

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Journal of Business Venturing Insights

journal homepage: [www.elsevier.com/locate/jbvi](http://www.elsevier.com/locate/jbvi)

## Perceiving entrepreneurs: Job title comparisons in warmth and competence

James W. Berry<sup>\*</sup>, Janice Sanchez

UCL School of Management, UK



## ARTICLE INFO

**Keywords:**

Stereotypes  
 Entrepreneur  
 Job titles  
 Warmth  
 Competence  
 Social cognition

## ABSTRACT

Recent research in entrepreneurship and stereotypes have considered how entrepreneurs are evaluated on various factors. Taking a social cognition approach, we examine entrepreneur stereotypes by identifying patterns in stereotype content dimensions for entrepreneurs and related job titles. The title of entrepreneur is complex incorporating both business and innovation components. Across three studies we compare warmth and competence dimensions of the title of entrepreneur with those of a business leader (CEO), inventor/innovator (scientist), and a role requiring both creativity and business skills (advertiser). We find that while entrepreneurs are consistently seen as less competent than either a CEO or scientist and more so than an advertiser, they tend to be seen as warmer than these professionals.

### 1. Introduction

We know little about the nature of the stereotype content of various job titles or how the job title of entrepreneur compares. Judgements in the entrepreneurial context are often based on complex but limited information. Under these conditions, bias and stereotypes may have significant implications (Bodenhausen and Lichtenstein, 1987; Wyer et al., 2000) relevant for entrepreneurs (Johnson et al., 2018; Lee and Huang, 2018). Research in social cognition has investigated stereotype effects across groups by examining perceptions of warmth and competence finding that they form most peoples' impressions of others (Fiske, 2018). Recent work in entrepreneurship highlights the influence of stereotypes in this domain (Lee and Huang, 2018).

However, direct examination of entrepreneur stereotypes has been confounded with gender considerations. Examination of stereotypes in the entrepreneurship context merits further consideration beyond gender (Lee and Huang, 2018). Focusing on the title, and considering closely related titles answers research calls for examining stereotypes within organizational labeling (Ashforth and Humphrey, 1997). With our work, we also aim to extend entrepreneurship literature by utilizing a social cognition approach to examine the stereotype content (Fiske et al., 2002) of entrepreneurs and business and innovation job titles, and add to the social cognition literature by expanding the categories typically investigated in a focused organizational context (Ashforth and Humphrey, 1995).

Therefore, our main research inquiry is the extent to which the title of entrepreneur triggers stereotypes by identifying patterns in dimensions of stereotype content for entrepreneurs and related job titles. This research is particularly important for entrepreneurship because while most people's job titles are externally imposed (Grant et al., 2014), entrepreneurs often have discretion about how they categorize themselves, choosing their work contexts and the image they want to project. This extends beyond the choice of product, market, employees, and venture name, to how they define their roles within their organizations. This flexibility and choice associated with entrepreneurs leads us to explore the extent to which job titles carry stereotype meaning.

<sup>\*</sup> Corresponding author. Level 38, One Canada Square, Canary Wharf, London, E14 5AA, UK.

E-mail address: [James.Berry@ucl.ac.uk](mailto:James.Berry@ucl.ac.uk) (J.W. Berry).

<https://doi.org/10.1016/j.jbvi.2019.e00145>

Received 22 July 2019; Received in revised form 11 October 2019; Accepted 13 October 2019

2352-6734/© 2019 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

<http://creativecommons.org/licenses/by/4.0/>

## 2. Stereotypes of entrepreneurs: a social cognition viewpoint

One job title that has received attention both in the research literature and public press in the last two decades is that of the entrepreneur. Entrepreneurs have been recognized as a driving force behind global economic and social growth (Baum et al., 2014). Specifically, the title of entrepreneur is linked to individuals who lead businesses and capitalize on innovation or invention (Carland et al., 1998). The dual nature of this particular group and the lack of other contextual cues associated with a new venture upon initial introduction make the examination of the perceived stereotype content consequential, as stereotypes are activated most frequently when there are many cognitive demands and for complex judgments (Bodenhausen and Lichtenstein, 1987; Wyer et al., 2000). Research on entrepreneurs and stereotypes has considered intragroup factors (gender, age, nationality) of entrepreneurship (for example: Gupta et al., 2009; Malmström et al., 2018) but has not examined intergroup factors, such as, the perception of the group itself.

