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Personality and Social Psychology

Jealousy at work: The role of rivals' characteristics

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Zurriaga, R., González-Navarro, P., Buunk, A. P. & Dijkstra, P. (2018). Jealousy at work: The role of rivals' characteristics. *Scandinavian Journal of Psychology*, 59, 443–450.

The present study examined rival characteristics that may evoke jealousy in the workplace, differences between men and women in this regard, and the relationship between jealousy responses and intrasexual competitiveness and social comparison orientation. Participants were 426 male and female employees. By means of a questionnaire, participants were presented with a jealousy-evoking scenario after which jealousy responses to 24 rival characteristics were assessed. Findings showed that a rival's social communal attributes evoked highest levels of jealousy, and that, compared to men, women reported more jealousy in response to a rival's physical attractiveness. Overall, as individuals had higher scores on intrasexual competitiveness and social comparison orientation, they also experienced more jealousy in response to their rival, regardless of his or her characteristics. These findings suggest that those characteristics that are highly valued in employees may backfire when employees perceive co-workers as rivals.

Key words: Jealousy, intrasexual competition, social comparison, work, sex differences.

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INTRODUCTION

Events in the workplace that evoke negative emotions may have an adverse impact on employee well-being and performance (e.g., Rispens & Demerouti, 2016). Jealousy at work is one such event that has received little attention from human resource professionals. A likely reason for this lack of attention is that, compared to other negative emotions, jealousy is seen as a relatively undesirable emotion (e.g., Saffrey, Summerville & Roese, 2008). As a consequence, people often feel reluctant to admit that they are jealous and situations at work that may evoke jealousy often remain unacknowledged (e.g., Evans, Traynor & Glass, 2014). In general, jealousy is generated by a threat to, or actual loss of, a valued relationship with another person, due to an actual or imagined rival for the other person's attention (Dijkstra & Buunk, 1998). Although jealousy is often associated with romantic relationships, any type of relationship can be threatened by a rival who evokes jealousy (DeSteno, Valdesolo & Bartlett, 2006). Many studies, for instance, have shown that children can be jealous of siblings' relationships with parents (e.g., Volling, Yu, Gonzalez, Kennedy, Rosenberg & Oh, 2014), and that individuals can react with jealousy to their friends' activities with others (e.g., Parker, Low, Walker & Gamm, 2005). According to DeSteno *et al.* (2006), jealousy should be viewed as a discrete emotional response to a specific type of anticipated or actual social rejection, that is, rejection by a relationship partner in favor of a rival. The present research examined how the characteristics of a rival may evoke feelings of jealousy in women and men in a work setting.

To date, only a few studies have investigated jealousy in work settings (e.g., Buunk, Aan 't Goor & Castro-Solano, 2010; Vecchio, 2000). However, studying jealousy in the context of work is important because it can have adverse effects on

employee performance and well-being. For instance, jealousy has been found to lead to work place gossip (Wert & Salovey, 2004), which often takes on a malicious form when individuals denigrate the person who evokes the feelings of jealousy. In organizations, negative talk about co-workers, clients or supervisors may produce conflicts and cause targets of gossip to become socially excluded, thus damaging reputations and creating hostile work environments (e.g., Grosser, Lopez-Kidwell, Labianca & Ellwardt, 2012). Likewise, recently, Wang and Sung (2016) found that employee jealousy negatively affected organizational citizenship behavior (OCB), that is employees' extra role behavior that benefits the organization.

