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## Technology, Relationship Satisfaction, and Online Infidelity Behavior

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# Technology, Relationship Satisfaction, and Online Infidelity Behavior

## Abstract

The present study is an exploration of the relationships that exist between technology use, relationship satisfaction, and online infidelity behaviors. The current study aims to determine relationships between enhancing and deterring uses of technology, relationship satisfaction and attachment style (anxious and avoidant), and hypothetical online infidelity behaviors (self and partner). Participants completed a series of questionnaires including a demographic questionnaire and measures of technology use, online infidelity, relationship satisfaction, and experiences in close romantic relationships. It was found that relationship satisfaction negatively correlated with relationship reducing uses of technology while relationship satisfaction was not correlated with enhancing uses of technology. It was also found that both enhancing and reducing uses of technology were positively correlated with attachment-anxiety. In addition, no relationship was found between attachment-avoidance and uses of technology in a relationship. When looking at relationship satisfaction, uses of technology and perceptions of online infidelity behaviors, significant relationships between the variables were largely not found. Significant paired samples *t*-test indicated people were more likely to rate behaviors more highly as being seen as infidelity when they did the behavior themselves versus when their partner engaged in the same behavior. Findings and future directions of the research are discussed.

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OF

MASTER OF SCIENCE IN APPLIED PSYCHOLOGY

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Shawn E. Davis, PhD, Faculty Advisor

### **Abstract**

The present study is an exploration of the relationships that exist between technology use, relationship satisfaction, and online infidelity behaviors. The current study aims to determine relationships between enhancing and deterring uses of technology, relationship satisfaction and attachment style (anxious and avoidant), and hypothetical online infidelity behaviors (self and partner). Participants completed a series of questionnaires including a demographic questionnaire and measures of technology use, online infidelity, relationship satisfaction, and experiences in close romantic relationships. It was found that relationship satisfaction negatively correlated with relationship reducing uses of technology while relationship satisfaction was not correlated with enhancing uses of technology. It was also found that both enhancing and reducing uses of technology were positively correlated with attachment-anxiety. In addition, no relationship was found between attachment-avoidance and uses of technology in a relationship. When looking at relationship satisfaction, uses of technology and perceptions of online infidelity behaviors, significant relationships between the variables were largely not found. Significant paired samples *t*-test indicated people were more likely to rate behaviors more highly as being seen as infidelity when they did the behavior themselves versus when their partner engaged in the same behavior. Findings and future directions of the research are discussed.

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## Table of Contents

	Page
<b>Introduction</b>	1
<b>Literature Review</b>	2
Technology Use Behavior in Relationships	2
Technology Use in Sexuality	3
Positive Uses of Technology	4
Negative Uses of Technology	5
Social Networking Use	6
Relationship Satisfaction	9
Attachment Style	11
Online Infidelity Behavior	12
<b>The Present Study</b>	15
<b>Method</b>	17
Participants	17
Procedure and Design	18
Instrumentation	19
<b>Results</b>	22
<b>Discussion</b>	29
<b>References</b>	33
<b>Appendices</b>	37
A. Recruitment Message	37

B. Informed Consent	38
C. Demographics Questionnaire	40
D. Technology and Intimate Relationships Questionnaire	43
E. Online Infidelity Questionnaire	44
F. Relationship Satisfaction Questionnaire	45
G. Experiences in Close Relationships Questionnaire	46

**List of Tables**

Table 1.	Sample Demographics	18
Table 2.	Correlation between Technology Use and Relationship Satisfaction	22
Table 3.	Comparison between Views of Self and Partner Online Behaviors	24
Table 4.	Correlations between Relational Anxiety, Relationship Satisfaction, and Technology Use	25
Table 5.	Correlations between Relational Avoidance, Relationship Satisfaction, and Technology Use	26
Table 6.	Correlations between Perceptions of Infidelity, Relationship Satisfaction, Relationship Enhancing Uses of Technology, and Relationship Reducing Uses of Technology	28

## **Introduction**

Technological advancement is a phenomenon that continues to see rapid growth. Campbell (2015) declares technology to be innovative equipment with specific functions that people use to achieve a goal. Since technology is becoming more available to us and is increasingly prominent in our lives, it is important to explore how we are using technology in our everyday interactions. According to the Pew Internet and American Life Project, 85% of adults use the Internet and 91% of adults own a cell phone, with 56% of these individuals owning a smart phone (Murray & Campbell, 2015). In a recent investigation, Drouin and Landgraff (2012) stated that text messaging has begun to dominate our way of communicating with each other, surpassing the use of making phone calls, with 98% of participants from a sample of 744 people reporting that they text their partners. In 2007, it was reported that 99% of college seniors use the Internet on a daily basis (Hertlein & Webster, 2008). Increasingly, our communications involve the use of social media and networking sites. As of 2015, the Pew Foundation Internet Statistics reported that 65% of Americans use social media (McDaniel, Drouin, & Cravens, 2017).

Due to technology's prevalence and the use of technology to communicate with others, it is important to explore the implications of its use in romantic relationships. The Internet gives people new opportunities to find and form relationships, maintain relationships, have virtual relationships, and find and have sexual encounters online (Thompson & O'Sullivan, 2016). The use of mobile phones, for example, is useful in sustaining relationships and text messaging has been reported to increase intimacy (Drouin & Landgraff, 2012).

The Internet provides new and positive ways to connect with our partners but also causes problems to arise from excessive and inappropriate use, online infidelity, and misinterpretations of messages being sent without face-to-face context (Hertlein & Ancheta, 2014a). Therapists are



seeing an increase in Internet related problems and addictions brought forth as concerning issues in the therapeutic setting (Hertlein & Webster, 2008). Internet boundaries are rarely discussed in the romantic relationship structure making it difficult to know if a behavior is appropriate or not appropriate as well as how to navigate problems that arise from Internet use (Cravens, Leckie, & Whiting, 2013).

The following review of the literature is an exploration of various positive and negative ways technology, including social media use, is used in romantic relationships. The review also details the impact of technology use on relationship satisfaction and how attachment styles impact technology use. Finally, online infidelity behaviors are explored as a consequence of technology use in the romantic relationship structure.

## **Review of the Literature**

### **Technology Use Behavior in Romantic Relationships**

Communication devices and online social networks provide new, non-traditional ways to communicate in a relationship (Currin, Jayne, Hammer, Brim, & Hubach, 2016). Facilitating romantic relationships using technology assisted communication (TAC) methods is largely popular and young people have strong emotional ties with receiving and sending text messages (Currin et al., 2016). Using TAC methods gives a user more control over their social interactions and provides more anonymity, which is particularly appreciated by those who struggle with face-to-face interactions (Schade, Sandberg, Bean, Busby, & Coyne, 2013). Further, existing adolescent relationships can be strengthened when incorporating TAC methods (Goodman-Deane, Mieczakowski, Johnson, Goldhaber, & Clarkson, 2014). However, Hudson et al. (2015) notes that TAC methods create greater ambiguity because of a lack of contextual cues that are present with face-to-face communication.

## Technology Use in Sexuality

TAC methods can also be used to enhance or initiate sexual interactions in a relationship. In 2008, Hertlein and Webster (2008) found that 20% of all Internet users self-reported using the Internet to engage in some type of sexual activity. Li and Zhang (2016) separated online sexual activities (OSAs) into three different types:

1. Non-arousal activities, such as seeking information on sex or sexuality
2. Solitary-arousal activities, such as viewing sexually explicit material and/or masturbating
3. Partnered-arousal activities, such as viewing explicit material with a partner or maintaining sexual partners online

OSAs incorporate a wide variety of activities as well. Viewing sexually explicit material, seeking sexual partners, engaging in online flirting, and engaging in cybersex are all forms of OSAs (Li & Zhang, 2016). Pornography is also a popular OSA choice; men are more likely to consume pornography than women for a variety of reasons (Ferron, Lussier, Sabourin, & Brassard, 2017). In a study with 524 women and 255 men in French-Canada, it was found that men ( $M = 4.68$ ,  $SD = 1.7$ ) did significantly engage in pornography viewing more so than did women ( $M = 2.18$ ,  $SD = 1.5$ ). Li and Zhang (2016) also found significant gender differences in pornography viewing; 96.6% of men in their sample and 77.7% of women viewing pornography, and 89% of participants self-reporting engagement in some form of OSA.

