to them (Gupta et al., 2009). For instance, whereas men are described with agentic characteristics, such as aggressive, independent and competitive, women are generally described with communal characteristics, including kind, loyal and sensitive to the needs of others (Pérez-Quintana and Hormiga, 2015). When thinking about a stereotypical entrepreneur, the results are comparable to Schein's (2001) "think manager, think male" gender norm: There is a high congruence between the perception of men and entrepreneurs, whereas there is no significant congruence between women and entrepreneurs (Buttner and Rosen, 1988, Gupta et al., 2009, Meyer, Tegtmeier and Pakura, 2017). Established gender-stereotype not only hinder women from considering entrepreneurship as a career option but are still perceived a barrier by female nascent entrepreneurs (Buttner, 1993). For example, women face more constraints when it comes to accessing finance for their businesses (Muravyev, Talavera and Schäfer, 2009). Heilman's lack of fit model (1983, 1997), originally developed in the context of gender inequalities in work settings, shows that if the perceived gap between an individual's attributes

and an occupation's requirements is too big it results in the expectation of failure. This logic is applicable to various occupations – not only management positions are generally classified as masculine (Heilman, 1983), also the work in specific sectors, such as technology or logistics is. This relationship depends less on a person's actual sex – referring to what people are born as biologically –, but rather on gender-identification. This means, individuals who identify more with male characteristics also demonstrate higher entrepreneurial intentions. Also, men tend to stereotype entrepreneurs as mostly male, whereas women also attribute some female characteristics to entrepreneurs (Gupta et al., 2009). Femininities and communal behaviors are acknowledged to add value to entrepreneurship (Patterson, Mavin and Turner, 2012), which challenges the lack of women's fit for entrepreneurship. These insights suggesting a change in perceptions and behaviors are worth noting, since they imply a gradual progression and shift of gender-stereotypes in entrepreneurship, which is also supported by the rising number of female entrepreneurs in recent years. Following specifically Gupta et al.'s (2009) findings, naturally the question arises if individuals' – and particularly women's – gender-stereotypical perceptions and their self-identification with gendered traits can be altered in a way that it increases their intentions to start a business.

Role Models and Entrepreneurship: Role models are widely recognized as promoting entrepreneurial activity (Scherer et al., 1989). Many nascent entrepreneurs report that role models have influences their initial decision to start a business (Bosma et al., 2011). This is also reflected in the correlation between entrepreneurial activity and having an entrepreneur as a parent (Saeed, Muffatto and Yousafzai, 2014). Furthermore, the exposure to role models was found to have a positive effect on individual's perceived desirability and feasibility of entrepreneurship (Fellhofer and Puumalainen, 2017). Also, fictional role models positively impact entrepreneurial self-efficacy and intent, if individuals identify with the role model (Laviolette, Lefebvre and Brunel, 2012). Only few researchers examined the effect of role models on entrepreneurial intentions through a gender lens: Knowing an entrepreneur has a

positive effect on entrepreneurial intent, independent of individuals' gender, but affects their entrepreneurial self-efficacy, more so for women (BarNir, Watson and Hutchins, 2011). Another study did not confirm the direct effect of knowing an entrepreneurial role model on entrepreneurial intent (Karimi et al., 2014). However, the same research revealed a significant positive, indirect effect on such through mediators – personal attitude towards entrepreneurship, social norms and personal perceived control – moderated by participant gender. These mediators are antecedents of entrepreneurial intent, directly forming it (Dinc and Budic, 2016). These findings suggest that there are unknown suppressor variables.

So far, no distinct definition for role models has evolved from past research. A role model is “someone to look up to and base your character, values and aspirations on” (Gauntlett, 2002). Also, they are defined as “individuals who provide an example of the kind of success that one may achieve, and often provide a template of the behaviors needed to achieve such success” (Lockwood, 2006). Research on role models mainly derived from role identification theory (Foote, 1951) and social learning theory (Bandura, 1977). Identification theory supports role models in the sense that individuals tend to be attracted to others who they perceive to be like themselves in some way and who they admire. In terms of the resemblance, role models that show a high degree of similarities to an individual, i.e. regarding gender, are considered more effective (Lockwood, 2006; Bandura, 1986). However, a study amongst entrepreneurs has shown that they tend to choose role models who have a similar level of education, a higher level of human capital than themselves and who are significantly older (Bosma et al., 2011). This suggests that to be effective a role model's achievements should be desirable to cause inspiring assimilation effects, which motivate an individual to reach a similar level of success. Nevertheless, superiority should be balanced, since if individuals perceives themselves as deficient relative to the role model this can result in contrast effects. This happens, when the aspirant is not able to identify with the role model and its achievements. In this case, individuals' confidence in their ability to achieve a similar level of success deflates (Lockwood

and Kunda, 1997, Major, Testa and Bylsma, 1991). Social learning theory suggests that individuals can learn by observing others – modelling is a “means of transmitting values, attitudes, and patterns of thought and behavior” (Bandura, 1986). And depending on the relationship to a role model, it fulfils different functions for entrepreneurs (Bosma et al., 2011). They typically serve three functions: “to provide learning, to provide motivation and inspiration and to help individuals define their self-concept” (Gibson, 2004). While a close relationship may focus on mentoring (learning), a role model with a weak tie may expand an individual’s horizon (motivation, inspiration, definition of one’s self-concept) (Bosma et al., 2011).

Research and hypothesis

Thus, as a distant role model is likely to provide inspiration, motivation and increasing individual’s self-efficacy regarding the role (e.g. entrepreneurship). However, there is a lack of research addressing potential mediating effects in the effect of role models on entrepreneurial intent. This study aims to contribute to closing this research gap in entrepreneurship literature by incorporating gender-stereotypes as a potential mediating variable as well as investigating mediating and moderating effects of two variables – role model gender and intensity (level of success) – which potentially influence role model effectiveness. So far it is unclear, whether role model gender or their level of success matters for a role model to positively, or potentially even negatively, influence entrepreneurial intent. Thus, the novelty of this research lies within the examination of whether entrepreneurial gender-stereotypes can be adjusted through the exposure to certain role models, causing a positive effect on entrepreneurial intent.

The Theory of Planned Behavior suggests that behavioral intent is formed through personal attitude towards such behavior, subjective norms and perceived behavioral control (Ajzen, 1991). While personal attitude is the extent to which an individual assesses a behavior as positive or negative, perceived behavioral control resembles perceived self-efficacy which can be described as individual’s belief in their own abilities (Bandura, 1977, 1982). Prior research

has already established a relationship between these antecedents and entrepreneurial intent. Thus, since the effect of adjusted stereotypes on entrepreneurial intent might be mediated through these antecedents, both personal attitude towards entrepreneurship and perceived behavioral control will be included in the examined model (see *Figure 1*).

Research question: *Does the exposure to a distant entrepreneurial role model influence entrepreneurial intent positively, through the adjustment of perceived gender-stereotypes of entrepreneurs?*

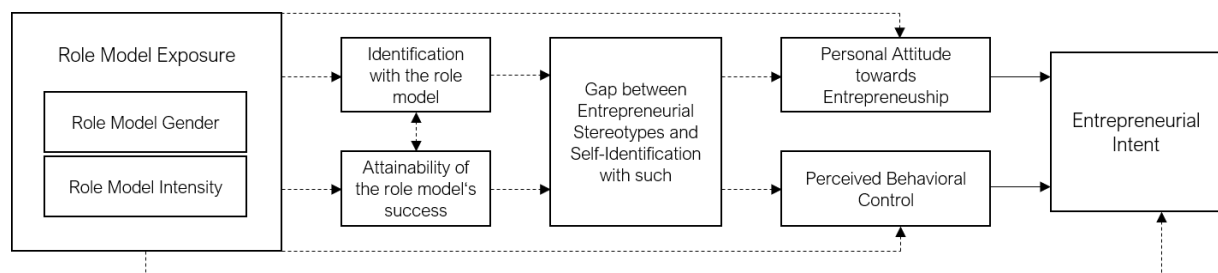


Figure 1 Hypothesized model

On one hand, this contributes to research addressing role model effectiveness and on the other hand it will add to the literature on the role of gender-stereotypes, both in the context of entrepreneurship. In terms of practical implications, the results will enable institutions, aiming to foster entrepreneurial intent, to choose role models who are expected to be more effective.

