

Competitor derogation in romantic jealousy and friendship rivalry

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Abstract

The present study tested whether different psychological mechanisms are defending threats to romantic relationships and close same-sex friendships. Depending on condition, the participants first read a scenario that introduced a competitor threatening either a romantic relationship or a close same-sex friendship. Subsequently, the participants rated the competitor with respect to twelve characteristics. Four each of these characteristics referred to dimensions particularly relevant for female romantic, male romantic and friendship competitor derogation. Ratings were made on scales allowing for a derogatory, neutral or favourable portrayal of the competitor. The results showed competitor derogation in the romantic but not in the friendship condition across all characteristics. Overall, men more than women in the romantic condition tended to provide more derogatory competitor ratings. Limitations of the present study and suggestions for future research are discussed.

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Jealousy in romantic relationships is a prominent, painful and dangerous social emotion (Buss, 2000). It is worldwide considered the key cause of spousal or partner killing (Daly & Wilson, 1988; Daly Wilson, & Weghorst, 1982) which often represents only the abominable apogee of a partner's enduring history of physical, sexual and psychological abuse. Not surprisingly then, jealousy is often associated with relationship dissatisfaction (e.g., Barelds & Barelds-Dijkstra, 2007; Elphinston, Feeney, Noller, Connor, & Fitzgerald, 2013). It is considered a complex psychological mechanism affecting a broad range of processes including emotional, behavioral, attentional, and cognitive responses (for a recent overview, see Edlund & Sagarin, 2017). Current approaches suggest that jealousy is the psychological mechanism that presumably becomes activated whenever a valued social relationship is threatened by a rival or competitor. If these approaches are correct, then the same jealousy mechanism is our life-long companion in a variety of social relationships. It starts in infants as young as six months in the form of sibling and peer jealousy (e.g., Hart, 2016; Legerstee, 2013), continues through childhood, adolescence and adulthood as friendship jealousy (e.g., Parker, Kruse, & Aikins, 2013), makes us suffer as romantic or sexual jealousy (e.g., Buss, 2013; Daly, Wilson, & Weghorst, 1982), and even affects our career in the form of workplace jealousy (Thompson, Buch, & Glasø, 2018; Vecchio, 2000; Zurriaga, Gonzalez-Navarro, Buunk, & Dijkstra, 2018).

The indiscriminate use of the term jealousy in the above examples reflects the tacit but widely accepted assumption that the same psychological mechanism is underlying jealousy irrespective of the specific stage in our socio-cognitive development and of the type of social relationship in question (e.g., Chung & Harris, 2018; Hart & Legerstee, 2013; Parrott, 1991). Unfortunately, this indiscriminate use of the term jealousy also entails a severe lack of conceptual clarity afflicting jealousy research. More specifically, although

there is considerable agreement among researchers with diverse theoretical backgrounds that (1) a valued social relationship (2) threatened by a human intruder or rival are the two indispensable preconditions for jealousy (e. g., Bringle & Buunk, 1991; Buss, 2013; Daly, Wilson, & Weghorst, 1982; Freud, 1924; Hart, 2016; Panksepp, 2013; Sharpsteen & Kirkpatrick, 1997; White & Mullen, 1989), current research supposedly addressing jealousy is based on experimental paradigms inducing cursory social relationship instead of relying on valued relationships (e.g., DeSteno, Valdesolo, & Bartlett, 2006) or include neither a valued relationship nor an intruder or rival (Harmon-Jones, Peterson, & Harris, 2009; Kelley, Eastwick, Harmon-Jones, & Schmeichel, 2015). Additionally, and to complicate matters, the rival supposedly is not necessarily restricted to a human being but could consist of an inanimate object when for example “a man may be jealous of his wife’s love of law school, a woman of her husband’s new car” (Parrott, 1991, p. 313). As a consequence of these conceptual ambiguities affecting jealousy research, it is currently unclear “whether romantic jealousy precludes, parallels, or operates independently or co-dependently of co-occurring rivalries, such as those among siblings, friends, lovers, or other types of competitors. Cross-context comparisons should also be helpful ... toward parsing jealousy from rivalry” (Hart, 2013, p. 353).