The control gained over social interactions (e.g., having time to think of replies) makes technology assisted communication a popular tool in initiating conversations about sex and sexuality (Currin et al., 2016). Individuals are often more confident asking for sex using TAC methods (Hertlein & Ancheta, 2014a). These are strong foundations for the act of sexting. Thompson and O'Sullivan (2016) defined sexting as the creation, sending, and receiving of sexually suggestive texts and/or provocative or nude images and videos using a cell phone or

computer. Currin et al. (2016) found a self-reported prevalence of 64% of adult women and 65% of adult men using sexting in their relationships with others, suggesting that the behavior is becoming a normative behavior in romantic relationships.

### **Positive Uses of Technology in Romantic Relationships**

The use of TAC methods provides new ways to enhance romantic relationships. One way that technology aids is in relationship formation. Technology makes it possible to meet people outside of an immediate social network from virtually anywhere in the world that otherwise would not be possible to meet (Murray & Campbell, 2015). Hertlein and Ancheta (2014a) found that people report using the Internet largely for meeting new people and partners. Dating websites also make it easier to meet and form online relationships that can turn into physical, face-to-face relationships (Murray & Campbell, 2015). It has been found that relationships that are formed online can be real, deep, and meaningful just like relationships formed face-to-face (Goodman-Deane et al., 2014).

Functional and emotional needs can be met through the use of TAC methods. (Hertlein & Ancheta, 2014b). Knowing a partner can easily be accessed using a TAC method provides a sense of safety, as long as partners are accessible, responsive and engaging (Schade et al., 2013). In emergency situations and in times of emotional stress, being able to reach out to a partner easily not only provides a sense of safety, but also increases feelings of connectedness (Hertlein & Ancheta, 2014b). Connectedness is further increased due to the ability to stay in contact with our partners throughout the day (Hertlein & Ancheta, 2014b). The ability to stay connected throughout the day creates new daily communication patterns for partners (Campbell, 2015) and this availability provides a sense that our partner cares and is responsive to our needs (Halpern & Katz, 2017). Also, the use of cell phones in relationships can help ease feelings of relational

uncertainty and provide more opportunities for mutual self-disclosure in order to enhance emotional intimacy (Morey, Gentzler, Creasy, Oberhauser, & Westerman, 2013).

Technology also helps in relationship maintenance and management. A few ways TAC methods can be used in relationship management is the ability to easily seek information, manage conflict, reduce anxiety, and demonstrate commitment to a partner (Campbell, 2015). It is easy to quickly make and follow through with plans with the use of TAC methods (Campbell, 2015). Text messaging provides a private way to talk to your partner when you are not physically together, as well as being able to easily exchange short, affectionate messages or flirtatious and secret messages (Hertlein & Ancheta, 2014a; Hertlein & Ancheta, 2014b.) Another maintenance behavior is the ability to share information about your interests to your partner, including the sharing of music or other forms of entertainment (Murray & Campbell, 2015).

### **Negative Uses of Technology in Romantic Relationships**

Most technological communication methods lack contextual cues such as body language and tone of voice to help the receiver accurately identify the message being given. Communication that is facilitated through technology creates challenges due to this lack of non-verbal cues, therefore leading to misinterpretations of the messages being sent (Campbell, 2015). Misinterpretations of messages can create barriers to problem-solving and even development of intimacy in a relationship (Hertlein & Ancheta, 2014a). Intimacy is further compromised because partners can hide and choose not to confront or express emotions fully when using TAC methods (Hertlein & Ancheta, 2014a). According to Campbell (2015), it is possible that a partner may not even be aware of what message they may indirectly be sending through TAC methods. TAC methods may also be seen as more superficial than face-to-face contact (Murray & Campbell, 2015). Hiding behavior and lack of clarity over what behavior is appropriate also creates

disconnection between partners (Hertlein & Ancheta, 2014a).

Jealousy, privacy breaches, and monitoring partners are other inappropriate uses of technology in a relationship. Individuals can monitor their partner's online behavior and social media use by visiting their social media pages, checking browser history, and reading texts or emails (Murray & Campbell, 2015). Fox and Warber (2014) have called this behavior interpersonal electronic surveillance (IES) and note that it affects levels of satisfaction, stability, and security in a relationship.

Another negative use of technology in relationships is excessive use and being distracted when with a partner. Replacing meaningful interactions with a partner by spending excess time on media and one's phone often leads to negative relationship outcomes and can cause problems to arise (Nongpong & Charoensukmongkol, 2016; Roberts & David, 2016). Phubbing is a new term being used to describe the phenomenon of interrupting face-to-face communication to attend to a cell phone or communicate with a non-present other (Roberts & David, 2016). Using a mobile phone during face-to-face interactions with others is perceived as a violation of interactional norms and individuals have shown lower trust toward those who use their phones during face-to-face interactions (Halpern & Katz, 2017). It is difficult to be emotionally and cognitively present when a partner is texting a non-present other, therefore weakening levels of intimacy (Halpern & Katz, 2017).

### **Social Networking Use in Romantic Relationships**

Social networking sites (SNS), such as Facebook and Twitter, allow others to publicly share information to a wide network of people (Fox & Warber, 2013). Facebook is the largest and most popular SNS, with 1.8 billion daily and 1.79 billion monthly active users as of 2016 (Abbasi & Alghamdi, 2017). SNS make it easy to form and maintain friendships and romantic

relationships by encouraging the sharing of information on public profiles (Muscanell & Guadagno, 2016). Partners in a relationship are encouraged to post about their relationship, search their partner's page, and categorize relationship status (Fox & Warber, 2014). Billedo, Kerkhof, and Finkenauer (2015) also discussed communicating everyday events, exhibiting public displays of affection, and seeing partner's interactions with other users as more ways SNS are used in romantic relationships.

Becoming Facebook official (FBO) with your partner can be seen by some as a milestone in a relationship and can also cause conflict if both partners do not want to publicly share on their page that they are together (Fox & Warber, 2013). Not sharing a relationship status or pictures of or with your partner can impact relationship quality (Muscanell & Guadagno, 2016). Fox and Warber (2013) found that women were more likely than men to say that a FBO status meant the relationship was exclusive and women were also more likely to believe a FBO status was a serious step in the relationship.

SNS have been found to be beneficial in helping users keep in touch, especially from large distances, but excessive use has also been found to be detrimental to users and their romantic relationships (Clayton, 2014). Excessive use of Facebook, for example, has been associated with increased levels of jealousy (Hand, Thomas, Buboltz, Deemer, & Buyanjargal, 2013). Evidence also suggests that Facebook use positively correlates with marital problems and even divorce through excessive usage, presenting ambiguous information, over-sharing intimate details, jealousy, and partner monitoring (Abbasi & Alghamdi, 2017). Nongpong and Charoensukmongkol (2016) assessed perceptions of excessive social media use when together with a partner and found excessive social media use positively associates with loneliness, lack of caring, and jealousy; increased levels of loneliness, lack of caring, and jealousy were also found

to positively associate with intentions to break up (Nongpong & Charoensukmongkol, 2016). Excessive sharing of information and intimate details of a relationship online may result in interpersonal consequences as well as raising relationship problems when people compare their lives to the virtual lives of others (Abbasi & Alghamdi, 2017).

