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Rival Characteristics That Provoke Jealousy: A Study in Iraqi Kurdistan

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This study examined gender differences in the jealousy-evoking nature of rival characteristics among 200 young people from Iraqi Kurdistan. A factor analysis showed exactly the same 5 dimensions of rival characteristics as in Dutch samples, that is, social dominance, physical attractiveness, physical dominance, seductive behavior, and social status. Unlike what was found in The Netherlands, Argentina, and Spain, men and women did not differ in the rival characteristics they found most threatening. Overall, women found the 5 dimensions of rival characteristics threatening to the same extent, whereas men found physical dominance of the rival the least threatening characteristic. With the exception of social dominance of the rival, Kurdish men found all other characteristics more threatening than Dutch men did. With the exception of social dominance and physical attractiveness of the rival, Kurdish women found all other characteristics more threatening than Dutch women did. Only among men did all rival characteristics, except social status, correlate positively with intrasexual competition. The results are interpreted in the context of Kurdistan society and culture, and suggest that classic evolutionary theorizing about the gender differences in the rival characteristics that may evoke jealousy needs to be revised and moderated.

Keywords: cultural differences, intrasexual competition, Iraqi Kurdistan, jealousy

Jealousy can be defined as the response to a threat to a valued relationship with another person, due to a rival vying for that other person's attention (cf. Bringle & Buunk, 1985; Buunk & Dijkstra, 2000; Guerrero, Spitzberg, & Yoshimura, 2004; Salovey, 1991). More specifically, although jealousy may constitute a response to actual infidelity of one's partner, in many cases individuals may respond with jealousy when they are confronted with the mere *potential* of infidelity by their partner because of the interference of a rival, especially when one's partner and a rival show signs of mutual attraction. In such a situation, individuals will

engage in a process of social comparison in which they compare their own personal characteristics—and especially those relevant to one's value as a mate—with those of the rival (Arnocky, Sunderani, Miller, & Vaillancourt, 2012; Broemer & Diehl, 2004; DeSteno & Salovey, 1996). Particularly when individuals observe that their rival exceeds them on these qualities, that rival will be perceived as a threat to the relationship, and will, consequently evoke feelings of jealousy (Buss et al., 2000; Dijkstra & Buunk, 1998; Massar, Buunk, & Dechesne, 2009). Overall, jealousy may be viewed as an evaluative-motivational complex aimed at assessing the threat that a rival may impose to one's reproductive interests (Buunk, Massar, & Dijkstra, 2007; Knobloch, Solomon, & Cruz, 2001).

From an evolutionary psychological perspective, it can be expected that there will be gender differences in the rival characteristics that evoke jealousy. Among men, the inclination to assess the potential threat of a rival has a long evolutionary history that is in part rooted in fights

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over the access to women and in mate guarding, behaviors that are found in many species (cf., Buunk, 1986; Buss, 1994; Barash & Lipton, 2001; Daly, Wilson & Weghorst, 1982). Moreover, although in many primates males direct special attention to offspring likely to be their own (Hrdy, 1981), men invest much more heavily in their offspring than males of other primate species, and will therefore be particularly alert to rivals who may interfere in the relationship, and especially to rivals high in dominance and status. Rivalry among men on these characteristics is fostered by the fact that women value in a man particularly social status and dominance, because this reflects women's evolved preference for men who are able to provide them and their offspring with sufficient resources and protection (Barber, 1995; Buss, 1989; Buss & Barnes, 1986; Kenrick, Sadalla, Groth, & Trost, 1990; Schmitt, 2005). In contrast, in the case of a rival vying for her mate's attention, a major threat to a woman is that she may have to share her partner's resources with another woman, and, even more threatening, that her partner will direct all of his support to another partner (Campbell, 2002). Because men, more than women, value physical attractiveness in a partner, as this signals women's reproductive value (e.g., Buss, 1994), it is generally assumed that women will have evolved a tendency to compete with other women in this domain, and jealousy in women is likely to be driven particularly by a rival's physical attractiveness (e.g., Buss, 1989; Buss & Barnes, 1986; Kenrick et al., 1990; Sadalla, Kenrick, & Vershure, 1987; Townsend & Wasserman, 1998). Indeed, in general, women tend to compete relatively more over physical attractiveness than men (Campbell, 2004). For example, women most often nominate, perform, and rate the tactic of attracting attention to their appearance as most effective, even when no mention is made of what the competition is about (Walters & Crawford, 1994; Cashdan, 1998).

