

RUNNING HEAD: AUTHENTICITY, ENTREPRENEURSHIP AND GENDER

PROPOSED TITLE: *An experiment exploring gender and leadership differences in collaboration between Managers and and Small and Medium Enterprise owners*

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Abstract

The role of Small and Medium Enterprises (SME) has been intensely studied in the management arena. Further, the goal of this study understands how a SME's context affects entrepreneurial behaviors in both men and women. In particular, women in managerial organizations suffer from a silent form of discrimination "glass ceiling", and they can break it to balance themselves in a "glass cliff". To break the "glass ceiling", women show technical or leadership skills. Authors suggest that the environment can explain the managerial behavior, SMEs versus public institutions. Furthermore, the role of leadership and biological gender play a crucial point to explain how managers behave face to a social dilemma. In this study, we propose an experimental analysis to measure the collective behavior in a specific social dilemma among two different samples, SME owners and management directors from the university. This small characterization confirms different behavioral patterns across the two different groups, in particular the found that the environment (SME vs public institutions) explain the differences in collaborative behavior. Further, the interactive effect between authentic leadership and entrepreneurship status on an individual's contribution to a public good will also vary according to the individual's biological gender.

Keywords: Authentic Leadership; Entrepreneurship, Management, Public good games.

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If small and medium enterprises (SME) are the fuel of a nation's economic engine, entrepreneurship is the oxygen that ignites it. To understand the economic impact that SMEs have across the EU28, only in 2014 some 21.6 million SMEs in the non-financial business sector employed 88.8 million people and generated €3,666 trillion in value added. In other words, 99% of the total businesses in the EU are SMEs (Muller, Gagliardi, Caliandro, Bohn, & Klitou, 2014). Similarly, in the U.S.A, SMEs employed over 50 percent of private sector employees, and generated 65 percent of net new private sector jobs. SMEs represented 98% of all U.S.A. exporters and 34 percent of U.S. export revenue.

SMEs have a distinctive set of characteristics that differs considerably from traditional organizations. For example, SME usually have fewer material and human resources, and thus are more sensitive to the economic context (e.g., financing opportunities, recession), but their smaller size enables SME owners to establish closer relationships with their employees. Behavioral differences in this group of entrepreneurs are of great interest to the leadership literature that focus on leaders who "lead from the front" and form open and transparent bonds with their collaborators (e.g., authentic leaders; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Shirey, 2006).

Further, understanding how a SME's context affects entrepreneurial behaviors in both men and women is also of great interest to both social and applied psychology. One reason for this is that unfortunately women in most traditional organizations, as it occurs with other minorities, suffer from a silent form of discrimination, known as the *glass ceiling*, understood as an invisible barrier that stops women from moving further up in the organizational hierarchy, after a certain level is reached (Cook & Glass, 2014).

Furthermore, in many cases, when women do manage to break the *glass ceiling* (i.e., due to technical or leadership skills) find themselves balancing in a *glass cliff*. The glass cliff is described as being appointed into executive or managerial positions in poorly performing firms, or to in situations in which failure is almost unavoidable due to external causes (Bruckmüller, Ryan, Rink, & Haslam, 2014).

Against this perspective, the idea of starting an own company can be very attractive to highly talented women that see themselves caught “between a rock and a hard place” in traditional organizations. However, as other minorities, women tend to have lower access to finance opportunities, and thus are more likely to start a SME and keep it small, especially if they have children (Carter, Mwaura, Ram, Trehan, & Jones, 2015; Rosenthal & Strange, 2012). A successful SME not only provides a steady monetary income, but also valuable non-financial rewards, such as more autonomy, work satisfaction and a sense of work-family life balance (Walker & Brown, 2004), being the latter particularly relevant to those women willing to start or maintain a family. In theory, starting a SME would enable women to balance their gender-role expectations with their leader-role expectations as business owner (Eagly & Karau, 2002), or does it?

We propose that due to an incongruence between these role expectations, becoming entrepreneurs may prove to be particularly challenging for women, as entrepreneurship usually occurs in highly competitive context, this may affect female entrepreneurs behaviors (i.e., highlight the influence of personality traits that distinguish entrepreneurs from managers; Rauch & Frese, 2007). Thus, to fulfil their role as leaders of a SME, they may have to behave against their gender-role expectations, making trade-offs that lead to psychological conflict, which will reflect in their leadership behavior, and especially for those female entrepreneurs who would like to be more

authentic in their role as leaders.