Jealousy can arise when partners misinterpret ambiguous information that is shared on SNS (Hudson et al., 2015). The more time a partner spends on SNS, the more exposed they are to their partner's information that is shared online (Muscanell & Guadagno, 2016). Information is often presented without context on SNS, which results in increasing levels of jealousy and relational uncertainty (Muscanell & Guadagno, 2016). Billedo et al. (2015) found that couples in long-distance relationships engage in more partner monitoring behaviors through SNS and have higher levels of SNS jealousy than couples that are geographically close. Relational uncertainty may lead to increased levels of partner monitoring, although Fox and Warber (2014) did not find a relationship between monitoring and relational uncertainty in their 2014 study. Hand et al. (2013) found a significant negative relationship between how a person perceives their partner's social media usage and levels of intimacy. It was also found that people are more likely to judge their partner's social media use more negatively than their own as well as viewing their partner's use as more damaging to relational intimacy (Hand et al., 2013).

Ambiguous interactions with past partners or attractive others can elicit jealousy and lead to questioning of fidelity (Billedo et al., 2015). Hudson et al. (2015) examined if emoticons made a difference in jealousy among partners in scenarios where they may find Facebook messages from the opposite sex, or preferred sexual preference. Women were found to be more jealous in scenarios where no emoticon was used and men were more jealous in scenarios where a winking face emoticon was used (Hudson et al., 2015). It was also found that women would be more

likely to confront a partner about their messages and men more likely to act aggressively, for example messaging the sender back (Hudson et al., 2015). Muscanell and Guadagno (2016) found that 59.4% of participants would confront their partner about questionable or ambiguous SNS activity.

### **Relationship Satisfaction and Technology Use**

Relationship satisfaction can be defined as how fulfilled a person is in their romantic relationship and possibly indicate how long that relationship will last (Currin et al., 2016). Relationship satisfaction indicates that there is a level of enjoyment, fulfillment, and contentment with the commitment that is shared with your partner (Cambell, 2015). Trust, intimacy, and gratification of communication are characteristics that signify relationship satisfaction (Currin et al., 2016). The way couples communicate impacts relationship satisfaction with positive communication generally showing an increase in relationship satisfaction and negative communication showing a decrease in relationship satisfaction (Campbell, 2015). Technology allows pre-existing relationship dynamics and communication patterns to emerge or continue (Campbell, 2015). Couples who are satisfied are more likely to use technology to enhance communication and their relationship, while unsatisfied couples are more likely to use technology to confront, avoid, or monitor partners (Campbell, 2015). Billedo et al. (2015) found that combining face-to-face communication and TAC methods relates to greater levels of intimacy and satisfaction. Satisfaction in a relationship tends to be higher with more frequent communication because of the feeling of more intimacy and partner support (Morey et al., 2013).

Technology use, such as texting or SNS, adds complexity into the precursors and continuance of relationship satisfaction or dissatisfaction. In relationships with high satisfaction, technology can be used to communicate affection and in relationships wherein there is low



satisfaction, technology may be used to communicate hurtful messages or to avoid partners (Campbell, 2015). When Facebook is used for public displays of affection or to show levels of commitment, relationship satisfaction generally increases (Muscanell & Guadagno, 2016). Partners who are dissatisfied in a relationship may turn to Facebook and SNS to find more satisfying social interactions with others online (Abbasi & Alghamdi, 2017). Excessive use of cell phones and media can lead to deterioration of relationship satisfaction and weaken levels of intimacy if online communication is used more frequently than face-to-face communication (Halpern & Katz, 2017). Roberts and David (2016) found a decrease in relationship satisfaction when cell phone use or time spent on SNS gets in the way of meaningful time spent with a partner. Halpern and Katz (2017) found that 25% of married couples and 42% of couples in a serious relationship felt cell phone use distracted their partner when they were together and that it impacted relationship quality.

Text messaging can be used to increase intimacy by being more available to our partners and by providing new ways to say connected which can improve relationship satisfaction when used positively (Schade et al., 2013). Morey et al. (2013) found that using cell phones and texting were positively correlated with relationship satisfaction. Halpern and Katz (2017) found the opposite, that there was a negative correlation between texting and relationship satisfaction. This was mainly due to couples texting with a non-present other when they were supposed to be spending time with their partner. It has also been found in a sample of 276 people, that female texting frequency is positively associated with self-reported relationship stability and male texting frequency is negatively associated with self-reported relationship satisfaction (Schade et al., 2013). Sexting has been found to spice-up a couple's sex life and increase relationship satisfaction (Hertlein & Ancheta, 2014b). However, women who receive sexts but do not

reciprocate by sending sexts, have lower relationship satisfaction when compared to women who do not receive or send sexts at all (Currin et al., 2016).

Online pornography use has also been found to relate to relationship satisfaction. There are approximately 4.2 million pornography websites (Minarik, Wetterneck, & Short, 2016). Pornography is generally found to be negatively associated with couple satisfaction (Ferron et al., 2017). Possible negative effects of pornography on a relationship are a decreased level of satisfaction with their partner and females are sometimes more likely to view themselves as not as sexually desirable as the women in pornographic material (Minarik et al., 2016). Minarik et al. (2016) found that couples who either viewed pornography together or both partners did not view pornography at all had higher levels of relationship satisfaction than those who viewed pornography independently from their partner or only one partner did.

### **Attachment Style's Impact on Relationship Satisfaction and Technology Use**

Another influential factor in the association between relationship satisfaction and technology use is one's attachment style. Anxious attachment, in particular, is characterized by an intense desire for closeness and fear of abandonment, while avoidant attachment is characterized by fear of dependence, self-disclosure, and intimacy (Drouin & Landgraff, 2012). People with more secure attachment styles generally experience more positive relationship qualities such as commitment, trust, and relationship satisfaction (Muscanell & Guadagno, 2016). Those who rate higher on attachment-related anxiety or attachment-related avoidance experience greater relationship and sexual dissatisfaction (Ferron et al., 2017).

Attachment anxiety has been found to moderate the relationship between cell phone use conflict and relationship satisfaction (Roberts & David, 2016). Partners who are anxiously attached have a tendency to use technology to excessively communicate with partners

(Campbell, 2015) and have higher levels of relationship uncertainty (Fox & Warber, 2014).

Anxiously attached individuals have a need to be certain about their partner's commitment and may become distressed without physical proximity, and, therefore, use text messaging to ease their need for certainty (Drouin & Landgraff, 2012). Those who have a more anxious attachment style tend to have lower levels of relationship satisfaction and monitor their partner's Facebook activity more often (Muscanell & Guadagno, 2016). Attachment anxiety may also predict how a couple uses sexting in a relationship in order to bolster relational certainty (Weisskirch & Delevi, 2011).

Those with more of an avoidant attachment style may minimize use of technology to communicate in order to avoid getting too close (Campbell, 2015). Drouin and Landgraff (2012) found that people with higher attachment avoidance were less likely to report texting their partner frequently. Weisskirch and Delevi (2011) also found that attachment avoidance negatively related to duration and frequency of phone calls to a partner. Further, partners with an avoidant attachment style may be more likely to use technology to terminate a relationship (Fox & Warber, 2014).

