



## Articles

# Perceptions of Infidelity: A Comparison of Sexual, Emotional, Cyber-, and Parasocial Behaviors

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## Abstract

Previous research indicates that extradyadic sexual behaviors and other behaviors including emotional infidelity, pornography use, and online infidelity are considered to be acts of betrayal. However, perceptions of infidelity occurring through social media and of romantic parasocial relationships (one-sided romantic attachments formed with media figures) have not been well researched. In two exploratory studies, I examined a) the extent to which participants rated parasocial, sexual, emotional, and social media behaviors as infidelity, and b) how hurtful these behaviors would be if a partner were to enact them. I also examined how often participants reported having been negatively affected by their partner's parasocial romances. Results indicate that activities such as sexting and sexy Snapchatting are perceived similarly to both cybersex and physical sexual infidelity, and that parasocial infidelity is seen similarly to pornography use. These similarities apply to whether the acts are seen as infidelity, and in terms of the emotional pain the acts may cause. These results indicate that extradyadic social media and parasocial behaviors can be negatively perceived, and may be likely to negatively affect real-life romantic relationships.

**Keywords:** infidelity, parasocial relationships, extradyadic, betrayal

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Infidelity can be defined as the violation of relationship norms in terms of emotional or physical intimacy with others outside a romantic relationship (Drigotas & Barta, 2001). Infidelity can have devastating effects on relationships, by creating or increasing personal and relationship distress, and is one of the most commonly cited reasons for divorce (Amato & Previti, 2003). Although much research has focused on the effects of sexual or emotional infidelity (see Carpenter, 2012, for a meta-analysis), and online infidelity (Guadagno & Sagarin, 2010; Whitty, 2003; 2005), less research has examined how other behaviors are perceived in terms of infidelity, such as those conducted through social media (e.g., Facebook or Snapchat) or parasocial attachments. Parasocial relationships (PSRs) are one-sided perceived relationships with characters in media (Horton & Wohl, 1956), which can even be romantic in nature (Adam & Sizemore, 2013; Tukachinsky, 2011). It is likely that new methods of interacting with others outside a relationship via social media will be seen similarly to other types of mediated infidelity. However, because PSRs are one-sided, it is unclear whether people see romantic PSRs as a form of infidelity. The main goals of the current set of studies were to explore whether or not participants perceived extradyadic parasocial behaviors and behaviors conducted through social media to be infidelity, to ex-

plore how hurtful participants would view these behaviors, and to compare perceptions of these behaviors to those of sexual, emotional, and online infidelity.

## Perceptions of Different Behaviors as Infidelity

Among other things, whether or not a behavior is considered infidelity depends on the type of behavior in question, and characteristics of the individuals in a relationship. Most research discusses infidelity along two main axes: sexual and emotional betrayal (Blow & Hartnett, 2005), referring to extradyadic sexual physical contact with or emotional attachment to someone not one's partner. However, some researchers have examined differences in perception of other behaviors in terms of betrayal. For example, Wilson and colleagues (Wilson, Mattingly, Clark, Weidler, & Bequette, 2011) developed a scale examining perceptions of ambiguous and deceptive behaviors, such as dancing with someone else or lying to one's partner, as well as explicit behaviors, such as oral sex with someone else. Their findings suggest that these three types of behaviors (ambiguous, deceptive, and explicit) are all seen as infidelity, but in different ways by different types of people. Previously, Whitty (2003) found that participants categorized infidelity into three main types, including sexual infidelity, emotional infidelity, and pornography use. Overall, Whitty found that behaviors related to pornography use were seen as the least likely to be infidelity, but computer-mediated behaviors such as cybersex were perceived similarly to face-to-face sexual behavior, and not as a separate form of cheating. These results indicate that physical or emotional infidelity doesn't have to occur in face-to-face situations to be perceived as betrayal. Indeed, at least 80% of people given scenarios about online infidelity indicated that this behavior would be seen as an act of betrayal (Schnarre & Adam, 2017; Whitty, 2005). In one study, Schneider and colleagues (2012) found that of 34 participants who had experienced online infidelity, 30 felt that this behavior had negatively impacted their real-life relationship. Most participants reported a loss of trust, because many of them were affected by their partner's deception. In addition, in interviews with people whose partners had engaged in online infidelity, Schneider (2000) found that almost a quarter of participants had since separated or divorced their partner.

## Are Social Media Behaviors Infidelity?

Since Whitty's study on computer-mediated infidelity was conducted (Whitty, 2003), the ways in which people can conduct extradyadic relationships has increased, due to social media platforms such as Facebook and Snapchat. Social media sites are interactive platforms that allow users to generate and post their own content and create and maintain relationships virtually (Obar & Wildman, 2015). These platforms are incredibly popular: Facebook recently reported 2.45 billion active monthly users (Facebook, 2019), and Snapchat reported 210 million active monthly users (Snapchat, 2019). However, with increased opportunities for virtual connection may come increased opportunities for infidelity. One study found that around 10% of participants who were in real-life relationships had participated in infidelity-related behaviors through social media (McDaniel, Drouin, & Cravens, 2017). Another study found that increased Facebook use was associated with increased likelihood of negative real-life-relationship outcomes, including cheating on one's partner with someone from Facebook (Clayton, Nagurney, & Smith, 2013). It seems likely that infidelity-related behaviors conducted through social media will be perceived similarly to other forms of online infidelity. One purpose of the current studies was to explore how behavior related to infidelity via social media compared to other more traditionally computer-mediated and sexual infidelity.