To test these assumptions, we conducted a laboratory experiment using a variation of a public goods game, with a gender-balanced sample of participants that were either entrepreneurs or managers in real-life. Such setting provides a controlled environment and enables to examine how gender-leader role conflict and other situational factors (e.g., entrepreneurial status and leadership style) influence individuals' economic behavior (competitive vs. collaborative patterns). Further, a laboratory experiment that uses real-life leaders as participants addresses a frequent call in the authentic leadership research to use experimental designs that better isolates the causal mechanisms and boundary conditions for authentic leadership (Gardner, Cogliser, Davis, & Dickens, 2012; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

### **Theoretical background**

Behavior is a function of the person and the situation (Lewin, 1951). Personality traits can affect behavior only if the situational constraints allow their expression (Mischel, 1968). Hence, in the following sections, we explore how two socially constructed roles (leader and gender) influence entrepreneurs' collaborative behaviors, as captured by their individuals' contributions in a public goods dilemma.

#### **Entrepreneurial status and individual contributions in public good dilemmas**

Not everyone has what it takes to be a successful entrepreneur. Meta-analytic findings show that competition-oriented personality traits (e.g., need for achievement, generalized self-efficacy, innovativeness, stress tolerance, need for autonomy, and proactive personality) significantly relate to business creation and business success of entrepreneurs (Rauch & Frese, 2007). However, because entrepreneurship does not occur in vacuum, the work context in which a leader must lead (e.g. SME vs traditional organization), influence the display of the behaviors related to these entrepreneurial

traits. For example, SMEs owners need to be more self-confident and more competitive, as they have to compete not only with other SME, but also with larger organizations, and failure might mean ruin. In consequence, in public goods dilemma, understood as a situation in which several individuals must contribute to a common goal to achieve a shared reward, but maximum individual profits is obtained when the participant does not contribute, we predict:

*Hypothesis 1a. Entrepreneurs will provide lower individual contributions to a public good than managers would.*

#### **Authentic leadership and individual contributions to public good dilemmas**

In the last decade, authentic leadership (AL) has gained importance in the leadership literature as a root construct underlying several positive leadership styles. Unlike other trait-based leadership approaches (Judge, Bono, Ilies, & Gerhardt, 2002), AL does not emanate from inherited traits but from the mastery of one's *core self* (Kernis, 2003). The core self is the knowledge structure that organizes and gives meaning to memory and behavior into a *core identity*, a self-referential construct that collects values and world-views that are highly stable across contexts (Hitlin, 2003; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004).

The in-role leadership behaviors of authentic leaders are consistent with their deeply internalized values (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). These leaders influence their followers through identification processes. These leaders establish transparent and growth-enhancing relations, "lead from the front" and thus become *exemplary role models* to which followers identify and emulate. This identification increases followers' identification with the organization, and their trust and commitment to the organizational goals. Further, it shapes positive emotional states (e.g., hope, optimism) and attitudes (e.g., job satisfaction) which result in positive in-

role and extra-role work behaviors (Avolio et al., 2004).

When faced with a public good dilemma, we expect authentic leaders to lead by example and provide a high individual contribution, avoiding deviant behaviors such as social loafing (Karau & Williams, 1993). First, authentic leaders guide their decisions according to an internalized moral perspective, which is grounded on universal character strengths and virtues (e.g., humanity, integrity and collaboration; Crossan, Mazutis, Seijts, & Gandz, 2013; Gandz, Crossan, Seijts, & Reno, 2013). Second, authentic leaders use their judgment to evaluate thoughtfully the consequences of their decisions (if they role model social loafing, their followers will imitate them). In consequence, we predict that...

*Hypothesis 1b:* Authentic leadership will positively relate to individual contributions to a public good.

On one hand, we predicted that authentic leaders would tend to collaborate in a public good dilemma by increasing his or her contributions, and that entrepreneurs will tend to be more competitive, and thus contribute less to the common good. However, based on these predictions, could we predict what would occur if an entrepreneur desires to be more authentic in his or her leadership style? It would seem that high levels of authentic leadership would inhibit the expression of the entrepreneurs' competition-oriented traits, or also a case could be made that entrepreneurs would only see themselves as authentic leaders if they act in line with the values associated to competitive traits. Because these aspects only show us a part picture, if we seek to achieve a more integrative understanding of what determines entrepreneurs collaborative behaviors in a public goods dilemma, we need to incorporate a theoretical framework that can bridge competition-oriented, biologically inherited personality traits and collaboration-oriented, role specific, leadership behaviors. We propose that Eagly

and Karau's (2002) leader-gender role congruity theory is that bridge.