A comparison of the structure and function of romantic relationships and friendships reveals several substantial differences between the two relationship types, supporting the hypothesis of separate psychological defence mechanisms coping with threats provoked by a rival or competitor. Romantic relationships but not friendships are typically dyadic, exclusive and sexual in nature (Argyle & Henderson, 1984; Ben-Ze’ev, 2013). Having sex with someone outside a romantic mating relationship but not outside a friendship constitutes an act of infidelity. Using the terms infidelity or unfaithfulness seems inappropriate with

respect to friendships but not romantic relationships. Instead, the terms betrayal, defection, disloyalty, or breach of trust appear more appropriate in connection with friendships. The emotional bond in romantic relationships is love, within friendships the emotional bond probably is better described as a feeling of emotional closeness or affection that most certainly is not identical with romantic love. Additionally, expectations of emotional closeness are significantly higher for romantic relationships than for friendships (Fuhrman, Flannagan, & Matamoros, 2009; Machin & Dunbar, 2013). The distinction between the type of emotional bonds in romantic relationships and friendships is further supported by brain imaging studies identifying differences in brain activities in response to facial images of the romantic partner and a cross-sex friend (Bartels & Zeki, 2000) as well as a same-sex friend (Acevedo, Aron, Fisher, & Brown, 2012).

Furthermore, the selection of romantic partners is guided by cues to future reproductive success whereas friends are presumably selected by characteristics indicating access to the benefits of friendships such as having a trustworthy ally who will reliably provide support during social conflicts (David-Barrett et al.; 2015; DeScioli & Kurzban, 2011; Machin & Dunbar, 2013). In romantic relationships, expressing her or his jealousy is considered evidence of the continuing emotional commitment. In contrast, one of the four most highly endorsed friendship rules across cultures is not to be jealous of a friend's other relationships. Not adhering to this rule was rated as the most important reason among 26 rules for friendship breakdown (Argyle & Henderson, 1984). Substantial empirical evidence supports the hypothesis of a sex-specific jealousy mechanism in romantic relationships. This hypothesis predicts that men's more than women's jealousy mechanism is particularly concerned with a mate's sexual infidelity, whereas women's more than men's jealousy mechanism is particularly concerned with a mate's emotional infidelity (see Buss, 2013, and

Edlund & Sagarin, 2017, for reviews of relevant research). As far as we are aware of, no sex differences have been suggested in response to threats to friendships. ⁱ

To the best of our knowledge, until recently research addressing the assumption of a common jealousy mechanism defending against threats to different social relationships was non-existent. A first empirical test comparing the behavioral responses to threats of a romantic relation and a friendship found that threats to a romantic relationship resulted in an orientation toward aggressive rather than friendly behavior (Schützwohl, Hinds, & John-Baptiste, under revision). Conversely, threats to a friendship resulted in an orientation toward using friendliness rather than aggression as a tactical response, supporting the assumption that the mechanisms defending against threats to romantic relationships and friendships are not identical.

The aim of the present article is to continue this line of research by comparing the derogation of a same-sex competitor in romantic relationships and friendships. The derogation of a competitor is a frequently used and efficient strategy triggered by jealousy in romantic relationships, trying to reduce her or his value (e.g., Bendixen & Kennair, 2015; Buss & Dedden, 1990; Chaudhary, Al-Shawaf, & Buss, 2018; Schmitt & Buss, 1996; Schulz, 1988). We decided to compare competitor derogation in response to threats to romantic relationship with those to threats to a same-sex friendship because the best same-sex friend comes closest to a romantic partner in several important aspects. First, the best same-sex friend is probably the most highly valued among friends. Second, the emotional bond with the best same-sex friend should be the closest among friends. Third, the best friend implies some exclusivity among friends that is typical for romantic relationships. Finally, we chose a same-sex best friend because cross-sex friendships can be perceived as mating opportunities, especially by single men (e.g., Bleske-Rechek & Buss, 2001; see also Fuhrman,

Flannagan, & Matamoros, 2009; Lewis, Al-Shawaf, Conroy-Beam, Asao, & Buss, 2012). As a consequence, the inclusion of cross-sex friendships would introduce the risk of a confounding variable as the mechanisms involved in cross-sex friendships might partially overlap with those involved in romantic relationships, especially in men without a romantic partner.