Jealousy and rival characteristics

Jealousy is partly evoked through a process of social comparison in which jealous individuals feel that the characteristics of the rival surpass their own characteristics (e.g., Buunk & Dijkstra, 2015). From an evolutionary perspective, the characteristics that are perceived as important and have the power to evoke jealousy are those that contribute to survival and reproduction (e.g., Campbell & Wilbur, 2009). Important characteristics, for both men and women, are those that help build relationships. One of human beings' strongest needs is to belong and be appreciated, loved, and valued by others (e.g., Baumeister, Brewer, Tice & Twenge, 2007). This need has important survival and reproductive benefits: groups can share food, provide mates, and help to care for offspring (e.g., Baumeister & Leary, 1995). What have been referred to as *social-communal characteristics*, such as having a sense of humor, being a good listener, and being attentive (Buunk, Castro-Solano, Zurriaga & González, 2011), are important in establishing high quality interpersonal relationships and fulfilling the need to belong. These characteristics seem

especially important in the work context. Many individuals can only perform their tasks successfully when cooperating with others, or at least when others are not obstructing their goals (e.g., Balliet & Van Lange, 2013), making the ability to establish positive relationships at work a crucial skill (Kuhlmeier & Knight, 2010). Therefore, we expected that a rival's social-communal characteristics at work would evoke the highest level of jealousy in both men and women (Hypothesis 1). To date, only limited research has examined this issue. Especially relevant in the present context, in a sample of 114 Spanish employees, Buunk, Zurriaga, González, and Castro-Solano (2012) found that a rival's social-communal characteristics evoked relatively high levels of jealousy in both sexes in a work setting (see also Buunk *et al.*, 2010).

Numerous studies have shown men and women to differ in their responses to jealousy-evoking situations (e.g., Bendixen, Kennair & Buss, 2015; Buss, 1992). From an evolutionary perspective sex differences can also be expected with regard to the jealousy-evoking nature of rival characteristics. For men more than women, characteristics that lead to a higher position in the social hierarchy may be more important because a high status facilitates access to important resources and attracts mates (e.g., Geary, 2010). In our evolutionary past, social and physical dominance helped men to compete with other men in the quest for high status in the social hierarchy. Social dominance refers to the degree to which someone is self-confident, assertive, extroverted, and authoritative (Dijkstra & Buunk, 1998), whereas physical dominance refers to physical features related to strength and physical power, such as having a V-shaped body and being tall (e.g., Bryan, Webster & Mahaffey, 2011). Social dominance contributes to occupational success in modern organizations because socially dominant workers, more than socially non-dominant workers, take initiative and proactively influence and steer their environments, achieving a relatively powerful position in the organization's hierarchy. Several studies support this line of reasoning. For instance, a meta-analytic study on the relationships between leader emergence and the Big Five characteristics showed that extraversion – an important component of social dominance – is strongly related to leadership emergence (Emery, Calvard & Pierce, 2013). In addition, socially dominant individuals appear to be more successful as leaders. A meta-analysis by Do and Minbashian (2014) showed that a leader's agency – another component of social dominance – is positively related to leadership effectiveness.

The degree to which men are able to engage in the strategy of physical dominance is related to their physical appearance. For instance, among men both a relatively high waist-to-hip ratio (WHR), that is a WHR of around 0.9, and relatively high muscularity have been found to be positively related to levels of testosterone (Garver-Apgar, Eaton, Tybur & Thompson, 2011) – an important hormone that fuels (sexual) aggressiveness, competitiveness, self-confidence and authoritarian behavior (Eisenegger, Kumsta, Naef, Gromoll & Heinrichs, 2017; Mehta & Beer, 2010). In addition, taller men have been found to be physically stronger, to more often win physical fights and to react more aggressively in sports (for an overview see Stulp, Buunk, Verhulst & Pollet, 2012). In addition to the body, the male face also shows signs of physical dominance. For instance, male facial

width-to-height ratio (fWHR) has been found to be positively related to self-perceived power, financial performance, (sexual) aggressiveness and success (Alrajih & Ward, 2014; Valentine, Li, Penke & Perrett, 2014).

