THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND EMOTIONAL INTELLIGENCE FROM A GENDERED APPROACH

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Studies on both transformational leadership and emotional intelligence have analyzed the relationship between emotions and leadership. Yet the relationships among these concepts and gender roles have not been documented. In this study, we investigated the relations among transformational leadership, emotional intelligence, and gender stereotypes. Four hundred thirty-one Spanish undergraduates (162 men and 269 women; mean age = 19.56 years) in three different disciplines completed a questionnaire including scales for measuring emotional intelligence, transformational leadership, and gender identity. Results showed important differences across the different disciplines and illustrated that emotional intelligence and gender roles predict transformational leadership. These results are interpreted in line with current research on the topic of leadership and emotional intelligence.
Key words: gender roles, transformational leadership, emotional intelligence, gender approach

Although women's participation in the workforce of industrialized societies is increasing substantially, the percentage of women in leading positions at the top of various organizations still remains low (Eagly, 2004, 2007; Eagly & Carli, 2003, 2007; Jacobs, 1999), suggesting that there is a glass ceiling preventing women from accessing leadership positions (Federal Glass Ceiling Commission, 1995). Furthermore, it is typical to observe men and women in different occupations and leading in differing entrepreneurial contexts. These differences are due to early divisions of labor, which lead to different gender roles in men and women (Eagly & Wood, 1999; Eagly, Wood, & Diekman, 2000; Wood & Eagly, 2002). The gender roles and the division of labor have promoted men and women having different occupations and academic training. Eagly and

Karau (2002) proposed the gender-role congruity theory to explain the lack of women at the top of working organizations and the even smaller percentage of female leaders in positions incongruent with their gender role and suggested the labyrinth metaphor to explain the difficulties that women have in accessing positions of leadership (Eagly & Carli, 2007).

Gender roles are related to gender stereotyping. Gender stereotyping refers to people's perception that men and women have different characteristics based on their gender. In fact, women are mostly viewed as occupying communal/feminine occupations, whereas men are viewed as occupying agentic/masculine occupations (Bosak, Sczesny, & Eagly, 2008; Garcia-Retamero & Lopez-Zafra, 2006b, 2008; Garcia-Retamero, Müller, & Lopez-Zafra, 2011). Agency and communion are basic dimensions of traits. *Agency* encompasses mastery and control; *communion* manifests the sense of being at one with others in relatedness and sharing. Agency is closely tied to masculinity and communion to femininity (Abele, Rupprecht, & Wojciszke, 2008).

The concept of leadership is related to agency traits (Chemers, 2001). In particular, Schein (1973) showed that individuals' perceptions about a typical man and a typical leader had several similarities, but there were few perceived similarities between a typical woman and a typical leader. These results have been replicated in other countries (e.g., Schein & Mueller, 1992; Schein, Mueller, Lituchy, & Liu, 1996).

However, literature about transformational leadership has illustrated that women are more transformational than men, as the characteristics of a transformational leadership style are related to feminine gender characteristics (Eagly, Johannesen-Schmidt, & van Engen, 2003; Lopez-Zafra & Del Olmo, 1999). In addition, women typically score higher than men in general emotional intelligence (Extremera, Fernández-Berrocal, & Salovey, 2006; Mayer, Caruso, & Salovey, 1999; Van Rooy, Alonso, & Viswesvaran, 2005). The aim of this research, therefore, was to relate these two concepts and investigate the impact of gender and gender-congenial variables on this relationship.

In line with previous comments, the preferences in occupations and academic training might influence which disciplines undergraduates select. Previous research has shown that socialization and stereotyping influence social and individual identity-generating differential perceptions about success and the future (Eccles, Barber, & Jocefowizc, 1999). Social roles further influence other areas in life such as undergraduates' preferences in selection of discipline (López-Sáez, Lisbona, & Saiz, 2004). Thus, the discipline that undergraduates choose to study can be considered as a gender-congenial variable.

Consequently, undergraduates may perceive that women and men have equal opportunities to achieve a leadership position; however, it may also be perceived that leadership is more properly attainable for men than women. This would be particularly the case in masculine contexts. In fact, previous research has shown that Spanish female undergraduates perceive leadership roles as being less accessible than do female undergraduates in the United States. In addition, male Spanish undergraduates evaluate leadership roles as more positive than their female counterparts, whereas there are no differences in these perceptions between male and female students in the United States (Killeen, Lopez-Zafra, & Eagly, 2006). This result may imply that congruity plays an important role in Spaniards, because leadership is perceived as more congruent with the masculine gender role. Furthermore, Spanish students hold a stronger prejudice against women's progress in the workforce than students in other European countries (Garcia-Retamero & Lopez-Zafra, 2009).