To compare competitor derogation in romantic relationships and friendships participants read a scenario introducing a same-sex competitor threatening the respective relationship. The participants were then asked as to how they wanted to portray the competitor to their partner/best friend with respect to 12 characteristics. More specifically, based on empirical evidence from studies on competitor derogation in romantic relationships, four characteristics each were considered particularly relevant in the female romantic and male romantic condition (Buss & Dedden, 1990; Schmitt & Buss, 1996; Schulz, 1988). The four characteristics relevant for women's competitor derogation in the romantic condition were attractive, youthful, sexually faithful and loyal because men value these traits in women as cues to their reproductive success. The four characteristics relevant for men's competitor derogation in the romantic condition were athletic, ambitious, supportive, and intelligent because women value these traits in men as cues to their reproductive success. Finally, in the absence of relevant research on competitor derogation in friendships we applied the above logic and selected four characteristics considered relevant for men's and women's competitor derogation in the friendship condition: trustworthy, honest, non-judgmental and dependable.

We tested the following predictions:

- (1) In the romantic condition, women more than men will derogate their competitor on those characteristics particularly valued by their male partners.

- (2) In the romantic condition, men more than women will derogate their competitor on those characteristics particularly valued by their female partners.
- (3) In the friendship condition we tested two competing predictions:
- 3a) Men and women will derogate their competitor on those characteristics valued by friends. This prediction is based on the assumption that competitor derogation is a coping mechanism similar to that in romantic relationships.
- 3b) Men and women do not derogate competitors. This prediction is based on Argyle and Henderson's (1984) basic rule of friendships not to be jealous of a friend's other relationships, suggesting a mechanism that is functionally different from the jealousy-triggered coping mechanism in romantic relationships.

Method

Participants

Fifty-seven women and 55 men who reported being heterosexual started to complete the online survey. However, twelve women and nine men failed to complete the survey, leaving 45 women and 46 men for data analysis. The women's mean age was 23.6 years ($SD = 8.38$) and the men's mean age was 24.1 years ($SD = 9.08$). Within the romantic condition, 39% of the men were single, 13% married, 26% in a committed romantic relationship and 22% casually dating. Within the romantic condition, 65% of the women were single, 8% married, 23% in a committed romantic relationship and 4% casually dating. Within the friendship condition, 91% of the men and 95% of the women reported having a best same-sex friend. Participants were randomly allocated to the romantic relationship or friendship condition.

Ethics statement

The study received ethical approval from the College of Health and Life Sciences Research Ethics Committee at Brunel University London in accordance with the BPS ethics guidelines.

Materials and procedure

Participants were recruited via social media and Brunel University's Sona system. They were provided with a link to an online study on Qualtrics (Qualtrics, Provo, UT) and were then presented with the information sheet and consent form online. After consenting to take part, participants had to indicate their age, sex, sexual orientation, ethnicity as well as their friendship and current relationship status. Additionally, they were also required to indicate their experience of infidelity within their romantic relationships.

Participants who identified themselves as heterosexual proceeded to the online survey where they were instructed to try to imagine as vividly as possible a scenario describing a social situation and to experience the emotions they would feel in this situation. Furthermore, they were also informed that following the scenario they would have to rate one of the persons involved in this scenario on provided rating scales. The scenario was identical in the romantic relationship and friendship condition apart from replacing the boyfriend/girlfriend in the romantic condition with the best same-sex friend in the friendship condition. The scenario in the romantic condition read as follows (female version; friendship adjustments in brackets):