**Can biological gender explain entrepreneurial collaborative behaviors?**

Biological gender influences behaviors, self-evaluations, and how their social interaction partners evaluate them (Fiske, 1998; Guerrero-Witt & Wood, 2010). Gender effects are frequent in medical and psychology studies, but also recently appeared in economic studies that use laboratory experiments, such as, finance, consumption, labor markets and in decision-making processes (for a review see Croson & Gneezy, 2009). Research confirms biological gender differences in competition, incentives, bargaining, and giving to explain gender-based differences in collaboration. Gneezy, Niederle, and Rustichini (2003) study on gender differences in behavior within competitive environments revealed that men show higher task performance. Gneezy and Rustichini (2004) obtained similar results when the task was a running competition. In the case of incentives, the vast majority of men choose the competition schema (Niederle & Vesterlund, 2011). Bargaining processes are also gender-biased. Eckel and Grossman (2001) and Solnick (2001) showed that men and women proposed the same amount in an Ultimatum Game, but proposals offered to men were higher. Guth et al. (2007) noted how females are dealing to choose equitable solutions for parties. Finally, gender differences exist in giving behavior, as Eckel and Grossman (1998) found women donating significantly higher amounts in a Dictator Game.

Gender role expectations can explain the above biological gender differences. For example, Gneezy et al. (2008) found that men from a patriarchal culture (Masaai) chose a competitive schema (50% of the times versus 25% for females); in a matriarchal culture (Khasi) only 39% men chose it (versus 54% for females). *Gender roles* are implicit socially shared beliefs about male and female attributes that are internalized through socialization processes (Biddle, 1979; Eagly, 1987; Feingold, 1994). They consist of a

descriptive (what women and men actually do) and a prescriptive (how women and men should behave) component (Cialdini & Trost, 1998; Cuddy, Fiske, & Glick, 2008). Women are more associated with being concerned about the wellbeing of others and thereby with communal attributes (e.g. being supportive, gentle, empathetic, and caring), whereas men are more associated with agentic attributes (e.g., being assertive, controlling, dominant, and competitive; Abele, Uchronski, Suitner, & Wojciszke, 2008; Hernandez Bark, Escartín, & van Dick, 2014; Williams & Best, 1990). Hence, gender roles relate to social attitudes in the way that women show higher levels of pro-social behavior and collaboration (Eagly & Wood, 1991; W. Wood, 1987).

However, study results in collaboration using Public Good Games are inconclusive. While some studies found higher contributions for the public good by men (58.7% vs. 46.3%; Kruse & Hummels, 1993; Sell & Wilon, 1991; Solow & Kirkwood, 2002), other studies not (Seguino et al., 1996; Ortmann & Tichy, 1999). These mixed findings on the effect of biological gender in public good dilemmas suggest that biological sex to dichotomies businesses is overly simplistic, and gender is in fact a mental (cognitive and affective) perspective that influences the process of organizational creation and operations but is not necessarily isomorphic with biological sex (Bird & Brush, 2002; Carter [et al.](#), 2015). Thus, the general expectation for women to display communal behaviors by providing a higher level of individual contributions to a public good may be indeed contingent of other factors. For example, a strong research line shows that gender roles are also associated to implicit expectations towards leadership roles.

A recent meta-analysis (Koenig, Eagly, Mitchell, & Ristikari, 2011) confirmed that Schein's "Think manager-think male" paradigm (Schein, Mueller, Lituchy, & Liu, 1996; Schein, 2001) is still prevailing, meaning that management is still more

associated with agentic characteristics and more closely related to the male gender role (Koenig et al., 2011). For women, these managerial role expectations cause an incongruity between the female gender role and the manager role (Eagly & Karau, 2002; Heilman, 1983; Lyness & Heilman, 2006). Due to these divergent expectations – being agentic as manager vs. communal as women – female managers are prone to experience role conflict and negative affect (Eagly, Karau, Miner, & Johnson, 1994). Further, they are faced with two forms of prejudice: (1) to be perceived as competent they have to perform better than their male counterparts (*double standard*), and (2) they have to fulfil the divergent expectations, i.e. be tough and nice (*double bind*, Eagly & Karau, 2002). Some authors recommend female managers to adopt more feminine leadership styles (e.g. transformational; Eagly, Johannesen-Schmidt, & van Engen, 2003) while others affirm that *androgynous* styles would enable female managers to reduce gender-leader role incongruence and display the best of both (agentic and communal) in their leadership behaviors (Hernandez Bark et al., 2014).

From a gender role perspective, AL would be an androgynous leadership style, as this style captures both agentic and communal behaviors (Monzani, Hernandez Bark, Van Dick, & Peiró, 2014). More precisely, AL behaviors express two self-based psychological mechanisms, self-awareness and self-regulation (Gardner et al., 2005), captured into four dimensions. First, *self-awareness* refers to the awareness of goals, emotions and needs of both the self and *others*. Second, *balanced processing of information* refers to things like the consideration of different viewpoints before making decisions. Third, *relational transparency* refers to the establishment of open and clear relations with others. Fourth, *internalized moral perspective* refers to behave coherently with inner values, and this even in adverse contexts. At first glance, a higher awareness of followers' development needs, developing growth-enhancing relations through open

and transparent communication and by allowing participation in decision-making is more congruent to the nurturing connotation of the female gender role. In turn, acting according to internalized ethical standards even in spite of situational pressure is congruent with the agentic connotation of the male gender role.