Until just over a decade ago, little research had addressed the role of rival characteristics in jealousy, and the research that had been done was limited to a few characteristics, allowing no definitive conclusions about which rival characteristics are the most jealousy evoking (e.g., Broemer & Diehl, 2004; Nadler & Dotan, 1992; Yarab & Allgeier, 1999). Dijkstra and Buunk (2002) began the development of an inventory

to chart rival characteristics, by asking participants what kind of person would evoke more jealousy when related to his or her partner (see for a review, Buunk, Massar, & Dijkstra, 2007). This research program resulted in a Dutch 56 item inventory, composed of five factors, that is, *social dominance* (e.g., more self-confident, more ascendance) as well as items referring to a sympathetic personality (e.g., better listener, nicer), *physical attractiveness* (e.g., more slender, more attractive face, better figure), *seductive behavior* (e.g., behaves more provocatively, is smoother and more shrewd, is more of a seducer), *physical dominance* (e.g., more muscular, built heavier, physically stronger), and *social status* (e.g., has a better job, has a better education, is more successful). The main finding was that jealousy in men was, more than in women, evoked by the rival's social and physical dominance, whereas jealousy in women was, more than in men, evoked more by the rival's physical attractiveness. These findings were obtained in a Dutch college sample and were cross-validated in a Dutch community sample (Dijkstra & Buunk, 2002). Thus far, the scales based on the five factors have not been related to mate value. However, they were found to be related in theoretically meaningful ways to a determinant of mate value—height. Taller men (who tend to be most liked by women) showed less jealousy in response to the social and physical dominance of a rival, and women of medium height (who tend to be most liked by men) showed less jealousy in response to the physical attractiveness of the rival (Buunk et al., 2008).

It is important to recognize the way humans interact with their environment (e.g., Buss, 1994). Different environmental conditions may necessitate the use of different strategies or tactics to reach an optimal allocation of resources, such as food or potential partners (e.g., Crawford & Anderson, 1989; Symons, 1979). With regard to the rival characteristics that evoke the most jealousy, it is therefore possible that individuals in different cultures follow different strategies or use different tactics when confronted with the threat of a mate's potential infidelity. To more precisely examine the effect of the environment on evolutionary-psychological mechanisms, such as jealousy, it is important to examine the way these mechanisms express themselves in different cultures. Relevant

to the present article, cultures differ in their attitudes toward aspects of sexuality such as premarital sex and extramarital affairs (Buss, 1989; Buunk & Van Driel, 1989; Schmitt, 2005) and the extent to which different norms apply to men and women with regard to sex (Frayser, 1985; Hofstede, 2001). Cultural differences like these may affect the way men and women respond to the threat of a mate's potential infidelity, and the extent to which men and women differ in the rival characteristics that evoke the most jealousy.

Because all studies with the five scales for rival characteristics were conducted in Dutch samples, Buunk, Castro Solano, Zurriaga, and Gonzales (2011) therefore replicated the original study done by Dijkstra and Buunk (2002) in two Latin countries, that is, Spain and Argentina. In general, in Dutch culture gender differences are downplayed more than in Latin countries. For instance, whereas for young men and women in The Netherlands social norms with regard to sexuality are very similar (e.g., Williams, 2012), in Spain young women's sexuality is much more restricted than men's, with, for instance, virginity still being an important value for women but not for men (Venegas, 2013). The study in Spain and Argentina did only in part show the same findings as Dijkstra and Buunk (2002). Again, five factors were found, and the first three factors—social dominance, physical attractiveness, and physical dominance—were quite similar to the original data by Dijkstra and Buunk. However, the fourth factor found by Dijkstra and Buunk—seductive behavior—was not clearly manifest in the Spanish and Argentinean data, and had lower item loadings than expected, whereas the fifth factor could not be interpreted clearly and did not match the social status factor that was expected on the basis of the Dijkstra and Buunk study. After extensive analyses, four factors were extracted, that is, physical attractiveness, physical dominance, social power and dominance (e.g., behaves more provocatively, has more authority, has had a higher education, is more popular, is smoother and more shrewd), and social communal attributes (e.g., is a better listener; is more attentive, is more sensitive to my partner's needs, is sweeter, is more self confident). In Argentina and Spain combined, men experienced more jealousy than women when their rival was more physically dominant, and

women experienced more jealousy than men when their rival was more physically attractive, had more social-communal attributes, and had more social power and dominance. In both genders, social communal attributes was the most jealousy-evoking characteristic, followed by physical attractiveness in women, and by social power and dominance in men. Although the factor structure was in part different, these sex differences were largely in line with those obtained by Dijkstra and Buunk (2002).