"You and your boyfriend (best friend) are at a party together. The music is loud. Despite visibility being reduced due to the crowds of people everywhere you spot your old high school friend across the room. She notices you too and comes over to say Hi. This is when you introduce her to your boyfriend (best friend). They get on very well and have more in common with each other than you and your boyfriend. You move on to socialise with the people you know at the party. It's obvious to you that your boyfriend (best friend) has been

giving all his attention to your high school friend. He (She) seems more interested in her than you tonight; and now you've been alone for most of the party. Her hand is on your boyfriend's (best friend's) arm; they have been talking and laughing together for quite a while before she directs him (her) to another location, soon after they disappear down the hallway together. It's been 10 minutes and they are still not back. You try and look at what's going on. You search in every room and don't find them. When you return to the party, you see your boyfriend and high school friend are on the dancefloor together, both smiling and dancing to the music. After the song finishes, they make their way to the table, both laughing and exchanging numbers. You decide to join them but by the time you get to the table they are making plans to meet up without you. They stop talking abruptly, when they notice your presence and change the topic of conversation."

At the end of the scenario the participants were presented with a second set of instructions that read as follows: "After reading the scenario, take a minute to think about how you would be feeling after the party. Your boyfriend asks you about your high school friend. How would you like to describe your high school friend to your boyfriend (best friend) with respect to the characteristics listed below on the provided rating scale ranging from 1-7. For example, with respect to how supportive you would like to portray your high school friend, the responses could range from 1 (your high school friend is extremely unsupportive) to 7 (your high school friend is extremely supportive). Additionally, if you think a characteristic is irrelevant for you to make judgement on, then select the N/A option from the dropdown list. Please keep in mind that we are interested in how you would like to portray your high school friend to your boyfriend (best friend) which might not be identical with how you would rate him if you were completely honest."

The following 12 characteristics were presented in two random orders: loyal, trustworthy, attractive, intelligent, ambitious, youthful, non-judgmental, honest, supportive, athletic, sexually faithful, dependable. Verbal labels were provided for each point of the rating scale. To illustrate for how supportive they wanted to portray the competitor, the verbal labels were as follows: 1 (extremely unsupportive), 2 (unsupportive), 3 (slightly unsupportive), 4 (neither supportive nor unsupportive), 5 (slightly supportive), 6 (supportive), 7 (extremely supportive). It is important to note that the verbal labels were such that ratings below 4 indicate competitor derogation, option 4 is a neutral or non-derogatory portrayal and ratings above 4 indicate a favourable portrayal of the competitor. Participants could also select n/a (non-applicable) if they considered a characteristic as irrelevant for their portrayal of the competitor. As mentioned earlier, four characteristics each were considered especially relevant for the competitor derogation in the friendship condition (trustworthy, non-judgmental, honest, and dependable), the female romantic condition (attractive, youthful, sexually faithful, and loyal), and the male romantic condition (intelligent, athletic, ambitious, and supportive). Finally, after the completion of the ratings participants were provided with a debrief sheet.

Design

The study used a 2 x 2 design with participants' sex (male vs. female) and relationship type (romantic vs. friendship) as the between-subjects factors.

Results

The competitor ratings and non-applicable choices were analysed separately. The vast majority (87% – 100%) of the participants in each condition considered the characteristics relevant for their portrayal of the competitor, irrespective of their sex and the relationship type condition, $\chi^2_s < 4.26, ps > .03$. Because of the varying numbers of non-

applicable choices across the various characteristics, the number of participants included in the analysis of the individual competitor ratings varied accordingly. As a consequence, the 12 competitor ratings were analysed with univariate Analyses of Variance (ANOVAs) with the participants' sex and the relationship type (romantic vs. friendship) as the between-subjects factors. To correct for inflated Type I errors, the significant level for the ANOVAs was set at $p < .01$. The men's and women's mean competitor ratings in the romantic and friendship condition are shown in Table 1. An inspection of the mean ratings reveals that men in the romantic condition provided derogatory ratings (ratings smaller than 4) for each of the twelve characteristics. In complete contrast, men in the friendship condition provided non-derogatory ratings (ratings greater than 4) for each of the twelve characteristics. Women in the romantic condition nine out of twelve and women in the friendship condition one out of twelve

Insert Tables 1 and 2 about here

The results of the ANOVAs are presented in Table 2. These ANOVAs consistently showed no main effects for sex, $F_s < 1.82$, with the majority of $F_s < 1$. In contrast, the main effect of the relationship type was significant for eight out of 12 characteristics, $F_s > 7.80$, $p_s < .01$, $\eta_p^2 > .10$, with the largest effect sizes for ratings of trustworthy, intelligent, honest, athletic and sexually faithful, $\eta_p^2 > .15$. In each of these cases, ratings were significantly lower in the romantic than in the friendship condition (see Table 1). None of the interaction effects reached statistical significance, $F_s < 3.28$, $p_s > .07$ (see also Table 2).