Unfortunately, theory suggests that female managers face more difficulties in achieving the relational authenticity required for AL (Eagly, 2005). First, because as other agentic leadership styles (directive, autocratic), the agentic dimension of AL is still susceptible to the leader-gender role incongruence (manager vs. women) and second, because this role incongruence also influences female managers' attribution processes towards the communal dimensions of AL. In other words, is more likely that women will attribute their awareness for their and others' needs (self-awareness), their (wish for) open relations with others (relational transparency), and their empathy to consider different perspectives (balanced processing of information) as behaviors expected from the female gender role, and not as a result of being authentic leaders. Women do not behave less authentic as leaders than men, but because the gender role expectation for females is highly congruent with the communal aspects of AL, female managers attribute these behaviors to being a woman and not to being an authentic leader (Monzani et al., 2014). Further, these authors suggest that female managers can overcome these difficulties if they become prototypical of the teams they lead.

As suggested, the characteristics of the workgroup also play a role in the above relation, especially if a manager is *prototypical* for the group, meaning that a manager embodies and represents the distinctive characteristics of the group he or she leads. When a manager is seen as prototypical, his or her followers will perceive the manager as one of them (in-group) and as acting in favor of the in-group (Social Identity Model of Leadership; van Knippenberg & Hogg, 2003). Additionally, prototypical managers

are liked and trusted more, and followers are tolerant about their manager's shortcomings (Giessner & van Knippenberg, 2008; Ullrich, Christ, & van Dick, 2009; van Knippenberg & Hogg, 2003). Hence, if female managers achieve a prototypical status of the in-group, this increased leeway may encourage female managers to show higher frequency of AL behaviors (Hernandez Bark, Monzani, & van Dick, 2015).

However, prototypicality can be a double edged-sword, because prototypical leaders tend to identify with the characteristics of the group an individual perceives him- or herself prototypical of. In other words, if female managers perceive themselves as part and prototypical of the team they are leading, then they will tend to internalize the values and characteristics of the team – which could be either cooperation- or competition-oriented. Furthermore, if female managers identify themselves more with the group of managers than with the group of women, and have experienced gender-based discrimination themselves, this might lead to an increase of masculine-typed, agentic behaviors such as being highly competitive and uncooperative (Derks, Ellemers, van Laar, & de Groot, 2011; Ellemers, Van den Heuvel, de Gilder, Maass, & Bonvini, 2004). This effect is called the *Queen bee effect*: Queen bees are female managers who have raised the career path, dissociate themselves from their gender, behave in line with the masculine organizational norms, and thereby often contribute to gender stereotyping and discriminating other women (Derks et al., 2011; Ellemers et al., 2004).

SMEs and traditional organizations are very two different work contexts. For example, at a basal level, the situational constraints of SME force the activation of the highly competitive personality traits of entrepreneurs. Further, female entrepreneurs might feel the need to assert themselves in a very competitive environment by differentiating themselves from other women by displaying similar competitive behaviors than their male counterparts. This could be the case of Queen bees, who after

a history of fighting the glass ceiling, decide to start their own SME. This group, having previously identified with a traditional managerial role, embraced agentic characteristics and internalized competitive values. Thus, for this group we expect such a competitive environment to suppress the expression of ALs' communal dimensions, due to its association to the female role. Thus, female entrepreneurs who are high in authentic leadership should act accordingly to their internalized competitive values (agentic dimension of AL) and show lower levels of individual contributions to a public goods dilemma, as way to maximize their own profits.

In contrast, female managers in bigger / bureaucratic companies experience a different working environment. If these women show very competitive or dominant behavior (agentic), they risk social punishment by coworkers or supervisors (backlash effects, Rudman & Glick, 2001; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). Thus, female managers in these companies – especially when they are high on authentic leadership behavior – needed to gain a balance between the leader (agentic) and gender role (communal) behaviors. This balance allows them to act in congruence to both roles. Therefore, they should be able to act more congruent to their female gender role expectations and less competition-oriented compared to their male counterparts.

From a gender role perspective, an androgynous leadership style such as AL should be more beneficial for male leaders than for female leaders. Our rationale being that male entrepreneurs that attain an AL style can complement their (agentic) managerial style with communal dimensions of AL, without attributing them to gender-role expectations, but recognizing them as part of their leadership style. In other words, authentic male entrepreneurs can be collaborative without feeling a leader-gender role conflict. In consequence, we expect authentic male entrepreneurs to provide a higher individual contribution in public goods dilemma than their female counterparts.