Role model gender: Applying the logic of Heilman’s lack of fit model (1983, 1997) to the male-stereotyped area of entrepreneurship suggests that gender-stereotypes may lead to women feeling less confident about succeeding as entrepreneurs, which in turn would reduce their likelihood of forming entrepreneurial intent. When confronted with a negative stereotype about a group to which an individual belongs, it is likely to underperform – this is an effect of so-called stereotype threat (Steele, 1997). However, role models can moderate these effects (Blay, 2015). Women who were confronted with women’s mathematic stereotype threat, performed significantly better when being reminded of other women’s achievements (McIntyre, Paulson and Lord, 2003). Indeed, implicit stereotypes can be adjusted by activating counter-stereotypical links in the cognitive network (Blair, Ma and Lenton, 2001). Previous research

amongst young people suggests that they don't believe in a relationship between gender and entrepreneurship (Meyer, Tegtmeier and Lord, 2017). But as mentioned earlier, entrepreneurship is still stereotyped as a male domain. This contrast indicates that gender-stereotypes in entrepreneurship are implicit. If this is the case, stereotypes could be altered by exposing women to counter-stereotypical role models – successful, female entrepreneurs. But also, self-identification with gendered characteristics can be adjusted this way (Asgari, Dasgupta and Cote, 2010, Asgari, Dasgupta and Stout, 2011). Thus, a female role model is likely to decrease the lack of fit for women and increase personal attitude towards entrepreneurship. And if entrepreneurship is perceived as desirable by an individual, the likelihood of developing entrepreneurial intent increases (Krueger, 1993). Hence, to examine the expected impact of role model gender, the experiment will be conducted with both a female and a male role model, to test the following hypothesis:

***H1:** Women exposed to a female role model will identify more with her than with a male one, thus will demonstrate a reduced gap between entrepreneurial stereotypes and their self-stereotypes, which will lead to an increased Personal Attitude and Entrepreneurial Intent.*

Women identify more with female role models, whereas men both with female and male role models (Lockwood, 2006). Shared group membership, e.g. gender, is known to prompt attainability (Morgenroth, 2015). Male participants will likely not adjust their entrepreneurial stereotypes, since they are not affected by stereotype threat. However, role models will still provide participants with motivation and inspiration, which leads to the following hypothesis:

***H2:** Male respondents will identify both with female and male role models similarly but will find male role models' success more attainable and will show a directly increased Personal Attitude and Entrepreneurial Intent, without adjusting gender-stereotypes.*

Assimilation and contrast effects: As discussed in the literature review, assimilation and contrast effects depend on whether role aspirants can identify with a role model and find their success attainable. While individuals are likely to identify more with same-gender role

models – which is tested in H1 and H2 – role models with different levels of success are also expected to yield different results for men and women. To anticipate the effects, self-efficacy is an important mediating factor that needs to be considered. Individuals with lower self-efficacy identify less with highly successful role models, which results in self-deflating contrast effects as opposed to individuals with high self-efficacy, who found the role model's success more attainable and inspiring (Hoyt, 2013). As women tend to have lower entrepreneurial self-efficacy than men (Chen, Greene and Crick, 1998), the following hypotheses will be tested:

***H3:** Women will identify more with moderate role models and find their success more attainable, which will reduce the gap between entrepreneurial stereotypes and self-stereotypes. Thus, they will score higher in Personal Attitude, Perceived Behavioral Control and Entrepreneurial Intent, as opposed to women exposed to the extreme role model scenarios.*

***H4:** Men will perceive extreme role model's success more attainable than female respondents and will demonstrated a directly increased Personal Attitude, Perceived Behavioral Control and Entrepreneurial Intent, compared to male participants in the moderate conditions.*

Methodology

Role model manipulation: To test the stated hypothesis, I conducted an experimental study, using an online questionnaire. First, participants were randomly assigned to five conditions, four of which presented different biographies of an imaginary entrepreneurial role model. The fifth was a control condition, including no role model biography. By working with scenarios, control over variables relevant to this study could be ensured. Without such scenarios it could not have been guaranteed that respondents would be able to recall an entrepreneur role model that meets the following criteria. The earlier mentioned definitions of role models (Gauntlett, 2002, Lockwood, 2006) suggest that to be considered a role model, individuals need to be successful in their respective field and their achievements need to be perceived as desirable by aspirants. Thus, I developed a biography of a successful entrepreneur meeting these criteria.

The *extreme* scenario is based on Payal Kadaki (The Hundert, 2016, Berger, 2018, ClassPass, 2018): She went to an elite university, worked for prestigious companies, is extremely successful as an entrepreneur and was recognized for it.

Participants assigned to a role model condition read one of the following scenarios, with the difference being the level of the entrepreneur's level of success and the entrepreneur's gender:

Extreme:

“Julia Hoffmann (male scenario version: ‘Philipp Hoffmann’) has a degree from MIT in Business Administration and worked at Bain & Company and in Warner Music Group’s Digital Strategy and Business Development Group after her studies.

One day during a business trip, after spending over an hour searching online for an open spinning class, 28-year old Julia had the idea to create a search engine and reservation system for fitness classes. Six months later she quit her job and rejected a lucrative job offer to focus fully on starting a business. In 2013 she founded Classitivity. The first business model - consisting of prepaid classes - didn’t take off, only 15% of customers would return. So, Julia changed the set-up and rebranded the company. Now, ClassPass is a monthly subscription service providing access to the world's largest network of boutique fitness studios and gyms. With tens of thousands of classes available in over 50 cities worldwide, ClassPass makes working out more accessible and affordable.

In 2016, Julia landed a spot on Fortune’s 40 under 40.

In 2017, ClassPass was valued at 470 million USD. Today, Julia’s company has over 300 employees and raised a total of 239 million USD in funding.”

For the *moderate* scenario to be perceived as more attainable by survey participants, the presented entrepreneur went to a mostly unknown university, had less prestigious employers and the founded company is less successful in terms of size and value:

Moderate:

“Julia Hoffmann (male scenario version: ‘Philipp Hoffmann’) has a degree from the University of Koblenz in Business Administration and worked at Capgemini and in Otto Group’s Digital Solution Group after her studies.

One day during a business trip, after spending over an hour searching online for an open spinning class, 28-year old Julia had the idea to create a search engine and reservation system for fitness classes. Six months later she quit her job and rejected a lucrative job offer to focus fully on starting a business. In 2013 she founded Classitivity. The first business model - consisting of prepaid classes - didn’t take off, only 15% of customers would return. So, Julia changed the set-up and rebranded the company. Now, ClassPass is a monthly subscription service providing access to a small network of boutique fitness studios and gyms. With dozens of classes available in over 5 European cities, ClassPass makes working out more accessible and affordable.

In 2017, ClassPass was valued at 1 million USD. Today, Julia’s company has over 20 employees and raised a total of 500,000 USD in funding.”

Additionally, considering the used snowball sampling method, it could be expected that most participants would be European. Thus, to increase the similarity with the moderate example, the presented entrepreneur was placed in Germany. The names for both the female and male versions were the same, as well as the last name was the same across all four scenarios to decrease any effects different names might have had on participants. The names were selected so they would be plausible in both the U.S. and German version. Furthermore, previous research found that role model effectiveness depends on whether a role model is deserving of his or her achievements (Taylor et al., 2011). To reflect this, the character's struggle in the early stages and how they overcame those is described. Moreover, it was important that the presented role models possess common characteristics of entrepreneurs. Hence, besides starting a business, some details were included for the characters to be perceived as more entrepreneurial, such as having an innovative problem-solving style (Buttner and Gryskiewicz, 1993) by finding a solution to a common problem and being risk-taking (Chen, Greene and Crick, 1998) by choosing the uncertainty of entrepreneurship over a well-paid job offer.