In the next analysis step, we averaged the ratings particularly relevant for the friendship condition (trustworthy, non-judgmental, honest, and dependable), the female

romantic condition (attractive, youthful, sexually faithful, and loyal), and the male romantic condition (intelligent, athletic, ambitious, and supportive). A three-way ANOVA with the three groups of characteristics as the within-subjects factor and relationship type and sex as the between subjects factors yielded a significant main effect for relationship type, $F(1, 85) = 18.55, p < .001, \eta_p^2 = .18$. Overall, the mean ratings were significantly lower in the romantic than in the friendship condition (3.30 vs. 4.56). The remaining main and interaction effects were not significant, $F_s < 2.93, p_s > .05$.

Discussion

The present findings provide substantial evidence for the presence of competitor derogation in the romantic condition and at the same time the complete absence of competitor derogation in the friendship condition. The ratings were significantly lower in the romantic than in the friendship condition for eight of the 12 characteristics.

Disconfirming hypothesis 1 and hypothesis 2, women in the romantic condition did not derogate their competitor more than men on those characteristics particularly valued by their male partners. Analogously, men in the romantic condition did not derogate their competitor more than women on those characteristics particularly valued by their female partners. Hypothesis 3b but not 3a was fully supported. In line with Argyle and Henderson's (1984) basic rule of friendships not to be jealous of a friend's other relationships, overall, participants portrayed the competitor favourably across the twelve characteristics.

Most importantly, the present findings refute the tacit and widespread assumption that the same jealousy mechanism gets activated whenever a rival or competitor threatens a social relationship, irrespective of its structure and function. Rather, in the presence of a competitor, the mechanisms in the romantic and friendship condition clearly do different things, presumably trying to achieve different goals. The mechanism in the romantic

condition paints the picture of an unattractive competitor in an intrasexual competition over mate-value, thus trying to minimise the risk of losing one's partner to the rival. The mechanism in the friendship condition paints the picture of a person with rather favourable characteristics, allowing for the extension of a network of loyal friends, thus emphasising the non-dyadic nature of friendships.

Contrary to our predictions, both men and women in the romantic condition did not show a preferential derogation of those characteristics particularly valued by the opposite sex. For women, two of their three non-derogatory ratings concerned those valued characteristics, youthful and attractive. These predictions were derived from theoretical arguments and empirical evidence employing different methodological approaches. Buss and Dedden (1990, Studies 1 and 2) and Schmitt and Buss (1996) had their participants rate the likelihood and the effectiveness of specific derogatory tactics performed by some unspecified, anonymous person of the same or opposite sex, explicitly instructing participants of the derogatory goal of the ratings. Schulz' (1988) participants rated the personality attributes of a previous or current competitor. However the nature of the rating scales was not explicitly stated. In our study, we asked our participants how they would like to portray one specific, familiar competitor in a response to a current scenario on personality attributes without mentioning a derogatory goal and providing explicit verbal labels for each of the seven points of the rating scale allowing for derogatory, neutral and favourable portrayal of the competitor. These methodological differences might at least partially explain the conflicting results between the previous competitor derogation studies and the present study. At this point it might be noteworthy that Buss and Dedden (1990, Study 3) reported few significant sex differences when asking for the likelihood of performing a derogatory act that concerned the participants' own relationship. Additionally,

Chaudhary, Al-Shawaf, and Buss (2018), adopting the procedure of Buss and Dedden (1990) and Schmitt and Buss (1996) to a sample of men and women from Pakistan, reported more male competitor derogation not only on dimensions valued by women but also on dimensions where men were not predicted to do so, which mirrors our findings that men tend to be more derogatory than women in the presence of a competitor across all characteristics used in our study.