In a complex world of information and broadening networks of connections, people often rely on stereotype information to simplify and frame their interactions (Bodenhausen, 1990; Macrae and Bodenhausen, 2000). Social cognition researchers investigate stereotype effects across groups by examining perceptions of warmth and competence as primary drivers of differential consideration (Fiske et al., 2002). This is due to the universality and predictive value of these dimensions based on decades of research (Fiske et al., 2007). Warmth judgements are primary but together with competence judgements more fully capture perceivers' impressions of people and interpretations of their actions. More specifically, the competence dimension of stereotype content is related to perceptions of ability, knowledge, skill, attainment, and intelligence while the warmth dimension is linked to the integrity of the person and intent of their behavior which is critical to considerations of trust and risk (Fiske et al., 2007). Social status and competitiveness give rise to these two dimensions and lead to emotions of admiration, contempt, envy, and pity from perceivers (SCM; Fiske et al., 2002; Fiske et al., 1999). Utilizing stereotype content framework, we explore the warmth and competence of entrepreneurs compared with related groups, chief executive officers (CEOs), scientists, and advertisers.

Entrepreneurs often present unknown companies and uncertain products to a wide variety of people. First impressions and getting access through gate keepers is critically important to this process. The stereotype content inherent in the job title they chose could affect how they are perceived and whether they get to even make a pitch. While there are many ways in which people can be categorized, a job title is one such categorization that has proliferated in the work environment (Baron and Bielby, 1986). Job titles typically precede our introductions to people through various communication and connection tools (i.e., business cards, email signatures, resumes). Even in face to face meetings, it is often expected to give not only your name but your title as a means of polite introduction (Ashforth and Kreiner, 1999; Grant et al., 2014). Job titles are often assigned to individuals when they join an organization or are promoted within one. These titles may indicate a range of factors, such as; technical expertise, role responsibilities, market focus, and organizational hierarchy. The title associated with a work role may even be seen as status compensation and holds real economic value (Besley and Ghatak, 2008; Greenberg and Ornstein, 1983). Researchers use job titles as proxy for experience and status levels of employees (Ferguson et al., 2016) but these titles may also be restrictive in bounding employee expectations and behavior (Burton and Beckman, 2007).

Fundamentally, the titles we use convey information about us to others that can be used to form vital initial impressions through stereotype activation. These titles, acting as social categorizations, once set, can endure and influence interactions beyond this initial stage (Van Dijk, Meyer, Engen and Lloyd, 2017). However, most stereotype research is focused on established social categories that often revolve around race, gender, and age (Fiske, 2018). Initial work on the theoretical development of the Stereotype Content Model examined a host of groups including Asians, Latinos, rich people, gay men but also included categories that might relate to job roles: housewife, house cleaner, migrant workers, and businesswomen (Fiske et al., 1999). These categories, while representing work-related roles, resulted in consistent stereotype content mapping on the factors of warmth and competence. We extend the model to examine job titles, specifically, entrepreneurs and closely aligned work categories.

Across three studies, we examine the differences between entrepreneurs and closely related titles across warmth and competence dimensions, and in our final study, we examine these stereotypes from an individual perspective using a networking scenario vignette. In this way, we seek to establish a relative baseline of perceived stereotype content for entrepreneurs and begin the work of exploring the implications of job title stereotype content. Currently, as governments, universities, and broader society prioritize innovation and encourage individuals to become entrepreneurs, how people perceive this growing population of individuals choosing to identify with this job title is of increasing importance.

## 3. Materials and methods

### 3.1. Pilot: job title comparison set

We conducted a pilot study on Amazon's Mechanical Turk (MTurk) to find related job titles based upon the dual nature of the entrepreneur title (see Buhrmester et al., 2011, for subject pool details). We asked one hundred participants (40 females, 60 males; mean age = 31.18,  $SD = 8.52$ ) to identify job titles representing business leaders, inventors/innovators, and titles that required a balance of both creativity and business skills. Participants were prompted to identify three job titles for each prompt in an open-response format. Using these responses, we found the CEO title to be most frequently mentioned for business leader, identified by 69% of respondents and scientist as the most recognized job title related to inventor/innovator with 48% of respondents identifying this title. The list of job titles requiring both creativity and business skills showed the most variance in responses but 41% included a job title related to advertising or marketing such as creative director, copywriter, ad executive, and marketing executive. This led us to select advertiser as the third comparison job title. We found further support for our comparison set as entrepreneur appeared frequently with between 15 and 20% of respondents identifying them in each of these three lists.

3.1.1. Common procedures

Participants for all three focal studies conducted were recruited via MTurk (a crowdsourcing microtask jobs platform) and were paid \$0.30 for their participation. The use of MTurk to recruit participants was deemed appropriate as we were looking for a societal sample (US based, over 18 years of age) with no particular expertise and utilized a number of methods to ensure quality responses were obtained. Participants were requested with high past qualifications (95% approval rating on previous tasks) within the MTurk platform, screened to prevent past participants from participating in future studies, and their responses were also reviewed using attention checks and completion times (under 2 min was deemed inadequate to read and complete the survey) to remove potential bots and inattentive respondents (Hunt and Scheetz, 2019; Kennedy et al., 2018). Sample size for each study was based upon prior research using these measures in comparing categories on stereotype content by Fiske et al. (2002). All measures of stereotype content were responded to on a 5-point scale anchored at 1 = not at all and 5 = extremely.