In consequence, the above leads to predict that...

*Hypothesis 2: The interactive effect between authentic leadership and entrepreneurship status on an individual's contribution to a public good will also vary according to the individual's biological gender, so that*

- a) Authentic male entrepreneurs will contribute more in a public good dilemma than authentic female managers will.*
- b) Authentic female managers will contribute more to a public good dilemma than authentic male managers will.*

### **Method**

#### **Sample**

This study uses primary data obtained through the implementation of three experimental sessions containing experimental data of 64 participants, 20 SME's managers and 44 public institution's managers. In general, our sample consists on managers from two different fields, but with a common skill, being managers with employees under charge (an average of 17 employees each). All the participants were recruited electronically with the unconditional support of the Technological Institute of Costa Rica to do the study. The sample was divided in two kind of manager attending to the operating field (private or public), that is SMEs owners and managers and managers from the university. Both kind of participants were leaders in their field, with a high level of responsibilities and employees, in particular, the SMEs have an average of 8.4 (from 2 to 45) and institutional managers have 18.7 (from 1 to 100). The age of the participants was on average 43 years old, and all the participants were informed about the experiment before they came.

#### **Procedure**

Experiments were run at the experimental laboratory of the Technological

Institute of Costa Rica (Costa Rica). The experiments involved managers from two separate fields, SMEs and public institutions managers. Participants had no knowledge about the purpose of the study. Subjects were invited to the lab, and experimenters randomly assigned one cubicle to each. Experimenters considered that a cold strategy game was acceptable because it was extremely difficult to know if the participants were going to attend the experiments (managers are very busy and we cannot confirm the audience). None of the participants had previous experience in a public good experiment and only participated in one session each. Experiments were run in a computerized environment using Z-tree (Fischbacher, 2007), following the standard methodology in experimental economics (full anonymity and privacy). Decisions were made simultaneously and subjects got information about decisions, and benefits only after decisions were made. Participants were allocated a fixed amount of capital (100 units), expressed with a fictitious currency (Equus). All participants were told that they would keep their profits, which would be converted into US dollars at a set exchange rate.

The experiment was a one shot game, thus entailed one period. Experiments took less than fifteen minutes to be run, and the average earnings were around 6.3 dollars (show up fee of 5 dollars).

### **Measures**

*Authentic leadership:* We used the authentic leadership questionnaire (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) to measure how frequently participants perceive themselves displaying authentic leadership behaviors. Even though this questionnaire has been validated for the Spanish population by Moriano, Molero, & Lévy Mangin, (2011), linguistics differences exist between Iberic and Latin-American Spanish, the language spoken in the location where our data was collected (Costa Rica).

To avoid or minimize the cultural difference and interpretations as much as possible, we followed Brislin's (1980) guidelines on the re-translation method as described in Luthans, Avolio, Walumbwa, & Li's (2005) to translate the original questionnaire into Latin-American Spanish. For this, the original items of the ALQ scale were translated to Spanish by the first author, who is a native Latin-American speaker and checked for consistency by 4 Latin-American research assistants that were blind to the experiment. After that, the translated copy was given to a native English professional translation for re-translation into English. No significant differences were found between Walumbwa and collaborators' original version and the re-translated questionnaire. All items were rated on 5-point Likert-type scales, with values ranging from "1 = Not at all" to "5 = frequently, if not always". Sample items are "Seeks feedback to improve interactions with others" (self-awareness), "Says exactly what he or she means" (relational transparency), "Makes decisions based on his/her core beliefs" (internalized moral perspective), and "Listens carefully to different points of view before coming to conclusions" (balanced processing of information). Cronbach's Alpha for the overall scale was .80.

*Individual Contribution to a public Good:* We measured the amount that participants contributed to the public goods dilemma, which could range from 1 to 100 Eques.

### **Control Variables**

We controlled for participants' age because initial studies in authenticity research suggest that age, as proxy of life-experiences, influences individuals to authentically express their true self (Harter, 2002). Young adults tend to be higher self-monitors, and in consequence more easily influenced in their decision-making processes to collaborate to a common goal.

