Understanding Receiver Effects of the Hyperpersonal Model Using the Imagined Interactions Framework

Dissertation

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Abstract

The hyperpersonal model (Walther, 1995) proposes that idealization can occur when individuals meet and interact in text-based, cue-lean online environments. This study sought to understand the mechanisms that might predict one's idealization of another, including their anxieties and uncertainty about the other. Further, this work incorporates the imagined interactions framework (Honeycutt, 2015), in an effort to explore the cognitive mechanisms that may lead to idealization. Participants (N = 79) took an online survey at time 1, then came to a lab to chat with an unknown partner, a confederate, at time 2. They completed a survey after the first chat, reporting their idealization of their partner, liking of the partner, and perceived similarity to the partner. After the first survey at time 2, anticipated future interaction was manipulated. Participants were either told they would meet their partner face-to-face in the next lab session or were not told anything about them. Following the manipulation, participants took another survey, measuring their anticipated future interaction and desired future interaction, as well as their uncertainty and desired uncertainty about the partner. Participants returned to the lab two days later to take another survey and engage in another chat. At this time, participants shared whether or not they had an imagined interaction with their partner after the first chat. The survey items measured the frequency and specificity of their imagined interactions, as well as the rehearsal of conversations using imagined interactions. Social anxiety did not predict one's uncertainty about their partner nor their use of imagined interaction features. One imagined interaction feature, specificity, did predict one's idealization of their partner. Idealization and desired future interaction had a relationship over time as well, with idealization after the first chat predicting a desire for future interactions, and desire for future interactions predicting idealization during the next lab session.

Dedication

Dedicated to Mom, Dad, and Michael

Harley and Finn

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Fields of Study

Major Field: Communication

Table of Contents

List of Tables

Chapter 1. Introduction

The hyperpersonal model is a firmly established computer-mediated communication (CMC) theory developed by Walther (1995, 1996) to explain instances where CMC interactions exceed interpersonal outcomes that are typically expected in face-to-face (FtF) interactions. These heightened interactions were investigated after individuals reported greater intimacy and liking for others that they met online, despite being in a cue-lean environment. The hyperpersonal model has four components that Walther (1995, 1996, 2011) says can interact to lead to heightened interactions: The sender's selective self-presentation, the receiver idealizing the sender, asynchronicity and editability enabled by the channel, and behavioral confirmation via the feedback loop from receiver back to the sender. Considerable research has been conducted using the hyperpersonal model, yet it tends to focus overwhelmingly on sender and channel characteristics. Receiver effects are a key component of the model.

This research seeks to understand the thoughts a receiver has about a sender that may lead them to like and eventually idealize the sender. The proposed mechanism draws from an interpersonal communication concept known as imagined interactions (Honeycutt, 2015). Imagined interactions (IIs) are a cognitive concept in communication whereby individuals think about conversations they might have in the future or have already had in the past and mentally play or replay them. IIs have not previously been incorporated into work on the hyperpersonal model. I propose that an II may be the mechanism by which a receiver idealizes the sender: By imagining future interactions with the sender, a receiver may feel more warmth toward the sender and idealize them through the anticipation of the future interaction.

By incorporating IIs into the hyperpersonal model as a potential mechanism through which sender attributes, such as personality cues and interests from one's profile, are interpreted

by a receiver, greater clarity on a relatively understudied aspect of the hyperpersonal model may be achieved. The receiver effects specifically proposed for study here are the anticipation of future interaction and the idealization of the sender by the receiver.

Chapter 2. Relational Development

Relationships develop as individuals come together, whether for friendship, romance, or work. Numerous theories have been proposed to explain the development of relationships. Some of these theories are reviewed here to understand common ways of understanding human relationship development.

Social penetration theory (Altman & Taylor, 1973) suggests that individuals come together through increasing the breadth and depth of their disclosures. As they reveal more to one another, they become closer. Social penetration theory (SPT) is a social exchange theory, wherein participants in a relationship think about the costs and rewards associated with being in the relationship (Thibaut & Kelley, 1959). Those in a relationship are motivated to balance their costs and rewards, such that each person is experiencing similar costs and benefits (Blau, 1964). The *principle of distributive justice* suggests that this balance needs to be maintained for individuals to stay in a relationship (Blau, 1964). If someone is over-benefitting while the other individual is under-benefiting, then the relationship may be more likely to end. Social penetration theory is based in self-appraisals of the relationship; an individual must think about what they are disclosing and how they receive disclosures from another (Kenrick, Goth, Trost, & Sadalla, 1993).

Uncertainty

As disclosure facilitates intimacy in SPT, it can also reduce uncertainty about another (Berger & Calabrese, 1975). Individuals typically like being able to explain and predict what is happening in their surroundings; communication, then, is used to reduce uncertainty about one's environment (Berger & Bradac, 1982). When people first meet, each individual wishes to reduce uncertainty about the other who has entered their environment (Berger & Bradac, 1982).