## Are Parasocial Behaviors Infidelity?

Whether or not a partner's romantic PSRs are considered to be infidelity has not received much attention. Parasocial crushes seem to be very common. In a recent study, over 90% of college-aged women recalled having a romantic parasocial attachment with a celebrity or fictional character while they were adolescents. Although on the surface PSRs may not be seen as extradyadic, they can function similarly to real-life romantic relationships, by providing companionship and increased positive affect, for example, while having low relationship costs (Adam & Sizemore, 2013). It may be that parasocial relationships, then, can be perceived as threatening to real-life relationships. In one study that examined the impact of extradyadic offline, online and parasocial behavior on hypothetical relationships, almost as many participants indicated that romantic parasocial relationships were acts of betrayal (76%) as online infidelity (80%), although for different reasons (Schnarre & Adam, 2017). Both offline and online acts were largely seen as betrayals of trust, while parasocial behavior was seen as betrayal because of its role in making a partner feel inadequate in the relationship. This suggests that people may indeed perceive romantic PSRs as violating relationship norms, and as infidelity.

The aspect of infidelity most similar to parasocial relationships may be pornography use, in which interaction is also one-sided. Some researchers argue for benefits of pornography use, such as increased satisfaction with sexual communication at least when engaged in as a couple (Harkness, 2014). However, other research has shown that personal pornography use is negatively correlated to relationship commitment (Lambert, Negash, Stillman, Olmstead, & Fincham, 2012) and intimacy (Harkness, 2014), and that a partner's pornography use is negatively related to trust and relationship satisfaction and positively correlated with psychological distress (Szymanski, Feltman, & Dunn, 2015). There may be more beneficial effects of pornography use as a couple, but solitary use by one partner appears to be considered a form of betrayal (Bergner & Bridges, 2002), and when engaged in outside of relationship norms, can be detrimental to that relationship. Pornography use by a partner can lead to distress and decreased perceptions of self-worth (Bergner & Bridges, 2002). It is likely that parasocial relationships are perceived similarly to pornography use in terms of infidelity, if PSRs take place outside of relationship norms, and involve a betrayal that may affect a partner's sense of self-worth within the relationship (Schnarre & Adam, 2017). Another goal of the current studies was to explore how parasocial behaviors were perceived compared to other forms of infidelity.

## Individual Differences in Perceptions of Infidelity

Perceptions of infidelity also depend upon individual characteristics. Some research has found that overall, men tend to find infidelity more acceptable than women, but that men and women view sexual and emotional infidelity similarly (Sheppard, Nelson, & Andreoli-Mathie, 1995). However, other researchers have found that men and women view different types of infidelity differently, such that men tend to find sexual infidelity more distressing, whereas women find emotional infidelity more distressing (Brase, Adair, & Monk, 2014; Buss et al., 1992; Cann, Mangum, & Wells, 2001; Kruger et al., 2015; Shackelford, Buss, & Bennett, 2002; Treger & Sprecher, 2011). Whitty (2003) found that gender and age influenced perceptions of whether a behavior was perceived as sexual infidelity. In general, younger, female participants were more likely to see extradyadic sexual behaviors (including computer-mediated sexual behavior) as infidelity. In the current studies, age and gender differences in perceptions of different types of infidelity were explored.

In the current article, I report on two studies I conducted to further explore perceptions of infidelity. The goal of Study 1 was to compare participant ratings of parasocial behavior and extradyadic behavior conducted through social media (such as sexy Snapchatting and sexting) to sexual, emotional, and online infidelity (Whitty, 2003).

## Study 1

### Method

#### Participants

College students from a mid-sized mid-western university in the United States ( $N = 114$ ) and 101 participants from Amazon's Mechanical Turk participated in this study. Student participants included 94 women and 20 men ranging in age from 18 to 44 years old ( $M = 19.33$ ,  $SD = 3.24$ ). Participants were recruited through the university's SONA system, an online research management system, and were compensated with research credit for their participation, which could be used toward course requirements or extra credit. MTurk participants included 48 women and 52 men living in the U.S. ranging in age from 20 to 61 years old ( $M = 33.34$ ,  $SD = 9.06$  years), and were compensated \$2.00 for their time. Most participants in the MTurk sample ( $N = 73$ ) reported being in a committed relationship, whereas 58 participants in the college sample were in a committed relationship.