To further examine the potential cross-cultural influence on gender differences in the rival characteristics that provoke jealousy, the exact same procedure was used to study the jealousy-evoking effect of rival characteristics in Iraqi Kurdistan, a culture that attaches much more value than The Netherlands, Spain, and Argentina to chastity and marital sexual exclusivity (e.g., Bennett, 2007). Iraqi Kurdistan is a relatively autonomous region of Iraq, and like other regions in the Middle East, it is historically a tribal culture, culturally closely related to Iran, where loyalty to the family and clan is of utmost importance (e.g., Al-Nouri, 1997). Related to this, the degree of free mate choice is limited, and parents determine to a large extent the mate choice of their offspring. Indeed, data from the same dataset as used in the present study showed that the degree to which individuals agreed with a scale containing statements referring to the desirability of parents influencing the mate choice of their children was much higher in Iraqi Kurdistan than in the Netherlands, with a very large effect size ($d = 2.23$, comparable to an r of .75; Buunk, Park, & Duncan, 2010). It is unclear what the consequences of such cultural differences may be for the relative importance of various rival characteristics for men and women. From a sex role point of view, one would expect more pronounced sex differences in a culture like Iraqi Kurdistan. The Kurdish society is a patriarchal system in which customs, traditions, and even many written laws favor men. Women have relatively little power and freedom, gender roles are quite segregated, and women's sexual behavior is guarded jealously (e.g., Othman, 2011). Although the Islam strongly forbids premarital sex and adultery—a felony called *zina* (Bennett, 2007)—for both men and women, especially women are expected to behave in a modest and chaste way (a term called *hijab*; see for instance Ruby, 2006).

However, one may also argue that the relative lack of freedom of mate choice will suppress sex differences as individuals have to compete less directly with same sex others over mate choice. Nevertheless, being confronted with a rival who is attractive to the opposite sex may be extremely threatening, as one is aware of the fact that one's partner is not married to oneself out of his or her own free will, and may therefore be more likely be romantically attracted to someone else. Indeed, cross-culturally, there is more possessive jealousy or mate guarding in cultures with more parental control of mate choice (Buunk & Castro Solano, 2012). Furthermore, Iraqi Kurdistan is undergoing rapid societal changes since the fall of the Saddam regime, and seems to evolve into a more open and democratic society in which attitudes toward the mixing of boys and girls seem to become somewhat more relaxed.

We expanded the original research by Dijkstra and Buunk (2002) further by examining whether the different rival characteristics that tend to evoke jealousy in men versus women reflect a broader phenomenon that is the result of the evolution of intrasexual competition, that is, the competition between same sex individuals for the attention from partners of the opposite sex. More specifically, we examined whether clusters of rival characteristics correlated with individual differences in intrasexual competition. Buunk and Fisher (2009) developed a scale to assess differences in what they defined as intrasexual competition (ISC) as an attitude. This attitude concerns the degree to which one views the confrontation with same-sex individuals, especially in the context of contact with the opposite sex, in competitive terms. ISC conceived like this implicates a number of phenomena that have been well described in the social science literature, albeit not especially with respect to same-sex others. That is, ISC includes the importance of one's relative instead of one's absolute position (Frank, 1985); the desire to beat others rather than to perform well (cf. Van Yperen, 2003); the desire to view oneself as better than others rather than as good (cf. self-enhancement, Zuckerman & O'Loughlin, 2006); the experience of envy and frustration when others are better off and negative feelings toward such others (cf. Smith & Kim, 2007); and malicious pleasure when high achievers ("tall poppies") lose face (cf., Feather, 1994). In

the scale developed by Buunk and Fisher (2009) these phenomena were operationalized on dimensions relevant to mating, or formulated in mating contexts. To the extent that the impact of a specific rival characteristic reflects intrasexual competition—such as physical dominance among men and physical attractiveness among women—it should be more prevalent among those high in ISC.