Because undergraduates are training to be the future employees and leaders, their current perceptions and leadership styles may mirror those that they would use if they were in a leadership position. Bearing these aspects in mind, we hypothesized that women may face a double-bind prejudice, given that the concept of leadership is perceived as masculine in contexts that are considered to be incongruent with the feminine gender role (Cabrera, Sauer, & Thomas-Hunt, 2009; Garcia-Retamero & Lopez-Zafra, 2002, 2006b).

Finally, we were interested in documenting the role that emotional variables (i.e., emotional intelligence) may have in the way men and women act as leaders. There is a debate about leadership styles in men and women and the influence of emotional variables

on perceptions of effectiveness of men and women as leaders. In this study, we investigated the relationships among leadership style and emotional variables in male and female undergraduates. We hypothesized that women's leadership style may benefit from their communal traits.

Transformational Versus Transactional Leadership Style and Gender

Leadership style is an important variable that explains gender differences in leadership. The most effective leadership style in contemporary organizations is transformational leadership (Conger & Hunt, 1999; Eagly & Johannesen-Schmidt, 2001; Hunt, 1999; Kirkpatrick & Locke, 1996; Lopez-Zafra, 2001; Lopez-Zafra & Morales, 1999, 2007; Lowe, Kroeck, & Sivasubramaniam, 1996).

Transformational leadership involves establishing oneself as a role model by gaining the trust and confidence of followers (Bass, 1985, 1998). This leadership style is in clear contrast to transactional leadership, where management is performed in a more conventional way and the leader rewards or punishes a follower depending on the adequacy of the follower's performance (Avolio & Bass, 2002, p. 3).

Transformational leaders motivate their followers to improve their performance (Conger & Kanungo, 1998; House, 1977; Lowe et al., 1996). Thus, transformational leaders, for instance, generally use emotional support; that is, they are able to spread their own emotions and they understand their followers' emotions (Avolio & Bass, 2002; Bass, 1996, 2002; Lopez-Zafra, 2001). These leaders also benefit from their followers' emotional commitment (Dionne, Yammarino, Atwater, & Spangler, 2004). Furthermore, transformational leaders present several nonverbal emotional cues that make them more effective and charismatic leaders (Weierter, 1997). Supportive (e.g., intellectual stimulation) and considerate (e.g., individual consideration) behaviors are also typical of transformational leaders and are related to feminine gender roles. These behaviors thus may be advantageous for women (Porterfield & Kleiner, 2005) and may allow them to be outstanding leaders (Eagly, 2003), as female leaders are often more transformational than male leaders (Eagly & Carli, 2007; Eagly & Johannensen-Schmidt, 2001; Eagly et al., 2003; Garcia-Retamero & Lopez-Zafra, 2002, 2006a, 2006b). Finally, previous research has illustrated that individuals' stereotypic feminine characteristics predict transformational leadership (Cuadrado, 2004; Kent & Moss, 1994; Hackman, Furniss, Hills, & Paterson, 1992; Lopez-Zafra & Morales, 1998, 2007), regardless of gender (Lopez-Zafra & Del Olmo, 1999).

Emotional Intelligence and Its Relationship With Gender and Transformational Leadership

The concept of emotional intelligence was introduced by Salovey and Mayer (1990). However, it was Daniel Goleman who promoted the topic in a book entitled *Emotional Intelligence* (see Goleman, 1995). Following this early publication, several authors explored the concept with different theoretical models (e.g., Bar-On & Parker, 2000; Ciarrochi, Forgas, & Mayer, 2001; Mayer & Salovey, 1997; Parker, Taylor, & Bagby, 2001). Three main approaches emerged: the ability model, the trait model, and the mixed model. The *ability model* focuses on how individuals process emotional information and the analysis of the capabilities that are required for such processing (Brackett & Salovey, 2006; Mayer & Salovey, 1997; Mayer et al., 1999). The *trait model* views the construct as a personality trait encompassing a constellation of emotion-related dispositions and self-perceptions (Petrides & Furnham, 2001, 2003) and conceptualizes emotional intelligence as a lower order trait (for an extended discussion, see Petrides, Pita, & Kokkinaki, 2007). Finally, the *mixed model* combines emotional abilities with personality dimensions such as optimism and self-motivation (Bar-On, 1997, 2006; Goleman, 1998).