### **Online Infidelity Behavior**

Thompson and O'Sullivan (2016) defined infidelity as a secret sexual, romantic, or emotional involvement that violates commitment in an exclusive and monogamous relationship. Online behaviors, however, are harder to define and there are, therefore, many inconsistencies with the definition. Flirting and sexual acts with others online are usually considered to be a violation of a marriage or a committed relationship agreement (Mileham, 2007). Whitty (2003) offered up possible definitions for cybersex and a cyber-affair. Cybersex is generally considered to be sexual dialogue that is typically accompanied by self-stimulation while a cyber-affair is a

romantic or sexual relationship that is primarily online (Whitty, 2003). McDaniel et al. (2017) surveyed 920 married couples and found that they report falling in love, engaging in cybersex, flirting, and revealing personal details as the most agreed upon online infidelity behaviors. Intentional flirting with a person online who is not in the bounds of a committed relationship may also be considered online infidelity (Abbasi & Alghamdi, 2017). This is likely because online flirting can elicit physical and sexual responses as well as lead to behaviors that may be considered more severe acts of betrayal (Abbasi & Alghamdi, 2017). Emotional intimacy is a significant component of online infidelity, which can be as detrimental to a relationship as are actual sexual acts (Abbasi & Alghamdi, 2017). Whitty (2003) drew from a sample of 1,117 participants and found that online acts of infidelity are considered as real and authentic as offline acts of infidelity even though physical touch or penetration may not be present. The fear being that sexual and emotional encounters that start online also have the potential to be moved to offline as well (Whitty, 2003).

Infidelity that is carried out online is more private, anonymous, and easily accessible (Murray & Campell, 2015). There are many potential and desirable alternative partners available at the click of a button and the Internet provides an easy alternative to finding partners (Mileham, 2007; Murray & Campbell, 2015). Women often will report emotional dissatisfaction for unfaithful behavior and men will report sexual dissatisfaction (Whitty, 2003). From a sample of 338 married couples, greater infidelity behaviors were significantly related to lower relationship satisfaction, greater relationship ambivalence, and greater attachment avoidance or anxiety (McDaniel et al., 2017). In a different study, it was found that even happily married couples reported engaging in infidelity behaviors for the stability of marriage and the exhilaration of a new, forbidden relationship (Mileham, 2007). Mileham (2007) found that participants rationalize

online behavior as not counting as infidelity since there is no physical contact, but 17% of participants considered their online behavior as infidelity in a weaker, less severe form. Individuals are also more likely to judge their partners potential infidelity behavior more harshly than their own behaviors (Thompson & O'Sullivan, 2016).

The utilization of SNS sites and online chat rooms has increased opportunities for online infidelity behavior through private messaging systems (Hudson et al., 2015). The most frequently stated problematic SNS behaviors are befriending an ex-partner online, hiding private messages, commenting on attractive people's posts, engaging in meaningful or sexual conversations, and not befriending a partner on a social media website (Abbasi & Alghamdi, 2017; McDaniel et al., 2017). Some chat rooms and websites are specifically advertised to married people to be able to participate in online flirting or infidelity (Mileham, 2007). Ferron et al. (2017) found that pornography use and relationship dissatisfaction were mediated by online infidelity. It was also found that visiting sexually explicit websites are associated with a greater likelihood of infidelity, especially if those websites are utilizing live webcam services (Ferron et al., 2017). When interviewing 86 married participants, Mileham (2007) found that 70% of participants were online searching for online-only interactions and 30% of participant met one or more of their online chat partners in person for sex.

Abbasi and Alghamdi (2017) have shown that official divorce documents have reported Facebook and online infidelity as reasons for the divorce. Hurt, betrayal, anger, and embarrassment are reported as the feelings associated with the discovery of online infidelity and these emotions are comparable to a discovery of an offline affair (Cravens et al., 2013; Mileham, 2007).

## The Present Study

The present study is an exploration of the relationships between technology use, relationship satisfaction, and online infidelity behaviors. The current study aims to determine associations between enhancing and reducing uses of technology, relationship satisfaction and attachment style (anxious and avoidant), and hypothetical online infidelity behaviors (self and partner). Findings of this study will add to the growing body of literature that surrounds how technology is being incorporated into the romantic relationship structure and the various factors that contribute to why it is used in that way. Further, the findings of this study will address inconsistencies in the literature and aid in further developing the conceptualization of what constitutes online infidelity behaviors and how such behaviors are viewed.

The following research questions and hypotheses are being addressed in the current study are as follows:

R<sub>1</sub>. Does how technology is used in a relationship affect relationship satisfaction?

H1a. It is hypothesized that individuals reporting more relationship enhancing qualities of technology use will exhibit more relationship satisfaction (i.e., they will be positively correlated).

H1b. It is hypothesized that individuals reporting more relationship reducing qualities of technology will exhibit less relationship satisfaction (i.e., they will be negatively correlated).

R<sub>2</sub>. How do people view their own hypothetical online infidelity behaviors and their partner's hypothetical online infidelity behaviors?

H2. It is hypothesized that people will be more likely to rate behaviors as infidelity if their partner does the behavior versus if they engage in the behavior.

R<sub>3</sub>. Does a person's attachment style impact how technology use influences relationship satisfaction?

H3a. It is hypothesized that individuals with higher attachment-anxiety will report more uses of technology in a relationship (i.e.; they will be positively correlated)

H3b. It is hypothesized that individuals with higher attachment-avoidance will report less uses of technology in a relationship (i.e., they will be negatively correlated)

H3c. It is hypothesized that individuals with higher attachment-anxiety will report lower levels of relationship satisfaction (i.e., they will be negatively correlated)

H3d. It is hypothesized that individuals with higher attachment-avoidance will report lower levels of relationship satisfaction (i.e., they will be negatively correlated)

R4. Does relationship satisfaction and technology use in relationships impact perceptions of online infidelity behaviors?

H4a. It is hypothesized that individuals with lower relationship satisfaction will be more likely to perceive online behaviors as being infidelity (i.e., they will be negatively correlated)

H4b. It is hypothesized that individuals reporting more relationship enhancing qualities of technology will be less likely to perceive online behaviors as being infidelity (i.e., they will be negatively correlated)

H4c. It is hypothesized that individuals reporting more relationship reducing qualities of technology will be more likely to perceive online behaviors as being infidelity (i.e., they will be positively correlated)

## Method

### Participants

Participants were recruited online through social networking sites owned and operated by study investigators and through national research recruitment websites. The only inclusion criterion was that participants were over 18 years old. A total of 183 people took the survey but not all of these participants fully completed the entire questionnaire. Those participants were removed from the final analysis of the data. Participants who identified not using social media websites were also removed from the final analysis of the data due to the scope of the study focusing on technology and social media use. For these reasons, a total sample of 141 participants was obtained (117 females, 24 males,  $M_{\text{age}} = 28.31$ ,  $SD = 9.90$ ; age range: 18-67). Refer to Table 1 for complete demographic information.



Table 1

*Sample Demographics*

Variable	N	Variable	N
<b>Race/Ethnicity</b>		<b>Education Level</b>	
White Caucasian	107	High School Graduate	11
Black/African American	2	Some College	35
American Indian/Alaskan Native	5	Two Year Degree	5
Asian	10	Four Year Degree	63
Hispanic/Latino/a	8	Masters Degree	22
Mixed Race	9	Professional Degree	3
		Doctorate Degree	2
<b>Sexual Orientation</b>		<b>Time Spent on Social Media Per Day</b>	
Heterosexual		A Great Deal	20
Homosexual	120	A Lot	31
Bisexual	6	A Moderate Amount	75
Other	14	A Little	15
	1		
<b>Relationship Status</b>		<b>Using Dating Apps</b>	
Single		Currently Using	14
Monogamous Relationship	34	Have Used in Past/Not Currently	52
<u>Polyamorous Relationship</u>	53	Never Used	75
Open Relationship	1		
Engaged	4	<b>Posts About Relationships on Social Media</b>	
Married	11	Yes	84
Other	37	No	57
	1		
<b>Preferred Relationship Structure</b>			
Monogamous	131		
<u>Polyamorous</u>	3		
Open	7		

N= 141

**Procedure and Design**

The purpose of the present study was to expand the literature on the influence of our technologies on our romantic relationships. Data were collected using the online survey based program, Qualtrics. A recruitment message was distributed online through social networking sites owned and operated by study investigators and through national research recruitment websites (see Appendix A). The recruitment message included a link to the online survey

wherein they could participate. Upon entering the secure website, participants were presented with an informed consent document to read detailing the terms of the study (see Appendix B). If the participant indicated consent, they completed a series of questionnaires including a demographic questionnaire, and measures of technology use, online infidelity, relationship satisfaction, and experiences in close romantic relationships. After completing the series of questionnaires, the participants were asked one more time to consent to submitting their answers and thanked for their participation. All participant responses were anonymous and the Pacific University Institutional Review Board approved this study.