Method

The sample consisted of 97 women and 100 men in Iraqi Kurdistan (mean age = 23.28, $SD = 3.48$). The educational level varied: 35% had a university education, 34% had a technical education, 15% had followed some years of education after primary school, and 12% were high school students. The participants were over a period of five months approached personally via youth associations, women's associations, sports associations, student associations, and various organizations (i.e., an airport, a prison, and a governmental ministry). The fieldwork was done by a social worker and the research supervisor, both native to Iraqi Kurdistan. The supervisor was a certified translator of Dutch, and translated the questionnaire into Kurdish. On the basis of eight try-out interviews, and after consultation of the social worker, the questionnaire was adapted to make the questions better comprehensible to the respondents. All questionnaires were personally delivered and collected. A total of 250 questionnaires were distributed, and the response rate was 79%.

Questionnaires

Participants were given a Kurdish version of exactly the same questionnaire that was used in the original study by Dijkstra and Buunk (2002) and in the studies in Spain and Argentina (Buunk et al., 2011). Male participants were asked to imagine that the following situation would happen to them:

You are at a party with your girlfriend and you are talking with some of your friends. You notice your girlfriend across the room talking to a man you do not know. You can see from his face that he is very interested in your girlfriend. He is listening closely to what she is saying and you notice that he casually touches her hand. You notice that he is flirting with her. After a minute, your girlfriend also begins to act flirtatiously. You can tell from the way she is looking

at him that she likes him a great deal. They seem completely absorbed in each other.

Next, male participants were asked *When my partner and a different man would flirt with each other, I would feel particularly jealous when the other man . . .*, after which they were presented with a questionnaire containing 56 characteristics that might describe their rival. Female participants received exactly the same scenario, except for the gender of their rival. Participants rated each rival characteristic on a 5-point scale (1 = *not at all*, 5 = *very strong*).

Intrasexual Competition

A Kurdish version of the scale for intrasexual competition (ISC) developed by Buunk and Fisher (2009) was administered. The scale consists of 12 items, such as *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, I tend to look for negative characteristics in attractive men/women, and I just don't like very ambitious men/women*. Each item had 7 possible answers varying from 1 = *not at all applicable* to 7 = *completely applicable*. Cronbach's alpha for the scale was .71 in this sample.

Although previous studies have shown the experience of jealousy to be affected by hormonal birth control use (e.g., Cobey et al., 2011), the present study did not assess women's use of birth control. The reason is that, especially in rural areas, women in Islam cultures use little birth control because of conservative Islam ideas that honor frequent childbearing (Varley, 2012). To prevent unnecessary embarrassment, it was therefore decided not to ask women about their birth control use.

Results

Factor Analysis

All data were analyzed with SPSS/PC. To examine the cross-cultural validity of the original Dijkstra and Buunk (2002) findings suggesting a clustering of the 56 rival characteristics in five separated factors, a principal component analysis (PCA) with a preset number of factors of five, and with varimax rotation was conducted (Table 1). For each factor, the coefficient of congruence ϕ was calculated for the items with loadings higher than .40 to assess

the psychometric equivalence between of the Dutch and Kurdish versions of the factor (Lorenzo-Seva & ten Berge, 2006; Tucker, 1951). The percentage of variance accounted for by the five factors was 46.47% (respectively 13.08%, 10.73%, 9.94%, 8.18%, and 5.08%). The content of the factors was very similar to that found by Dijkstra and Buunk in The Netherlands, and the congruence was for four of the five factors very high, and for one of the factors fair. The first factor was nearly identical to their first factor that was labeled *social dominance*. All 14 items that loaded in the Kurdish sample higher than .40 on this factor also did so in the Dutch sample. Like the Dutch first factor (that included more items), the present first factor included items referring to assertiveness and dominance (e.g., more ascendance, more popular, more self-confident) as well as items referring to a sympathetic personality (e.g., better listener, nicer, more attentive). The coefficient of congruence between both factor solutions was .96, indicating that the factors are virtually identical. The second factor was similar to the second factor in the Dutch sample, and clearly reflected *physical attractiveness*, with the highest loadings of a better figure, a narrower waist, a more attractive face, more beautiful hips, and a more attractive body. Of the 10 items that loaded higher than .40 on this factor in the Dutch sample, 9 did so in the present sample. The coefficient of congruence between both factor solutions was .98, indicating that the factors can be considered equal. The third factor in the present sample was in part similar to the fourth factor—*physical dominance*—in the Dutch sample. All six items referring to specifically this type of dominance in the Kurdish sample that had loadings higher than .40, did also have loadings higher than .40 in the Dutch sample, with a coefficient of congruence of .99, indicating that the factors can be considered equal. However, although most items clearly referred to physical dominance, a couple of items seemed not to fit very well, including more mysterious, more egotistic, a better talker, and more of a troublemaker, suggesting that this factor also reflected in part nonphysical forms of dominance. The fourth factor in the present sample was in content similar to the third factor of *seductive behavior* in the Dutch sample, with, like in the latter sample, the highest loadings for *behaves more exaggeratedly* and *smoother and*