Mayer and Salovey's (1997) ability model focused on emotional constructs such as the ability to perceive, glean information from, and manage one's own and others' emotions

(Salovey & Mayer, 1990). Emotional intelligence is defined as the result of an adaptive interaction between emotion and cognition that includes the ability to perceive, assimilate, understand, and handle one's own emotions and the capacity to detect and interpret the emotions of the others. In other words, it is ability or competency based, as opposed to being rooted in personality attributes (Brackett & Salovey, 2006). Our research focused on this model.

There is a debate about whether women are more emotionally intelligent than men. However, analyses of this issue yield contradictory results (Brackett & Salovey, 2006). In general, these studies suggest that women score higher than men; thus, women might have a clear advantage (Ciarrochi, Chang, & Caputi, 2000; Dawda & Hart, 2000; Extremera et al., 2006; Mayer et al., 1999). However, these high scores may be due to the predominance of certain characteristics over others (e.g., feminine vs. masculine characteristics) or even may be due to the instrument used to measure emotional intelligence (see García-León & Lopez-Zafra, 2009, for a review). For example, Ciarrochi et al. (2000) showed that women scored higher than men on the Trait-Meta Mood Scale (TMMS; the scale typically used in the ability model). In contrast, Dawda and Hart (2000) did not find differences between men and women on the Emotional Quotient Inventory (EQ-i; the mixed-model measure). Finally, Bar-On, Brown, Kirkcaldy, and Thomé (2000) found differences in the components of the EQ-i for men and women. Also, from the trait model, women scored higher than men in the social abilities dimensions, but men scored higher than women in a global score (Petrides & Furnham, 2000). Other authors, in contrast, have shown that women have better skills for interpersonal relationships than men, whereas men have better skills to cope with stress than women (Bar-On, 2006; Bar-On et al., 2000). A plausible explanation for this result is that women are more socialized in feelings and are more expressive than men (Garner & Estep, 2001). As a result, women can be viewed as more supportive and affective with characteristics involving the management of emotions, thus generalizing the perception that women are more emotionally intelligent.

In sum, research on emotional intelligence has generally concluded that there are gender differences in specific aspects (Candela, Barberá, Ramos, & Sarrió, 2002; Conway, 2000; Salovey, 2006), but further investigation on this issue is needed. Thus, investigating whether gender identity plays a role in the relationship between leadership and emotional intelligence was a second aim of our research.

In the workplace, emotional intelligence could be an important factor in influencing organizations to be more productive and profitable (Cherniss, 2001; Joseph, Newman, & MacCann, 2010; Zeidner, Matthews, & Roberts, 2009). Researchers have also focused on leaders' ability to recognize others' emotional expressions, how leaders use emotions to supervise their followers in work groups, and how emotions are used to develop leadership skills (e.g., Caruso, Mayer, & Salovey, 2002). These abilities and capacities are crucial in leadership emergence, because they are perceived positively by the leaders' followers. In fact, Dasborough (2006) empirically demonstrated that leaders evoke emotional responses in employees in workplace settings. Moreover, it is widely accepted that leadership is an emotion-laden process: Empathetic leaders who manage their own emotions are more effective in the workplace than those who do not (Antonakis, Ashkanasy, & Dasborough, 2009). Competencies of effective leadership are the ability to monitor emotions in oneself and others and the ability to manage emotions (Palmer, Walls, Burgess, & Stough, 2001). Furthermore, leaders that incorporate transformational leadership into organizational learning activities enhance employee job satisfaction and, ultimately, employee performance (Chang & Lee, 2007). Also, transformational leadership strategies help foster an innovative climate because this approach directly addresses the intrinsic needs and motivations of personnel (Sarros, Cooper, & Santora, 2008) and strategic planning (Leban & Zulauf, 2004), suggesting a logical link between emotional intelligence and leadership. However, although there is a wide range of research documenting the relationship between transformational leadership and emotional intelligence (Rajagopalan, 2009; see also meta-analysis by Harms & Credé, 2010), to the best of our knowledge, other aspects that could

influence this relation have not been empirically investigated. In this article, we investigate this issue from a gendered approach and include gender-congenial variables (e.g., discipline of studies).

Although it could be the case that female leaders who score high in emotional intelligence are more transformational than male leaders, previous research has not supported this hypothesis. Specifically, Mandell and Pherwani (2003) pointed out that emotional intelligence predicts transformational leadership regardless of gender. In a similar vein, Corona (2010) asserted that emotional intelligence and transformational leadership are positively correlated but do not differ as a function of gender. An explanation of this result might be that it is not the sex of the participant that influences emotional intelligence when predicting transformational leadership but gender identity.