### **Instrumentation**

**Demographic information.** Demographic information (Appendix C) was collected at the start of the survey. Data that were collected included participant age, gender, race/ethnicity, sexual orientation, current relationship status, preferred relationship structure, education, social media use, if dating applications were or had been used, and if the participant posted about their relationship on social media websites.

**Technology use.** To measure the participant's use of technology in a relationship, the Technology and Intimate Relationship Assessment (TIRA) developed by Campbell and Murray (2015) was utilized (Appendix D). The TIRA consists of 22-items with 2 subscales of 11 items each that contain items asking about intimacy-enhancing and intimacy-reducing qualities of technology use in romantic relationships. Participants indicate their levels of agreement to statements using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example from the intimacy-enhancing subscale is "My use of technology helps me feel more emotionally connected to my partner." An example from the intimacy-reducing subscale is "When my partner and I are together in the same place, it seems like we do not

communicate much because we are both distracted by technology.” Higher scores on the intimacy-enhancing subscales signify stronger positive perceptions of technology use in the relationship and higher scores on the intimacy-reducing subscales signify strong negative perceptions of technology use in a relationship. The scale is relatively new, but has shown good internal consistency as evidenced by a Cronbach’s alpha  $\alpha = .86$  for the intimacy-enhancing subscale and a Cronbach’s alpha  $\alpha = .83$  for the intimacy-reducing subscale (Campbell, 2015).

**Online infidelity behaviors.** To assess online infidelity behaviors, the Technology/Online behavior subscale was used from Thompson and O’Sullivan’s (2015) The Definitions of Infidelity Questionnaire (Appendix E). The subscale consists of 7-items about the use of technology to communicate with others in potentially inappropriate ways when in a relationship. Some examples of these are “Sending explicit texts message/emails” and “Masturbating over webcam.” The participants were asked to rate the scenarios and hypothetical situations as being perceived as infidelity behaviors on a 7-point Likert-scale ranging from 1 (not at all unfaithful) to 7 (very unfaithful). For the purpose of this study, the Likert-scale was adjusted to a 4-point scale ranging from 1 (not at all infidelity) to 4 (definitely infidelity). Participants were asked to provide judgment ratings for each item based on, 1) if their partner engaged in the behavior, and 2) if they themselves engaged in the behavior. This was done to assess potential inconsistencies in behavior judgment between those assigned to the partner and those of the participant themselves.

**Relationship satisfaction.** To measure relationship satisfaction, participants completed the Relationship Assessment Scale (RAS; Appendix F) developed by Hendrick (1988). The RAS is a short, 7-item, 5-point Likert-scale. Scores range from 1 (low satisfaction) to 5 (high satisfaction) with higher scores indicating higher relationship satisfaction. Items 4 and 7 are

reverse coded. Examples from the scale include “How well does your partner meet your needs?” and “In general, how satisfied are you with your relationship?” Cronbach’s alpha coefficients ranging from  $\alpha = .73$  to  $\alpha = .93$  have been reported and the RAS also has high test-retest reliability ( $r = .85$ ; Hendrick, 1988).

**Attachment style.** To assess attachment styles and the participant’s experiences in romantic relationships, the Experiences in Close Relationships-Revised (ECR-R) scale was used (Appendix G). The ECR-R is a revised version of Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships (ECR) scale, revised by Fraley, Waller, and Brennan (2000). This is a 36-item scale measure of adult attachment style. The ECR-R has two subscales to assess avoidant and anxious attachment, with 18 items each. Several items are reverse coded. Examples from this scale are “I get frustrated when my partner is not around as much as I would like” and “Just when my partner starts to get close to me I find myself pulling away”. The scale generally has a Cronbach’s alpha of  $\alpha = .90$  or higher reported (Fraley et al., 2000).

## Results

A series of bivariate correlation analyses and t-test analyses were conducted to test study hypotheses. First, it's to be noted that technology's enhancing and reducing qualities were significantly and positively associated with each other,  $r(139) = .202, p = .016$ . In other words, technology is used both to enhance relationships and in relationship-reducing ways.

To test  $R_1$ , whether or not technology is associated with relationship satisfaction, bivariate correlation analyses were conducted between the enhancing and reducing effects of technology subscales and the measure of relationship satisfaction. It was found that enhancing uses of technology in relationships scores were not significantly associated with relationship satisfaction,  $r(136) = -.064, p = .452$ . However, reducing uses of technology in relationships had a significant, negative association with relationship satisfaction,  $r(136) = -.503, p = .000$ . As technology is used more often in reducing ways, relationship satisfaction decreases and vice versa. See Table 2 below.

Table 2

*Correlation between Technology Use and Relationship Satisfaction*

		Enhancing Uses	Reducing Uses
Relationship Satisfaction	Pearson Correlation	-.064	-.503**
	Sig. (2-tailed)	.452	.000
	N	138	138

$H1_a$  was not supported, as enhancing uses of technology and relationship satisfaction were not correlated. Individuals reporting more enhancing uses of technology did not exhibit more relationship satisfaction. However,  $H1_b$  was supported. Individuals who reported more

reducing uses of technology exhibited less relationship satisfaction; the two variables were negatively correlated.

To test  $R_2$ , a paired samples  $t$ -test was conducted to examine a person's view of their partner's hypothetical infidelity compared to their own. Each of the 7-items were examined separately to determine significant differences between views of partner and self within each scenario. There was a significant difference between the view of a partner masturbating with someone over webcam as being infidelity ( $M = 3.55$ ,  $SD = 1.00$ ) and the view of themselves masturbating with someone over webcam as being infidelity ( $M = 3.66$ ,  $SD = .93$ );  $t(137) = -2.11$ ,  $p = .037$ . People were more likely to view masturbating with someone over webcam to be infidelity when they themselves do the behavior versus when their partners do. No significant differences between views of self and partner were found on any of the remaining items, however, mean scores of perceived infidelity if the participant engaged in the behavior themselves were consistently higher than the means for when a partner did the behavior.  $H_2$  was not supported; people did not view their partner's infidelity behavior more harshly than their own. Refer to Table 3 for information on all paired samples  $t$ -tests. Lower ratings indicate less likely to view as infidelity and higher ratings indicate being more likely to view behavior as infidelity.