#### Design/Measures

I conducted an online survey using SurveyMonkey. In addition to basic demographic questions, participants rated 10 behaviors that had been previously researched in terms of infidelity (Whitty, 2003). Whitty's original Infidelity Scale included three factors with 15 items, related to sexual infidelity, emotional infidelity, and pornographic infidelity. I eliminated questions about "hot chat" as a term that is no longer widely used, and asked only one question about solo pornography use. I expanded upon aspects of social media infidelity to explore how sexting, sexy Snapchatting, and sending or receiving nude selfies, rated in terms of infidelity. I also wanted to know how these behaviors compared to other real-world behaviors considered, at times, to be infidelity, so also asked about 12 behaviors from the Perceptions of Dating Infidelity Scale (PDIS; Wilson et al., 2011). Conceptually, factors of the PDIS (Explicit and Deceptive) overlap with the Sexual and Emotional components of Whitty's Infidelity scale, but I was also interested in how social media behaviors compared to behaviors related to the Ambiguous subscale of the PDIS, such as hugging or dancing with someone else. Finally, I asked participants to rate seven behaviors related to parasocial infidelity (e.g., buying/sending gifts for a celebrity crush, fantasizing about that crush, watching pornography of that crush), and also included real-world components of those behaviors (fantasizing about someone else, buying/receiving gifts from someone else), for a total of 34 items. As in the original Whitty study (and similarly to Study 1 by Wilson et al.), participants rated each behavior on a five-point scale from not at all infidelity to extreme infidelity. The order of presentation of the behaviors was randomized for each participant.

### Results

To explore how these 34 items related to the different types of infidelity, I submitted participants' perceptions of the 34 behaviors to principal axis factoring using direct oblimin rotation in SPSS (descriptive statistics are in Table 1).

Table 1

*Mean Ratings for Each Behavior as Infidelity*

Item	<i>M</i>	<i>SD</i>
Oral sex with someone else	4.91	0.53
Sexual intercourse with someone else	4.90	0.54
Dating someone else	4.79	0.71
Sending nude selfies to someone else	4.74	0.68
Cybersex regularly with multiple people	4.73	0.72
Heavy petting/fondling with someone else	4.71	0.71
Sexting	4.70	0.76
Kissing someone else	4.62	0.79
Cybersex with stranger – just once	4.62	0.87
Sexy Snapchatting	4.60	0.80
Cybersex regularly with same person	4.56	0.94
Receiving nude selfies from someone else	4.43	0.94
Flirting with someone else	3.61	1.18
Sharing deep emotional info online	3.42	1.26
Sharing deep emotional information offline	3.42	1.24
Lying	3.33	1.18
Buy/receive gifts from someone else	3.30	1.26
Going to strip clubs without you	3.20	1.30
Withholding information from you	3.15	1.13
Having a non-sexual relationship offline	3.03	1.37
Fantasizing about someone else	3.01	1.44
Having a non-sexual relationship online	3.00	1.42
Going out to eat/drink with someone else	2.84	1.23
Buy/send gifts for celebrity crush	2.79	1.34
View porn of celebrity crush	2.69	1.42
Dancing with someone else	2.65	1.17
Viewing porn without you	2.44	1.46
Going somewhere with someone else	2.37	1.22
Trying to meet with celebrity crush	2.17	1.17
Trying to contact celebrity crush	2.11	1.18
Keeping memorabilia of celebrity crush	2.03	1.13
Having a long-term celebrity crush	2.03	1.16
Hugging someone else	2.00	1.06
Fantasizing about celebrity crush	1.76	1.04

Although six factors had Eigenvalues above one, predicting 71% of the variance, conceptually, a five- or six-factor solution was not a good fit. A four-factor solution predicted 63 percent of the variance, with parasocial items divided up into more real-world behaviors (Parasocial Behavior) and solo behaviors (Parasocial Fantasy), leaving other behaviors loading onto two factors – Sexual and Emotional infidelity. Ambiguous behaviors from the PDIS aligned with the Emotional (Deceptive) factor. Pornography use was included in the Parasocial Fantasy factor, although *sending or receiving* nude selfies was clearly grouped with Sexual infidelity (see Table 2 for factor loadings). The average of items for each factor was calculated.

As in Whitty's (2003) study, the Sexual infidelity factor included cybersexual behaviors as well as physical sexual infidelity. As predicted, social media behaviors such as sexting, sexy Snapchatting, and sending or receiving nude selfies were also included in the Sexual infidelity factor, for a total of 12 behaviors ( $\alpha = .946$ ). As can be

