

# Can we experience relationship jealousy online? The effect of rival attractiveness

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Previous research reported that gender differences in patterns of romantic jealousy responses intensified when a rival was described as being attractive. The current study extends these findings and investigates whether jealousy responses to attractive rivals also applies in an online situation. A 2 (infidelity context: offline/online) X 2 (participant gender) X 2 (rival attractiveness: attractive/unattractive) X 2 (infidelity type: emotional/sexual) design was employed. Participants were 104 undergraduate students who responded to online and offline scenarios in terms of jealousy, hurt, anger, and disgust. More anger was reported when participants were told of a partner being unfaithful with an attractive rival, and also more anger and hurt was reported when the scenarios featured attractive rivals in the online condition compared to the offline condition. This study has implications for our understanding of emotional reactions to jealousy in romantic interactions online.

Keywords: jealousy; online infidelity; relationship jealousy; rival attractiveness; romantic interaction

Jealousy within a romantic relationship may occur as a consequence of a rival attempting to gain the attention of one partner without the approval of the other (Sheets et al., 1997) or a result of real or imagined infidelity (unfaithful behaviour) (Sharpsteen, 1995). In addition to sexual intercourse, infidelity may also include behaviour such as kissing, flirting and petting with another (Roscoe et al., 1988). These researchers also found that the respondents in their study reported other emotional transgressions such as dating and spending time with a different partner to be judged as unfaithful behaviour in an emotional sense. Furthermore, Yarab et al. (1998) suggested that what has been termed mental exclusivity is often judged to be as important as sexual exclusivity in a relationship. Within the range of possible definitions of unfaithful behaviour, very clear gender differences have been noted in terms of jealousy responses to infidelity, with males reporting being more jealous to a situation involving sexual infidelity and females reporting more jealousy to a situation involving emotional infidelity (Buss et al., 1992; Shackelford & Buss, 1996).

### **Online infidelity**

The internet is now used widely for relationship initiation and relationship maintenance, although it has also created a further avenue for individuals to engage in unfaithful behaviour, with online infidelity commonly cited in divorce proceedings (Attwood, 2005). Accordingly, online infidelity has forced a re-examination of the nature of infidelity and its effect on romantic jealousy.

Schneider (2003) noted that females whose partners were Internet addicts considered online sexual activities in the same way they considered real-life infidelity. Furthermore, Whitty (2003) found that both online and offline unfaithful behaviour was judged to be equally serious when participants were asked to rate their perceptions of different acts of online and conventional infidelity. For example, cybersex and hot chatting were perceived as unfaithful behaviour despite no physical contact taking place (Relajo-Howell, 2020). Furthermore, online emotional disclosure was also perceived as unfaithful behaviour. By contrast, Mileham (2007) found that 83% of respondents in chat rooms tended to rationalise online sexual acts as acceptable and harmless, possibly because there is no physical contact involved, suggesting that online liaisons are not perceived as unfaithful behaviour. While these studies have examined how people judge online infidelity, they do not examine individual emotional responses to infidelity, which is typically measured by assessing degrees of jealousy and other emotional responses.

In terms of gender differences and the consequences of online infidelity, Parker and Wampler (2003) reported that females perceive online sexual activities as more serious than males, and Whitty (2005) found that females experience more adverse reactions to online infidelity than males, and are more likely to report that they would end a relationship as a result of this. In terms of gender differences and infidelity type, Guadagno and Sagarin (2010) noted that online and offline infidelity elicited the same gender differences in jealousy as found by Buss et al. (1992), with females reporting more jealousy to scenarios involving emotional infidelity and males reporting more jealousy to scenarios involving sexual infidelity in both online and offline conditions.

### **Emotional responses**

Besides jealousy, research has also investigated the degree of hurt, anger and disgust reported in response to emotional and sexual infidelity (Becker et al., 2004). In addition to the gender differences in jealousy noted above, Becker et al. (2004) found that both males and females reported experiencing more disgust and anger to sexual infidelity and more hurt to emotional infidelity. Earlier, Maheu and Subotnik (2001) reported that people experience an equal amount of the emotions anger, hurt and betrayal to online and offline infidelity.