Although one might expect physical features to contribute to status in organizations such as the army, police, and fire fighters, in most modern organizations physical dominance will generally play a relatively unimportant role and may even have adverse effects (e.g., Vongas & Al Haji, 2015). For instance, high levels of testosterone have been found to be related to antisocial behaviors and impulsive decision making (e.g., Nave, Nadler, Zava & Camerer, 2017) and may cause workers to feel little empathy for co-workers who suffer losses (Vongas & Al Haji, 2015). Nonetheless, several studies indirectly or directly suggest that a man's physical dominance still has advantages in modern organizations. For instance, Tiedens and Fragale (2003) found that men changed their behavior when in the same room as a male who, due to his bodily posture, was perceived as dominant: confronted with this type of male, men behaved more submissively. In an Argentinean sample, Buunk *et al.* (2010) showed that a rival's physical dominance evoked more jealousy on the work floor in men than in women. Likewise, several studies have found a relationship between occupational success and body height. Taller men, for instance, have been found to have higher starting salaries, to be more likely to be promoted at work and to be more likely to occupy a leadership or managerial position (for an overview see Stulp, Buunk, Verhulst & Pollet, 2012).

Whereas throughout human history men have competed in the domains of status and dominance more than women, women seem to have competed more – and still tend to do so – in the domain of physical attractiveness, in order to attract and keep mates (Fisher, Tran & Voracek, 2008; Hudders, De Backer, Fisher & Vyncke, 2014), probably because attractiveness is a sign of health and fertility. Indeed, it is widely accepted that physical attractiveness is a more important attribute in society for women than for men (Singh & Singh, 2011), and many studies support the important role of physical attractiveness in competition among women. For example, when confronted with same-sex rivals, women often derogate their rival's physical attractiveness by negative statements about their rival's physical appearance (Bleske-Rechek & Lighthall, 2010; Fisher & Cox, 2009). Like physical dominance for men, physical attractiveness for women may not seem very relevant in modern organizations. Nonetheless, several studies suggest that women's physical attractiveness still plays an important role in competition among women in organizations. Because women compete with each other on physical attractiveness, gossip often serves to derogate other women's appearance, and women may exclude attractive women (Campbell, 2004). In an illustrative study, Luxen and Van de Vijver (2006) examined the effect of facial attractiveness on hiring decisions about same-sex applicants among Human Resources Management professionals and students. They found some evidence that women – but not men – were less likely to hire a highly attractive same-sex applicant than an unattractive same-sex applicant. In addition, Buunk *et al.* (2010) found that women experienced more jealousy than men at work in response to a rival's physical attractiveness. Recently, in an experiment

among women, Buunk, Zurriaga, González-Navarro, and Monzani (2016) found that, at work, a physically attractive rival evoked more jealousy and lower career advancement expectations than a physically unattractive rival.

In general, it seems that the importance of social dominance for men and physical attractiveness for women lies in human social cognition. In an eye-tracking experiment, Maner, DeWall and Gailliot (2008) showed that individuals unconsciously visually fixate on socially dominant men, but not on socially dominant women, and, in a similar vein, on physically attractive women, but not on physically attractive men. Based on the previous arguments, we expected men to experience more jealousy than women in response to a rival's social dominance and physical dominance, whereas we expected women to experience more jealousy than men in response to a rival's physical attractiveness (Hypothesis 2).

Individual differences that may feed jealousy at work

Although all individuals compete to some extent with same-sex members, they may differ in the degree to which they view the confrontation with same-sex individuals in competitive terms (Buunk & Fisher, 2009). In other words, individuals may differ in their degree of *intrasexual competitiveness*. At work, these individual differences may become magnified, and, therefore, it is particularly important to study them in the work context. In organizations, individuals often compete for resources such as status, attention, prestige, and money (e.g., Sheppard & Aquino, 2017). With the increasing influx of women in organizations and the development of a mixed-gender work force, intrasexual competition may have become even more salient. For instance, in a study among young women, Xing, Chen and Du (2016) found that a female-biased sex ratio (that is, an excess of women) increased women's degree of intrasexual competitiveness and made women care more about relative than absolute economic gains. Therefore, we expected that, in the context of work, women with higher intrasexual competitiveness would experience more jealousy in response to a rival's physical attractiveness, whereas men with higher intrasexual competitiveness would experience more jealousy in response to a rival's social and physical dominance (Hypothesis 3). In addition, we expected that both men and women with higher intrasexual competitiveness would experience more jealousy in response to a rival's social-communal attributes (Hypothesis 4).