Table 3

*Comparison between Views of Self and Partner Online Behaviors*

	Mean	Standard Deviation	<i>t</i>	df	Sig. (2-tailed)
Sending sexually explicit messages by text or email to someone					
Partner	3.47	.961	-1.58	137	.115
Self	3.56	.936			
Masturbating with someone over webcam					
Partner	3.55	1.00	-2.11	137	.037*
Self	3.65	.927			
Receiving sexually explicit messages by text or email from someone					
Partner	2.94	1.13	.100	137	.920
Self	2.94	1.12			
Creating a profile on a dating website					
Partner	3.27	1.02	-1.39	137	.167
Self	3.35	.979			
Sending affectionate/flirtatious texts or emails to someone					
Partner	3.07	1.03	-1.31	137	.193
Self	3.15	1.02			
Receiving affectionate/flirtatious texts or emails from someone					
Partner	2.54	1.11	-.767	137	.444
Self	2.59	1.09			
Browsing an online dating website alone					
Partner	2.96	1.08	-1.55	137	.123
Self	3.05	1.12			

To test R<sub>3</sub> a series of bivariate correlations were conducted. It was found that there were significant associations between technology use, relationship satisfaction, and relational anxiety. Relational anxiety was significantly and positively associated with relationship enhancing uses of technology,  $r(133) = .185, p = .032$ . When relationship attachment anxiety is high, technology is likely to be used more often in relationship-enhancing ways. Relational anxiety was also significantly and positively associated with relationship reducing uses of technology,  $r(133) = .401, p = .000$ . Similarly, when relationship attachment anxiety is high, technology is likely to be used more often in relationship-reducing ways. Therefore, attachment-related anxiety in relationships overall appeared to be related to the increased use of technology in a relationship. Relational anxiety was found to have a significant and negative association with relationship satisfaction,  $r(133) = -.272, p = .001$ . When relationship attachment anxiety is high, relationship satisfaction is likely to decrease and vice versa. Refer to Table 4.

Table 4

*Correlations between Relational Anxiety, Relationship Satisfaction, and Technology Use*

	Enhancing Uses	Reducing Uses	Relationship Satisfaction
Pearson Correlation	.185*	.401**	-.272**
Relational Anxiety Sig. (2-tailed)	.032	.000	.001
N	135	135	135

Relational avoidance was not significantly associated with technology use in a relationship. Relational avoidance, however, was found to have a significant, negative association with relationship satisfaction,  $r(133) = -.372, p = .000$ . When relationship attachment avoidance is high, relationship satisfaction is likely to decrease and vice versa. Refer to Table 5.



Table 5

*Correlations between Relational Avoidance, Relationship Satisfaction, and Technology Use*

		Enhancing Uses	Reducing Uses	Relationship Satisfaction
	Pearson Correlation	-.100	-.009	-.372**
Relational Avoidance	Sig. (2-tailed)	.250	.922	.001
	N	135	135	135

H3a was supported, as people with higher attachment-anxiety reported more uses of technology in a relationship; both enhancing and reducing uses were positively correlated with attachment-anxiety. H3b was not supported, as there was no relationship found between attachment-avoidance and uses of technology in a relationship. H3c and H3d were both supported, as relationship satisfaction was found to negatively correlate with both relational anxiety and avoidance.

To test R<sub>4</sub> a series of bivariate correlation analyses were conducted. When looking at relationship satisfaction and perceptions of online infidelity behaviors, significance between the two variables was not largely found. The only item on the online infidelity questionnaire wherein a significant relationship was found was that of receiving affectionate/flirtatious texts or emails from someone; relationship satisfaction was significantly and negatively correlated with viewing one's own behavior as being infidelity,  $r(136) = -.278, p = .001$ . As relationship satisfaction decreases, the more likely a person will view they themselves receiving affectionate/flirtatious texts as being infidelity, and vice versa. It was hypothesized that individuals with lower relationship satisfaction would be more likely to perceive online behaviors as being infidelity.

H4a has weak, partial support as only one behavior was found to significantly relationship satisfaction.

When examining the correlations between perceptions of online infidelity behaviors and enhancing and reducing uses of technology, again, not many relationships were found. Rating a partner's receiving of sexually explicit messages by text or email from someone did positively correlate with relationship enhancing uses of technology,  $r(136) = .172, p = .044$ . Meaning, as technology is used increasingly to enhance relationships, it's more likely someone will perceive their partner's behavior of receiving sexually explicit messages as being infidelity. Rating one's own receiving affectionate/flirtatious texts or emails from someone as infidelity was also positively correlated with relationship enhancing uses of technology,  $r(136) = .181, p = .033$ . Therefore, the more use of technology to enhance the relationship, the more likely a person will view their own receiving of affectionate/flirtatious texts as infidelity.

The hypothesis that individuals reporting more relationship enhancing qualities of technology would be less likely to perceive online behaviors as being infidelity was not supported. Within some behaviors, people who reported more relationship enhancing qualities of technology were more likely to perceive online behaviors as being infidelity. Therefore, H4b was not supported. Also, the hypothesis that individuals reporting more relationship reducing qualities of technology would be more likely to perceive online behaviors as being infidelity was not supported. No significant relationships were found between reducing uses of technology and perceptions of online infidelity behaviors. Therefore, H4c was not supported. Refer to Table 6 below.

Table 6

*Correlations between Perceptions of Infidelity, Relationship Satisfaction, Relationship Enhancing Uses of Technology, and Relationship Reducing Uses of Technology*

	Enhancing Uses	Reducing Uses	Relationship Satisfaction
Sending sexually explicit messages by text or email to someone	Partner $r=.081, p=.346$	$r = -.094, p=.274$	$r=.030, p=.728$
	Self $r=.090, p=.296$	$r = -.007, p=.931$	$r = -.036, p=.672$
Masturbating with someone over webcam	Partner $r=.123, p=.152$	$r = -.137, p=.108$	$r=.083, p=.334$
	Self $r=.085, p=.322$	$r = -.046, p=.594$	$r=.050, p=.557$
Receiving sexually explicit messages by text or email from someone	Partner $r=.172, p=.044^*$	$r = -.055, p=.524$	$r=.025, p=.771$
	Self $r=.181, p=.033^*$	$r=.027, p=.750$	$r = -.110, p=.198$
Creating a profile on a dating website	Partner $r=.101, p=.240$	$r = -.162, p=.057$	$r=.116, p=.176$
	Self $r = -.071, p=.408$	$r = -.042, p=.627$	$r = -.032, p=.706$
Sending affectionate/flirtatious texts or emails to someone	Partner $r=.009, p=.917$	$r = -.139, p=.104$	$r = -.002, p=.980$
	Self $r=.082, p=.341$	$r=.002, p=.980$	$r = -.085, p=.321$
Receiving affectionate/flirtatious texts or emails from someone	Partner $r=.067, p=.432$	$r = -.082, p=.340$	$r = -.103, p=.230$
	Self $r=.181, p=.033^*$	$r=.063, p=.462$	$r = -.278, p=.001^{**}$
Browsing an online dating website alone	Partner $r=.143, p=.094$	$r = -.092, p=.283$	$r = -.024, p=.781$
	Self $r=.043, p=.613$	$r = -.076, p=.377$	$r = -.067, p=.433$

## Discussion

Technology is ever present and is often the main method of communication in our everyday interactions and in our relationships. Our relationship satisfaction is impacted by a variety of factors, including how technology is used. Technology can be used as an enhancing tool in our relationships but also as a tool that reduces or harms our relationships. Online infidelity, specifically, has been reported to be one of the biggest ways technology is used inappropriately and negatively impacts our relationships and the relationship structure.

The purpose of the present study was to investigate relationships that exist between technology use, relationship satisfaction, and online infidelity behaviors. This exploration was intended to gain insight into how the use of technology relates to relationship satisfaction and one's attachment style. The present study was also a look into how different potential online infidelity behaviors are viewed.

Relationship satisfaction was not found to be significantly related to relationship-enhancing uses of technology. This finding is contrary to those within the current literature; Campbell (2015) found that couples using technology in a positive way had an increase in relationship satisfaction. Relationship-reducing uses of technology, however, did negatively correlate with relationship satisfaction. When couples use technology in negative ways, relationship satisfaction is likely to decrease. This finding suggests that satisfaction in a relationship is more strongly impacted by technology use when technology is being used in negative ways. This finding is consistent with Campbell (2015), who found that relationship satisfaction decreases when technology is used to negatively communicate.