Bearing these comments in mind, we hypothesized the following:

> **Hypothesis 1.** Regarding the relationships among leadership, emotional intelligence, and gender, we expect that women will be (a) more transformational and less transactional in their leadership and (b) more emotionally intelligent.

> **Hypothesis 2.** Gender and emotional intelligence will predict transformational leadership. Specifically, transformational leadership will be predicted by emotional intelligence and femininity.

Finally, some variables may be considered as gender-congenial variables (e.g., the social categories that individuals belong to) that might also influence the relationship between emotional intelligence and transformational leadership. For example, the academic discipline that a person selects might be important because the extent to which a leader is perceived to be transformational is mediated by the congruency perceived with the gender role (i.e., whether it is male or female congenial; Eagly & Karau, 2002; Garcia-Retamero & Lopez-Zafra, 2006b). Male students often choose male-dominated disciplines (e.g., engineering) to a larger extent than female students do, and vice versa. This result holds even when students are primed with traditional or nontraditional gender roles in a task about interest in masculine and feminine careers (Rudman & Phelan, 2010).

As a consequence, disciplines are perceived as either male congenial or female congenial. In fact, in the academic year 2009–2010 in Spain, 58.2% of undergraduate students were women. Due to gender segregation, the percentage of women varied across different disciplines: health sciences (72.1%), humanities (61.4%), social sciences and law (62%), experimental sciences (56.8%), and engineering sciences (26.8%; Ministerio de Educación, 2010).

One explanation for this segregation has to do with the mathematical content of the disciplines. Women and men develop preferences and choose courses coherent with their gender and their gender stereotypes (McHale, Shanahan, Updegraff, Crouter, & Booth, 2004). In line with this, technology is generally associated with mathematics and a masculine gender role (Nosek, Banaji, & Greenwald, 2002). Therefore, it could be assumed that the higher the mathematical content of a discipline (e.g., engineering), the more masculine it is perceived to be. In Spain, the mathematical content of the different disciplines is as follows: For engineering, the mathematical content is 87.3% for the theoretical and practical core courses, for economics the mathematical content is 46.9%, and for psychology the mathematical content is 12.6% of the overall content.[1]

Bearing these comments in mind, we hypothesized the following:

> **Hypothesis 3.** Regarding the relationship between leadership, emotional intelligence, and gender-congenial discipline, we predict that undergraduates from feminine gender-congenial disciplines will be more transformational, emotionally intelligent, and feminine than students from masculine gender-congenial disciplines.

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1 We obtained these percentages by analyzing existing curricula in Spanish universities (see http://www.infouma.es/faq/planes.html).

Taken together, we assumed that the relationship between transformational and transactional leadership, emotional intelligence, and gender identity might be robust, and it might be modulated by participants' academic orientation (i.e., the discipline that students selected). Thus, undergraduates who are studying a specific discipline that may be masculine or feminine congenial may provide knowledge about leadership styles by their orientation to a more transformational or transactional leadership style and their emotional intelligence.

Method

Participants and Procedure

Four hundred and thirty-one undergraduates from the University of Jaén, Spain (162 men and 269 women) completed a 30-min set of questionnaires that measured sociodemographic variables, emotional intelligence, leadership style, and gender roles (see the "Instruments" section). Participants had a median age of 19.56 years (SD = 1.5; range = 18–23) and were all undergraduates in the first or second academic year in three different disciplines (psychology, n = 217, 164 females and 53 males; engineering sciences, n = 76, 10 females and 66 males; and economics, n = 138, 95 females and 43 males).[2] Researchers asked for permission to have access to the students in their classes, and the disciplines were selected on the basis of their gender congeniality (see the following section). Two surveyors conducted the study. Participants voluntarily consented to participate in the study and received course credit for their participation.

Gender congeniality of the disciplines. Participants in our study were selected on the basis of the gender congeniality of the discipline they were studying and following several criteria. Specifically, we considered (a) the percentage of male and female undergraduates in each discipline in Spanish universities (as described previously) and (b) the results in a pretest conducted to explore undergraduates' perceptions about the extent to which they consider their disciplines to be congruent with their gender.