In addition to intrasexual competitiveness, social comparison processes are important forces in evoking jealousy. The frequency with which individuals make social comparisons has been called the *social comparison orientation* (Gibbons & Buunk, 1999). According to Buunk *et al.* (2010, pp. 674–675), the social comparison orientation “refers to the extent to which individuals use social comparisons to evaluate their characteristics, relate to themselves what happens to others, and are particularly interested in information about others' thoughts and behaviors in similar circumstances”. Individuals with a higher social comparison orientation are more likely to be attentive and responsive to the characteristics of a rival that they find most threatening. Therefore, we expected that, in the context of work, women, but not men, with a higher social comparison orientation would experience more jealousy in response to a rival's physical attractiveness, whereas men, but not women, with a higher social

comparison orientation would experience more jealousy in response to a rival's social dominance and physical dominance (Hypothesis 5). Finally, we expected that both men and women with a higher social comparison orientation would experience more jealousy in response to a rival's social-communal attributes (Hypothesis 6). To date, only a few studies have investigated the role of individual differences in intrasexual competitiveness and the social comparison orientation in the experience of jealousy at work. Buunk *et al.* (2010) found that, at work, a rival's physical dominance evoked jealousy in men, and a rival's physical attractiveness evoked jealousy in women, especially in men and women with high intrasexual competitiveness.

The present study included a relatively large sample of workers, that is, 426 workers, – the largest sample to date in research on jealousy at work – making it possible to draw relatively valid and reliable conclusions about jealousy at work, and making it possible to shed light on confusing and mixed findings from previous studies.

METHOD

Sample and Procedure

Participants were 426 Spanish employees, 204 men (47.9%) and 222 women (52.1%) with a mean age of 37.4 years ($SD = 10.79$). The majority, 65.5%, had completed higher education. Participants were employed in different fields: administration (30%), trade and marketing (14.8%), health (11.7%), education (10.8%), hospitality and tourism (3.3%), computers and communications (3.1%), and other sectors such as mechanical manufacturing, graphic arts, personal image, and transport (23.7%). Some participants (2.6%) reported being unemployed at the time of the study, but had previous work experience. More than two-thirds of the sample consisted of workers with a permanent job (80.8%), whereas a minority (11.0%) held a temporary job. The sampling procedure was incidental purposive sampling. Data were collected through self-report questionnaires completed voluntarily by the participants in the presence of the researcher, after providing their informed consent. The researchers stressed that anonymity and confidentiality were guaranteed, that there were no right or wrong answers, and that they should answer the questions as honestly as possible (Podsakoff, Mackenzie, Lee & Podsakoff, 2003).

Measures

Jealousy. The questionnaire included a jealousy-evoking scenario derived from work by Buunk *et al.*, (2010, 2012), and used by Buunk, Zurriaga, González-Navarro and Monzani (2016). This scenario has been shown to evoke jealousy in most people. The scenario was similar for male and female participants, except for the sex of the rival and the individual whose attention was sought. Whereas the rival in the scenario was of the same sex, the individual whose attention was sought was of the opposite sex.

Central to the jealousy-evoking scenario was the (potential) loss of a valued person's attention, in this case a supervisor of the other sex. The jealousy-evoking scenario read as follows: “Imagine that you have been working in a company for two years

or more. The relationship with your boss has always been very good, to the point where you usually go to lunch together, your boss asks your opinion about various topics, both business and personal, and s/he even considers you his/her confidant. However, some time ago a new colleague joined the department who performs the same tasks as you. This person is becoming the person your boss trusts, and your boss now has lunch with this person and not with you like s/he did before. At weekly meetings, the boss does not ask for your opinion as s/he used to; instead, s/he is quite interested in your colleague's opinion. In addition, you have seen them leaving together after work."