Attachment anxiety was found to correlate positively with both reducing and enhancing uses of technology; the more anxiously attached a person is, the more they use technology. This

finding makes sense given that anxiously attached individuals use technology frequently to communicate with their partner; this communication can enhance the relationship, however, excessive communication can reduce relationship satisfaction (Campbell, 2015). Within the present study, an anxious attachment style was negatively correlated with relationship satisfaction. Greater levels of anxiety were related to lower levels of self-reported relationship satisfaction. Also, individuals rating higher on relationship avoidance had lower levels of relationship satisfaction. This is consistent with Ferron et al. (2017) who found that people rating high on attachment-related anxiety and avoidance generally experience greater relationship dissatisfaction. Attachment avoidance, however, did not significantly correlate with either enhancing or reducing uses of technology. This could be due to those with an avoidant attachment style not being as prone to excessive uses of technology. People with higher attachment avoidance have been found to be less likely to report texting their partner frequently (Drouin & Landgraff, 2012).

Within the present study, individuals more strongly rated behaviors as being seen as infidelity when they did the behavior themselves versus when their partner engaged in the same behavior. This was an unexpected finding and not consistent with the existing literature. Thompson and O'Sullivan (2016) found that individuals were more likely to judge their partner's potential infidelity behavior more harshly than their own behaviors. Also, in the present study, it was found that females rated behaviors more strongly as infidelity if they themselves engaged in the behavior than did male participants. This could be due to western sexual scripts that sexuality (and sexual infidelity) is more accepted for a man than it is a woman (Ferron et al., 2017). Another unexpected finding was that people who reported more relationship enhancing qualities of technology were more likely to perceive online behaviors as being infidelity. This could be

because people who use technology positively in relationships may discuss Internet boundaries more often and more explicitly. This discussion around technology could lead to viewing behaviors as infidelity more often since boundaries were discussed and more clearly established.

Receiving affectionate/flirtatious texts or emails from someone and receiving sexually explicit messages were viewed as infidelity behaviors. This makes sense given that emotional intimacy is a significant component of online infidelity and intentional flirting with a person online who is not in the bounds of a committed relationship is often considered online infidelity (Abbasi & Alghamdi, 2017). However, it is interesting that more sexually explicit behaviors were not rated higher as being infidelity. This could again be due to online infidelity being viewed as a more an emotional as opposed to physical form of infidelity.

### **Limitations and Future Directions**

The present study is not without limitations. The first limitation to be noted is the disproportionate amount of female participants to male participants as well as the sample being mainly Caucasian. The study also utilized a self-report method and participants may have responded according to what they deemed socially desirable, especially considering the sensitive nature of some of the questions focused on experiences in relationships and online infidelity behaviors. Although this study was not looking through a heterosexual-only lens, the homosexual population was largely missed as the majority of the sample identified as being heterosexual. It is also a limitation that the study was focused mainly on traditional, monogamous relationships. It's important to remember that there are many different structures of relationships within which the population participates. Given the traditional view of infidelity that is most often detailed in the literature, monogamous relationships were the main focus for the scope of this study.

The last limitation leads to a potential future direction of investigation. There is a paucity of literature examining what constitutes infidelity and how it is perceived in non-monogamous structured relationships, such as open or polyamorous relationships. The potentially differing views of a significant portion of the population, therefore, are not being represented. Future studies should also be carefully designed so as to not be potentially heteronormative. For example, in the demographics section of the present study, no homosexual-only dating apps (such as Grindr) were included. While unintentional, this oversight possibly limited the findings of the current investigation. Future studies could also focus on the engagement of online infidelity behaviors in addition to attitudes held towards such behaviors. Additionally, future investigations could expand on the assessment of gender differences in how technology is used as well as how infidelity is viewed.

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## Appendix A

### *Recruitment Message*

Hello!

I hope you are doing well. My name is Emily Nelson and I am a Master of Science candidate at Pacific University's Applied Psychological Science Program with a Research Specialization. I am in the process of collecting data for my master's thesis project. I am investigating the relationships between technology use, relationship satisfaction, and online infidelity behaviors.

I am seeking individuals who are over the age of 18. If you are over 18 years of age, I would greatly appreciate your participation in this study, as well as the distribution of this message to any other parties who may meet criteria and be interested in participating. Please feel free to reach out with any questions you may have. Thank you for your time and your consideration! You will be find the link to the online survey below.

[https://pacificu.co1.qualtrics.com/jfe/form/SV\\_5gyxI2kFNrwT2Jf](https://pacificu.co1.qualtrics.com/jfe/form/SV_5gyxI2kFNrwT2Jf)

This research is conducted under the direction of Shawn Davis, Ph.D., at the Pacific University School of Graduate Psychology and is approved by Pacific University Institutional Review Board. If there are any further questions regarding the study, please feel free to contact me at nels8703@pacificu.edu

Best,

Emily Nelson  
Master of Science Candidate  
Pacific University  
School of Graduate Psychology

## Appendix B

### *Informed Consent Form*

Thank you for your interest in participating in this research study. The purpose of the project is to investigate the relationships that exist between a person's technology use and their levels of satisfaction when in a romantic relationship. The study will also investigate how technology use and relationship satisfaction contribute to views on and engagement in infidelity behaviors that are entirely online. The survey will take about 20 minutes to complete and consists of demographic questions and questions on technology use and intimate relationships, online infidelity behaviors, relationship satisfaction, and your experiences in close relationships. This online study will remain active and data will be collected until August 1, 2018.

Please read this material very carefully to be sure you understand the nature of the project. If questions remain, or you later have concerns about any aspect of the project or your treatment, you may contact any of the investigators or the Pacific University Research Office. Please note that if you do initiate such contact(s), some degree of anonymity will likely be lost; however, your privacy will be protected by strict adherence to rigorous confidentiality practices. Be sure to print a copy of this page for your records.

**Do you meet the eligibility requirements?** To be eligible you must meet all the following criteria. If even one item does not apply to you, we ask that you not take the survey. You must be over 18 to participate in this study.

Please confirm you are eligible for this study.  
I am over 18 years of age

**How will your responses be kept private?** An anonymous methodology is being used. This means we are collecting no information about your identity; we will not know who responded and there is no way to link answers to identities. However, we cannot guarantee the privacy of data transmitted via the internet. The survey has been built using Qualtrics. Only the investigators are the formal owners of the survey account, but all gathered information is available to any person who gains account access. Once the survey period is closed [date to be determined], all data will be transferred to a secure storage device and the account will be deactivated.

**Are there risks to taking the survey?** The study has been reviewed and approved by the Pacific University human subject research ethics committee. Any potential risks (e.g., emotional, financial, social, legal) due to participating are minimal, no greater than what one faces in normal daily living activities. One way to avoid potential risk is that you are free not to answer any question, and you may withdraw at any time simply by closing your browser or navigating away from the survey. If you do skip questions, the entire survey will be excluded from the analysis. However, once you submit your survey, withdrawing is impossible due to the anonymous methodology. If you experience discomfort during the study procedure you should stop your participation immediately and call Shawn Davis, Ph.D. at (503) 352-7219.

**Are there benefits to taking the survey?** There is no benefit, payment, or reward to be gained by participating. Except for your time, there are no additional costs. It is important to understand you are receiving no services of any sort from Pacific University as a result of your participation in this study. Any past, current, or future relationships you may have with Pacific University or any other university will not be affected in any way as a consequence of your choosing whether or not to participate.