### **Rival attractiveness**

Levels of jealousy reported are also related to rival attractiveness, with gender differences also evident here. For example, Dijkstra and Buunk (1998) found that attractive rivals triggered more jealousy in females than males. Furthermore, when the level of jealousy is analysed according to infidelity type (sexual and emotional), the salience of physical attractiveness is again gender-specific. For females, a rival's physical attractiveness evokes greater feelings of jealousy in scenarios involving emotional infidelity, whereas, for males, a rival's physical attractiveness evokes greater feelings of jealousy in scenarios involving sexual infidelity. The primary female jealousy perception being a threat, and the primary male jealousy perception being betrayal resulting in anger (Buunk & Dijkstra, 2004). Supporting this, Wade and Fowler (2006) found that females were more upset by their partner's emotional infidelity with another attractive female than with an unattractive female, whereas, for sexual infidelity, rival attractiveness was less important.

In summary, this study attempts firstly to assess the conditions under which rival attractiveness becomes salient. It is predicted that more jealousy, anger, hurt and disgust will be reported at a partner being unfaithful with an attractive rival than an unattractive rival. Furthermore, Guadagno and Sagarin (2010) found specific differences online and offline, and it is suggested that rival attractiveness will influence judgements of emotional responses differentially online and offline. If online infidelity is perceived as real in a relationship threatening sense, then judgements of jealousy will be heightened when a rival is described as attractive. However, if online infidelity is not perceived as real, then rival attractiveness will not be relevant in the online condition. Buunk and Dijkstra (2004) noted that specific gender differences in patterns of jealousy are evident when a rival is described as attractive. Therefore, for females, a rival's physical attractiveness should evoke greater feelings of jealousy in an emotional infidelity condition, whereas, for males, a rival's physical attractiveness should evoke greater feelings of jealousy in a sexual infidelity condition.

Consistent with Buss et al. (1992), it is predicted that female jealousy will be primarily triggered by emotional infidelity, whereas male jealousy will be triggered by sexual infidelity, and that this effect will also be evident online (Guadagno & Sagarin, 2010). Furthermore, as Becker et al. (2004) found, males and females will report more anger and disgust to sexual infidelity and more hurt to emotional infidelity.

## METHODS

### Participants

The participants in this study were 104 undergraduate students (54 males, 50 females). They were students at a provincial university in the UK, with a mean age of 21.13 (*SD*, 3.13).

### Scenarios

Four different variations of scenarios based around the following were employed. An offline liaison with a physically attractive rival, an offline liaison with physically unattractive rival, an online liaison with a physically attractive rival, and an online liaison with a physically unattractive rival. The offline version featured descriptions of the partner sharing emotional intimacy with a rival, forming a deep emotional connection with a rival, and flirting, kissing and having sexual intercourse with a rival. The online version featured descriptions of the partner sharing emotional intimacy with a rival online, forming a deep emotional connection with a rival online, and engaging in hot chat and cybersex. Responses to the scenarios were on a seven-point scale in terms of how jealous, angry, hurt or disgusted participants would be to each scenario. All variations of the scenarios featured both sexual and emotional infidelity

### Procedures

The design employed in this study was a 2 (infidelity context: offline/online) X 2 (participant gender) X 2 (rival attractiveness: attractive/unattractive) X 2 (infidelity type: emotional/sexual) design. Infidelity context, participant gender and rival attractiveness were between-participant factors, and infidelity type was a within-participant factor. The dependent variables were ratings to each scenario in terms of jealousy, anger, hurt and disgust. Participants were given one of the four variations of the scenarios described above (online attractive, online unattractive, offline attractive or online unattractive).

## RESULTS

The data were analysed using a mixed design MANOVA, with gender (male responses female responses), rival attractiveness (attractive, unattractive) and infidelity context (online, offline) as between-participant factors, and infidelity type (sexual, emotional) as a within-participant factor. The dependent variables were participant ratings of jealousy, anger, hurt and disgust. Mean ratings of jealousy, anger, hurt and disgust for the attractive condition are shown in Table 1 and mean ratings for these variables for the unattractive condition are outlined in Table 2.