After reading the jealousy scenario, participants were asked how jealous they would feel if their colleague had each of 24 characteristics. Each characteristic was assessed on a five-point scale (1 = not at all, 5 = very strong). This instrument was validated for Spanish-speaking samples by Buunk *et al.*, (2011), and the analysis yielded a four-factor solution. Two factors were related to physical characteristics of the rival (dominance or attractiveness), and the other two were related to psychological or social attributes (social power and dominance, and social-communal attributes). Six items were used to measure the characteristics of the rival's *social dominance*. Examples of items are: 'has more authority' and 'is more popular' ($\alpha = 0.90$). In a similar vein, six characteristics were used to measure *physical attractiveness*. Examples of items are: 'has a smaller waist', 'has a better figure' and, 'has more beautiful legs' ($\alpha = 0.95$). Six items made up the scale for a rival's *social-communal attributes*. Examples of items are: 'is a better listener', 'is more attentive', and 'has a better sense of humor' ($\alpha = 0.89$). Finally, six items were used to assess the jealousy evoked by a rival's *physical dominance*. Examples of items are: 'has broader shoulders', 'is more muscular', and 'is taller' ($\alpha = 0.94$).

Intrasexual Competitiveness. Participants completed the 12-item Spanish version of the Intrasexual Competition Scale (ISC; Buunk & Fischer, 2009). This scale measures the dispositional tendency to compete with same-sex others, especially in the mating domain. An example item is: "When I go out, I can't stand it when women/men pay more attention to a same-sex friend of mine than to me." Items are assessed on a seven-point scale (1 = "not at all applicable" to 7 = "completely applicable"). Cronbach's alpha for this scale was 0.88.

Social Comparison Orientation. We administered the validated Spanish version of the Social Comparison Orientation scale (SCO; Buunk, Belmonte, Peiró, Zurriaga & Gibbons, 2005). An example item is: 'I always like to know what others in a similar situation would do'. Items are assessed on a five-point scale (1 = 'strongly disagree', 5 = 'strongly agree'). Cronbach's alpha for this scale was 0.77.

RESULTS

The effect of the rival's social-communal characteristics

To test Hypothesis 1, that is, the prediction that in both men and women a rival's social-communal attributes would evoke more jealousy, a within-subject MANOVA and subsequent pairwise comparisons were conducted for each sex separately. Results

showed that, in men, the four rival characteristics evoked significantly different levels of jealousy, $F(3, 196) = 114.67, p < 0.001, \eta^2 = 0.36$. Consistent with Hypothesis 1, in men, a rival's social communal attributes evoked more jealousy ($M = 2.18, SD = 0.93$), followed by a rival's social dominance ($M = 1.94, SD = 0.97$) and a rival's physical dominance ($M = 1.52, SD = 0.92$). A rival's physical attractiveness evoked less jealousy in men ($M = 1.45, SD = 0.84$; see also Table 1). In women, the four characteristics of the rival evoked significantly different levels of jealousy, $F(3, 214) = 148.23, p < 0.001, \eta^2 = 0.40$. The order of the rival characteristics that evoked jealousy in women was, however, different from that of men. Consistent with Hypothesis 1, as in men, women experienced more jealousy in response to a rival's social-communal attributes ($M = 2.35, SD = 0.96$), followed by a rival's social dominance ($M = 2.11, SD = 1.03$) and a rival's physical attractiveness ($M = 1.67, SD = 0.96$). A rival's physical dominance evoked less jealousy in women ($M = 1.46, SD = 0.88$; see also Table 1). The low means obtained in this study are consistent with prior studies on jealousy (see Arnocky, Sunderani, Miller & Vaillancourt, 2012; Buunk *et al.*, 2011, 2012).