**Informed Consent.** In that this is an online study, signed consent is not possible. Please print this screen for your records. By clicking AGREE below, you indicate your agreement to the following:

- I am 18 years of age or over.
- All of my questions have been answered.
- I have read and understand the description of my participation duties.
- I have been offered a copy of this form to keep for my records.
- I agree to participate in this study and understand that I may withdraw at any time without consequence.

**Appendix C***Demographic Questionnaire*

1.) Age: \_\_\_\_\_

2.) Gender:

- a. Male
- b. Female
- c. Other

3.) Race and/or Ethnicity

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Pacific Islander
- f. Hispanic or Latino/a
- g. Mixed Race
- h. Other

4.) Sexual Orientation

- a. Heterosexual
- b. Homosexual
- c. Bisexual
- d. Other

5.) Current Relationship Status

- a. Single
- b. Monogamous Relationship
- c. Polyamorous Relationship
- d. Open Relationship
- e. Engaged
- f. Married
- g. Other

6.) Preferred Relationship Structure

- a. Monogamous
- b. Polyamorous
- c. Open
- d. Other

7.) Highest Education Level Completed

- a. Less than high school
- b. High school graduate
- c. Some college
- d. 2 year degree
- e. 4 year degree
- f. Masters degree
- g. Professional degree
- h. Doctorate

8.) Do you use social media websites

- a. Yes
- b. No
- c. Have used in the past, no longer do



9.) Please list all social media websites that you use. (e.g. : Facebook, Twitter, Instagram, Tumblr, Pinterest, etc.)

10.) Approximately how much time do you spend on social media per day?

- a. A great deal
- b. A lot
- c. A moderate amount
- d. A little
- e. None at all

11.) Do you or have you ever used dating apps? (e.g. : Tinder, Bumble, Plenty of Fish, etc.)

- a. Currently using dating apps
- b. Have used dating apps in the past, not currently using
- c. Never have used a dating app

12.) When in a relationship, do you post pictures and status updates about your relationship online?

- a. Yes
- b. No

## Appendix D

### *Technology and Intimate Relationships Questionnaire*

Directions: In answering the items, think of your technology use in the context of your personal life (e.g., outside what is required for work or school). Then specifically think about your technology use in the context of your romantic relationships. Using the following scale, please indicate the extent to which you agree or disagree with each item

Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

1. My use of technology affects my romantic relationship positively.
2. My use of technology helps me feel more emotionally connected to my partner.
3. My partner's use of technology affects our romantic relationship positively.
4. I feel like I know my partner better because of what I have learned about him or her through technology.
5. Technology helps my partner and me make plans for sharing time together.
6. When my partner and I are facing conflict, I communicate with my partner through technology more frequently.
7. Being "friends" with my partner on Facebook and/or other social networking sites helps to strengthen our emotional connection.
8. My use of technology helps me feel more sexually connected to my partner.
9. If I am feeling anxious about how my partner feels about me, I will check in with him or her using technology (e.g. texting, e-mailing).
10. My partner and I talk in person about how we use technology in our relationship.
11. Technology helps me to stay connected to my partner when we are not together in the same place.
12. When my partner and I are having problems, using technology helps me avoid these problems.
13. When my partner and I are together in the same place, it seems like we do not communicate much because we are both distracted by technology.
14. Using technology helps distract me when I am having problems in my relationship with my partner.
15. Sometimes, I wish my partner would use technology less to communicate with me.
16. My partner is demanding in terms of how soon I respond to his or her text messages, phone calls, and/or e-mails.
17. I have felt jealousy as a result of seeing how my partner interacts with others on social networking sites.
18. When I am feeling neglected in my romantic relationship, I use technology to seek other companionship.
19. I feel like my partner gets distracted by technology when I am trying to talk with him/her.
20. Sometimes, I feel like my partner uses technology to check up on me.
21. My partner would say that I get distracted by technology when she/he is trying to talk with me.
22. I have snooped in one or more of my partner's technology accounts or devices (e.g., a phone call log, e-mail account, or social networking site account)

## Appendix E

### *Online Infidelity Questionnaire*

Directions: Indicate the level to which you would think **your partner** (past or present) was being unfaithful if **they** participated in the following behaviors

Not considered infidelity, Somewhat infidelity, Neutral, Infidelity, Extreme Infidelity

1. Sending sexually explicit messages by text or email to someone
2. Masturbating with someone over webcam
3. Receiving sexually explicit messages by text or email from someone
4. Creating a profile on a dating website
5. Sending affectionate/flirtatious texts or emails to someone
6. Receiving affectionate/flirtatious texts or emails from someone
7. Browsing an online dating website alone

Directions: Indicate the level to which you would think **you** were being unfaithful if **you** participated in the following behaviors

Not considered infidelity, Somewhat infidelity, Neutral, Infidelity, Extreme Infidelity

1. Sending sexually explicit messages by text or email to someone
2. Masturbating with someone over webcam
3. Receiving sexually explicit messages by text or email from someone
4. Creating a profile on a dating website
5. Sending affectionate/flirtatious texts or emails to someone
6. Receiving affectionate/flirtatious texts or emails from someone
7. Browsing an online dating website alone

## **Appendix F**

### *Relationship Satisfaction Questionnaire*

Directions: If you are currently in a relationship, answer the questions based on your current partner. If you are single, answer the questions based on your most recent relationship.

1. How well does your partner meet your needs?
2. In general, how satisfied are you with your relationship?
3. How good is your relationship compared to most?
4. How often do you wish you hadn't gotten in this relationship?
5. To what extent has your relationship met your original expectations?
6. How much do you love your partner?
7. How many problems are there in your relationship?

## Appendix G

### *Experiences in Close Relationships Questionnaire*

Directions: The following statements are about how you feel in romantic relationships. For this measure we are interested in how you experience relationships in general, and not just in your current relationship. Respond to each statement by indicating how much you agree or disagree with it.

Strongly Agree, Agree, Somewhat Agree, Neither agree nor disagree, Somewhat Disagree,  
Disagree, Strongly Disagree

1. I prefer not to show a partner how I feel deep down.
2. I worry about being abandoned.
3. I am very comfortable being close to romantic partners.
4. I worry a lot about my relationships.
5. Just when my partner starts to get close to me I find myself pulling away.
6. I worry that romantic partners won't care about me as much as I care about them.
7. I get uncomfortable when a romantic partner wants to be very close.
8. I worry a fair amount about losing my partner.
9. I don't feel comfortable opening up to romantic partners.
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her
11. I want to get close to my partner, but I keep pulling back.
12. I often want to merge completely with romantic partners, and this sometimes scares them away.
13. I am nervous when partners get too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with my partner.
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to my partner.
18. I need a lot of reassurance that I am loved by my partner.
19. I find it relatively easy to get close to my partner.
20. Sometimes I feel that I force my partners to show more feeling, more commitment.
21. I find it difficult to allow myself to depend on romantic partners.
22. I do not often worry about being abandoned.
23. I prefer not to be too close to romantic partners.
24. If I can't get my partner to show interest in me, I get upset or angry.
25. I tell my partner just about everything.
26. I find that my partner(s) don't want to get as close as I would like.
27. I usually discuss my problems and concerns with my partner.
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
29. I feel comfortable depending on romantic partners.
30. I get frustrated when my partner is not around as much as I would like.
31. I don't mind asking romantic partners for comfort, advice, or help.
32. I get frustrated if romantic partners are not available when I need them.
33. It helps to turn to my romantic partner in times of need.

- 34. When romantic partners disapprove of me, I feel really bad about myself.
- 35. I turn to my partner for many things, including comfort and reassurance.
- 36. I resent it when my partner spends time away from me.