Table 2

## Factor Pattern Matrix Study 1

	F1	F2	F3	F4
Infidelity Item	Emot	Sex	PB	PF
<b>Eigenvalues</b>	12.79	5.48	2.14	1.48
<b>Explained variance</b>	37.64	16.10	6.29	4.36
Going somewhere with someone else	<b>0.789</b>	0.116	0.089	0.096
Buy/receive gifts for/from someone else	<b>0.776</b>	-0.006	0.069	0.058
Sharing deep emotional information with someone online	<b>0.767</b>	-0.050	-0.161	-0.070
Sharing deep emotional information with someone offline	<b>0.763</b>	-0.073	-0.081	-0.003
Going out to eat or drink with someone else	<b>0.688</b>	-0.010	0.106	-0.034
Withholding information from you	<b>0.683</b>	-0.033	0.070	0.023
Lying to you	<b>0.680</b>	-0.075	0.129	0.098
Having non-sexual online relationship	<b>0.526</b>	-0.070	-0.002	-0.084
Having non-sexual offline relationship	<b>0.505</b>	-0.027	0.038	-0.046
Hugging someone else	<b>0.448</b>	0.072	-0.020	-0.281
Dancing with someone else	<b>0.433</b>	-0.066	-0.081	-0.309
Flirting with someone else	<b>0.397</b>	-0.223	-0.051	-0.296
Cybersex regularly with multiple people	-0.042	<b>-0.907</b>	-0.012	-0.006
Sending nude selfies to someone else	-0.037	<b>-0.905</b>	-0.005	-0.069
Oral sex with someone else	-0.057	<b>-0.868</b>	0.075	0.154
Sexual intercourse with someone else	-0.035	<b>-0.858</b>	0.077	0.159
Sexting	0.021	<b>-0.845</b>	0.056	0.029
Heavy petting/fondling	-0.009	<b>-0.809</b>	0.091	0.135
Sexy Snapchatting	0.079	<b>-0.803</b>	0.052	-0.035
Dating someone else	0.010	<b>-0.790</b>	0.000	-0.032
Cybersex with stranger – once	0.013	<b>-0.764</b>	-0.079	-0.168
Kissing someone else	0.100	<b>-0.725</b>	-0.046	-0.041
Cybersex regularly with same person	0.033	<b>-0.640</b>	-0.067	-0.092
Receiving nude selfies from someone else	0.073	<b>-0.567</b>	-0.144	-0.210
Trying to contact celebrity crush	0.081	-0.056	<b>0.787</b>	-0.047
Trying to meet celebrity crush	0.084	-0.028	<b>0.772</b>	-0.086
Buying/sending gifts celebrity crush	0.232	-0.073	<b>0.550</b>	-0.091
Viewing pornography of celebrity crush	0.057	-0.067	0.154	<b>-0.764</b>
Viewing pornography without you	0.081	-0.061	0.054	<b>-0.736</b>
Fantasizing about someone else	0.239	-0.082	-0.084	<b>-0.647</b>
Fantasizing about celebrity/character crush	-0.109	-0.003	0.406	<b>-0.609</b>
Keeping memorabilia of celebrity/character crush	0.073	0.048	0.380	<b>-0.581</b>
Having long-term crush on celebrity/character	0.047	0.066	0.455	<b>-0.539</b>
Going to strip clubs without you	0.308	-0.089	0.009	<b>-0.460</b>

Note. Boldface indicates highest factor loadings.

seen in Table 1, sexual behaviors enacted via social media were rated very similarly to real-world sexual behaviors in terms of perceived infidelity. Emotional infidelity included 12 behaviors, which were also internally consistent ( $\alpha = .908$ ). Parasocial Fantasy included seven behaviors ( $\alpha = .908$ ), including some solo pornography-related behaviors, and Parasocial Behavior included three behaviors that involved attempting to interact with a real-life celebrity (buying them gifts, trying to contact or meet with them;  $\alpha = .831$ ).

To explore whether there were effects of gender on perceptions of the different types of infidelity, I conducted a mixed ANOVA in SPSS, with the four types of infidelity as the within-subjects independent variable, self-identified gender (male or female) as the between-subjects independent variable, and infidelity rating as the dependent variable. There was a main effect of type of infidelity on infidelity ratings,  $F(3, 639) = 510.46$ ,  $p < .001$ ,  $\eta^2 = .706$ . Pairwise comparisons indicated that average scores for Sexual Infidelity were significantly higher ( $M = 4.69$ ,  $SD = 0.60$ ) than for Emotional Infidelity ( $M = 2.98$ ,  $SD = 0.87$ ), Parasocial Fantasy ( $M = 2.45$ ,  $SD = 1.04$ ) or Parasocial Behavior ( $M = 2.35$ ,  $SD = 1.06$ ). In addition, Emotional Infidelity was also rated significantly higher in terms of infidelity than either parasocial category.

There was also a main effect of gender on perceptions of infidelity,  $F(1, 213) = 8.42$ ,  $p = .004$ ,  $\eta^2 = .038$ . Overall, women rated behaviors as more indicative of infidelity ( $M = 3.22$ ,  $SD = 0.74$ ) than men ( $M = 2.93$ ,  $SD = 0.58$ ). However, the interaction between type of behavior and gender was also significant,  $F(3, 624) = 2.46$ ,  $p = .062$ ,  $\eta^2 = .012$ . Independent-samples  $t$  tests showed that in particular, women were more likely to rate Parasocial Fantasy and Emotional Infidelity as infidelity (see Table 3).