Table 1  
 Attractive Rival

	Male Responses				Female Responses			
	Sexual		Emotional		Sexual		Emotional	
	Online	Offline	Online	Offline	Online	Offline	Online	Offline
Jealousy	13.60	12.53	13.46	11.61	16.08	15.92	16.08	15.57
Anger	16.73	15.15	13.26	12.15	17.58	16.50	16.50	13.78
Hurt	14.93	13.92	13.26	12.15	17.25	17.07	16.33	15.28
Disgust	16.13	14.15	13.53	11.92	17.00	16.85	16.75	14.50

Table 2  
 Unattractive Rival

	Male Responses				Female Responses			
	Sexual		Emotional		Sexual		Emotional	
	Online	Offline	Online	Offline	Online	Offline	Online	Offline
Jealousy	10.93	13.72	10.13	13.09	15.70	15.50	14.80	15.71
Anger	12.93	13.90	10.20	12.45	14.90	15.92	13.70	14.85
Hurt	11.86	15.18	10.13	13.63	15.70	16.42	15.10	15.64
Disgust	12.00	15.27	9.80	13.81	15.90	16.28	14.70	15.50

### Rival attractiveness

The main effect for rival attractiveness collapsing across all other conditions was significant for the emotion anger only,  $F(1, 96) = 4.96, p = 0.02$ , with participants reporting more anger at a partner being unfaithful with an attractive rival than an unattractive one (unattractive,  $M = 13.61$ ; attractive,  $M = 15.21$ ). There were no significant effects for jealousy, hurt or disgust. No significant main effects for infidelity context (online/offline) were observed, suggesting that participant responses to online and offline infidelity are similar; however, the following interactions were observed between rival attractiveness and infidelity context.

### Rival attractiveness and infidelity context

For the emotions, anger, hurt and disgust, significant two-way interactions were observed between rival attractiveness and infidelity context (online/offline). For anger  $F(1, 96) = 4.29, p = 0.04$ , with participants reporting more anger from attractive rivals in the online condition (attractive,  $M = 16.02$  unattractive,  $M = 12.93$ ) whereas there was little difference in anger scores between attractive and unattractive in the offline condition (attractive,  $M = 14.39$ ; unattractive,  $M = 14.28$ ). Similarly, for hurt,  $F(1, 96) = 4.64, p = 0.03$ , participants reported more hurt from attractive rivals in the online condition (attractive,  $M = 15.44$ ; unattractive,  $M = 13.20$ ), whereas there was little difference between attractive and unattractive for hurt levels reported in the offline condition (attractive,  $M = 14.61$ ; unattractive,  $M = 15.22$ ). Finally, there was a significant interaction for disgust,  $F(1, 96) = 7.21, p = 0.01$ , with participants reporting more disgust from attractive rivals in the online condition (attractive,  $M = 15.85$ ; unattractive,  $M = 13.10$ ), and conversely reported more disgust from unattractive rivals in the offline condition (attractive,  $M = 14.35$ ; unattractive,  $M = 15.21$ ). An effect approaching significance was observed for jealousy  $F(1, 96) = 3.04, p = 0.08$ , where participants reported more jealousy from attractive rivals in the online condition (attractive,  $M = 14.80$ ; unattractive,  $M = 12.89$ ) with very little difference being evident offline (attractive,  $M = 13.91$ ; unattractive,  $M = 14.51$ ).

No interactions were observed for rival attractiveness and gender or rival attractiveness and infidelity type for any of the emotions.

### Gender

The main effects for gender collapsing across all other conditions for all emotions are as follows. For jealousy,  $F(1, 96) = 20.84, p = 0.001$ , (male,  $M = 12.38$ ; female  $M = 15.67$ ), for anger,  $F(1, 96) = 8.71, p = 0.004$  (male,  $M = 13.35$ ; female,  $M = 15.46$ ), for hurt,  $F(1, 96) = 19.94, p = 0.001$  (male,  $M = 13.13$ ; female,  $M = 16.10$ ) and for disgust,  $F(1, 96) = 15.01, p = 0.001$  (male,  $M = 13.32$ ; female,  $M = 15.93$ ). These results indicate that females

compared to males report stronger emotions for jealousy, anger, hurt and disgust at the thought of their partner being unfaithful.

### **Infidelity type**

For infidelity type (emotional or sexual), the main effects of collapsing across the other conditions were as follows. For anger,  $F(1, 96) = 51.45$ ,  $p = 0.001$ , (emotional,  $M = 13.36$ ; sexual,  $M = 15.45$ ), for hurt,  $F(1, 96) = 20.08$ ,  $p = 0.001$ , (emotional,  $M = 13.94$ ; sexual,  $M = 15.29$ ) and for disgust,  $F(1, 96) = 28.05$ ,  $p = 0.001$  (emotional,  $M = 13.81$ ; sexual,  $M = 15.45$ ). There was no significant main effect for jealousy for infidelity type. These findings indicate that significantly more anger, hurt and disgust, but not more jealousy, is reported when respondents considered a partner being sexually unfaithful as compared to a partner being emotionally unfaithful.