We consider it a strength of the current study that it allows the participants to decide whether to portray the competitor in a derogatory, neutral or favourable way, thus enabling us to capture qualitative differences in the portrayal of the competitor. Additionally, a new element of our study concerns the circumstances of measuring the dependent variables as participants provided their competitor ratings immediately after having been confronted with a scenario introducing a rival to the two different social relationships. Some limitations of the present study suggest directions for future research. While most of the participants in the friendship condition reported having a best same-sex friend, fewer participants in the romantic condition reported being in a committed romantic relationship. Future studies should better control for this difference between the two relationship conditions. Additionally, a larger sample size would have been desirable to increase the statistical power of the present study. Another limitation that complicates the comparison with previous competitor derogation studies refers to the fact that the current competitor ratings concerned a person presented as someone the participants know quite well. Although this might reflect rather typical circumstances of characterising a competitor, a careful control of the level of familiarity with the competitor will be helpful to improve our understanding of the factors affecting competitor derogation.

References

- Acevedo, B. P., Aron, A., Fisher, H. E., & Brown, L. L. (2012). Neural correlates of long-term intense romantic love. *SCAN, 7*, 145-159.
- Argyle, M. & Henderson, M. (1984). The rules of friendship. *Journal of Social and Personal Relationships, 1*, 211-237.
- Barelds , D. P. H. , & Barelds-Dijkstra , P. (2007). Relations between different types of jealousy and self and partner perceptions of relationship quality. *Clinical Psychology and Psychotherapy, 14*, 176–188.
- Bartels, A. & Zeki, S. (2000). The neural basis of romantic love. *NeuroReport, 11*, 3829-3834.
- Bendixen, M. & Kennair, L. E. O. (2015). Revisiting judgment of strategic self-promotion and competitor derogation tactics. *Journal of Social and Personal Relationships, 32*, 1050-1082.
- Ben-Ze'ev, A. (2013). Jealousy and romantic love. In S. L. Hart & M. Legerstee (Eds.), *Handbook of jealousy: Theory, research, and multidisciplinary approaches* (pp. 40-54). Chichester, West Sussex: Wiley-Blackwell.
- Bleske-Rechek, A. L. & Buss, D. M. (2001). Opposite-sex friendship: Sex differences in similarities in initiation, selection, and dissolution. *Personality and Social Psychology Bulletin, 27*, 1310-1323.
- Bringle, R. G. & Buunk, B. P. (1991). Extradyadic relationships and sexual jealousy. In K. McKinney & S. Sprecher (Eds.), *Sexuality in close relationships* (pp. 135-153). Mahaw, NJ: Lawrence Erlbaum Associates.
- Buss, D. M. (2000). *The dangerous passion: Why jealousy is as necessary as love and sex*. New York, NY: Free Press.
- Buss, D. M. (2013). Sexual jealousy. *Psychological Topics, 22*, 155-182

- Buss, D. M. & Dedden, L. A. (1990). Derogation of competitors. *Journal of Social and Personal Relationships, 7*, 395-422.
- Chaudhary, N., Al-Shawaf, L., & Buss, D. M. (2018). Mate competition in Pakistan: Mate value, mate retention, and competitor derogation. *Personality and Individual Differences, 130*, 141-146.
- Chung, M. & Harris, C. (2018). Jealousy as a specific emotion: The dynamic functional model. *Emotion Review, 10*, 272-287.
- Daly, M. & Wilson, M. (1988). *Homicide*. New York, NY: Aldine de Gruyter.
- Daly, M., Wilson, M., & Weghorst, S. J. (1982). Male sexual jealousy. *Ethology and Sociobiology, 3*, 11-27.
- David-Barrett, T., Rotkirch, A., Carney, J., Behncke Izquierdo, I., Krems, J. A., Townley, D., McDaniel, E., Byrne-Smith, A., & Dunbar, R. I. M. (2015). Women favour dyadic relationships, but men prefer clubs: Cross-cultural evidence from social networking. *PLoS ONE, 10*, e0118329.
- DeScioli, P. & Kurzban, R. (2011). The company you keep: Friendship decisions from a functional perspective. In J. I. Krueger (Ed.), *Social psychology and decision making* (pp. 209-225). New York, NY: Psychology Press.
- DeSteno, D., Valdesolo, P., & Bartlett, M. Y. (2006). Jealousy and the threatened self: Getting at the heart of the green-eyed monster. *Journal of Personality and Social Psychology, 91*, 626-641.
- Edlund, J. E. & Sagarin, B. J. (2017). Sex differences in jealousy: A 25-year retrospective. In J. M. Olson, (Ed.), *Advances in experimental social psychology, Vol. 55* (pp. 259-302). Burlington, MA: Academic Press,