3.2. Study 1: entrepreneur job titles: competence and warmth

In our first study we examined whether the stereotype of an entrepreneur job title differs from those of CEO, scientist, and advertiser on dimensions of competence and warmth.

3.2.1. Participants

Ninety participants responded to our study as posted on MTurk. However, three participants were excluded for inadequate completion times and 11 were dropped for a failed attention check question indicating these participants had not been reading the study questions carefully (Oppenheimer et al., 2009). Thus, the final sample analyzed included seventy-six participants (33 females, 43 males; mean age = 36.78 years, SD = 13.24).

3.2.2. Measures

Participants were asked, "Please rate the following groups on the basis of how the groups are viewed by American society. We are not interested in your personal beliefs, but in how you think they are viewed by others." This is an abbreviated societal framing adopted from Fiske et al.'s (2002) Study 3 for the trait dimensions to address social desirability concerns. We inquired about 4 groups (entrepreneurs, CEOs, scientists, and advertisers). The items capturing our focal stereotype content dimension of competence and warmth were, "How confident are members of this group?", "How competent are members of this group?", and "How sincere are members of this group?", "How warm are members of this group?" respectively, as in Fiske et al. (2002) Study 3. The job titles and content questions were presented in randomized order to counteract order effects.

3.2.3. Results

Differences between the entrepreneur title and the other job titles were tested with paired samples *t*-tests. Table 1 reports the results for the analysis for the three studies conducted. Entrepreneurs averaged 4.01 on competence, which differed significantly from all other groups, CEOs  $t(75) = 2.49, p = .015$ , scientists  $t(75) = 2.87, p = .005$ , and advertisers  $t(75) = -2.91, p = .005$  (see Table 1). On the dimension of warmth, entrepreneurs averaged 3.34, which was significantly different from CEOs  $t(75) = -10.32, p < .000$ , scientists

**Table 1**  
Descriptive statistics and paired T-Tests for all studies.

Study (N)	Titles	Competence Mean (SD)	Warmth Mean (SD)
1 (76) societal	Entrepreneur	4.01 (0.64)	3.34 (0.65)
	CEO	4.20 (0.66)*	2.32 (0.73)*
	Scientist	4.25 (0.62)*	3.13 (0.69)*
	Advertiser	3.80 (0.57)*	2.43 (0.79)*
2 (127) societal	Entrepreneur - Male	4.18 (0.59)	3.21 (0.66)
	Entrepreneur - Female	4.08 (0.61)	3.37 (0.85)
	CEO - Male	4.26 (0.71)	2.46 (0.83)
	CEO - Female	4.32 (0.70)	2.85 (0.93)
	Scientist - Male	4.33 (0.64)	3.20 (0.78)
	Scientist - Female	4.25 (0.64)	3.46 (0.66)
	Advertiser - Male	3.90 (0.65)	2.72 (0.80)
	Advertiser - Female	3.94 (0.69)	3.15 (0.81)
3 (83) individual societal	Entrepreneur	4.04 (0.70)	3.69 (0.61)
	CEO	4.07 (0.63)	3.26 (0.69)*
	Scientist	3.95 (0.59)	3.72 (0.62)
	Advertiser	3.46 (0.66)*	3.28 (0.64)*
	Entrepreneur	4.02 (0.86)	3.63 (0.79)
	CEO	4.29 (0.77)*	2.83 (0.93)*
	Scientist	4.49 (0.67)*	3.01 (0.94)*
	Advertiser	3.61 (0.75)*	3.45 (0.87)

Note: Standard deviations are given in parenthesis. \* indicates significant difference from the entrepreneur value estimated via paired *t*-test at a 0.05 level under the conservative Holm-Bonferroni step-down procedure to account for multiple estimations (Holm, 1979). T-values and specific p-values are reported in the text.

$t(75) = -2.04$ ,  $p = .045$ , and advertisers  $t(75) = -8.28$ ,  $p < .000$ . Making considerations for multiple tests using a Holm-Bonferroni correction to the appropriate level of p-value for each test in a step-down method (Holm, 1979), all comparisons were significant. These results indicate that entrepreneurs are perceived as less competent than CEOs and scientists and more competent than advertisers. In terms of warmth, entrepreneurs are perceived as significantly higher on warmth than the other job titles. These findings lay the groundwork for the comparative stereotype content of these professional titles.