Participants' perceptions about the disciplines. Participants in the pretest were randomly selected from several campus settings by a research assistant. Seventy-one students (49 women, 22 men) consented to participate in the pretest (99% of the students who were asked to participate) and completed a 2-min questionnaire. On a scale ranging from 1 = *not at all interested* to 5 = *extremely interested,* half of the participants rated how interested the typical man would be in 10 disciplines. The other half rated the typical woman's interest in each discipline. Participants estimated engineering as more interesting for the typical man (M = 3.71, SD = 0.98) than for the typical woman (M = 1.97, SD = 0.65), $F(1, 70)$ = 63.41, p < .001. In contrast, psychology was evaluated as more interesting for the typical woman (M = 3.88, SD = 0.82) than for the typical man (M = 2.51, SD = 0.97), $F(1, 70)$ = 32.59, p < .001. There were no differences in the ratings for economics, as participants thought that a typical man and a typical woman would be similarly interested in this discipline (M = 3.45, SD = 1.0 and M = 3.22, SD = 0.98, respectively), $F(1, 70)$ = 1.45, p = .23.

Taking these two criteria into account, we considered three levels of gender-congeniality of the disciplines: masculine congenial, feminine congenial, and neutral. In particular, psychology was considered to be a female-congenial discipline, whereas engineering sciences was considered to be a male-congenial discipline. Finally, economics was considered to be gender neutral. The rationale for this is that the proportion of women in economics is large and the mathematical content is this discipline is larger than in psychology but still lower than in engineering sciences.

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2   The percentage of undergraduates in each discipline at the University of Jaén was taken into account to select the final sample of participants in the study. In fact, the overall percentages of undergraduates in psychology, engineering sciences, and economics were 41.7, 20.3, and 37.8%, respectively. The corresponding percentages in our sample were 50.4, 17.6, and 32.0%, respectively. Our sample, therefore, is representative of the percentages of students from these disciplines.

Instruments

Emotional intelligence questionnaire. The participants evaluated their emotional intelligence (i.e., their meta-knowledge about their own emotional abilities). Specifically, they completed the TMMS (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), a 24-item questionnaire scored on a 5-point scale that identifies three interpersonal factors: emotional clarity, emotional repair, and emotional attention. *Emotional clarity* refers to an individual's tendency to discriminate his or her own emotions and moods (eight items, e.g., "I often perceive my feelings clearly"); *emotional repair* refers to the individual's tendency to regulate his or her own feelings (eight items, e.g., "Although I am sometimes sad, I have a mostly optimistic viewpoint"); and *emotional attention* conveys the degree to which an individual tends to observe and think about his or her feelings and moods (eight items, e.g., "I think it is not worth paying attention to my emotion or moods").

The Spanish version of the TMMS was developed by Fernández-Berrocal, Extremera, and Ramos (2004). Cronbach's alpha was .90 for emotional clarity, .86 for emotional repair, and .86 for emotional attention.

Leadership style questionnaire. On a 5-point scale, participants evaluated their leadership style by completing a reduced version of the Multifactorial Leadership Questionnaire (MLQ; Bass, 1985). The reduced version has convergent validity with the full MLQ and includes 22 items that measure transformational, transactional, and laissez-faire leadership (see Lopez-Zafra, 1998).

Transformational leadership was assessed by four components (α = .87 for the global transformational leadership scale): (a) *Charisma or idealized influence* is shown by leaders who act as role models, create a sense of identification with a shared vision, and instill pride and respect from association with them (α = .76); (b) *inspirational motivation* is shown by leaders who use emotional support and exhibit excitement about goals and future states (α = .79); (c) *intellectual stimulation* is shown by leaders who encourage their followers to rethink their conventional practices and ideas and increase problem solving (α = .73); and (d) *individualized consideration* is shown by leaders whose behavior communicates personal respect to followers and who attend to their individual needs (α = .74).

Transactional leadership (global α = .83) was assessed by two subscales: (a) *Management by exception* is shown by leaders who monitor performance and take corrective action as necessary (α = .72), and (b) *contingent reward* is shown by leaders who provide tangible or intangible support and resources to followers in exchange for their efforts and performance (α = .74).

Laissez-faire leadership is the avoidance or absence of leadership (α = .74).

Gender roles questionnaire. Participants completed the 7-point scale developed by Morales and López-Sáez (1993, see also Morales & López-Sáez, 1994). This scale includes a short version of Bem's Sex Role Inventory (BSRI; Bem, 1974) and measures trait stereotyping and gender identity by the identification with communal/expressive and agentic/instrumental traits (see also López-Sáez, Morales, & Lisbona, 2009). Half of the items on the scale evaluate gender-stereotypic feminine characteristics (e.g., sensitive; α = .76). The other half evaluate masculine characteristics (e.g., aggressive; α = .99). These gender-stereotypic characteristics have been labeled as communal and agentic terms in leadership literature (Bosak et al., 2008).