Table 3

Comparison of Mean Infidelity Scores by Type and Gender, Study 1

Infidelity Type	Women $M$ ( $SD$ )	Men $M$ ( $SD$ )	$t$	$d$
Parasocial Behavior	2.36 (1.13)	2.35 (0.93)	0.07	0.01
Parasocial Fantasy	2.60 (1.06)	2.17 (0.93)	2.92**	0.43
Sexual	4.76 (0.62)	4.56 (0.55)	2.29*	0.34
Emotional	3.16 (0.88)	2.65 (0.74)	4.27***	0.63

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Another mixed ANOVA was used to examine the effect of age on perceptions of the different types of infidelity. Age was included as a between-subjects covariate. There was a main effect of age on infidelity rating,  $F(1, 209) = 5.41$ ,  $p = .021$ ,  $\eta^2 = .025$ . Age significantly predicted how participants rated Parasocial Fantasy,  $\beta = -.026$ ,  $t = -3.59$ ,  $p < .001$ , and Emotional infidelity,  $\beta = -.023$ ,  $t = -3.73$ ,  $p < .001$ . As age increased, participants were less likely to rate these behaviors as indicative of infidelity.

Table 4

Comparison of Mean Infidelity Scores by Type and Relationship Status, Study 1

Infidelity Type	Single $M$ ( $SD$ )	Relationship $M$ ( $SD$ )	$t$	$d$
Parasocial Behavior	2.12 (0.95)	2.51 (1.11)	-2.68**	0.38
Parasocial Fantasy	2.33 (0.88)	2.53 (1.13)	-1.43	0.20
Sexual	4.65 (0.75)	4.72 (0.48)	-0.82	0.11
Emotional	2.80 (0.78)	3.10 (0.90)	-2.54*	0.36

Note. Para. Beh. = Parasocial Behavior; Para. Fant. = Parasocial Fantasy.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Finally, the effect of relationship status on perceptions of different types of infidelity was explored. The results of another mixed ANOVA showed that there was a significant effect of relationship status (in a committed relationship vs. not) on perceptions of infidelity,  $F(1, 213) = 6.33$ ,  $p = .013$ ,  $\eta^2 = .029$ . Independent-samples  $t$  tests

showed that participants in a committed relationship rated parasocial behavior and emotional behaviors as significantly higher in infidelity than participants not in committed relationships (see [Table 4](#)).

## Discussion

This exploratory study furthers what is known about how people perceive extradyadic behaviors. Overall, behaviors related to infidelity that occur via social media (like sexy Snapchatting) were seen similarly to previously studied acts of cyber-infidelity (like having cybersex with a stranger; [Whitty, 2003](#)), and both social media and cyber-behaviors were categorized with Sexual Infidelity in terms of betrayal. Indeed, compared to Whitty's original study, people rated sending and receiving nude selfies through social media or other electronic venues to other people as extreme infidelity.

In addition, although parasocial behaviors were much less likely to be considered infidelity compared to their social media counterparts, they were, as predicted, perceived similarly to pornography use in terms of infidelity. Thus, it appears that if one perceives a partner's pornography use to be an act of betrayal, they might also be likely to perceive romantic parasocial relationships as infidelity, and may similarly be distressed by this behavior.

There were some differences in how people perceived infidelity. On average, women rated sexual behaviors as higher in infidelity, but there was no influence of age or relationship status on how this factor was perceived. Women and younger participants were more likely to rate behaviors related to parasocial fantasy as infidelity, similarly to the results of [Whitty \(2003\)](#). That younger participants rated these behaviors as higher in infidelity could be due to lack of experience with real-world relationships, or due to a changing culture regarding appropriate extradyadic relationships. In some situations, then, parasocial behaviors on part of one's partner may be perceived as betrayal, and as such, may negatively influence that relationship, particularly for younger women. As means of social interaction expand, so too should the conversation around what is acceptable in particular relationships. What may be perceived as harmless by one partner may be perceived as sexual infidelity by another partner.

Although participants did seem to perceive both social media behaviors and parasocial behaviors as forms of infidelity comparable with sexual infidelity and pornography use, it is possible that the perceived impact of these behaviors would be less, particularly for parasocial relationships. Participants might feel that a certain parasocial behavior would violate the norms of a real-life relationship, but they might be less affected by that norm violation than by other behaviors, or feel that they would have less right to feel hurt by that violation. A second study was conducted to confirm that the previously studied behaviors, particularly parasocial behaviors, were indeed perceived as infidelity and thus distressing to relationships, and to compare the perceived impact of Sexual, Emotional, and Parasocial infidelity, and to explore the prevalence and outcome of parasocial infidelity.



## Study 2

### Method

#### Participants

Participants were recruited through MTurk and from a Midwestern university in the United States. College student participants included 68 women and 29 men ranging in age from 18 to 28 years old ( $M = 18.91$ ,  $SD = 1.69$ ). Participants were recruited through the university's SONA system, an online research management system, and were compensated with research credit for their participation, which could be used toward course requirements or extra credit. MTurk participants included 34 women and 66 men ranging in age from 19 to 59 years old ( $M = 31.60$ ,  $SD = 8.15$  years), and were compensated \$1.00 for their time. Most participants in the MTurk sample ( $N = 62$ ) reported being in a committed relationship, whereas 43 participants in the college sample were in a committed relationship.