Table 1
Varimax Rotated Factor Structure of the 56 Rival Characteristics (Only Loadings of >.40 Are Presented)

Rival characteristic	Factor				
	I	II	III	IV	V
More attentive	.69				
More generous	.67				
More sensitive to my partner's needs	.63				
A better listener	.62				
Sweeter	.62				
More ascendance	.59				
More intelligent	.53				
Quicker/sharper	.53				
More self-confident	.50				
More assertive	.48				
Sexier	.44				
More popular	.44				
A better sense of humor	.42	.41			
Nicer	.41				
Behaves more provocatively					
More spontaneous					
Gives compliments more easily					
Better figure		.67			
More narrow waist		.67			
More attractive face		.67			
More beautiful legs		.64			
More attractive body		.62			
More beautiful hips		.59			
More lightly built		.55			
More slender		.53			
More elegant		.49			
More beautiful hair	.46	.48			
Younger		.45			
Better dressed		.45			
Built heavier			.67		
Broader shoulders			.62		
Older			.60		
More mysterious			.59		
Bigger			.59		
More egotistic			.59		
More of a troublemaker			.57		
More muscular			.55		
Better in sports			.55		
Taller	.40		.54		
A better talker			.44		
Physically stronger					
More charisma					
Behaves more exaggeratedly				.64	
Smoother and more shrewd				.62	
Funnier				.60	
Laughs more (about my partner's jokes)				.59	
More interesting		.43		.53	
Tougher				.53	
Dressed more nakedly				.51	

Table 1 (continued)

Rival characteristic	Factor				
	I	II	III	IV	V
Better company	.41			.47	
More of a seducer				.41	
Has a more beautiful car or motorcycle					.67
Has more money					.62
Has a better job					.61
Has a better education					.52
More successful					.49

more shrewd. Of the eight items that loaded higher than .40 in the Dutch sample, five did so in the present sample, with a coefficient of congruence of .86, indicating a fair similarity. The other items in the present factor did also fit the concept of seductive behavior rather well (e.g., *funnier* and *more interesting*). The final factor was completely identical to the last factor—*social status*—in the Dutch sample, and was even less ambiguous as all five items did only load on this factor (e.g., has more money, more successful, has a more beautiful car or motorcycle). The coefficient of congruence was .99, indicating that the factors can be considered equal.

Scale Construction

Given the high degree of similarity in the factor structure, and to allow for a comparison between The Netherlands and Iraqi Kurdistan, scales for the five dimensions were constructed with the same items as in the Dutch sample, resulting in the following scales: *social dominance* (17 items, $\alpha = .89$), *physical attractiveness* (8 items, $\alpha = .87$), *physical dominance* (7 items, $\alpha = .82$), *seductive behavior* (7 items, $\alpha = .70$), and *social status* (4 items, $\alpha = .68$).

Between-Gender Differences

To examine gender differences in the importance of the various rival characteristics, a MANOVA was performed with gender as an independent variable and the five scales as dependent variables. The Box's M was 16.28, $F(15, 75125.44) = 1.04, p = .41$. The overall multivariate effect was not significant, $F(5, 139) = 1.83, p = .32$. Neither was any separate univariate effect significant, $F_s < 2.31, p_s > .13$ (for the means see Table 2). In addition, as

Table 2
Means, Standard Deviations and Ranges of the Five Scales for Rival Characteristics for Men and Women