Demographics. Participants reported their age, gender, and the course in which they were enrolled.

Results

For the sake of simplicity, results are reported following the research hypotheses presented previously. We used IBM SPSS® v.17 in all our analyses. Tukey's HSD test was used in all post hoc analyses. Statistical significance was set at an alpha level of .05.

In Hypothesis 1, we predicted that women would be more transformational and less transactional in their leadership style and more emotionally intelligent than men. To

compare male and female participants in all dependent variables we conducted t-test analyses. In line with our predictions, female participants showed larger scores in transformational leadership than male participants, $t(419) = 4.54$, $p < .000$, $\eta^2 = .01$. However, in contrast to our prediction, female participants were also more transactional than male participants, $t(419) = 2.19$, $p < .05$, $\eta^2 = .051$. The reason for this result might be that female participants scored higher on contingent reward than male participants did, $t(425) = 2.59$, $p < .01$, $\eta^2 = .019$. In addition, female participants had lower scores in emotional repair than male participants, $t(425) = -3.44$, $p < .001$, $\eta^2 = .027$. Male and female participants did not differ in emotional clarity and emotional attention (see Table 1).

Table 1
ANOVA for the Dimensions by Sex

	Female participants		Male participants	
	M	SD	M	SD
Transformational leadership	3.98[a]	0.49	3.87[b]	0.51
Charisma	3.64	0.57	3.67	0.66
Inspirational motivation	3.98	0.61	3.89	0.72
Intellectual stimulation	3.97	0.67	3.86	0.66
Individualized consideration	4.29[a]	0.61	4.03[b]	0.66
Transactional leadership	3.99[a]	0.57	3.73[b]	0.57
Management by exception	3.68	0.64	3.65	0.65
Contingent reward	3.90[a]	0.78	3.70[b]	0.79
Emotional attention	27.52	5.51	26.64	5.68
Emotional clarity	25.61	5.38	25.83	5.68
Emotional repair	25.00[b]	5.94	27.11[a]	6.37
Masculinity	3.31[b]	0.90	3.76[a]	1.03
Femininity	5.51[a]	0.66	4.64[b]	0.81

Note. Total *N* for female participants for each scale was from 265 to 268, total *N* for male participants was from 157 to 162. The means and standard deviations for transformational and transactional leadership are on a scale ranging from 1 to 5; for emotional attention, clarity, and repair, means and standard deviations range from 8 to 40; and for masculinity and femininity scales, means and standard deviations range from 1 to 7. Larger numbers indicate larger scores. Means that do not share a common superscript differ at the .05 level or smaller by Tukey contrasts.

We further analyzed whether transformational leadership can be predicted by emotional intelligence and gender roles. We hypothesized that transformational leadership may be predicted from emotional intelligence and femininity (Hypothesis 2). To test this hypothesis, we conducted a multiple-step regression analysis with transformational leadership as the dependent variable and emotional attention, emotional clarity, and emotional repair (i.e., the components of emotional intelligence) and masculine and feminine gender characteristics as independent variables.

The analysis revealed that emotional clarity, emotional repair, and femininity were the most predictive factors, $R^2 = .168$, $F(3, 406) = 27.08$, $p < .001$, accounting for 17% of the variance. This result therefore shows that both gender roles (femininity) and emotional

intelligence (emotional clarity and emotional repair) are related to transformational leadership and predict the extent to which an individual is transformational in his or her leadership style. When considering each of the dimensions of transformational leadership, charisma is predicted by emotional clarity and repair, $R^2 = .12$, $F(2, 409) = 26.89$, $p < .001$, accounting for 12% of the variance; emotional clarity, emotional repair, and femininity accounted for 12% of the variance in the inspirational motivation, $R^2 = .12$, $F(3, 411) = 18.82$, $p < .001$; emotional clarity and emotional repair accounted for 10% of the variance in intellectual stimulation, $R^2 = .098$, $F(2, 408) = 21.86$, $p < .001$; and femininity and emotional repair accounted for 11% of the variance in individualized consideration, $R^2 = .11$, $F(2, 412) = 25.53$, $p < .001$.