Measures: To ensure that participants in the experimental group read the scenarios, first, the button to continue in the survey only appeared after 30 seconds and second, they were asked to answer an *attention check* question about the content of the biography. Participants who didn't pass this test were excluded from the sample to not affect the results.

This was followed by *manipulation checks* based on a study conducted by Dasgupta and Asgari (2004), asking participants to rate "(a) how successful, admirable and inspirational they considered this person to be, (b) the extent of their identification with him or her and (c) the extent to which they saw themselves obtaining comparable success in their own professional future" (see *Appendix 1* for all items).

Regarding the *measurement of gender-stereotypes* for both respondents' perceptions of entrepreneurs and their own gender-role orientation, the two most common measures are Schein's (1973) Descriptive Index (92 items) and Bem's (1974, 1981) Sex-Role Inventory (60

items). However, their lengthiness might have negatively affected survey completion rates. For this reason, a reduced version of the Bem Sex-Role Inventory was used, consisting of 25 items, which were found to be either synonymous or antonymous for entrepreneurs. As they were already tested for their social desirability for women and men the according classification as masculine, feminine or androgynous (Pérez-Quintana and Hormiga, 2015) was adopted for the purpose of this research (see *Appendix 1* for all items). Survey participants were asked to rate each item in terms of how characteristic it is of entrepreneurs and of themselves, on a 7-point Likert scale, ranging from 1 (totally disagree) to 7 (totally agree).

The Entrepreneurial Intent Questionnaire was developed based on past measures and assesses variables beyond entrepreneurial intent, such as cognitive antecedents, directly forming it. This includes *personal attitude* and *perceived behavioral control*, which were measured by asking participants to rate their level of agreement with five and six statements, respectively (see *Appendix 1* for all items), on a 7-point Likert scale, ranging from 1 (totally disagree) to 7 (totally agree) (Liñán and Chen, 2009).

Various measures exist to evaluate *entrepreneurial intent*, ranging from assessing attitudes, expectations and intentions up to behavior (Valliere, 2014). Usually this was done with general sentences. However, many of those imply that individuals have either already extensively considered entrepreneurship (Veciana, Aponte and Urbano, 2005, Liñán and Chen 2009) or acted towards this goal (Noel 2002, Thompson, 2009). In both cases, these measures would likely not be affected by the role model manipulation. Hence, a more moderate measure was applied, asking participants to rate their interest in “(a) starting a business, (b) acquiring a small business, (c) starting and building a high-growth business and (d) acquiring and building a company into a high-growth business, in the next five to ten years” (Zhao, Seibert and Hills, 2005) on a 7-point Likert-scale, ranging from 1 (Very little) to 7 (A great deal).

Sample: A convenience sample of 287 participants completed the questionnaire. Six respondents were excluded from the sample for failing to answer the attention check correctly

and seven participants due to poor quality of their responses. This selection was based on the time it took them to answer the survey (below 240 seconds) and a manual check, which confirmed anomalous patterns in some responses (e.g., one participant selected “6 Agree” for 60 out of 69 Likert scale type responses). Thus, it can be assumed that those participants were neither truthful nor accurate. Hence, for the analysis the sample consisted of 274 participants, of which 152 were female, 121 male and one identified as “other” in terms of gender.

Analysis

Reliability of measures: The internal reliability of each scale was evaluated by using Cronbach’s alpha. Only the two scales Self-Androgynous and Entrepreneur-Androgynous would benefit from excluding an item, which is in both cases the attribute “unpredictable”. By deleting this item from the scales, Cronbach’s alpha improved to .63 and .574, respectively. All other scales were maintained with their original items (see *Appendix 2* for each scales’ alpha). Based on these results, mean values were created of each scale’s items for the analysis.

Manipulation check: The manipulation check displayed that those assigned to a role model condition viewed the entrepreneurs as successful, inspirational and admirable ($M = 5.448$ on a 7-point scale, $SD = .991$). A one-sample t-test confirmed that this is significantly higher than the scales midpoint at four ($p = .000$). A three-way analysis of variance was conducted on the influence of three variables participant gender, role model gender and role model intensity on the manipulation check. There was an effect of participant gender ($F(1, 211) = 6.861$, $p = .009$): men had lower scores ($M = 5.256$, $SD = 1.006$) than women ($M = 5.594$, $SD = .96$).

Hypothesis Testing

To test the effect of participant gender, role model gender and role model intensity, three-way analysis of variance were conducted for all dependent variables in the model. The following results will focus on significant results ($p < .05$).

Effects of Role Model Gender (H1 and H2): While I hypothesized that only men identified similarly with both male and female role models, the fact that there was no significant effect on *identification with the role models* ($F(7, 211) = 1.064, p = .388$) suggests that this was also true for women, who were hypothesized to identify more with female role models. Also, in terms of *perceived attainability of the role model's success* no significant effect was revealed ($F(7, 211) = 1.069, p = .384$). Thus, men appeared to find role models' success of both genders similarly attainable, which does not support H2. Furthermore, role model gender had only limited effect on respondents' stereotypical perceptions of entrepreneurs and none on their self-identification: Although the overall difference is small, participants exposed to a female role model attributed significantly ($F(1, 211) = 5.524, p = .02$) fewer *male characteristics to entrepreneurs* ($M = 5.46, SD = .633$) than those exposed to a male role model ($M = 5.633, SD = .551$). The results in male role model conditions were close to those of the control condition ($M = 5.673, SD = .518$). However, the effect appears to be driven by men who were exposed to extreme, female role models ($M = 5.178, SD = .732$), who demonstrated the lowest value in comparison to all other conditions. This does not support H1 and contradicts H2, which hypothesized men would not adjust their stereotypes. Furthermore, a one-way ANOVA revealed that men assigned to a role model condition identified significantly less with male characteristics ($p = .019$), than those in the control group ($M_{\text{role model}} = 4.8, SD_{\text{role model}} = .703$; $M_{\text{control group}} = 5.157, SD_{\text{control group}} = .625$). Still, role model gender had no effect on the gaps¹ between gendered, entrepreneurial stereotypes and self-identification with such. While this behavior was hypothesized for male respondents in H2, these results don't support H1. Nevertheless, participant gender did influence *personal attitude towards entrepreneurship* significantly ($M_{\text{men}} = 4.663, SD_{\text{men}} = 1.425$; $M_{\text{women}} = 4.029, SD_{\text{women}} = 1.508$; $p = .002$) – generally speaking, men demonstrated a more positive attitude than women. For reference, this

¹ Calculated by subtracting mean entrepreneurial perceptions from mean self-reported stereotypes for each male, female and androgynous characteristics.

appeared to be the case as well within the control group (see *Table 1*). The three-way analysis of variance also revealed a significant three-way interaction of role model gender, role model intensity and participant gender ($F(1, 211) = 5.768, p = .017$, see *Table 1*). Being exposed to a moderate, same-sex role model yielded a more positive attitude than moderate role models from the opposite sex. Men exposed to a female, moderate role model demonstrated a lower personal attitude than those in the control group. While their attitude was highest when being exposed to extreme role models, independent of role model gender, women reacted only positively to male extreme role models. Extremely successful, female role model decreased their personal attitude, also compared to women in the control group.

Table 1 Mean Values of Personal Attitude towards Entrepreneurship, split by Participant Gender, Role Model Intensity and Role Model Gender ($N = 219$) vs. the Control Condition split by Participant Gender ($N = 53$).