Sex differences in jealousy

To test Hypothesis 2, that is, the expectation that men would experience more feelings of jealousy than women in response to a rival's social dominance and physical dominance, whereas women would experience more feelings of jealousy in response to a rival's physical attractiveness than men, a MANOVA was performed with the participant's sex as the independent variable and jealousy in response to the four rival characteristics as dependent variables. This analysis revealed a multivariate main effect of gender, $F(4, 411) = 12.39, p < 0.01, \eta^2 = 0.11$. Univariately, this effect could be attributed to a rival's physical attractiveness: supporting Hypothesis 2, women reported more jealousy in response to a rival's physical attractiveness than men. Contrary to expectations, however, no sex differences were found in the extent to which a rival's social dominance ($M = 1.94$ vs $M = 2.11, F(4, 411) = 3.00, ns$) and physical dominance evoked jealousy ($M = 1.46$ vs $M = 1.52, F(4, 411) = 0.49, ns$).

The Role of Intrasexual Competitiveness (ISC) and Social Comparison Orientation (SCO)

To examine the relations between ISC and the extent to which the four rival characteristics evoked jealousy, correlational analyses were conducted (see Table 2), showing that ISC was positively

Table 1. Mean reported jealousy scores in response to rival characteristics at work

Rival Characteristic	Women	Men
Social dominance	2.11 (1.03) _b	1.94 (0.97) _b
Physical attractiveness	1.67 (0.96) _c	1.45 (0.84) _d
Social communal attributes	2.35 (0.96) _a	2.18 (0.93) _a
Physical dominance	1.46 (0.88) _d	1.52 (0.92) _d

Notes: Subscript letters refer to differences between rows ($p < 0.01$). Standard deviations in parentheses.

related to jealousy in response to all four rival characteristics ($r_s > 0.14$, $ps < 0.001$). Thus, the more intrasexually competitive the individuals were, the more jealousy they felt in response to all four rival characteristics. Although significant, all correlations are small (Cohen, 1992).

We hypothesized that women with higher ISC, but not men, would experience more jealousy in response to a rival's physical attractiveness, whereas men, but not women, would experience more jealousy in response to a rival's social and physical dominance (Hypothesis 3). Moreover, both men and women with higher ISC would experience more jealousy in response to a rival's social-communal attributes (Hypothesis 4). To test these hypotheses, a MANCOVA was performed with the participant's sex as the independent variable, jealousy in response to the four rival characteristics as dependent variables, and ISC as a covariate. This analysis revealed a multivariate effect of ISC, $F(4, 402) = 9.9$, $p < 0.001$, $\eta^2 = 0.09$, which, univariately, could be attributed to all four rival characteristics ($F's > 9.57$; $ps < 0.001$). In addition, a significant multivariate interaction effect emerged between ISC and Sex, $F(4, 402) = 2.98$, $p < 0.05$, $\eta^2 = 0.02$, which, univariately, however, could not be attributed to a particular rival characteristic ($F's < 2.78$, ns). In women, jealousy in response to the rival's characteristics was more strongly related to ISC than in men. The multivariate main effect of Sex was not significant, $F(4, 402) = 1.09$, ns). In sum, no support was found for Hypothesis 3, whereas Hypothesis 4 was supported. Both men and women who were higher in intrasexual competitiveness experienced more jealousy in response to a rival's social-communal attributes.

Similar analyses were conducted to test Hypotheses 5 and 6, regarding SCO. Correlational analyses showed significant positive correlations between SCO and jealousy in response to all four rival characteristics ($r_s > 0.23$, $ps < 0.01$; see Table 2). These correlations are small to medium (Cohen, 1992). Individuals with higher SCO experienced more jealousy in response to all four rival characteristics. We hypothesized that women, but not men, with higher SCO would experience more jealousy in response to a rival's physical attractiveness, whereas men, but not women, would experience more jealousy in response to a rival's social and physical dominance (Hypothesis 5). Moreover, both men and women with higher SCO would experience more jealousy in response to a rival's social-communal attributes (Hypothesis 6). To test these hypotheses, a MANCOVA was performed with the participant's sex as the independent variable, jealousy in response

to the four rival characteristics as dependent variables, and SCO as a covariate. Only a multivariate effect of SCO was found, $F(4, 401) = 15.37$, $p < 0.001$, $\eta^2 = 0.13$; other multivariate effects $F's < 1.37$, ns , which, univariately, could be attributed to all four rival characteristics ($F's > 26.30$, $ps < 0.001$). In sum, no support was found for Hypothesis 5, whereas Hypothesis 6 was supported. Both men and women with higher SCO experienced more jealousy in response to a rival's social-communal attributes.