### **Data Analysis**

We tested our hypotheses using a multivariate regression analysis strategy that combines Ordinary Least Squares (OLS) with a non-parametric approach. More specifically, we used the bootstrap function in IBM SPSS statistics 22 © using 5000 sub-samples with reposition and Bias-Corrected and accelerated (BCa) option enabled, to estimate SE and 95% CI for all regression coefficients. We report bootstrapped CI's, because this technique avoids power problems introduced by asymmetric and non-normal sampling distributions, and is an intuitive way to verify the results of the null-hypothesis testing approach (Hayes, 2009; M. Wood, 2005). Further, because we explore biological gender differences, we split our data into two groups by dummy coding biological gender into 0 = "male" and 1 = "female". Participants' age, AL, entrepreneurship status (dummy coded as 0 = "manager" and 1 = "entrepreneur") and an interaction term between AL and entrepreneurship status were entered as predictors. As theory suggest, to test for significant differences between groups, we conducted a third multivariate regression, where in addition to the above predictors, the biological gender dummy variable was entered as predictor, and well as all three two-way interaction terms that result from the combination of AL, biological gender and entrepreneurship status, and its three-way interaction term. For significant interaction effects, we applied conventional procedures for plotting simple slopes at one standard deviation above and below the mean of all our dependent variables and simple or slope analyses to evaluate the significant of the slope gradients (Aiken & West, 1991; Dawson, 2013).

### **Results**

Means, standard deviations and Pearson's correlations for all variables in this study are shown in Table 1.

--- Please insert Table 1 about here ---

### Hypotheses Testing

Table 2 shows  $R^2$ , OLS regression coefficients and their bootstrapped SE and 95% Confidence intervals (CI) for all our multivariate regressions.

--- Please insert Table 2 about here ---

Model 1 explained only 4.3% of the variance in male participants contributions to a public good ( $R^2 = .04$ ,  $F(1, 29) = .67$ ,  $p = .42$ ). None of our control variables, predictors nor the AL x Entrepreneurship status interaction term were statistically significant. In turn, Model 2 explained 44.8% of the variance in female participants contributions to a public good ( $R^2 = .45$ ,  $F(1, 25) = 17.07$ ,  $p = .0001$ ). Participants age ( $\beta = -.41$ ,  $t(1, 25) = -2.45$ ,  $p < .05$ ), authentic leadership ( $\beta = .60$ ,  $t(1, 25) = 2.77$ ,  $p < .01$ ), entrepreneurial status<sup>1</sup> ( $\beta = -.52$ ,  $t(1, 25) = -2.72$ ,  $p < .01$ ) and the AL x Entrepreneurship interaction term ( $\beta = -.95$ ,  $t(1, 25) = -4.13$ ,  $p < .0001$ ) were statistically significant predictors. Figure 1 show a graphical representation of these differences between models.

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To further clarify these interaction effects, following Aiken & West, (1991) and Dawson (2013), we conducted simple slope analyses for the interaction term of model 2. Simple slope analyses show that slopes gradient between low (-1SD) and high (+1SD) levels of AL for female entrepreneurs ( $\beta = 52.89$ ,  $t(1, 29) = 3.15$ ,  $p < .01$ ) and managers ( $\beta = -42.50$ ,  $t(1, 29) = -2.75$ ,  $p < .01$ ) were significant. These results suggest that Biological gender moderates the interactive effect of AL and entrepreneurship status on participants' contributions to a public goods dilemma, justifying the need for model 3.

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<sup>1</sup> The bootstrapped 95% CI for the entrepreneurship status regression coefficient includes zero, even though is significant in the OLS regression. Thus, we recommend caution when interpreting this result.

Model 3 explained 20.0 % of the variance in participants' individual contributions to in a public good dilemma ( $R^2 = .20$   $F(1, 56) = 7.35$ ,  $p < .01$ ). Neither AL, biological gender nor Entrepreneurship status had main effects on individual contributions to a public good dilemma. However, the two-way AL x biological gender interaction term is a marginally significant predictor ( $\beta = -.50$   $t(1, 56) = -3.73$   $p < .10$ ) which was also the case in the non-parametric approach ( $p < .10$ ). On the other hand, both the biological gender x Entrepreneurship status ( $\beta = -.45$   $t(1, 56) = -2.03$   $p < .05$ )<sup>2</sup> and the three-way interaction ( $\beta = -.88$   $t(1, 56) = -2.71$   $p < .01$ ) terms were significant predictors of participants' contributions to a public good (see. Figure 2).

--- Please insert figure 2 about here ---

There were difference in slope gradients for women depending on their entrepreneurial status ( $t(2, 57) = -3.04$   $p < .01$ ), and between biological genders in managerial roles ( $t(2, 57) = 2.24$   $p < .05$ ). On the other hand, single slope analyses show that the slope gradient for women in managerial roles was significant for low (-1SD) vs. high (+1SD) levels of authentic leadership ( $\beta = 46.50$   $t(1, 56) = 2.35$   $p < .05$ ), and only marginally significant for women in entrepreneurial positions ( $\beta = -31.51$   $t(1, 56) = -1.83$   $p < .10$ ). These results partially support Hypotheses 1a and b, but fully support hypothesis 2a and b.