Participant Gender	Role Model Intensity	Role Model Gender	Mean	Standard Deviation	Std. Error	95% Confidence Interval	
						Lower Bound	Upper Bound
Men	Moderate	Male	4.736	1.300	.310	4.125	5.348
		Female	4.000	1.593	.297	3.415	4.585
	Extreme	Male	4.877	1.417	.285	4.315	5.439
		Female	5.043	1.201	.303	4.446	5.641
Women	Moderate	Male	3.913	1.480	.257	3.406	4.419
		Female	4.386	1.535	.270	3.854	4.919
	Extreme	Male	4.194	1.474	.261	3.679	4.708
		Female	3.663	1.518	.257	3.156	4.169
Control condition							
Men			4.469	1.498	.294		
Women			3.850	1.424	.269		

Furthermore, the exposure to a male role model appeared to increase *perceived behavioral control*, while female role models affected it negatively ($F(1, 211) = 4.764, p = .03$), see *Table 2*). Also, men reported significantly higher entrepreneurial self-efficacy ($F(1, 211) = 8.208, p = .005$, see *Table 2*) and *entrepreneurial intent* than women ($M_{men} = 3.845, SD_{men} = 1.582; M_{women} = 3.081, SD_{women} = 1.49; p = .005$). The values for entrepreneurial intent were close to those of the control group ($M_{men} = 3.74, SD_{men} = 1.773; M_{women} = 2.982, SD_{women} = 1.305$). Since there was no effect of conditions, H1 and H2 were not supported.

Table 2 Means and standard deviations of Perceived Behavioral Control, split by Role Model Gender, Participant Gender vs. Control Condition split by Participant Gender.

		Mean	Standard Deviation	N
Role Model Gender	Male	3.800	1.211	111
	Female	3.475	1.266	108
Participant Gender	Men	3.900	1.071	95
	Women	3.441	1.245	124
Control Condition	Men	4.006	1.358	25
	Women	3.190	1.347	28

In sum, the results suggest that role model and participant gender do not influence role model identification or attainability. However, although the gender-stereotype-gaps remained unaffected when being exposed to a female role model, respondents attributed fewer male characteristics to their entrepreneurial stereotypes. This suggests, that male gender-stereotypes in entrepreneurship can be adjusted through the exposure to female role models and surprisingly this effect appears to be stronger for male participants. Furthermore, role model gender and participant gender seem to influence personal attitude, however, only in interaction with the role model's success. Participants' perceived behavioral control was higher when exposed to a male role model. Still, role model gender did not affect Entrepreneurial Intent. Hence, both H1 and H2 are not supported by these results.

Effects of Role Model Success (H3 and H4): Since there was no significant effect on participants' *identification with the role model* or *perceived attainability of their success*, H3 and H4 are not supported by these results either. Also, the impact of role model intensity on entrepreneurial stereotypes and self-identification was limited: There was a small but

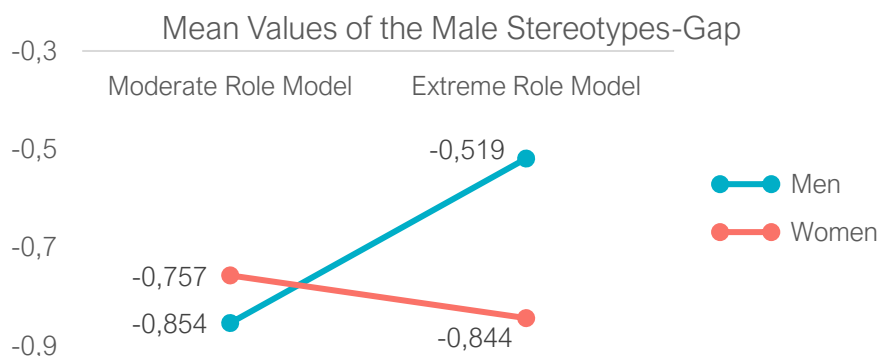


Figure 2 Effect of the interaction between Role Model Intensity and Participant Gender on the Male Stereotypes-Gap. (N = 219)

significant effect on *male stereotypical perceptions of entrepreneurs* ($M_{\text{moderate RM}} = 5.622$, $SD_{\text{moderate RM}} = .531$; $M_{\text{extreme RM}} = 5.477$, $SD_{\text{extreme RM}} = .65$; $p = .046$). Again, this effect appears to be driven by men in the female, extreme role model condition, who demonstrated the lowest value. This and the earlier mentioned negative effect of role models on men's self-identification with male traits are reflected in an interaction of participant gender and role model intensity influencing the *male stereotypes-gap* ($F(1, 211) = 4.564$, $p = .034$). **Figure 2** shows that the effect was also driven by men. Those exposed to extreme role models demonstrated a gap comparable to men in the control condition ($M = -.507$, $SD = .671$). But it increased when they were exposed to moderate role models. Regarding the women, it appeared to slightly decrease when they were exposed to any role model, independent of its level of success, versus women who were not (Control group: $M = -1.0113$, $SD = .577$). Furthermore, the analysis of *androgynous self-identification* revealed a significant interaction of participant gender and role model intensity ($F(1, 211) = 4.009$, $p = .047$). As **Figure 3** shows women identified significantly less with such in extreme role model conditions. These differences are reflected in the *androgynous stereotypes-gap*, which was significantly influenced by participant gender ($F(1, 211) = 4.042$, $p = .046$), indicating that it is smaller for male participants ($M = -.505$, $SD = .918$) than for female ones ($M = -.753$, $SD = .845$). The effects on stereotypes partially support H3 but are contrary to H4 – again this shows that men appear to adjust their gender-stereotypes in response to certain role models. Testing for *personal attitude towards entrepreneurship*, the

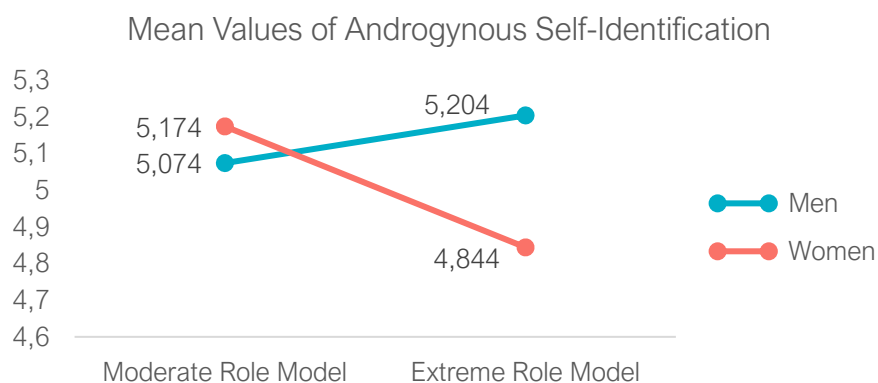


Figure 3 Effect of the interaction between Role Model Intensity and Participant Gender on Androgynous Self-Identification. ($N = 219$)

three-way analysis of variance also revealed a significant interaction of role model intensity and participant gender ($F(1, 211) = 8.871, p = .042$). **Figure 4** shows that while women's personal attitude increased when exposed to a moderate role model versus the control group ($M = 3.85, SD = 1.424$), men's personal attitude is more positively influenced by extremely successful role models (Control condition: $M = 4.47, SD = 1.498$), which supports both H3 and H4. However, the role model's level of success does not appear to influence *perceived behavioral control* or *entrepreneurial intent*, which both is not in favor of H3 and H4.