Rival characteristic	Men			Women		
	<i>M</i>	(<i>SD</i>)	Range	<i>M</i>	(<i>SD</i>)	Range
Social dominance	2.66	(.85)	1.00–4.53	2.80	(.87)	1.29–4.94
Physical attractiveness	2.66	(1.03)	1.00–4.75	2.73	(.99)	1.00–4.88
Physical dominance	2.47	(.94)	1.00–4.43	2.68	(.95)	1.00–4.86
Social status	2.78	(1.03)	1.00–5.00	2.58	(.97)	1.00–5.00
Seductive behavior	2.70	(.89)	1.00–4.43	2.86	(.81)	1.00–4.71

was done by Dijkstra and Buunk (2002), we examined the effect of gender on the 56 items. The results of these tests should be viewed with much caution, because of the possibility of chance capitalization. Nevertheless, they are presented here for reasons of completeness. A MANOVA showed that the overall multivariate effect was marginally significant, $F(56, 86) = 1.38, p = .09$. The Box's M was 3494.58, $F(1596, 55926.23) = 1.24, p < .001$. Separate univariate analyses in showed that only four items reached conventional significance levels. Women indicated more jealousy than men in response to a rival who was physically stronger ($M = 2.66, SD = 1.24$ versus $M = 2.30, SD = 1.24$), $t(190) = 1.99, p < .05$, sexier ($M = 3.24, SD = 1.48$ versus $M = 2.55, SD = 1.45$), $t(192) = 3.31, p < .001$, and who had more self-confidence ($M = 3.02, SD = 1.38$ versus $M = 2.62, SD = 1.43$), $t(192) = 2.02, p < .05$. Men indicated more jealousy than women in response to a rival who had a better car or motorcycle ($M = 2.94, SD = 1.43$ versus $M = 2.51, SD = 1.34$), $t(191) = 2.14, p < .05$. In sum, hardly any gender differences were found.

Within-Gender Differences

Separately for each sex a within-subjects ANOVA and subsequent t tests were conducted to establish which rival characteristics evoked most jealousy. The results showed no significant overall effect among women, $F(4, 61) = 1.09, p = .37$, indicating that all rival characteristics evoked the same level of jealousy among women. For the sake of completeness it may be noted that subsequent t tests showed that social status evoked less jealousy than social dominance, $t(88) = 2.30, p < .05$, and than seductive behavior, $t(83) = 2.58, p < .05$. How-

ever, the overall effect among men was significant, $F(4, 79) = 3.31, p < .05$. Subsequent t tests showed that this effect was only attributable to the fact that among men physical dominance evoked less jealousy than all other dimensions, that is, less than social dominance, $t(88) = 2.82, p < .01$, physical attractiveness, $t(86) = 2.11, p < .05$, seductive behavior, $t(92) = 2.63, p < .01$, and social status, $t(95) = 2.79, p < .01$. In sum, some evidence was found that among women social status evoked relatively little jealousy, and that among men physical dominance evoked relatively little jealousy.

Cross-Cultural Comparisons

Next, we compared the scores on the five dimensions of rival characteristics with those obtained by Dijkstra and Buunk (2002). Among women, there was no significant difference between the Kurdish and the Dutch with respect to social dominance, $t(194) = .23, ns$, and physical attractiveness, $t(203) = .61, ns$. However, Kurdish women responded with much more jealousy than Dutch women when the rival was physically more dominant, $t(212) = 12.30, p < .001$, higher in social status, $t(205) = 6.05, p < .001$, and showed more seductive behavior, $t(210) = 10.02, p < .001$. Among men, all differences between the Kurdish and the Dutch were highly significant, and all but one were in the same direction. Kurdish men responded with much more jealousy than Dutch men when the rival was physically more attractive, $t(205) = 5.38, p < .001$, was physically more dominant, $t(212) = 4.28, p < .001$, was higher in social status, $t(216) = 5.55, p < .001$, and showed more seductive behavior, $t(216) = 7.70, p < .001$. However, Kurdish men responded with much less jealousy than Dutch

men when the rival was socially dominant, $t(209) = 4.16, p < .001$. Overall, however, these data clearly suggest that young people in Iraqi Kurdistan were much more jealous in response to a variety of rival characteristics than their Dutch counterparts.

Relation With Intrasexual Competition

We calculated the correlations between the five dimensions of rival characteristics and Intrasexual Competition. As shown in Table 3, among women, none of the rival characteristics was correlated with Intrasexual Competition. However, among men there were quite substantial correlations between four of the five rival characteristics and Intrasexual Competition. As men were higher in Intrasexual Competition, they responded with more jealousy when the rival was socially more dominant, was physically more attractive, was physically more dominant, and showed more seductive behavior. Only a relatively high social status of the rival did not correlate with Intrasexual Competition (see Table 3).