Although we did not hypothesize that either emotional intelligence or femininity would predict transactional leadership, we also conducted regression analyses to determine if this result was similar to that for transformational leadership. In the case of transactional leadership, regression analysis yielded a significant prediction of femininity, $R^2 = .057$, $F(2, 411) = 24.72$, $p < .001$, accounting for the 6% of the variance. We tested the dimensions for transactional leadership and found that the femininity gender-identity dimension predicted contingent reward but not management by exception, $R^2 = .016$, $F(2, 409) = 6.77$, $p = .01$ and $R^2 = .000$, $F(2, 409) = 0.13$, $p = .909$, respectively. This result is in line with previous studies suggesting that femininity is related to contingent reward (e.g., Eagly & Johannesen-Schmidt, 2001; Eagly et al., 2003). No significant results were found for emotional intelligence dimensions.

We also hypothesized that undergraduates from feminine gender-congenial disciplines would be more transformational, emotionally intelligent, and feminine than undergraduates from masculine gender-congenial disciplines, and this would be independent of the participants' sex role (Hypothesis 3). To test these hypotheses, we conducted analyses of variance (ANOVAs) with sex and discipline as independent variables and the components of the emotional intelligence, leadership, and gender-identity scales as dependent variables. The analyses only showed a significant interaction between sex and discipline for the masculine gender identity, $F(2, 405) = 3.30$, $p = .038$, $\eta^2 = .016$, observed power $= .625$. Post hoc analyses showed that both male and female participants in engineering sciences had larger scores in masculinity than participants in psychology and economics ($M = 4.44$, $SD = .75$ for female and $M = 4.13$, $SD = .78$ for male participants in engineering sciences vs. $M = 3.27$, $SD = .89$ for female and $M = 3.42$, $SD = 1.32$ for male participants in psychology and $M = 3.28$, $SD = .87$ for female and $M = 3.79$, $SD = .86$ for male participants in economics). In sum, this result implies that male undergraduates in psychology and economics scored higher in masculinity than females, as expected, but in engineering, female undergraduates scored higher in masculinity than males. We think this is a very interesting result that supports our assumptions about gender-congeniality of the disciplines.

We also conducted one-way ANOVAs with discipline as the independent variable and leadership style, emotional intelligence, and gender identity as dependent variables. The hypothesis received only partial support. That is, participants who studied psychology or economics scored higher on both femininity and emotional attention than those who studied engineering sciences, $F(2, 420) = 20.08$, $p < .001$, $\eta^2 = .085$ and $F(2, 471) = 3.08$, $p < .05$, $\eta^2 = .16$, respectively. Furthermore, participants who studied engineering sciences scored higher on masculinity than those who studied psychology or economics, $F(2, 425) = 18.77$, $p < .001$, $\eta^2 = .075$. Although there were not significant differences in transformational leadership, participants who studied psychology yielded higher scores in individual consideration, $F(2, 425) = 3.99$, $p < .05$, $\eta^2 = .018$. However, participants who studied psychology also had larger scores in transactional leadership than those who studied economics or engineering sciences, $F(2, 421) = 15.47$, $p < .001$, $\eta^2 = .069$. Finally, participants who studied economics or engineering scored higher in emotional repair than those who studied psychology, $F(2, 426) = 14.46$, $p < .001$, $\eta^2 = .065$ (see Table 2).

Table 2
ANOVA for the Dimensions by Gender-Congenial Discipline

	Psychology (feminine)		Economics (neutral)		Engineering sciences (masculine)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Transformational leadership	3.94	0.54	3.95	0.45	3.88	0.46
Charisma	3.60	0.60	3.71	0.59	3.73	0.63
Inspirational Motivation	3.94	0.67	3.96	0.65	3.91	0.59
Intellectual Stimulation	3.97	0.71	3.91	0.62	3.88	0.66
Individualized consideration	4.25[a]	0.64	4.20[a]	0.65	4.00[b]	0.62
Transactional leadership	4.04[a]	0.58	3.79[b]	0.53	3.67[b]	0.60
Management by exception	3.66	0.63	3.69	0.67	3.61	0.64
Contingent reward	3.84	0.79	3.88	0.78	3.72	0.84
Emotional attention	27.57[a]	5.83	27.39[a]	5.81	25.75[b]	4.47
Emotional clarity	25.80	5.32	25.83	6.00	25.09	5.01
Emotional repair	24.27[b]	5.88	27.36[a]	6.34	27.43[a]	5.67
Masculinity	3.31[b]	1.01	3.43[b]	0.91	4.08[a]	0.78
Femininity	5.37[a]	0.83	5.18[a]	0.81	4.68[b]	0.66

Note. The means and standard deviations for transformational and transactional leadership are on a scale ranging from 1 to 5; for emotional attention, clarity, and repair, means and standard deviations range from 8 to 40; and for masculinity and femininity scales, means and standard deviations range from 1 to 7. Larger numbers indicate larger scores. Means that do not share a common superscript differ at the .05 level or smaller by Tukey contrasts.