To examine which variable(s) best predicts jealousy in response to the four rival characteristics four logistic regressions (one for each of the four jealousy scores) were conducted using participant sex, ISC and SCO as predictors. Results showed that SCO was a significant predictor of all four jealousy scores ($\beta_s \geq 0.19$, $ps < 0.01$; see Table 3). In contrast, participant sex was only a marginally significant predictor of jealousy in response a rival's physical attractiveness ($\beta = 0.12$, $p = 0.14$) whereas ICS was a significant predictor of three of the four jealousy scores, that is, of jealousy in response to a rival's physical attractiveness, a rival's physical dominance and a rival's social dominance ($\beta \geq 0.17$, $ps < 0.01$).

DISCUSSION

The first goal of the present study was to investigate the extent to which, in the context of work, rival characteristics evoked jealousy, and the extent to which men and women differed in this regard. With regard to a rival's social-communal attributes, the expectations were confirmed. That is, both men and women responded with more jealousy to a rival's social communal attributes than to a rival' physical attractiveness, physical dominance and social dominance. In line with expectations, the present study also found women to experience more jealousy than men in response to a rival's physical attractiveness. Contrary to expectations, however, no sex differences were found in the extent to which a rival's social dominance or physical dominance evoked jealousy. The second goal of this study was to investigate the relationship between the jealousy-evoking effect of rival characteristics on the one hand and individual differences in intrasexual competitiveness and social comparison orientation on the other hand. Results showed that, as individuals were higher in intrasexual competitiveness and social comparison orientation, they experienced more intense feelings of jealousy overall, and especially in response to a rival's social communal attributes. In contrast to expectations, no sex differences were found in the relationship between social comparison orientation respectively intrasexual competitiveness and the specific rival characteristic that evoked jealousy.

Table 2. Correlations between variables

	1	2	3	4	5	6
1. ISC	1.00					
2. SCO	0.24*	1.00				
3. Jealousy-SD	0.25*	0.37*	1.00			
4. Jealousy-PA	0.26*	0.26*	0.78*	1.00		
5. Jealousy-SCA	0.14*	0.32*	0.82*	0.64*	1.00	
6. Jealousy-PD	0.26*	0.23*	0.71*	0.88*	0.61*	1.00

Notes: SD = a rival's social dominance, PA = a rival's physical attractiveness, SCA = a rival's social communal attributes, PD = a rival's physical dominance; * = $p < 0.01$.

Table 3. Betas for sex, ISC and SCO for each jealousy score

	Jealousy-SD	Jealousy-PA	Jealousy-SCA	Jealousy-PD
Sex	0.05	0.12+	0.06	-0.05
ISC	0.17*	0.23*	0.08	0.22*
SCO	0.33*	0.20*	0.30*	0.19*

Note: * = $p < 0.01$, + = $p = 0.014$.

Overall, our study's results underline the importance of social-communal attributes at work. These attributes are essential for cooperation and group life, especially at work, where many tasks can only be successfully performed in cooperation with others. For both sexes, being confronted at work with a rival who is superior in this regard may threaten one's position in the group and, therefore, evoke relatively strong feelings of jealousy. Both the tendency to make social comparisons and the degree of intrasexual competitiveness are indicators of competition at work (Buunk & Dijkstra, 2012). The finding that, in both sexes, social comparison orientation and intrasexual competitiveness were especially related to jealousy evoked by a rival's social-communal attributes suggests that, at work, individuals indeed significantly compete with each other over these attributes.