### Discussion

Starting a business can be an attractive, but also a challenging endeavor for women, especially if they have a managerial history in the corporate world. It can be attractive, because it ideally provides them more autonomy and a higher sense of

<sup>2</sup> Even though, the significance test using the bootstrapped SE was significant at the  $p < .05$  level and OLS 95% CI did not include zero for the Gender x Entrepreneurship status, the bootstrapped 95% CI did. This last indicates that interaction is not truly significant at the  $p < .05$  level. However, the three-way interaction, which was statistically significant in the parametric and non-parametric approaches.

meaning in every-day activities. However, starting a SME is still a daunting task for women and other minorities if they are not able to set up a collaboration network with other stakeholders (e.g., business angels, suppliers and customers; Carter et al., 2015). Thus, the aim of this study was to explore what fosters collaborative behaviors in entrepreneurs. For this, using a public goods dilemma, we compared the collaborative behaviors of two groups, one formed by entrepreneurs and the other formed by traditional managers in a controlled setting (hypothesis 1a). Further, we also evaluated if a self-based leadership style would foster collaborative behaviors (hypotheses 1b). Our results only partially support our hypotheses 1a and 1b, as they were only statistically significant for the female sub-sample. This findings is not unexpected as it is consistent with the leader-gender role incongruence theory (Eagly & Karau, 2002). Based on this theory, we also predicted that biological gender would interact with entrepreneurship status and AL on participants' collaboration behaviors (hypotheses 2a and b). These predictions were supported by our data. In short, male entrepreneur are more collaborative than female entrepreneurs, independently of their AL level. In turn, the more authentic female managers are, the more they will display collaborative behaviors, while no slope gradient differences in AL where found for male managers.

### **Theoretical implications**

Our findings have several theoretical implications. First, it shows that context really matters in entrepreneurship research. As suggested by Rauch & Frese (2007), in our experiment, socially-constructed situational variables (e.g., gender and leadership roles) influenced the display of trait-based competitive behaviors. When gender roles were considered, a positive form of leadership (AL) fostered collaboration in male entrepreneurs, but made female entrepreneurs more competitive. This is relevant to entrepreneurship research, as it occurs in leadership studies (Hofstede, 1981). The

western perspective assumes that agentic traits and behaviors, such as being individualistic, competitive and results-oriented, are the key to entrepreneurial success independently of biological genders (roles). While this may be true for short-term success in western agentic-oriented societies, it may not generalize to more communal-oriented societies, where a wide array of social networks facilitates entrepreneurial success.

Second, our findings also informs authentic leadership research. In line with Jensen and Luthans' (2006) findings, AL helps entrepreneurs to compensate for trait-based competitive behaviors, but only for *male* entrepreneurs. Further, as recent studies suggest, AL is an androgynous leadership style that helps female managers to become prototypical and overcome the leader-gender role divide (Hernandez Bark et al., 2014; Monzani et al., 2014). This improve their relational exchanges with others in organizational settings (Tzinerr & Barsheshet-Picke, 2014), evidenced in the display more collaborative behaviors. However, this study expands previous findings, by showing that the opposite occurs for authentic female entrepreneurs (i.e., especially if are “Queen Bees”). It seems that being an authentic leader for this group implies displaying competitive (agentic) behaviors. In other words, being an authentic leader implies acting with integrity in line with a moral self-identity (Diddams & Chang, 2012). However, while integrity is a universal character strength which is one of the underlying influence mechanism of AL (Leroy, Palanski, & Simons, 2011), how authentic leaders will display that integrity depends on the values that conform the social identity that authentic prototypical leaders represent as embedders of identity (Reicher, Haslam, & Platow, 2011).

Third, from a gender roles perspective, our findings suggest that female entrepreneurs might be more susceptible of becoming “Queen Bees”. Our evidence that

as their AL increased, the lower that their contributions were to a public good, and thus a higher prevalence of competitive behaviors. Queen Bees pay a high cost for success, because to make it in the corporate world they must renounce to their gender identity in favor of more agentic attributes. Will we not assume that our findings generalizes to all possible female entrepreneurs, however it does seems plausible that the highly competitive environment of SME may force female entrepreneurs to become Queen Bees, or activate their more agentic, entrepreneurial traits.

### **Implications for practice**

Our findings have some implications for practice. For example, collaboration is the base for trust-based relations that conform an entrepreneur's social capital, understood as the product of co-operation between various institutions, networks and business partners. Social capital is particular relevant for SME's because it complements the scarce physical and human capital. However, if not grounded on a strong integrity, entrepreneurs may invest in social capital only with manipulative ends (Spence, Schmidpeter, & Habisch, 2003). Therefore, if entrepreneurs achieve authenticity in their leadership style, they will establish growth-enhancing relations with other stakeholders, which will lead to actual financial growth through sustainable and veritable performance (Avolio et al., 2004).