Discussion

Our study contributes to the literature on transformational leadership, emotional intelligence, and gender stereotypes in several ways. First, to the best of our knowledge, our study is the first that stresses the relationships among the three concepts. Second, emotional clarity and emotional repair are highly correlated to transformational leadership, and we showed that individuals' feminine characteristics, emotional clarity, and emotional repair predict the extent to which they are transformational leaders. Also, in line with published research (e.g., Eagly et al., 2003), our study revealed that high scores in transformational leadership correlate positively with contingent reward, and that femininity predicted contingent reward. Finally, other gender-congenial variables (e.g., the discipline that undergraduates study) play an important role in the relationships among the concepts we investigated. wIn contrast to our hypothesis, women scored higher than men in transactional leadership, and femininity predicted transactional leadership. A possible explanation of these results is that women scored higher than men in contingent reward, which is a result consistent with previous research (Eagly et al., 2003). In fact, the factorial structure of the MLQ as proposed by Bass and Avolio (1997) has received a series of critiques due to the high correlations among all the transformational leadership factors and also the high correlations between transformational leadership and contingent reward (Molero, Recio, & Cuadrado, 2010). These criticisms are impelling researchers to verify the factorial structure. Our scale is based on the original scale and yields seven dimensions (four to measure

transformational leadership, two for transactional leadership, and two for laissez-faire; see "Instruments" section). Therefore, this may be an aspect to take into account in future research.

Our results also demonstrate that femininity, emotional clarity, and emotional repair are predictors of transformational leadership. Mandell and Pherwani (2003) pointed out that emotional intelligence predicts transformational leadership regardless of gender. Our study goes one step further, as the analyses for each of the transformational leadership dimensions show that emotional repair is the key factor in its prediction of all the dimensions, whereas emotional clarity is important for the prediction of charisma, inspirational motivation, and intellectual stimulation, and femininity is predictive of the leadership factors that most contribute to interpersonal relations (inspirational motivation and individualized consideration).

Finally, we showed that individuals who studied a female-congenial or neutral discipline (e.g., psychology and economics) had larger scores in femininity and emotional attention than those who studied a male-congenial discipline (e.g., engineering sciences). In contrast, students who studied a gender-neutral discipline (e.g., economics) or a masculine-congenial discipline had higher scores in emotional repair than those who studied a feminine-congenial discipline. This result supports the rationale that individuals (men and women) studying in a discipline associated with a particular gender also score higher in variables that are shown to be related to a particular gender (femininity and emotional attention), regardless of their sex. There are studies showing that women score higher than men in emotional attention (Extremera et al., 2006). Although this difference was not significant for the men and women in our study, it is reliable when the gender congeniality of the discipline is taken into account. Thus, gender-congenial factors might interact with gender roles rather than with biological sex. Finally, in line with previous published research, gender-neutral variables are associated with one gender in some cases and with the other gender in other cases (e.g., Garcia-Retamero & Lopez-Zafra, 2002).

Our study has important practical implications. First, our results suggest that leaders should be trained in emotional intelligence. Specific components of emotional intelligence have been proven to be useful for professionals in several domains (e.g., nurses; Augusto-Landa & Lopez-Zafra, 2010; or teachers; Augusto, Pulido, & Lopez-Zafra, 2011). These professionals can be trained accordingly, and such training could help them become better team leaders. Second, our study provides supporting evidence for the claim of the importance of training emotional intelligence (McEnrue, Groves, & Shen, 2009). In fact, this training may reduce the prejudice against female leaders or at least erode it by stressing the importance of the relation between emotional intelligence (which is often high in women) and leadership style.

Finally, our findings may have important implications for crosscultural research, as future avenues for research are suggested. It would be interesting, for instance, to investigate whether the relationships among leadership, gender, and emotional intelligence remain the same in undergraduates from other countries with different views about women. Our prediction is that these concepts might not be related in cultures that are less traditional than in Spain.

The present study has some limitations. First, the imbalance of men and women across disciplines in this sample is representative of the reality but limits conclusions. Second, the research was focused on self-report measurements and, therefore, does not fully account for real-world scenarios. Third, the adopted cross-sectional research design does not allow affirmative causal explanations. Future research should address external ratings for the leadership style and whether our results can be replicated in a formal leadership context (i.e., with managers in a workplace). Nevertheless, the present findings are a promising starting point for future research in formal contexts.

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