### 3.3. Study 2: entrepreneur job titles: competence and warmth and gender

In this study, we aimed to replicate and extend the findings of Study 1. To strengthen the measurement of the stereotype content factors and to enable robust reliability calculations, we added an additional item to both measures of perceived competence and warmth. Furthermore, we considered whether the gender of the target influenced the perceivers' ratings. Previous research has shown significant gender differences when considering the entrepreneurial stereotype generally considered a masculine occupation (e.g., Baron et al., 2001; Gupta et al., 2009); gendered job titles overcome stereotypical job role bias in balancing gender fit perceptions for hiring (Horvath and Sczesny, 2016); and work on stereotype content has shown differences between perceptions of men and women on warmth and competence (Fiske et al., 2002). In addition to a comparison of job titles, this study explored differences on warmth and competence between males and females holding the same job titles combining previous research inquiries.

#### 3.3.1. Participants

We posted the study on MTurk and one hundred and fifty-three individuals responded. However, thirteen participants were excluded for inadequate completion times, four were removed for participating in prior studies, and nine were dropped for a failed attention check, as per our common procedures. This yielded a final sample of one hundred twenty-seven participants (72 females, 55 males; mean age = 36.91 years,  $SD = 12.26$ ).

#### 3.3.2. Measures

In this study, we used the same instruction and measures as in Study 1 except for two things. First, we included one additional item for perceived competence and warmth measures, taken from prior research (Fiske et al., 2002); for the competence dimension, "How capable are members of this group?" was added to the confident and competent items and "How good-natured are members of this group?" was added to sincere and warm items for the warmth dimension. These composite-measures evidenced good reliability yielding Cronbach's  $\alpha$  for competence was .75 and .83 for warmth. Second, this study asked participants to rate the focal titles as identified with either a male or female qualifier (i.e., Entrepreneurs – Male). Participants were randomly assigned to either the male or female treatments.

#### 3.3.3. Results

Differences between groups were tested with paired samples  $t$ -tests. There was no significant main effect of target gender for the focal group of entrepreneurs, and therefore the target gender (male, female) were collapsed in the following analyses. However, we report the separated and combined mean scores for this study in Table 1 for clarity and completeness. The comparisons amongst the four groups again revealed consistent differences on both dimensions of competence and warmth. Entrepreneurs averaged 4.12 on competence, differing significantly from CEOs  $t(126) = 3.10$ ,  $p = .002$ , scientists  $t(126) = 2.71$ ,  $p = .008$ , and advertisers  $t(126) = -3.47$ ,  $p < .001$  (see Table 1). For warmth, entrepreneurs averaged 3.30, which was also significantly different from CEOs  $t(126) = -7.12$ ,  $p < .000$  and advertisers  $t(126) = -4.46$ ,  $p < .000$ , but not from scientists  $t(126) = 0.55$ ,  $p = .584$ . These results demonstrate that entrepreneurs are perceived to be less competent than CEOs and scientists and more competent than advertisers. They are also perceived as warmer than CEOs and advertisers.

These findings replicate the same patterns of results found in Study 1 with the exception that entrepreneurs did not differ from scientists in terms of warmth. This replication provides stronger evidence of the stereotype content related to these job titles. By considering gender as a factor, we sought to build a bridge to prior work indicating stereotypical gender effects related to entrepreneurship. While there was no conclusive evidence of a target gender effect in this study, this result appears to run counter to general gender effects showing women to be rated lower in competence than men. Consistently higher ratings (albeit non-significantly higher) for warmth may add some support for women being viewed as stronger on this dimension (Fiske et al., 2002). This could perhaps indicate that gender effects were overpowered by a stronger stereotype response based on the specific nature of the job titles or an order effect of how the terms were presented giving more weight to job titles.

### 3.4. Study 3: entrepreneur job titles: competence and warmth and situational context

Comfortable with the consistency of the pattern shown in Studies 1 and 2, we sought to extend these findings by measuring the stereotype content factors as reported by individuals in a situational context. This approach extends the previous findings by exploring if general stereotype content influence individual views and public sentiments in a more complex contextual frame. This study offers a more conservative test of the robustness of the stereotype content as these effects must contest with social desirability and increased individual variation than the standard general response framework used in most stereotype research.

#### 3.4.1. Participants

Ninety-three participants responded to this study invitation on MTurk. However, five participants were dropped for inadequate

completion times and five participants were removed as past study participants. A final sample completing the study as requested encompassed eighty-three participants (40 females, 43 males; mean age = 32.99 years,  $SD = 10.26$ ).