Further, our results show that female entrepreneurs might perceive that they should use every opportunity to maximize their profit to act in accordance to their internalized agentic values. While this behavior might increase their physical capital in the short-term, in the long-run should gradually reduce their social capital, as other may perceive them as social loafers, and refrain from conducting further business with them in the future (Klein & Mulvey, 1995), something that a SME cannot afford.

In turn, as suggested by Monzani et al. (2014) authentic female entrepreneurs

could transfer their business entrepreneurial skills, into a different type of entrepreneurship, an “identity entrepreneurship”. Identity entrepreneurship is understood as the actions that prototypical leaders take in order to shift an existing prototype of a group’s identity (e.g. managers), into a new social identity envisioned by the leader (Reicher et al., 2011). In other words, if females entrepreneurs (“Queen Bees”) could reconnect with the communal aspect of their female gender roles, they should be the most qualified to implement policy and redefine the culture of their SME, into a more androgynous prototype of managerial identity, bridging the leader-gender role divide (Eagly, 2005).

### **Strengths, limitations and future research**

Our study has several strengths, and as any other study is not with some limitations, that future research should address. One clear strength is that our multi-disciplinary approach integrates three bodies of research to inform male and female entrepreneurs about potential pitfalls that may reduce their ability to collaborate with others, and suggest ways to avoid them. A second strength is that we explored these differences in a sample of real managers and entrepreneurs, but in a controlled environment and using an experimental task frequently used in behavioral economic studies. This last ensures that our conclusions are robust, as we experimentally controlled for other confounding variables and thus our recommendation may generalize to a greater audience than if we used a student sample. Finally, our findings are highly relevant in an economic context in which women may be forced out of traditional organizations (i.e. through downsizing or massive layoffs) and thus seek to start a SME as an alternative of entering an already competitive job market.

One limitation of our study lies in the well-known difficulty of bringing entrepreneurs (businesses owners), CEO’s or even top-level managers into laboratory

experiments. Thus, some may argue that our sample size is too small, and thus may lack the statistical power to avoid a type II error (Cohen, 1992). We would only partially agree with this concern, as to address this limitation we used several statistical approaches. First, using Cohen's (1992)  $f^2$  indicator we conducted post-hoc power tests for our three regression models, using G\*Power 3.1.9.2 (Faul, Erdfelder, Buchner, & Lang, 2009). The power test indicated that our sample has enough power to detect medium (.15) to large effects (.35) at the  $p < .10$  level, which has been suggested by many authors as the conventional  $p$  level for interaction effects (Caplan & Jones, 1975; Champoux & Peters, 1987; Rodriguez-Molina, Bravo, Peiró, & Schaufeli, 2001). Further, we tried to remedy this limitation by using non-parametric techniques to estimate standard errors and effect sizes on the 95% confidence interval, an approach that is less susceptible to power issues (Hayes, 2009; M. Wood, 2005). A second limitation concerns our experimental task, as strict economics would argue, that this experiment does not allow participants to adjust their behavior to the responses of their group. Using this approach was necessary for two reasons. First, the focus on this study was on how situational factors inhibits or enables trait-based behaviors in groups with different characteristics (men vs. women and entrepreneurs vs. managers) and in consequence, we had to ensure that all participants received the same stimuli, which would not have been possible if participants worked in groups. By using this approach, we can be confident that the observed differences are not due to measurement error in our outcome criteria (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research should try to replicate and extend our experiment in several ways. On the one hand, authentic leadership is the behavioral expression of only one of many leader character strengths and virtues implied in excellent leadership (Seijts, Gandz, Crossan, & Reno, 2015). Hence, future researchers should try to replicate our findings taking these

underlying leader character dimensions in consideration. Second, our study only used one experimental task to evaluate behavior. Future researches may want to evaluate a wider array of behaviors in their experimental design.

### **Concluding remarks**

Women willing to become SME's owners must be aware that they will pay a cost to be the boss, but that cost may be lower if they are able to engage the collaborating with others by being authentic leaders. We hope that, we provided useful advice for them to be more authentic as leaders, and pay that price without scarifying their female identity.

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Table 1.

*Means, standard deviations and Pearson's bivariate correlations for all variables in the study*

	Mean	SD	1	2	3	4
1. Participants' Age	43.35	8.93	-			
2. Authentic leadership	3.30	.35	-.03	-		
3. Biological Gender	.48	.50	-.09	-.17	-	
4. Entrepreneurship	.31	.46	-.23	-.31*	.10	-
5. Individual contribution to a Public good	54.46	28.83	-.03	.06	-.15	-.01

Note: \*  $p. < .05$ ;