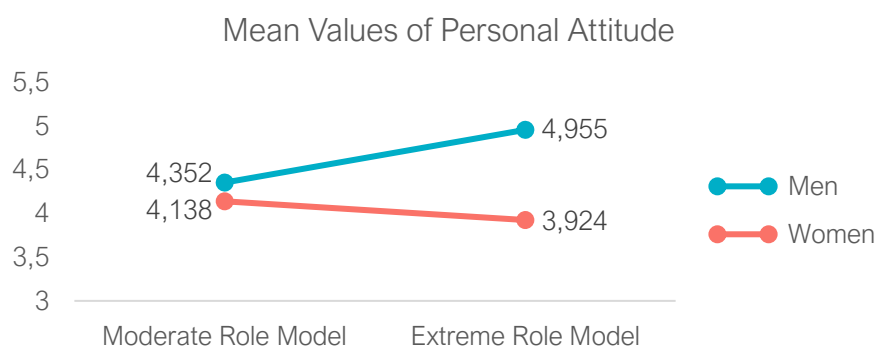


Figure 4 Effect of the interaction between Role Model Intensity and Participant's Gender on Personal Attitude towards Entrepreneurship. ($N = 219$)

In sum, both role model identification and attainability seem not to be affected by role model success. Thus, the revealed effects seem not to depend on these factors. Women in moderate conditions appeared to identify more with androgynous characteristics than those in extreme condition or the control group. They also demonstrated an increased personal attitude in moderate conditions. However, this was also due to an extremely low value in the female extreme condition, which seemed to decrease women's attitude, also versus the control group. Regarding male participants, moderate – and particularly female – role models appear to increase their male stereotypes-gap, while extremely successful ones keep the gap stable versus the control condition. Their personal attitude appears to decrease when exposed to a female moderate role mode, versus the control condition, whereas it increased when exposed to extreme conditions. However, the size of the gap was not linked to personal attitude, when comparing the values across conditions. All results considered, H3 and H4 were not supported by the results.

The Model: I tested the model in Figure 1 via the procedures outlined by Hayes (2018). Only a few mediation patterns were significant, which I report below. First, the impact of role models was considered: Although *role model gender* significantly predicted *perceived behavioral control* ($\beta = -.337$, $t(218) = -2.11$, $p < .05$) and explained a small but significant proportion of its variance ($R^2 = .02$, $F(1, 218) = 4.453$, $p < .05$), there was no significant direct or mediated effect on entrepreneurial intent. Role model gender also significantly predicted *male entrepreneurial stereotypes* ($\beta = -.169$, $t(218) = -2.11$, $p < .05$), explaining a small but significant proportion of its variance ($R^2 = .02$, $F(1, 218) = 4.451$, $p < .05$). But again, there was no direct or mediated effect on personal attitude, perceived behavioral control or entrepreneurial intent, although male entrepreneurial stereotypes are a predictor of personal attitude ($\beta = .335$, $t(218) = 1.987$, $p < .05$). These results are valid for both male and female participants. Despite the revealed three-way interaction of participant gender, role model gender and intensity affecting *personal attitude*, the mediation analysis did not reveal any further direct or indirect effects of the role models. Although role model gender and intensity, as well as participant gender did not play a crucial role within the whole model, the following mediation models emerged from the analysis: *Personal attitude* and *perceived behavioral control* were significant parallel mediators of the effect of *male* and *androgynous self-identification* and *female entrepreneurial stereotypes* on entrepreneurial intent (see **Table 3** and **Figure 5-7**). *Male entrepreneurial stereotypes* ($R^2 = .023$, $F(1, 218) = 5.143$, $p < .05$; $\beta = .4$, $p < .05$) and *feminine self-identification* ($R^2 = .042$, $F(1, 218) = 10.629$, $p < .05$; $\beta = .531$, $p < .05$) had a small but significant, positive effect on entrepreneurial intent, which was not mediated. The indirect effects were tested using a percentile bootstrap estimation approach with 10000 samples, implemented with the PROCESS macro Version 3.2 (Hayes, 2018).

In sum, the initial model was not supported by the results, as role model gender and intensity don't affect entrepreneurial intent. However, in terms of direct effects, identification with female gender-stereotypes was identified as a predictor of entrepreneurial intent, while being a

woman impacts it negatively. Additionally, the effects of self-identification with male and androgynous characteristics, as well as female perceptions of entrepreneurs on entrepreneurial intent, were mediated by personal attitude and perceived behavioral control.

Table 3 Indirect effects of X on Entrepreneurial Intent. (N = 219)

X	Mediator	β (indirect effect)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male self-identification	Personal Attitude	.373	.103	.178	.582
	Perceived Behavioral Control	.195	.070	.072	.582
Androgynous self-identification	Personal Attitude	.381	.098	.210	.594
	Perceived Behavioral Control	.159	.056	.063	.280
Female entrepreneurial stereotypes	Personal Attitude	.283	.083	.123	.449
	Perceived Behavioral Control	.093	.420	.021	.184

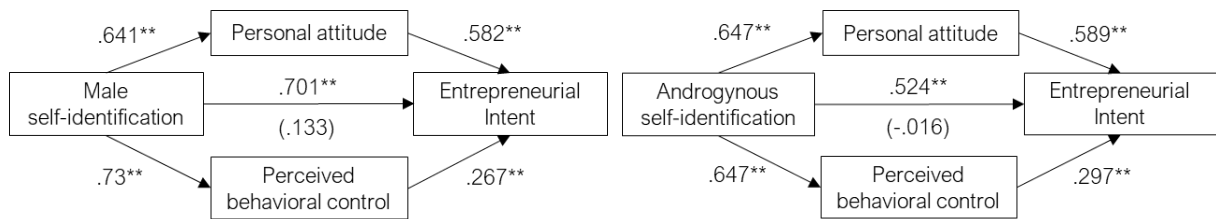


Figure 5 Estimated model of the moderated effect of Male Self-Identification on Entrepreneurial Intent (** p < .01).

Figure 6 Estimated model of the moderated effect of Androgynous Self-Identification on Entrepreneurial Intent (** p < .01).

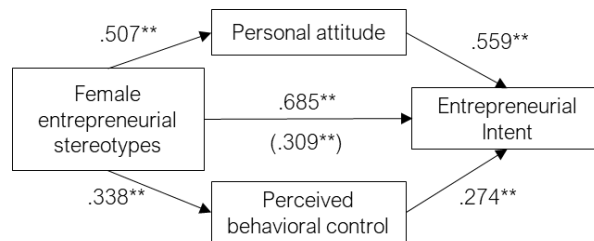


Figure 7 Estimated model of the moderated effect of Female Entrepreneurial Stereotypes on Entrepreneurial Intent (** p < .01).

Discussion

Male participants showed similar identification with all role models and perceived their success as equally attainable, in line with previous research (Lockwood, 2006). Unexpectedly, also for female participants role model gender did not matter. It is possible that as female role models were counter-stereotypical, the perceived dissimilarities especially in the extreme version lead to contrast effects, which would explain why women did not identify more with them.

In line with prior research (Dasgupta and Asgari, 2004) was also that exposing women to counter-stereotypical, female role models reduced their male stereotypes of entrepreneurs. Even though hypothesized differently, this was also valid for men, which is an important finding of this research, as there is a lack of research addressing the effect of role models on non-stigmatized groups' beliefs. It must be noted though, that this did not seem to negatively affect men's personal attitude – although their personal attitude decreased in the moderate female condition, it was highest in the condition with the extreme female role model.

Women identified less with androgynous traits after being exposed to an extreme role model, which is likely due to contrast effects. As women presumably feel relatively deficient compared to them, in response they seem to identify less with characteristics commonly associated with entrepreneurs (e.g. optimistic, innovative). On the other hand, men identified more with these traits – likely caused by assimilation effects, as they were more inspired by extreme role models. Male and female characteristics might have been perceived as less relevant overall for entrepreneurs, since self-identification with such was not affected in a similar way.

Furthermore, previous research findings were confirmed, suggesting significantly higher personal attitude, perceived behavioral control (Sahinidis, Giovanis and Sdrolias, 2012) and entrepreneurial intent of men compared to women (Sánchez and Licciardello, 2017). However, it is interesting to see how both genders are influenced by different role models: Higher personal attitude in moderate, same-sex conditions as compared to opposite-sex role models can be explained through shared group membership, which can foster positive associations with a field (Stout et al., 2011). And as predicted, men are even more inspired by extremely successful role models, independent of their gender, due to assimilation effects. On the other hand, contrast effects led to women feeling once more intimidated by extreme, female entrepreneurs leading to a decrease in personal attitude. And while shared group membership (e.g. gender) did also promote perceived behavioral control for both men and women, it appears not to be impacted by the assimilation and contrast effects associated with extremely successful role models.