### 3.4.2. Measures

Participants were asked, "Imagine you are planning to attend a community networking event and you have the opportunity to meet with several different people. The organizers have asked everyone to identify their job role to help with matching people. Please rate your thoughts on engaging with each type of professional below." They then rated three-item measures of competence and warmth for the professionals from the groups. For competence, participants were asked: "How likely are you to seek advice from this person?", "How likely are you to learn something from them?", and "Is this person confident?" For warmth, participants were asked: "Do you think it would be enjoyable to speak with this person?", "What is the likelihood that this person makes others feel at ease and welcome?", and "How likely is this person to be trustworthy?" These measures capture the individual's personal rather than societal perceptions of others holding these titles. Cronbach's  $\alpha$  was .58 for competence and .64 for warmth. Following these questions, participants rated the four groups on competence and warmth using single-item measures, "How competent (warm) are members of this group?" We specifically utilized these terms to enable comparisons to our previous studies and provide an opportunity to replicate the results of Studies 1 and 2.

### 3.4.3. Results

Considering the individually focused measures, entrepreneurs averaged 4.04 on competence, which differed significantly from advertisers  $t(82) = -6.61, p < .000$ , but not from the other groups, CEOs  $t(82) = 0.38, p = .705$  and scientists  $t(82) = -1.13, p = .260$  (see Table 1). On the dimension of warmth, entrepreneurs averaged 3.69, which was significantly different from CEOs  $t(82) = -5.90, p < .000$  and advertisers  $t(82) = -4.43, p < .000$ , but not from scientists  $t(82) = 0.41, p = .686$ . Thus, entrepreneurs were perceived to be more competent than advertisers, and higher on warmth than CEOs and advertisers within a more complex situational context.

With regards to the single-item societal framed measures of perceived warmth and competence, entrepreneurs averaged 4.02 on competence, which differed significantly from all groups, CEOs  $t(82) = 2.61, p = .011$ , scientists  $t(82) = 4.49, p < .000$ , and advertisers  $t(82) = -4.10, p < .000$  (see Table 1). For warmth, entrepreneurs averaged 3.63, which was significantly different from CEOs  $t(82) = -7.55, p < .000$  and scientists  $t(82) = -4.98, p < .000$ , but not from advertisers  $t(82) = -1.73, p = .087$ . These results demonstrate that entrepreneurs are perceived to be less competent than CEOs and scientists and more competent than advertisers. They are also perceived as warmer than CEOs and scientists.

These results (mostly) replicate those found in Studies 1 and 2. For the situational 3-item measures, entrepreneurs were still rated more competent than advertisers, but no longer less competent than CEOs and scientists. One possible explanation for this finding is that when you ask directly about stereotypes as felt by the general public, there is less of a concern with social desirability influencing the outcomes (e.g., Fiske et al., 2002; King and Bruner, 2000; Moorman and Podsakoff, 1992). Another possible explanation is that a situational context (in this case, a vignette of a networking event) may bring to mind individuals who attend these types of events that may influence the stereotype activation. Finally, there could be differences due to asking about individuals compared to asking about groups (Hamilton and Sherman, 1996). This difference is evidenced in the return to the patterns for competence from Study 1 and 2 when the question reverted to a societal form (asking about groups). The consistency of the results contribute to the idea that warmth and competence dimensions can be used to explain the categorization of entrepreneurs and related job titles, and provides a type of constructive replication (Köhler and Cortina, 2019; Lykken, 1968) in terms of measurement.

## 4. General discussion

### 4.1. Overview

Stereotypes are often used to simplify the world we live in and inform impressions and judgments (Brewer, 1988; Kunda and Spencer, 2003). In the organizational world, the job title is an expanding means of classification and often represents key information about the individuals holding these named roles within organizations (Baron and Bielby, 1986; Grant et al., 2014). In this paper, we have shown that the stereotypes activated by these different job titles carry consistent distinctions. This is particularly important for a complex job title like that of entrepreneur that may bring to mind information about more than one primary skill domain (business and innovation). Across all of our studies the entrepreneur job title elicited lower levels of perceived competence than the archetypal titles for business leaders (CEOs) and inventors/innovators (scientists), and consistently higher level of warmth than CEOs and some indications of higher warmth than scientists. Comparing entrepreneurs against the prevalent title representing combined business and innovation skills (advertisers), the entrepreneurs consistently were rated as more competent and warm. These findings map where the title of entrepreneur falls in psychological dimensions in relation to related professional titles.

### 4.2. Theoretical implications

The current findings extend prior work on stereotype content to the comparisons of job titles as social categories. Combinations of warmth and competence give rise to different emotions (admiration: high competence, high warmth; contempt: low competence, low warmth; envy: low warmth, high competence; and pity: high warmth, low competence). Being seen as both competent and warm, entrepreneurs fit squarely in Fiske et al.'s (2002) admiration quadrant of the Stereotype Content Model (SCM). Previous work on stereotypes most often focuses on membership in varied groups, job titles, however, are somewhat less assuredly fixed to any individual.

Individuals may hold several job titles over their lifetime, and these may carry similar or varying stereotype content. Additionally, research and theory on perceptions of an entrepreneur's trustworthiness and competence to deliver on their start-up might want to consider the initial bias inherent in the title of entrepreneur.