#### Design/Measures

I again conducted an online survey using SurveyMonkey. In addition to basic demographic question, measures included the behaviors that participants had previously rated in terms of infidelity. Also included were a few new behaviors, including a partner posting Facebook photos that illustrated flirtatious behavior with another person, having a social media dating account, and telling their partner they wished they looked more like their celebrity crush. Each behavior was rated via a sliding bar from 0 to 100 in terms of how *hurtful* the behavior would be if the participant's partner were to enact each behavior. The order in which the behaviors were presented was randomized for each participant. Participants were also asked if they had ever been in a relationship in which their partner had a romantic parasocial attachment, and how that affected their relationship.

### Results

I submitted participants' perceptions of hurtfulness of the behaviors to exploratory factor analysis using direct oblimin rotation in SPSS (descriptive statistics are in [Table 5](#)). Although six factors had Eigenvalues above one, four factors again predicted 64 percent of the variance. However, a four-factor solution did not map on well to the previous factors – behaviors previously characterized as emotional infidelity fell into two factors with no clear theoretical distinction, and the parasocial behaviors loaded onto a single factor. So, a three factor solution was examined, which explained 60 percent of the variance (see [Table 6](#)), and items largely corresponded to Sexual, Emotional, and Parasocial Infidelity, with a lack of distinction between parasocial behaviors and parasocial fantasy. Thus, in subsequent analyses, Parasocial Infidelity was examined as one factor.

Sexual Infidelity again included cybersexual behaviors, including the use of Facebook or social dating sites, for a total of 16 behaviors ( $\alpha = .952$ ). Emotional Infidelity included 10 behaviors, which were also internally consistent ( $\alpha = .882$ ). Parasocial Infidelity included 10 behaviors, again including pornography use ( $\alpha = .905$ ). Hugging corresponded with both parasocial and emotional factors and was dropped from further analyses.

I conducted a mixed ANOVA with the three types of infidelity as the within-subjects independent variables, gender (male or female) as the between-subjects independent variable, and perceived hurtfulness as the dependent variable. There was a main effect of type of infidelity on hurtfulness ratings,  $F(2, 344) = 590.27$ ,  $p < .001$ ,  $\eta^2 = .774$ . Pairwise comparisons showed that overall, average scores for Sexual Infidelity were significantly higher ( $M = 82.56$ ,  $SD = 18.29$ ) than for Emotional Infidelity ( $M = 53.64$ ,  $SD = 21.52$ ) or Parasocial Infidelity

Table 5

*Descriptive Statistics for Hurtfulness of Behaviors, Study 2*

Item	<i>M</i>	<i>SD</i>
Sexual intercourse with someone else	95.09	13.37
Giving oral sex	93.01	16.55
Receiving oral sex	92.75	15.98
Sending nude selfies to someone else	88.79	21.24
Dating someone else	88.10	23.69
Cybersex regularly with same person	87.44	21.43
Kissing someone else	86.22	19.10
Cybersex regularly with multiple people	86.04	23.53
Sexting	85.54	21.11
Heavy petting/fondling with someone else	85.02	19.42
Posted photos Facebook touching someone else	79.86	23.26
Sexy Snapchatting	78.73	25.32
Lying	74.69	21.77
Cybersex with stranger – just once	73.83	30.19
Receiving nude selfies from someone else	72.37	32.40
They have Tinder/Bumble/similar account	72.31	31.08
Withholding information from you	69.84	26.20
Flirting with someone else	67.91	28.69
Sharing deep emotional info offline	64.62	30.47
Told you wish you look like celebrity crush	63.06	30.50
Sharing deep emotional info online	58.71	30.99
Fantasizing about someone else	57.07	34.09
Going to strip clubs without you	50.24	36.00
Buy/receive gifts from someone else	50.08	35.16
Having a non-sexual relationship online	47.31	35.74
Having a non-sexual relationship offline	44.07	35.27
Buy/send gifts for celebrity crush	39.08	31.87
Dancing with someone else	38.72	29.58
Going out to eat/drink with someone else	37.93	32.42
Trying to contact celebrity crush	34.15	31.42
Trying to meet with celebrity crush	32.16	30.88
View porn of celebrity crush	29.75	32.69
Viewing porn without you	25.34	33.59
Having a long-term celebrity crush	21.78	26.56
Fantasizing about celebrity crush	20.87	25.43
Hugging someone else	18.87	23.66
Keeping memorabilia of celebrity crush	18.69	25.43

( $M = 32.20$ ,  $SD = 21.37$ ), and that Emotional Infidelity was seen as significantly more hurtful than Parasocial Infidelity.