The results of the overall model support previous research, suggesting that self-identification with male characteristics predicts entrepreneurial intent (Gupta et al., 2009). Also, that androgynous traits were perceived as relevant for entrepreneurs would explain why self-identification with them also has a mediated positive effect on entrepreneurial intent. What surprises though, is that for both men and women female stereotypes of entrepreneurs appear to have a positive mediated and self-identification with female characteristics even a positive direct effect on entrepreneurial intent. This contradicts Gupta et al.'s (2009) research, which only found an effect of male self-identification on entrepreneurial intent. However, their study suggested that women also attributed female characteristics to entrepreneurs. Thus, as my sample skewed towards female participants, their perceptions might have outweighed male responses. However, the moderated effect of androgynous self-identification and lack of significant effects of the gender-stereotypes-gaps suggests that it might not necessarily depend on whether a trait is gender-stereotyped, but simply on the characteristic itself. Because ultimately, these gender-stereotypes are learned expectations towards a gender, which does not mean they hold true. For instance, in this sample there was no significant difference between men's and women's self-identification with male or female characteristics. Lastly, there are multiple possible explanations for why none of the revealed effects of role model gender or intensity was transmitted to entrepreneurial intent. The effect of role models might not be sufficient, unknown factors could have suppressed the effect or there might simply be no effect.

Limitations: The research faces some limitations that prevent us from generalizing its results, such as the sample characteristics. First, the most represented nationalities were German (176) and Portuguese (33). Although both are European, the research did not control for possible cultural or economic differences of respondents' origins, which might affect their attitude towards entrepreneurship. Furthermore, the sample was not representative: It consisted of 55.7 % women, 88 % were below the age of 35 years, 51.3 % were students and finally, a total of 81 % possessed an academic degree. A representative sample might have yielded

different results. For example, older respondents might have already developed stronger stereotypes and could be less open about entrepreneurship as a career path after being employed for a while. In addition to that, the stimulus and presented role models define a limitation: First, some participants might have doubted the truthfulness of the scenarios, which was not controlled for and would influence the study outcomes. Second, different stimulus material could lead to different results, such as having participants work on a case study about one or more entrepreneurs or even exposing them to entrepreneurs in-person.

Implications: Besides its theoretical contributions, the present research bears valuable practical implications. First, to encourage female entrepreneurship at present, exposing women to moderately successful, female role models has the best prospects of success, as they are most effective in positively influencing their personal attitude towards entrepreneurship. Extreme, female role models should be avoided when working with women, while extreme, male role models appear not to be harmful. However, men seem to react best to extreme role models, independent of their gender. Particularly educators or career counsellors should be cautious in interventions that rely on role models, e.g. case studies, as higher educational institutions significantly impact young adults who have not chosen a career path yet. Second, the results suggest that counter-stereotypical role models – in this case extremely successful, female entrepreneur – can reduce male stereotypes within the male-stereotyped business of entrepreneurship. Thus, to effectively challenge limiting gender-stereotypes in our society, members must be exposed to a balanced communication of success stories of both men and women from an early age onwards. To ensure this, the media, educators and in general institutions aiming to promote entrepreneurship, but also parents with regards to the upbringing of their children, are called upon. This would not only promote female entrepreneurship, but it would also foster a start-up environment accepting of women, which would give women equal chances of succeeding as entrepreneurs.

Conclusion and future research

Gender-stereotypes associated with entrepreneurship and self-identification with such have a moderated, indirect effect on entrepreneurial intent through personal attitude and perceived behavioral control. And it appears that at least male stereotypes about entrepreneurs can be reduced and self-identification with androgynous characteristics altered, through the exposure to certain role models. However, there is no “one size fits all”-solution to this – men and women react significantly different depending on factors such as role model gender and their level of success. E.g. very successful, female role models can cause more harm than good to women whereas men tend to react more positively to extremes, independent of gender.

It would be interesting to advance the research on additional factors influencing role model effectiveness in gender-stereotyped areas, such as the industry in which the role model is active. But as I mentioned earlier, the stimulus material was a limiting factor. Hence, this study should be repeated with other types of role model manipulations, e.g. by conducting a workshop with real entrepreneurs or working on a detailed case study in a course at university. In this case it would make sense to test stereotypes and intent both before and after the role model exposure. This would be interesting for a second reason as well: Younger participants’ entrepreneurial stereotypes might not be as rigid yet, which might lead to different results.

However, as the effects were not carried over to entrepreneurial intent, future research should also focus on identifying factors, which intercept them. To be able to effectively utilize role models to promote women’s entrepreneurial intent, we need to develop a holistic understanding of the workings of gender-stereotypes, including inhibiting factors. Additionally, further research on the diminishing effect of successful, female role models on men’s perceived stereotypes could reveal whether this entails a higher acceptance of women in entrepreneurship and potentially other male-stereotypes areas, such as management positions. Finally, to assess if we can sustainably reduce gender-stereotypes in our society, the long-term nature of the revealed effects needs to be evaluated, e.g. by conducting a time series analysis.

References

- Ajzen, Icek. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes*, 50(2): 179-211.
- Asgari, Shaki, Nilanjana Dasgupta and Nicole G. Cote. 2010. "When does contact with successful ingroup members change self-stereotypes? A longitudinal study comparing the effect of quantity vs. quality of contact with successful individuals." *Social Psychology*, 41: 203-2011.
- Asgari, Shaki, Nilanjana Dasgupta and Jane G. Stout. 2011. "When do counterstereotypic ingroup members inspire vs. deflate? The effect of successful professional women on young women's leadership self-concept." *Personality and Social Psychology Bulletin*, 38: 370-383.
- Bandura, Albert. 1977. "Self-efficacy: Toward a unifying theory of behavioral change." *Psychological Review*, 84: 191-215.
- Bandura, Albert. 1982. „Self-efficacy mechanism in human agency." *American Psychologist*, 37(2): 122-147.
- Bandura, Albert. 1986. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- BarNir, Anat, Warren E. Watson and Holly M. Hutchins. 2011. "Mediation and Moderated Mediation in the Relationship Among Role Models, Self-Efficacy, Entrepreneurial Career Intention, and Gender." *Journal of Applied Social Psychology*, 41(2): 270-297.
- Bechthold, Laura and Laura Rosendahl Huber. 2018. "The Effects of Same-Gender Role Models in Entrepreneurship – A Randomized Field Experiment." *AEA RCT Registry*. March 29. Accessed December 23rd, 2018.
<https://www.socialscienceregistry.org/trials/2284>
- Berger, Sarah. 2018. „ClassPass founder: This is the biggest difference between successful and unsuccessful people." Accessed December 08th, 2018.
<https://www.cnn.com/2018/07/13/classpass-founder-payal-kadakia-reveals-what-makes-people-successful.html>
- Bem, Sandra L. 1974. „The measurement of psychological androgyny." *Journal of Consulting and Clinical Psychology*, 42: 155-162.
- Bem, Sandra L. 1981. „Gender schema theory: A cognitive account of sex typing." *Psychological Review*, 88(4): 354-364.
- Blair, Irene V., Jennifer E. Ma and Alison P. Lenton. 2001. "Imagining Stereotypes Away: The Moderation of Implicit Stereotypes Through Mental Imagery." *Journal of Personality and Social Psychology*, 81(5): 828-841.
- Blay, Angela. 2015. "The Influence of Exemplars and Role Models on Women's Stereotype Threat." *Senior Honors Theses Eastern Michigan University*, 445.