#### 4.3. Practical implications

These job titles can not only have stereotype implications but also represent an aspect of an individual's identity (Ashforth and Kreiner, 1999; Baron & Bielby, 1986). These findings can help the leaders of new organizations advantageously position themselves to others. If entrepreneurs have other professional titles (such as CEO, scientist, and/or advertiser) and a choice in identification, they may be able to take advantage of positive stereotype effects (Shih et al., 1999) and avoid other negative biases like those against creative types (Mueller et al., 2012). Using the title of entrepreneur may be helpful when warmth and associated qualities are desired, but CEO or scientist may be a better option in order to signal competence. This research may also have implications when entrepreneurs meet and present to funders and investors as often those in powerful roles attend to stereotype-consistent information (Fiske and Dépret, 1996; Guinote and Phillips, 2010). Finally, understanding the stereotypes around a specific job title may help individuals, start-ups, and existing organizations utilize these worker classifications as effective communication and motivation tools (Grant et al., 2014).

#### 4.4. Limitations and future directions

We recognize some constraints on generalizability (COG: Simons et al., 2017) of these findings. First, we consciously selected samples that represent the US population, thus these results may not generalize to other countries. Second, our materials and stimuli utilized established measures and methods from other stereotype research, however, we have no reason to believe our results would differ using the same measures and methods. While our scales and studies measured the focal constructs, the two-item scale in one of the studies and moderate reliabilities in our final study suggest an opportunity for additional scale development with these measures. Finally, our findings may depend on historical context. For instance, at another point in time, trends as to the social acceptability of entrepreneurs may influence the nature the title's stereotype content.

While we focused on a particular subset of job titles that were most relevant for our studies, future work should explore a wider range of titles and include international samples. Additionally, jobs such as "advertisers" could have other connotations (this group had the most variance of responses in the open-ended response in the pilot study); however, even with this group, our findings show a consistent stereotype pattern. Another area worth exploring is gender effects in professional stereotypes. While past research has found such effects (Gupta et al., 2009; Sexton and Bowman-Upton, 1990), the additional comparisons made in these studies might highlight distinctions or confounding effects in activating multiple stereotypes (Kunda and Thagard, 1996). The present studies established the stereotype dimensions of competence and warmth as relevant to job titles, further work can examine the correlates of status and competition that follow from the content factors of warmth and competence (Fiske et al., 2002). The social cognition framework can also be used to consider other aspects of entrepreneurship, such as entrepreneur processes and actions. There may also be categorical perceptions of entrepreneurs on other relevant characteristics not examined in this work such as risk-taking, proactivity, and creativity.

### 5. Conclusion

The present studies demonstrated that job titles carry stereotype content, and that, even in situations where there are other contextual factors at play, these perceptions of competence and warmth still shine through. While the stereotypes described may have come about through various professional histories and encounters, the competence and warmth dimensions gathered are a first step in understanding attitudes towards entrepreneurs and their self-identification. The entrepreneur's stereotype is generally favorable, and the results provide compelling evidence of patterns of distinctions amongst related professions.

#### Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

#### Declaration of competing interest

None.

#### Acknowledgements

We would like to thank the contributions of SunYoung Lee and Martin Kilduff for their friendly review and considered thoughts in refining this paper. Additionally, we would like to thank the members of the UCL School of Management's reading group for their combined comments and support of this work.

#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jbvi.2019.e00145>.