- Elphinston, R. A., Feeney, J. A., Noller, P., Connor, J. P., & Fitzgerald, J. (2013). Romantic jealousy and relationship satisfaction: The costs of rumination. *Western Journal of Communication, 77*, 293-304.
- Freud, S. (1924). Certain neurotic mechanisms in jealousy, paranoia, and homosexuality. In S. Freud, *Collected papers* (Vol. 2, J. Rivière, Ed. and Trans.). London: Hogarth.
- Fuhrman, R. W., Flannagan, D., & Matamoros, M. (2009). Behavior expectations in cross-sex friendships, same-sex friendships, and romantic relationships. *Personal Relationships, 16*, 575-596.
- Harmon-Jones, E., Peterson, C. K., & Harris, C. R. (2009). Jealousy: Novel methods and neural correlates. *Emotion, 9*, 113-117.
- Hart, S. L. (2013). A theoretical model of the development of jealousy: Insight through inquiry into jealousy protest. In S. L. Hart & M. Legerstee (Eds.), *Handbook of jealousy: Theory, research, and multidisciplinary approaches* (pp. 331-361). Chichester, West Sussex: Wiley-Blackwell.
- Hart, S. L. (2016). Proximal foundations of jealousy: Expectations of exclusivity in the infant's first year of life. *Emotion Review, 8*, 358-366.
- Hart, S. L. & Legerstee, M. (Eds.) (2013). *Handbook of jealousy: Theory, research, and multidisciplinary approaches*. Chichester, West Sussex: Wiley-Blackwell.
- Kelley, N. J., Eastwick, P. W., Harmon-Jones, E., & Schmeichel, B. J. (2015). Jealousy increased by induced relative left frontal cortical activity. *Emotion, 15*, 550-555.
- Legerstee, M. (2013). The developing social brain: Social connections and social bonds, social loss, and jealousy in infancy. In M. Legerstee, D. W. Haley, & M. H. Bornstein (Eds.), *The infant mind: Origins of the social brain* (pp. 223-247). New York, NY: Guilford Press.

Lewis, D. M. G., Al-Shawaf, L., Conroy-Beam, D., Asao, K., & Buss, D. M. (2012). Friends with benefits II: Mating activation in cross-sex friendships as a function of sociosexual orientation and relationship status. *Personality and Individual Differences, 53*, 622-628.

Machin, A. & Dunbar, R. I. M. (2013). Sex and sex as factors in romantic partnerships and friendships. *Journal of Relationships Research, 4*, 1-10.

Panksepp, J. (2013). The evolutionary sources of jealousy: Cross-species approaches to fundamental issues. In S. L. Hart & M. Legerstee (Eds.), *Handbook of jealousy: Theory, research, and multidisciplinary approaches* (pp. 101-120). Chichester, West Sussex: Wiley-Blackwell.

Parker, J. G., Kruse, S. A., & Aikins, J. W. (2013). When friends have other friends: Friendship jealousy in childhood and adolescents. In S. L. Hart & M. Legerstee (Eds.), *Handbook of jealousy: Theory, research, and multidisciplinary approaches* (pp. 516-546). Chichester, West Sussex: Wiley-Blackwell.

Parrott, W. G. (1991). The emotional experiences of jealousy and envy. In P. Salovey (Ed.), *The psychology of jealousy and envy* (pp. 3-30). New York, NY: Guilford Press.