- Bosma, Niels, Jolanda Hessels, Veronique Schutjens, Mirjam van Praag and Ingrid Verheul. 2011. „Entrepreneurship and Role Models.“ *Tinbergen Institute Discussion Paper*, No. 11-061/3.
- Bönte, Werner and Monika Piegeler. 2013. “Gender gap in latent and nascent entrepreneurship: Driven by Competitiveness.“ *Small Business Economics*, 41(4): 961-987.
- Buttner, Holly E. 1993. “Female Entrepreneurs: How far have They Come?” *Business Horizons*, 36(2): 59-65.
- Buttner, Holly E. and Benson Rosen. 1988. “Bank Loan Officers’ Perceptions of the Characteristics of Men, Women, and Successful Entrepreneurs.” *Journal of Business Venturing*, 3 (3): 249-258.
- Buttner, Holly E. and Nur Gryskiewicz. 1993. „Entrepreneurs‘ problem-solving styles: An empirical study using the Kirton Adaption/Innovation Theory.” *Journal of Small Business Management*, 31(1): 22-31.
- Caliendo, Marco, Frank M. Fossen, Alexander Kritikos and Miriam Wetter. 2014. “The Gender Gap in Entrepreneurship: Not just a Matter of Personality.” *CESifo Economic Studies*, 61(1): 202-238.
- Camelo-Ordaz, Carmen, Joan Pablo Diáñez-González and José Ruiz-Navarro. 2015. “The influence of gender on entrepreneurial intention: The mediating role of perceptual factors.” *Business Research Quarterly*, 19: 261-277.
- Chen, Chao C., Patricia Gene Greene and Ann Crick. 1998. “Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?” *Journal of Business Venturing*, 13(4): 295-316.
- ClassPass. 2018. “Meet the team – Payal Kadakia.” Accessed December 8th, 2018.
<https://classpass.com/about/team>
- Dasgupta, Nilanjana. and Shaki Asgari. 2004. „Seeing is believing: Exposure to counterstereotypic women leaders and its effect on the malleability of automatic gender stereotyping.” *Journal of Experimental Social Psychology*, 40: 642-658.
- Dinc, Muhammet S. and Semira Budic. 2016. “The Impact of Personal Attitude, Subjective Norm, and Perceived Behavioural Control on Entrepreneurial Intentions of Women.” *Eurasian Journal of Business and Economics*, 9 (17): 23-35.
- European Commission. 2018. “*Female entrepreneurs.*” Accessed December 8th, 2018.
https://ec.europa.eu/growth/smes/promoting-entrepreneurship/we-work-for/women_en
- Fellhofer Katharina and Kaisu Puumalainen. 2017. „Can role models boost entrepreneurial attitudes?” *International Journal of Entrepreneurship and Innovation Management*, 21 (3): 274-290.
- Foote, Nelson. N. 1951. „Identification as the basis for a theory of motivation.” *American Sociological Review*, 16: 14-21.

- Furdas, Marina and Karsten Kohn. 2010. „What’s the Difference?! Gender, Personality and the Propensity to Start a Business.” *IZA Discussion Paper Np. 4778*.
- Gauntlett, David. 2002. *Media, gender and identity: An Introduction*. London: Routledge.
- Gibson, Donald E. 2004. „Role models in career development: New directions for theory and research.” *Journal of Vocational Behavior*, 65 (1): 134-156.
- Global Entrepreneurship Monitor – Global Report 2017/18. 2018. London: *Global Entrepreneurship Research Association*. Retrieved from: www.gemconcordium.com.
- Gupta, Vishal K., Daniel B. Turban, S. Arzu Wasti and Arijit Sikidar. 2009. “The Role of Gender Stereotypes in Perceptions of Entrepreneurs and Intentions to Become an Entrepreneur.” *Entrepreneurship: Theory & Practice*: 397-417.
- Hayes, Andrew F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach, Second Edition*. New York City, NY: The Guilford Press.
- Heilman, Madeline. 1983. “Sex bias in work settings: The lack of fit model.” *Research in Organizational Behavior*, 5: 269–298.
- Heilman, Madeline. 1997. “Sex discrimination and the affirmative action remedy: The role of sex stereotypes.” *Journal of Business Ethics*, 16 (9): 877–889.
- Hoyt, Crystal L. 2013. „Inspirational or Self-Deflating: The Role of Self-Efficacy in Elite Role Model Effectiveness.”, *Social Psychological and Personality Science*, 4(3): 290-2013.
- Karimi, Saeid, Harm J. A. Biemans, Thomas Lans, Mohammad Chizari and Martin Mulder. 2014. „Effects of role models and gender on students’ entrepreneurial intentions.” *European Journal of Training and Development*, 38 (8): 694-727.
- Kelley, Donna J., Benjamin S. Baumer, Candida Brush, Patrica G. Greene, Mahnaz Mahdavi, Mahdi Majbouri, Marcia Cole, Monica Dean and René Heavlow. 2017. “Global Entrepreneurship Monitor – Women’s Entrepreneurship 2016/2017 Report.” *Global Entrepreneurship Research Association*. Retrieved from: www.gemconsortium.com.
- Kepler, Erin and Scott Shane. 2007. “Are Male and Female Entrepreneurs Really That Different?” *SBA – Small Business Research Summary*, 309: 1-61.
- Krueger, Norris F. 1993. "The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability." *Entrepreneurship Theory & Practice*, 18(1): 5-21.
- Laviolette, Eric M., Miruna Radu Lefebvre and Oliver Brunel. 2012. “The impact of story bound entrepreneurial role models on self-efficacy and entrepreneurial intention.” *International Journal of Entrepreneurial Behavior & Research*, 18(6): 720-742.
- Lee, Soo Hoon and Poh Kam Wong. 2004. "An Exploratory Study of Technopreneurial Intentions: A Career Anchor Perspective." *Journal of Business Venturing*, 19: 7-28.

- Liñán, Francisco, and Yi-Wen Chen. 2009. "Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions." *Entrepreneurship Theory & Practice*, 33(3): 593-617.
- Lockwood, Penelope. 2006. „Someone like me can be successful: Do college students need same gender role models?“ *Psychology of Women Quarterly*, 30: 36-46.
- Lockwood, Penelope and Ziva Kunda. 1997. "Superstars and me: Predicting the impact of role models on the self." *Journal of Personality and Social Psychology*, 73: 91-103.
- Major, Brenda, Maria Testa and Wayne H. Blysm. 1991. "Responses to upward and downward social comparisons: The impact of esteem-relevance and perceived control." In *Social comparison: Contemporary theory and research*, J. Suls & T. A. Wills: 237-260. Hillsdale, NJ: Erlbaum.
- McIntyre, Rusty B., René M. Paulson and Charles G. Lord. 2003. "Alleviating women's mathematics stereotype threat through salience of group achievements." *Journal of Experimental Social Psychology*, 39: 83-90.
- Meyer, Verena, Silke Tegtmeier and Stefanie Pakura. 2017. "Revisited: how gender role stereotypes affect the image of entrepreneurs among young adults." *International Journal of Gender and Entrepreneurship*, 9(2): 319-337.
- Morgenroth, Thekla. 2015. "How Role Models Affect Role Aspirants' Motivation and Goals." (Doctoral dissertation). Retrieved from *University of Exeter's* database <https://ore.exeter.ac.uk/repository/handle/10871/18483>.
- Muravyev, Alexander, Oleksandr Talavera and Dorothea Schäfer. 2009. "Entrepreneurs' gender and financial constraints: Evidence from international data." *Journal of Comparative Economics*, 37: 270-286.
- Noel, Terry W. 2002. "Effects of Entrepreneurial Education on Intent to Open a Business: An Exploratory Study." *Journal of Entrepreneurship Education*, 5: 3-13.
- Patterson, Nicola, Sharon Mavin and Jane Turner. 2012. "Envisioning Female Entrepreneur: Leaders Anew from a Gender Perspective." *Gender in Management*, 27(6): 395-416.
- Pérez-Quintana, Anna and Esther Hormiga. 2015. "The role of androgynous gender stereotypes in entrepreneurship." *UB Business Working Papers 2015/2*.
- Raghuvanshi, Juhi, Rajat Agrawal and P.K. Ghosh. 2017. "Analysis of Barriers to Women Entrepreneurship: The DEMATEL Approach." *The Journal of Entrepreneurship*, 26(2): 220-238.
- Saeed, Saadat, Moreno Muffatto and Shumaila Yousafzai SY. 2014. "Exploring intergenerational influence on entrepreneurial intention: the mediating role of perceived desirability and perceived feasibility." *International Journal of Entrepreneurship & Innovation Management*, 18(2/3):134–153.