Discussion

The present research was conducted in Iraqi Kurdistan, a region with a very different historical and cultural background than The Netherlands. We aimed to examine the cross-cultural robustness of the factor structure of the jealousy-evoking effect of rival characteristics found by Dijkstra and Buunk (2002), and the differences in men and women in these rival characteristics. In contrast to previous studies that investigated the jealousy-evoking nature of a limited number of theoretically based or intuitively chosen rival characteristics, (e.g., Buss et al., 2000; Hupka & Eshett, 1988), Dijkstra and

Buunk had based their inventory of 56 rival characteristics on all those rival characteristics that individuals mentioned in open interviews to evoke jealousy. They found that a five-factor structure fit the data best. A remarkable finding from the present study was that the factor structure found in the culturally quite different Iraqi Kurdistan was very similar to that found in The Netherlands. The five factors—social dominance, physical attractiveness, physical dominance, seductive behavior, and social status—were nearly completely replicated, with a high degree of overlap of the items, and a high congruence between the factors. This finding is particularly noteworthy because this factor structure could not be completely confirmed in Spain and Argentina—countries culturally much more similar to The Netherlands than Iraqi Kurdistan. Thus, the evaluation of the threatening nature of rival characteristics, occurred among young people in Iraqi Kurdistan along virtually the same dimensions as among young people in The Netherlands, suggesting that these dimensions are cross-culturally more robust than the research in Spain and Argentina would suggest.

However, in other ways the findings from the present research are very different from those obtained in The Netherlands as well as from those in Spain and Argentina. That is, not a single sex difference among Kurdish men and women was found: young men and women responded with the same levels of jealousy to the five dimensions of rival characteristics. This is especially remarkable because Iraqi Kurdistan is historically a male-dominated, patriarchal Islamic society, in which women’s sexual behavior is guarded jealously, and in which women tend to have less freedom to follow their desires and wishes. In addition, it is noteworthy that within women and within men most rival characteristics evoked similar levels of jealousy, with two exceptions. First, in line with the findings of Dijkstra and Buunk (2002), social status evoked among women less jealousy than social dominance and seductive behavior. Second, among Kurdish men physical dominance evoked less jealousy than all other characteristics. This latter finding is surprising, especially considering the fact that a rival’s physical attractiveness evoked more jealousy in men than a rival’s physical dominance. The items on the physical attractiveness scale that loaded highest on this scale were all typically feminine traits, such as a narrow waist and beautiful hips,

Table 3
Correlations Between Intrasexual Competition and the Five Scales for Rival Characteristics for Men and Women

Rival characteristic	Men	Women
Social dominance	.39**	-.01
Physical attractiveness	.29*	.02
Physical dominance	.38**	.13
Social status	.07	.00
Seductive behavior	.37**	.07

* $p < .05$. ** $p < .01$.

making it highly likely that men would experience less jealousy in response to rivals who are physically attractive than to rivals who are physically dominant. This was, however, not the case.

A possible explanation for the lack of gender differences and the surprising within-sex findings is that the scenario evoked so much jealousy that the effect of specific rival characteristics was overruled. Also the fact that on almost all rival characteristics, both Kurdish men and women felt more jealous than their Dutch same-sex counterparts seems to point in this direction. Our finding that the scenario evoked such high levels of jealousy may be related to the fact that the dominant religion in Iraqi Kurdistan, the Islam, strongly forbids *zina* (e.g., Bennett, 2007). The Qur'an, for instance, states that: "Nor come nigh to adultery: for it is a shameful (deed) and an evil, opening the road (to other evils)," and "The woman and the man guilty of adultery or fornication—flog each of them with a hundred stripes. Let not compassion move you in their case, in a matter prescribed by Allah, if ye believe in Allah and the Last Day and let a party of the Believers witness their punishment." As a result of these strict norms concerning extradyadic sex, the rival's and partner's flirting behaviors described in the scenario may be perceived as highly inappropriate and sinful, and, as a result, may evoke strong negative affect, such as jealousy. The *hijab*—the norm that especially women have to behave chaste and modest—may explain our finding that, among women, intrasexual competition was not related to jealousy in response to rival characteristics. For Kurdish women, the threat to the relationship may not be as much related to the extent to which they tend to engage in sexual rivalry, but to other factors, such as the degree to which they view the behavior of the rival as violating religious and cultural norms concerning appropriate behavior.