The present study did not find support for all of our hypotheses on sex differences. For instance, we did not find men and women to differ in the degree of jealousy they experienced in response to a rival's physical and social dominance. There are several possible explanations for this lack of sex differences. First, during the last half century, women's role in society has changed dramatically. Whereas, traditionally, women engaged in unpaid work at home, since the 1950s and the 1960s of the past century women's participation in the workforce has increased dramatically. Whereas in the 1950s and the 1960s around 30% of European women participated in the workforce, in 2016 the employment rate for European women stood at an all-time high level of 65.5% (in comparison, for men this was 77.4%; European Commission, 2017). In addition, in modern organizations, although still less than men, women increasingly perform tasks and jobs that traditionally were the domain of men, such as engineering and ICT. Illustrative is that, in European countries, women hold a quarter of board seats on the STOXX 600 (ISS, 2016). As a result, with regard to job opportunities, job success, and important work relationships, women not only have to compete with other women, but also with men, and vice versa. Therefore, at work, characteristics such as physical and social dominance may be important to both men and women, and, as a consequence, a workplace rival's physical and social dominance may evoke jealousy in both sexes. A second explanation for the lack of sex differences in our data is that the present study's sample consisted of employees working in settings where competition between coworkers is relatively high. Compared to less competitive work environments, in competitive work settings almost anyone can be perceived as a threat to one's position in the group and to one's relationship with supervisors, regardless of his/her characteristics. By contrast, in less competitive work environments, individuals may only experience jealousy when the threat is relatively high, for example, when rivals have highly desirable characteristics. In addition to assessing the jealousy-evoking effect of rivals' characteristics, it may be therefore important for future studies to assess characteristics of the work setting that can give rise to work place competition, such as the degree to which rewards are allocated competitively and the degree to which workers experience a lack of autonomy and supervisor consideration (Vecchio, 2005).

It must be noted that the lack of sex differences in our results does not per se argue against an evolutionary-psychological explanation of jealousy. Human cognition and behavior are highly

sensitive to changes in the environment, a phenomenon referred to as behavioral or phenotypic plasticity (Royle, Russell & Wilson, 2014). This plasticity increases adaptation to changing environments and survival in these environments (Mateo, 2010). It is highly likely that in today's organizations different adaptations are required in order to 'survive' and succeed than in the private domain. As a consequence, a rival's characteristics at work may weight differently in terms of the jealousy they evoke than a rival's characteristics in the mating arena.

The present research has a number of limitations. First, the scenario described a valued relationship under threat, specified as a leader-subordinate relationship rather than as a relationship between coworkers. Second, as is always the case when using a scenario, responses to a hypothetical situation may not reliably reflect how individuals will respond when a similar situation occurs to them in real life. Nonetheless, responses to hypothetical situations may provide an index of how subjects tend to react to a comparable situation in 'real' life (Bendixen *et al.*, 2015). Moreover, this scenario has shown its usefulness in previous studies (Buunk *et al.*, 2016). Nevertheless, the present study contributes to the literature by showing the importance of rivals' characteristics in evoking jealousy at work, especially with regard to a rival's social-communal attributes. Our study also shows that previous findings on the jealousy-evoking effect of rivals' characteristics in the context of intimate relationships may not automatically be generalized to professional relationships. Finally, our study reveals that, at work, individual differences that feed competition are relatively important in the experience of jealousy, particularly among women.

For organizations, our study's results may present a dilemma. On the one hand organizations may highly value those attributes that contribute to cooperation and performance, such as social-communal attributes, and weight these attributes highly in their selection of personnel. On the other hand, these same attributes may backfire when employees perceive co-workers that possess these attributes as rivals. In that case, jealousy may be evoked and undermine cooperation and performances. It therefore seems wise for organizations to acknowledge and be attentive to indications of jealousy among their workers. Only then organizations may effectively intervene when jealousy-related behaviors threaten to interfere with employee functioning and performance.

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