Schmitt, D. P. & Buss, D. M. (1996). Strategic self-promotion and competitor derogation: Sex and Context effects on the perceived effectiveness of mate attraction tactics. *Journal of Personality and Social Psychology, 70*, 1185-1204.

Schulz, B. H. (1988). Social comparison in romantic jealousy. *Personality and Social Psychology Bulletin, 14*, 374-387.

Schützwohl, A., Hinds, O., & John-Baptiste, L. (under revision). Behavioral dynamics in romantic jealousy and friendship rivalry. *Frontiers in Psychology: Evolutionary Psychology*.

- Sharpsteen, D. J. & Kirkpatrick, L. A. (1997). Romantic jealousy and adult romantic attachment. *Journal of Personality and Social Psychology, 72*, 627-640.
- Thompson, G., Buch, R., & Glasø, L. (2018) Follower jealousy at work: A test of Vecchio's model of antecedents and consequences of jealousy. *Journal of Psychology, 152*, 60-74.
- Vecchio, R. P. (2000). Negative emotions in the workplace: Employee jealousy and envy. *International Journal of Stress Management, 7*, 161-179.
- White, G. L. & Mullen, P. E. (1989). *Jealousy: Theory, research, and clinical strategies*. New York, NY: Guilford Press.
- Zurriaga, R., Gonzalez-Navarro, P., Buunk, A. P., & Dijkstra, P. (2018). Jealousy at work: The role of rivals' characteristics. *Scandinavian Journal of Psychology, 59*, 443-450.

Table 1. Men and women's mean ratings (SDs in brackets) in the romantic and friendship condition of the competitor's characteristics. Derogatory ratings (i.e., mean ratings < 4) are highlighted in bold).

	Men		Women	
	Romantic	Friendship	Romantic	Friendship
Loyal	2.57 (1.73)	4.38 (1.75)	3.24 (1.86)	4.00 (2.00)
Trustworthy	2.22 (1.78)	4.45 (1.74)	3.42 (1.68)	4.28 (1.99)
Attractive	3.20 (1.99)	4.71 (1.64)	4.24 (2.19)	4.22 (2.10)
Intelligent	3.30 (1.96)	5.29 (1.35)	3.80 (1.96)	5.00 (1.68)
Ambitious	3.88 (2.42)	5.25 (1.45)	4.27 (1.75)	4.79 (1.65)
Youthful	3.17 (1.76)	4.73 (1.76)	4.00 (2.16)	5.00 (1.66)
Non-judgmental	3.35 (1.69)	4.95 (1.62)	3.91 (1.93)	4.67 (1.82)
Honest	2.39 (1.67)	4.43 (1.69)	3.29 (2.01)	4.26 (1.82)
Supportive	3.14 (1.98)	4.15 (1.74)	3.52 (2.10)	4.37 (1.38)
Athletic	2.71 (1.40)	4.57 (1.65)	3.21 (2.02)	4.54 (1.81)
Sexually faithful	2.21 (1.72)	4.83 (1.64)	3.05 (2.08)	4.50 (2.07)
Dependable	3.71 (1.95)	4.86 (1.78)	3.63 (2.06)	3.94 (1.89)

Table 2. Results of the two-way ANOVAs for the ratings of the competitor's characteristics.

	Sex (S)	Relationship Type (R_T)	S x R_T
Loyal	< 1	10.64*	1.78
Trustworthy	1.81	16.37**	3.27
Attractive	< 1	2.51	2.64
Intelligent	< 1	17.23**	1.04
Ambitious	<1	5.14	1.05
Youthful	1.43	7.81*	< 1
Non-judgmental	< 1	9.13*	1.19
Honest	< 1	14.94**	1.87
Supportive	< 1	5.88	< 1
Athletic	< 1	12.91**	< 1
Sexually faithful	< 1	18.07**	1.48
Dependable	1.42	2.98	< 1

* $p < .01$; ** $p \leq .001$

Footnote

ⁱ For a more detailed comparison between romantic relationships and friendships, see Schützwohl, Hinds, & John-Baptiste (under revision).