In addition, it must be noted that Iraqi Kurds are confronted with a confusing and rapid societal transition since the fall of the Saddam regime, from a society being a closed authoritative system to a society that becomes more open and democratic. More mixing between boys and girls is allowed, and the number of TV and satellite channels with the presence of Internet has increased. In the mean time the change in traditional and religious attitudes toward, for instance, marriage and sex, remains very limited. This tension between

new and old society seems to have grave social consequences. For instance, in recent years, in Iraqi Kurdistan, the incidence of suicide as well as attempts of suicide by self-burning are increasing, especially among women in their teenage years and in their twenties (Hanna & Ahmad, 2013; Othman, 2011). In general, in times of insecurity, and when confronted with mortality salience, individuals seek a safe haven and comfort from anxiety. In such circumstances, individuals more strictly tend to follow cultural and religious norms (Jonas, Sullivan, & Greenberg, 2013) and, more specifically, often become more committed to their partner (Cox & Arndt, 2012). Thus, the context of social change and the insecurity that accompanies it may have caused the scenario to be interpreted as even more upsetting. From this perspective, it would be interesting to cross-validate the present study's findings in Iraqi Kurdistan in, for instance, 10 years from now. In that time, Kurdish society may have developed a more solid and secure basis, and new and old cultural norms may have become more aligned.

We would have been reluctant to attach too much value to the cross-cultural differences that we found, if the factor analysis would not have been so similar in both Iraqi Kurdistan and The Netherlands. Overall, despite the large cultural differences, the factor solution obtained was very consistent with the solution found by Dijkstra and Buunk (2002), and the congruence between the factors was very high. This was particularly noteworthy as the language difference that made some terms difficult to translate, because of which some discrepancy between both factor structures was to be expected. In fact, it has been suggested that an "imposed etics" process of using instruments (applying the same factors obtained in one culture straight in another) might result in not valid factor solutions and results when such scale is applied into different cultural environments (Berry, Poortinga, Segall, & Dasen, 2006). Individual differences obtained might result in confounded effects attributable to cultural differences and not the construct tested itself. The present findings suggest that an imposed etics approach may function quite well. Nevertheless, we do not know what kind of rival characteristics Kurdish young people would mention as most relevant if they were directly interviewed.

There are some limitations to the present research. First, it must be noted that the items of

the Intrasexual Competition Scale may not be entirely valid in a Kurdish female population. The applicability of items such as *I wouldn't hire a very attractive woman as a colleague* and *I wouldn't hire a highly competent woman as a colleague* may be questionable in a population where relatively few women join the labor force, and those who do experience low status and a lack of human rights (e.g., UN, 2013). In addition, in real life, individuals are usually not confronted with isolated characteristics of their rival but, instead, with a rival as a complete person. Because in determining a rival's mate value, individuals may function as cognitive misers (Dijkstra & Buunk, 2001; Fiske & Taylor, 1991), only using information that is highly accessible and easy to detect, it is not very likely that individuals will evaluate each of their rival's characteristics. As a consequence, some characteristics that participants reported to elicit jealousy in the present research may not do so in real-life situations because they are overruled by other, more salient characteristics. In addition, it is possible that, when confronted with a rival as a 'whole,' different rival characteristics will interact in evoking jealousy (e.g., Dijkstra & Buunk, 1998). Furthermore, the scenario used in the present study may have not been the most appropriate one to assess the effect of rival characteristics among Iraqi Kurds. Probably a scenario in which the flirting is less explicit and more modest may differentiate much more between rival characteristics, both between the sexes as within. Finally, although we speculated about the cultural factors that may explain our findings, we did not directly assess what factors may be responsible for the differences in jealousy between Iraqi Kurds and other cultures. In this context it must be noted that many aspects of modern-day Kurdish society still remain vague and unexplained (Iman & Mohammadpur, 2010), and that several other valid explanations may be put forward to explain our findings than the ones we presented. Nonetheless we feel that the topic of the present study—potential infidelity and the jealousy that may result from it—is interesting from both an evolutionary and a cultural perspective, and that it seems especially informative to study this topic in cultures that place relatively high value on chastity and marital sexual exclusivity.

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