There was also a main effect of gender on how hurtful participants saw all of the types of infidelity,  $F(1, 172) = 42.91$ ,  $p < .001$ ,  $\eta^2 = .200$ . Overall, women perceived infidelity to be more hurtful ( $M = 63.82$ ,  $SD = 15.29$ ) than men ( $M = 48.62$ ,  $SD = 15.30$ ). In addition, there was a small but significant interaction effect between type of infidelity and gender on perceived hurtfulness,  $F(2, 344) = 3.45$ ,  $p = .033$ ,  $\eta^2 = .02$ . Independent-samples  $t$  tests

Table 6

*Factor Pattern Matrix Study 2*

Infidelity Item	F1	F2	F3
	Sexual	Parasoc.	Emotional
<b>Eigenvalues</b>	<b>14.90</b>	<b>5.85</b>	<b>1.92</b>
<b>Explained variance</b>	<b>39.22</b>	<b>15.38</b>	<b>5.05</b>
Gave oral sex to someone else	<b>0.928</b>	-0.097	-0.120
Cybersex regularly same person	<b>0.909</b>	-0.061	0.011
Received oral sex from someone else	<b>0.907</b>	-0.080	-0.099
Cybersex regularly with multiple people	<b>0.906</b>	0.035	-0.033
Sent nude selfies to someone else	<b>0.895</b>	-0.005	-0.045
Sexted someone else	<b>0.882</b>	0.051	-0.021
Sexual intercourse with someone else	<b>0.856</b>	-0.180	-0.067
Sexy Snapchatted	<b>0.830</b>	0.106	0.051
Kissed someone else	<b>0.723</b>	-0.081	0.170
Cybersex with stranger – once	<b>0.680</b>	0.205	0.013
Engaged in heavy petting/fondling	<b>0.676</b>	0.020	0.049
Received nude selfies via email/chat/message	<b>0.540</b>	0.127	0.247
Posted flirtatious photos with someone else on Facebook	<b>0.530</b>	0.087	0.281
Flirted with someone else	<b>0.502</b>	0.092	0.340
Tinder/Bumble/similar account	<b>0.501</b>	0.221	0.122
Dated someone else	<b>0.497</b>	0.008	0.020
Keep memorabilia of celebrity/character crush	-0.144	<b>0.827</b>	0.038
Tried to meet celebrity crush	0.116	<b>0.812</b>	-0.124
Long-term crush on celebrity/character	-0.103	<b>0.775</b>	0.118
Tried to contact crush	0.109	<b>0.759</b>	-0.173
Fantasized about crush	-0.054	<b>0.753</b>	0.061
Bought/sent gifts for crush	0.116	<b>0.735</b>	-0.007
Viewed porn of crush	-0.014	<b>0.628</b>	0.201
Viewed porn without you	-0.051	<b>0.462</b>	0.177
Hugged someone else	-0.117	<b>0.448</b>	0.410
Went to strip clubs without you	0.096	<b>0.389</b>	0.274
Told you they wished you looked more like crush	0.289	<b>0.359</b>	0.153
Shared emotional information with someone else online	0.003	-0.045	<b>0.767</b>
Shared emotional information with someone else offline	-0.070	-0.022	<b>0.702</b>
Went out to eat with someone else	-0.005	0.194	<b>0.669</b>
Withheld information from you	0.035	-0.020	<b>0.613</b>
Bought/received gifts for/from someone else	0.090	0.170	<b>0.601</b>
Non-sexual relationship online	0.122	0.153	<b>0.498</b>
Lied to you	0.258	-0.156	<b>0.494</b>
Danced with someone else	0.059	0.266	<b>0.445</b>
Fantasized about someone else	0.333	0.224	<b>0.380</b>
Non-sexual relationship offline	0.093	0.230	<b>0.348</b>

Note. Boldface indicates highest factor loadings.

showed that although women were more likely to rate all forms of infidelity as more hurtful, the difference was less pronounced for parasocial behaviors (see Table 7).

Another mixed ANOVA was used to examine the effect of age on perceived hurtfulness of the different types of infidelity. Age was included as a between-subjects covariate. There was a main effect of age on infidelity rating,

Table 7

Comparison of Mean Hurtfulness Scores by Type and Gender, Study 2

Infidelity Type	Women <i>M</i> ( <i>SD</i> )	Men <i>M</i> ( <i>SD</i> )	<i>t</i>	<i>d</i>
Parasocial	37.94 (21.14)	26.59 (20.17)	3.63***	0.55
Emotional	63.29 (19.10)	44.21 (19.55)	6.51***	0.99
Sexual	90.22 (11.73)	75.07 (20.39)	5.99***	0.91

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

$F(1, 172) = 6.88$ ,  $p = .010$ ,  $\eta^2 = .038$ . Age significantly predicted how participants rated Sexual Infidelity,  $\beta = -.578$ ,  $t = -3.84$ ,  $p < .001$ , and Emotional Infidelity,  $\beta = -.397$ ,  $t = -2.18$ ,  $p = .030$ . As age increased, participants were less likely to rate sexual and emotional infidelity as hurtful.