### **Gender and infidelity type**

Only one significant interaction was observed between the factors gender and infidelity type (sexual/emotional), which was for the emotion anger,  $F(1, 96) = 3.86$ ,  $p = 0.05$ . The mean anger response increased significantly more for males in the sexual condition (emotional,  $M = 12.01$ , sexual,  $M = 14.62$ ) than for the females (emotional,  $M = 14.71$ ; sexual,  $M = 16.22$ ).

No three- or four-way interactions were observed for rival attractiveness, participant gender, infidelity type or infidelity context, with the study having insufficient power to detect these interactions.

## **DISCUSSION**

This study aimed to investigate jealousy, anger, hurt, and disgust in response to rival attractiveness, infidelity type, and infidelity context (offline, online). Firstly, for rival attractiveness, it was found that participants reported more anger, but not more jealousy, hurt or disgust, at a partner being unfaithful with an attractive rival than an unattractive one. This fails to replicate Dijkstra and Buunk (1998) findings which found that rival attractiveness triggered more jealousy, at least for females.

For the emotions, anger, hurt and disgust, significant two-way interactions were observed between rival attractiveness and infidelity context. In terms of rival attractiveness, participants reported more anger and hurt from attractive rivals in the online condition, whereas there was little difference in the amount of anger and hurt reported in the offline condition. For disgust, participants reported more disgust from attractive rivals in the online condition and conversely reported more disgust from unattractive rivals in the offline condition. So why is there an effect for rival attractiveness in the online condition and not in the offline condition? Two further hypotheses are proposed. Firstly, there might be a higher imagined threat effect in the online condition. Secondly, participants might experience a heightened sensitivity to the description online, but not offline. Furthermore, people may believe that individuals do not always believe that online affairs will be confined to an online context and progress into a face-to-face relationship. In addition, the fact that participants reported significantly higher levels of disgust in response to the prospect of their partners forming close emotional attachments online may be due to the secrecy, relative anonymity, and convenience that online relationship formation affords.

For gender overall, collapsing across other conditions, it was found that females were more jealous, angry, hurt and disgusted than males. These findings are consistent with the previous research of Sheppard et al. (1995), who found that males report being more accepting of infidelity than females and Parker and Wampler (2003), who noted that females judge online sexual activities to be more serious than males.

The main effect for infidelity type collapsed across conditions showed that respondents reported more anger, hurt and disgust to sexual infidelity than to emotional infidelity, but not more jealousy. However, an interaction was observed between gender and infidelity type. In other words, there was a greater difference in the male responses between the emotional and sexual conditions than there was for the female responses. This is consistent with the evolutionary explanation of gender differences in emotional responses to infidelity. In both contexts, males reported more distress than females at the prospect of their partners being sexually unfaithful than when their partners were emotionally unfaithful. Alternatively, the finding that females were more jealous at the thought of their partners forming an emotional attachment in both infidelity contexts is perhaps unsurprising because an emotional attachment formed online may be just as threatening to parental investment as one formed offline.

## CONCLUSION

The study has several limitations. One of which is that participants were asked to respond to scenarios, which might be considered artificial to some extent and not really a clear indication of how individuals might respond to jealousy provoking situations. Furthermore, a manipulation check on participants' understanding of jealousy, anger, hurt and disgust might have given a clearer baseline for how they might behave.

Nevertheless, the findings have implications for our increased understanding of jealousy resulting from relationship transgressions online. As mentioned above, the internet is now routinely employed for the purpose of relationship initiation, relationship maintenance and even for monitoring the behaviour of ex partners. Accordingly, a continued understanding of how jealousy occurs online is necessary for relationship counsellors and therapists, as well as those working in a legal capacity.

Overall, this study goes some way to increasing an understanding of jealousy, anger, hurt and disgust in online romantic interactions. In terms of methodology, this study measured participants' judgements of infidelity scenarios, and therefore future research could incorporate additional methods to ascertain further assessments of jealousy. However, the results provide insight into an understanding of the emotional responses to infidelity in an online context.

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