- Sahinidis, Alexandros G., Apostolos N. Giovanis and Lampros Sdrolias. 2012. "The role of gender on entrepreneurial intention among students: an empirical test of the theory of planned behavior in a Greek university." *International Journal on Integrated Information Management*, 2: 117-130.
- Sánchez, José C. and Orazio Licciardello. 2017. "Gender Differences and Attitudes in Entrepreneurial Intentions: The Role of Career Choice." *Journal of Women's Entrepreneurship and Education*, 1(2): 7-27.
- Schein, Virginia E. 2001. "A global look at psychological barriers to women's progress in management." *Journal of Social Issues*, 57(4): 675-688.
- Schein, Virginia E. 1973. "The relationship between sex stereotypes and requisite management characteristics." *Journal of Applied Psychology*, 57(2): 95-100.
- Scherer, Robert F., Janet S. Adams, Susan S. Carley and Frank A. Wiebe. 1989. "Role model performance effects on development of entrepreneurial career preference." *Entrepreneurship Theory and Practice*, 13(3): 53-71.
- Scott, Carole E. 1986. "Why more women are becoming Entrepreneurs." *Journal of Small Business Management*, 24(4): 37-44.
- Steele, Claude M. 1997. "A threat in the air: How stereotypes shape intellectual identity and performance." *American Psychologist*, 52: 613-629.
- Stout, Jane G., Nilanjana Dasgupta, Matthew Hunsinger and Melissa A. McManus. 2011. "STEMing the Tide: Using Ingroup Experts to Inoculate Women's Self-Concept in Science, Technology, Engineering, and Mathematics (STEM)." *Journal of Personality and Social Psychology*, 100(2): 255-270.
- Taylor, Cheryl A., Charles G. Lord, Rusty B. McIntyre and René M. Paulson. 2011. "The Hillary Clinton effect: When the same role model inspires or fails to inspire improved performance under stereotype threat." *Group Processes & Intergroup Relations*, 14: 447-459.
- Taylor, Sherrill R. and Julia D. Newcomer. 2005. "Characteristics of Women Small Business Owners." In *International Handbook of Women and Small Business Entrepreneurship*, S. Fielden and J. Davidson (eds.): 17-31. Northampton, Massachusetts: Edward Elgar Publishing Limited.
- The Hundert. 2016. *The Hundert – Startups of New York, Number 9*. New York City, NY: Jan Thomas.
- Thompson, Edmund R. 2009. "Individual Entrepreneurial Intent: Construct Clarification and Development of an Internationally Reliable Metric." *Entrepreneurship: Theory & Practice*, 33(3): 669-694.
- Valliere, Dave. 2014. "An Effectuation Measure of Entrepreneurial Intent", *Procedia – Social and Behavioral Sciences*, 169: 131-142.

- Veciana, José M., Marínés Aponte and David Urbano. 2005. "University Students' Attitudes Towards Entrepreneurship: A Two Country Comparison." *International Entrepreneurial Management Journal*, 1: 165-182.
- Wagner, Joachim. 2007. „What a Difference a Y Makes – Female and Male Nascent Entrepreneurs in Germany." *Small Business Economics*, 28(1): 1-21.
- Zhao, Hao, Scott E. Seibert and Gerald E. Hills. 2005. "The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions." *Journal of Applied Psychology*, 90(6): 1265-1272.

Appendices

Appendix 1: Questionnaire and Measurements

Q1. Attention check

[Single choice]

To assure that you read the text carefully, please answer the question below:

What service does *ClassPass* offer to its customers?

- A subscription service providing access to fitness studios and gyms.
- A platform offering access to various online courses, i.e. language or coding courses.
- I don't remember.

Q2. Role Model Perceptions

[7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)]

Think about the biography you just viewed. Please, indicate your level of agreement with the following statements from 1 (strongly disagree) to 7 (strongly agree).

Manipulation check

- I consider this person to be successful.
- I admire this person.
- I find this person to be inspiring.

Identification with the role model

- I identify with the accomplishments of the person I read about.

Perceived attainability of the role models' success

- Someday in the future, I will reach a similar level of success in my own field.

Q3. Gender Stereotypes – Entrepreneurs

[7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)]

[randomize statements]

Below you will find a series of descriptive terms commonly used to characterize people in general. Some of these terms are positive in connotation, others are negative, and some are neither very positive nor very negative. We would like you to use this list to tell us what you think entrepreneurs are like.

Please rate each word or phrase in terms of how characteristic it is of entrepreneurs from 1 (strongly disagree) to 7 (strongly agree).

Male Characteristics

- Aggressive / dominant
- Ambitious
- Competitive
- Determined
- Independent
- Individualistic
- Leadership capacity
- Make decisions easily

- Willingness to take risks
- Willingness to take a stand
- Self-confident

Female Characteristics

- Flexible
- Humble
- Gullible
- Kind / attentive
- Loyal
- Sensible to other's needs
- Shy / discreet
- Submissive

Androgynous Characteristics

- Analytical
- Active / energetic
- Creative
- Innovative
- Optimistic
- Unpredictable

Q4. Gender-Stereotypes – Self-Identification

[7-point Likert scale, ranging from 1 (totally disagree) to 7 (totally agree)]

[randomize statements]

How would you describe yourself?

Please rate each word or phrase in terms of how characteristic it is of you from 1 (strongly disagree) to 7 (strongly agree).

Male Characteristics

- Aggressive / dominant
- Ambitious
- Competitive
- Determined
- Independent
- Individualistic
- Leadership capacity
- Make decisions easily
- Willingness to take risks
- Willingness to take a stand
- Self-confident

Female Characteristics

- Flexible
- Humble
- Gullible
- Kind / attentive
- Loyal
- Sensible to other's needs
- Shy / discreet
- Submissive

Androgynous Characteristics

- Analytical
- Active / energetic
- Creative
- Innovative
- Optimistic
- Unpredictable

Q5. Personal attitude

Please indicate your level of agreement with the following sentences from 1 (strongly disagree) to 7 (strongly agree).

- Being an entrepreneur implies more advantages than disadvantages to me.
- A career as entrepreneur is attractive for me.
- If I had the opportunity and resources, I'd like to start a firm.
- Being an entrepreneur would entail great satisfaction for me.
- Among various options, I would rather be an entrepreneur.

Q6. Perceived behavioral control

To what extent do you agree with the following statements regarding your entrepreneurial capacity? Value them from 1 (totally disagree) to 7 (totally agree).

- To start a firm and keep it working would be easy for me.
- I am prepared to start a viable firm.
- I can control the creation process of a new firm.
- I know the necessary practical details to start a firm.
- I know how to develop an entrepreneurial project.
- If I tried to start a firm, I would have a high probability of succeeding.

Q7. Entrepreneurial Intent

How interested are you in engaging in one of these activities within the next 5-10 years? Please indicate your level of interest in the following options from 1 (very little) to 7 (a great deal).

- Start a business
- Acquire a small business
- Start and build a high-growth business
- Acquire and build a company into a high-growth business

Appendix 2: Table 4: Scales' Cronbach's alphas. (N = 220)

Scale	Cronbach's Alpha
Manipulation Check	.747
Male Entrepreneurial Stereotypes	.727
Female Entrepreneurial Stereotypes	.648
Androgynous Entrepreneurial Stereotypes	.577 .63 without "unpredictable"
Male Self-Identification	.732
Female Self-Identification	.55
Androgynous Self-Identification	.508 .574 without "unpredictable"
Personal Attitude towards Entrepreneurship	.929
Perceived Behavioral Control	.883
Entrepreneurial Intent	.861