The results of a final ANOVA showed that there was a significant main effect of relationships status (in a committed relationship vs. not) on perceptions of hurtfulness,  $F(1, 172) = 8.88$ ,  $p = .003$ ,  $\eta^2 = .049$ . Independent-samples *t* tests showed that participants in a committed relationship were more likely to rate all three forms of infidelity as more hurtful than participants not in committed relationships (see Table 8).

Table 8

Comparison of Mean Hurtfulness Scores by Type and Relationship Status, Study 2

Infidelity Type	Single <i>M</i> ( <i>SD</i> )	Relationship <i>M</i> ( <i>SD</i> )	<i>t</i>	<i>d</i>
Parasocial	27.95 (18.99)	35.89 (22.70)	2.48*	0.55
Emotional	49.59 (19.95)	57.17 (22.31)	2.35*	0.38
Sexual	78.75 (17.28)	85.88 (18.58)	2.61*	0.36

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Discussion

Overall, these findings confirm and extend the results of Study 1, and suggest that similarly to cybersex, sexual or flirtatious behaviors taking place via social media are perceived to be as hurtful as physical sexual infidelity. Just because these behaviors are not taking place face-to-face doesn't make them less impactful upon relationships, and it is important that these behaviors be further studied in terms of prevalence and their impact on relationships.

In addition, behaviors related to parasocial infidelity were perceived as similarly hurtful as pornography use. As previously stated, research suggests that pornography use, particularly excessive and solo use, can have detrimental effects on real-life relationships (Schneider et al., 2012), and is negatively related to commitment to one's partner and positively related to infidelity (Lambert et al., 2012). The results of study 2 confirm that although one-sided, parasocial behaviors can also negatively impact romantic relationships, particularly for women and those in committed relationships.

## General Discussion

There are two main conclusions of the current research. First, sexual or flirtatious behavior conducted via social media is indeed perceived similarly not only to cyber-sexual behaviors but also to physical sexual infidelity, and is seen as similarly hurtful to romantic relationships. These findings correspond to those of Whitty (2003; 2005), and again suggest that extradyadic behavior does not have to be physical for it to be considered infidelity.

In addition, although parasocial relationships might not be considered to be true extradyadic relationships due to their one-sided nature, the results of the current studies demonstrate that extradyadic parasocial romances are rated similarly to and as hurtful as pornography use in terms of betrayal of romantic relationship expectations. Engaging in these relationships may violate established or perceived relationship norms, and may thus damage relationships. The results of the current studies suggest that these violations may be particularly perceived by and impact young women. Unfortunately, as people spend more time on their smart phones and in mediated spaces, the opportunity for both social media infidelity and parasocial infidelity increases, as does the potential for relationship harm. One area of future research should examine partners' social media use in relation to both extradyadic virtual and parasocial behaviors. It is also unclear whether partners are having conversations around what constitutes infidelity. Previous researchers have found that communication between partners is positively correlated with relationship satisfaction (Litzinger & Gordon, 2005). As with pornography use, communication about acceptable emotional or sexual extradyadic behavior, including via social media or parasocially, may lead to increased relationship satisfaction. Future researchers may want to not only see what people determine to be infidelity, but also what aspects of infidelity they talk to their partners about.

Why do people engage in infidelity? The research on infidelity suggest that lack of relationship satisfaction (particularly for women) and sexual satisfaction (particularly for men) are related to increased infidelity (Blow & Hartnett, 2005). It may be that people also engage in explicit behaviors via social media or indulge in parasocial fantasies for similar reasons. Indeed, the benefits received from romantic parasocial relationships appear to be similar to those garnered by real-life romantic relationships (Adam & Sizemore, 2013). However, there may be important differences in not only why people behave this way, but also in *who* conducts these types of infidelity. Future research should address these questions.

### Limitations

There are some important limitations to these studies. Both studies were exploratory in nature, and were conducted to see if extradyadic parasocial behaviors would even be considered to be forms of infidelity. Future research should replicate the overall findings that parasocial behaviors are seen similarly to pornography use, and that extradyadic social media behaviors are seen similarly to cyber- and sexual infidelity. In addition, the small samples did not allow for examination of higher-order interaction effects between the between-subjects variables. It may be that younger men, for example, may perceive the studied behaviors differently from what we would expect based on the current study. A larger sample would allow for greater exploration of interaction effects to see what types of people are most likely to perceive parasocial behaviors, in particular, as infidelity.

Another limitation of these studies as that each behavior was assessed in only one way. Although this was done to limit the length of the surveys, future research may focus upon social media or parasocial behaviors and better assess different perceptions of these behaviors.

Finally, the frequency and perception of extradyadic social media behavior and parasocial romances likely varies across cultures. It is likely that increased use of mass media and social media may both increase the occurrence of these behaviors, and affect perceived norms surrounding these behaviors. Future studies could also examine relative occurrence of social media and parasocial infidelity in relation to overall media use, and across culturally more diverse samples of people.

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The author has declared that no competing interests exist.

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### Ethics Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional Review Board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from all individual participants included in the study.

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