## References

- Ashforth, B.E., Humphrey, R.H., 1995. Labeling processes in the organization. *Res. Organ. Behav.* 17, 413–461.
- Ashforth, B.E., Humphrey, R.H., 1997. The ubiquity and potency of labeling in organizations. *Organ. Sci.* 8 (1), 43–58.
- Ashforth, B.E., Kreiner, G.E., 1999. How can you do it?: dirty work and the challenge of constructing a positive identity. *Acad. Manag. Rev.* 24 (3), 413–434. <https://doi.org/10.5465/AMR.1999.2202129>.
- Baron, R.N., Bielby, W.T., 1986. The proliferation of job titles in organizations. *Adm. Sci. Q.* 31 (4), 561–586. <https://doi.org/10.2307/2392964>.
- Baron, R.N., Markman, G.D., Hirska, A., 2001. Perceptions of women and men as entrepreneurs: evidence for differential effects of attributional augmenting. *J. Appl. Psychol.* 86 (5), 923–929. <https://doi.org/10.1037/0021-9010.86.5.923>.
- Baum, J.R., Frese, M., Baron, R.A., Katz, J.A., 2014. Entrepreneurship as an area of psychological study: an introduction. In: Baum, J.R., Frese, M., Baron, R.A. (Eds.), *The Psychology of Entrepreneurship* (1–18). Psychology Press, NY.
- Besley, T., Ghatak, M., 2008. Status incentives. *Am. Econ. Rev.* 98 (2), 206–211. <https://doi.org/10.1257/aer.98.2.206>.
- Bodenhausen, G.V., Lichtenstein, M., 1987. Social stereotypes and information-processing strategies: the impact of task complexity. *J. Personal. Soc. Psychol.* 52 (5), 871–880. <https://doi.org/10.1037/0022-3514.52.5.871>.
- Bodenhausen, G.V., 1990. Stereotypes as judgmental heuristics: evidence of circadian variations in discrimination. *Psychol. Sci.* 1 (5), 319–322. <https://doi.org/10.1111/j.1467-9280.1990.tb00226.x>.
- Brewer, M., 1988. A dual process model of impression formation. In: Srull, T.K., Wyer Jr., R.S. (Eds.), *Advances in Social Cognition*, vol. 1. Erlbaum, Hillsdale, NJ, pp. 1–36.
- Buhrmester, M., Kwang, T., Gosling, S.D., 2011. Amazon's Mechanical Turk: a new source of inexpensive, yet high-quality, data? *Perspect. Psychol. Sci.* 6 (1), 3–5. <https://doi.org/10.1177/1745691610393980>.
- Burton, M.D., Beckman, C.M., 2007. Leaving a legacy: Position imprints and successor turnover in young firms. *Am. Sociol. Rev.* 72, 239–266. <https://doi.org/10.1016/j.jbusvent.2006.02.001>.
- Carland, J.W., Hoy, F., Boulton, W.R., Carland, J.A.C., 1998. Differentiating entrepreneurs from small business owners: a conceptualisation. *Entrepreneur* 9 (2), 149–155. [https://doi.org/10.1007/3-540-48543-0\\_3](https://doi.org/10.1007/3-540-48543-0_3).
- Ferguson, A.J., Cohen, L.E., Burton, M.D., Beckman, C.M., 2016. Misfit and milestones: structural elaboration and capability reinforcement in the evolution of entrepreneurial top management teams. *Acad. Manag. J.* 59 (4), 1430–1450.
- Fiske, S.T., 2018. Stereotype content: warmth and competence endure. *Curr. Dir. Psychol. Sci.* 27 (2), 67–73. <https://doi.org/10.1177/0963721417738825>.
- Fiske, S.T., Cuddy, A.J.C., Glick, P., 2007. Universal dimensions of social cognition: Warmth and competence. *Trends Cognitive Sci.* 11 (2), 77–83. <https://doi.org/10.1016/j.tics.2006.11.005>.
- Fiske, S.T., Cuddy, A.J.C., Glick, P., Xu, J., 2002. A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *J. Personal. Soc. Psychol.* 82 (6), 878–902. <https://doi.org/10.1037/0022-3514.82.6.878>.
- Fiske, S.T., Dépret, E., 1996. Control, interdependence and power: understanding social cognition in its social context. *Eur. Rev. Soc. Psychol.* 7 (1), 31–61. <https://doi.org/10.1080/14792779443000094>.
- Fiske, S.T., Xu, J., Cuddy, A., Glick, P., 1999. (Dis)respecting versus (dis)liking: status and interdependence predict ambivalent stereotypes of competence and warmth. *J. Soc. Issues* 55, 473–491. <https://doi.org/10.1111/0022-4537.00128>.
- Grant, A.M., Berg, J.M., Cable, D.M., 2014. Job titles as identity badges: how self-reflective titles can reduce emotional exhaustion. *Acad. Manag. J.* 57 (4), 1201–1225. <https://doi.org/10.5465/amj.2012.0338>.
- Greenberg, J., Ornstein, S., 1983. High status job title compensation for underpayment: a test of equity theory. *J. Appl. Psychol.* 68 (2), 285–297. <https://doi.org/10.1037/0021-9010.68.2.285>.
- Guinote, A., Phillips, A., 2010. Power can increase stereotyping: evidence from managers and subordinates in the hotel industry. *Soc. Psychol.* 41 (1), 3–9. <https://doi.org/10.1027/1864-9335/a000002>.
- Gupta, V.K., Turban, D.B., Wasti, S.A., Sikdar, A., 2009. The role of gender stereotypes in perceptions of entrepreneurs and intentions to become an entrepreneur. *Entrep. Theory Pract.* (March), 397–417. <https://doi.org/10.1111/j.1540-6520.2009.00296.x>.
- Hamilton, D.L., Sherman, S.J., 1996. Perceiving persons and groups. *Psychol. Rev.* 103 (2), 336.
- Holm, S., 1979. A simple sequentially rejective multiple test procedure. *Scand. J. Stat.* 6 (2), 65–70.
- Horvath, L.K., Szczesny, S., 2016. Reducing women's lack of fit with leadership positions? Effects of the wording of job advertisements. *Eur. J. Work Organ. Psychol.* 25 (2), 316–328. <https://doi.org/10.1080/1359432X.2015.1067611>.
- Hunt, N.C., Scheetz, A.M., 2019. Using MTurk to distribute a survey or experiment: methodological considerations. *J. Inf. Syst.* 33 (1), 43–65. <https://doi.org/10.2308/isys-52021>.
- Johnson, M.A., Stevenson, R.M., Letwin, C.R., 2018. A woman's place is in the... startup! Crowdfunder judgments, implicit bias, and the stereotype content model. *J. Bus. Ventur.* 33, 813–831. <https://doi.org/10.1016/j.jbusvent.2018.04.003>.
- Kennedy, R., Clifford, S., Burleigh, T., Waggoner, P., Jewell, R., 2018. *The Shape of and Solutions to the MTurk Quality Crisis* (Available at: SSRN).
- King, M.F., Bruner, G.C., 2000. Social desirability bias: a neglected aspect of validity testing. *Psychol. Mark.* 17 (2), 79–103.
- Köhler, T., Cortina, J.M., 2019. Play it again, sam! An analysis of constructive replication in the organizational sciences. *J. Manag.*, 0149206319843985
- Kunda, Z., Spencer, S.J., 2003. When do stereotypes come to mind and when do they color judgment? A goal-based theoretical framework for stereotype activation and application. *Psychol. Bull.* 129 (4), 522–544. <https://doi.org/10.1037/0033-2909.129.4.522>.
- Kunda, Z., Thagard, P., 1996. Forming impressions from stereotypes, traits, and behaviors: a parallel-constraint-satisfaction theory. *Psychol. Rev.* 103 (2), 284–308. <https://doi.org/10.1037/0033-295x.103.2.284>.
- Lee, M., Huang, L., 2018. Gender bias, social impact framing, and evaluation of entrepreneurial ventures. *Organ. Sci.* 29 (1), 1–16.
- Lykken, D.T., 1968. Statistical significance in psychological research. *Psychol. Bull.* 70 (3p1), 151.
- Macrae, C.N., Bodenhausen, G.V., 2000. Social cognition: thinking categorically about others. *Annu. Rev. Psychol.* 51, 93–120. <https://doi.org/10.1146/annurev.psych.51.1.93>.
- Malmström, M., Voitkane, A., Johansson, J., Wincent, J., 2018. When stereotypical gender notions see the light of day, will they burst? Venture capitalists' gender constructions versus venturing performance facts. *Journal of Business Venturing Insights* 9, 32–38. <https://doi.org/10.1016/j.jbvi.2018.01.002>.
- Moorman, R.H., Podsakoff, P.M., 1992. A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behaviour research. *J. Occup. Organ. Psychol.* 65 (2), 131–149.
- Mueller, J.S., Melwani, S., Goncalo, J.A., 2012. The bias against creativity: why people desire but reject creative ideas. *Psychol. Sci.* 23 (1), 13–17. <https://doi.org/10.1177/0956797611421018>.
- Oppenheimer, D.M., Meyvis, T., Davidenko, N., 2009. Instructional manipulation checks: detecting satisficing to increase statistical power. *J. Exp. Soc. Psychol.* 45, 867–872. <https://doi.org/10.1016/j.jesp.2009.03.009>.
- Sexton, D.L., Bowman-Upton, N., 1990. Female and male entrepreneurs: psychological characteristics and their role in gender-related discrimination. *J. Bus. Ventur.* 5 (1), 29–36. [https://doi.org/10.1016/0883-9026\(90\)90024-N](https://doi.org/10.1016/0883-9026(90)90024-N).
- Shih, M., Pittinsky, T.L., Ambady, N., 1999. Stereotype susceptibility: identity salience and shifts in quantitative performance. *Psychol. Sci.* 10 (1), 80–83. <https://doi.org/10.1111/1467-9280.00111>.
- Simons, D.J., Shoda, Y., Lindsay, D.S., 2017. Constraints on generality (COG): a proposed addition to all empirical papers. *Perspect. Psychol. Sci.* 12 (6), 1123–1128.
- Van Dijk, H., Meyer, B., Van Engen, M., Loyd, D.L., 2017. Microdynamics in diverse teams: a review and integration of the diversity and stereotyping literatures. *Acad. Manag. Ann.* 11 (1), 517–557. <https://doi.org/10.5465/annals.2014.0046>.
- Wyer, N.A., Sherman, J.W., Stroessner, S.J., 2000. The roles of motivation and ability in controlling the consequences of stereotype suppression. *Personal. Soc. Psychol. Bull.* 26 (1), 13–25. <https://doi.org/10.1177/0146167200261002>.