Uncertainty reduction theory (URT) argues that information seeking about another and greater verbal disclosures from someone can reduce uncertainty about them and the potential for a relationship with them (Berger & Calabrese, 1975). Relational uncertainty puts uncertainty in the context of relationships specifically, such that individuals seek to reduce uncertainty about the state of the relationship they are in (Knobloch & Solomon, 2003). URT posits that communication can be used to both create and reduce one's uncertainty about a relationship. Though URT is often not supported by existing research, individuals can manage their uncertainty about their relationships.

One way individuals can manage uncertainty about a relationship is through information seeking (Hendrick, 1981). As individuals gain more information about another, their relationship satisfaction with that person increases (Hendrick, 1981). Strategies for reducing uncertainty through information seeking include passive strategies, such as observing another without interacting with them; active strategies, including asking others for information but not interacting with the other person; and interactive strategies, such as asking the other person questions about themselves (Berger & Bradac, 1982). Yet not all information needs to be known for a relationship to satisfy the parties in it; as relationships progress, partners in the relationship can choose which information to share with one another (Petronio, 1991). Thus, as relationships develop, information seeking needs can change. Information seeking may be motivated, in part, by the possibility of future interactions with another individual.

Uncertainty Discrepancy

Many uncertainty frameworks suggest that individuals work to reduce their uncertainty about relationships through information seeking (Berger & Bradac, 1982). However, a growing body of work also suggests that individuals may, in some instances, desire some amount of

uncertainty in their relationships (Afifi & Weiner, 2004). Uncertainty discrepancy is the difference between one's actual amount of uncertainty about another or their relationship and their desired amount of uncertainty about that person or relationship (Afifi & Weiner, 2004). For those who seek some uncertainty, the discrepancy is reduced, as actual and desired are closer together. For those who do wish to reduce their uncertainty, the discrepancy is greater because the actual amount of uncertainty is further from the desired amount (Thompson, Bevan, & Sparks, 2012). One's desired amount of uncertainty will likely impact how they seek information about another, as well as the types of information they look for interpersonally (Afifi & Weiner, 2004). One's desired uncertainty may shed further light on their interactions with others and the relationships they build.

Anticipated Future Interaction

Anticipating future interaction with another individual may lead someone to seek additional information about that person, reducing their uncertainty about their future meetings (Douglas, 1987). *Anticipation of future interaction* occurs when individuals are likely to meet again, whether through in-person communication or computer-mediated communication (Douglas, 1987). The possibility of interactions with relatively unknown others can produce feelings of uncertainty, as individuals are unable to set and manage expectations for the interactions they may have (Solomon & Knobloch, 2001). Many interactions individuals have do not have uncertainty accompanying them, as many people interact with familiar others with more regularity than unknown others (Solomon & Knobloch, 2001). Thus, anticipating a future interaction with another individual may give rise to uncertainty and spur the individual to information seek in order to manage the possible future interaction (Douglas, 1987).

Social Anxiety

Social anxiety can also impact how one approaches and develops relationships. Individuals with social anxiety worry about their interpersonal skills; often, these individuals feel that they will be isolated in certain environments where others are present because they will be unable to interact in a socially normative way (Segrin, 1990). Socially anxious individuals have concerns about their self-presentation; they worry that, when they are interacting with others, they are not meeting expectations and are being negatively evaluated as a result (Schlenker & Leary, 1982). This sense of negative evaluation by others is a critical aspect of social anxiety; concerns about the evaluation often overwhelm a socially anxious individual (Schlenker & Leary, 1982). Thus, those who are socially anxious are more likely to struggle with meeting new people, as they are worried about how their initial impressions will fail to meet expectations. Social anxiety can manifest as both a trait, whereby one is anxious in most social settings (Segrin, 1990); social anxiety can also be a temporary feeling that one experiences as the result of specific interactions or situations (Kashdan & Steger, 2006).

Chapter 3. Computer-Mediated Communication

Affordances of Computer-Mediated Communication

CMC technologies afford different communication abilities that users can take advantage of when engaging with others online. An *affordance* of an object is the inherent value and meaning of the object as perceived by an actor who is interacting with the object (Gibson, 1979). An affordance in CMC is an attribute of a CMC channel perceived by those using the channel, and different channels have different attributes allowing for various uses and goals (Fox & McEwan, 2017; Schrock, 2015). Historically, CMC channels have been compared to face-to-face communication, often with the argument that CMC cannot achieve the relational goals that FtF interaction can (Walther, Gay, & Hancock, 2005). In doing this, CMC is considered as one channel, with all CMC affording the same capabilities; all CMC is assumed equal (Walther et al., 2005). Yet this perspective of CMC as only one channel fails to consider emerging CMC technologies and the ways they may differ from each other, as well as from FtF communication (Fox & McEwan, 2017). An affordances approach to CMC considers how different types of CMC channels vary. One's message construction and subsequent perceived personal audience can change based on channel choice and use (Bazarova, Taft, Choi, & Cosley, 2013).

An affordance of a channel is not an objective fact (Chan, 2017; Mascheroni & Vincent, 2016). Instead, affordances of a channel are socially embedded, meaning they are interpreted and understood through the society in which they are situated and the actual experience of those people using them (Mascheroni & Vincent, 2016; Schouten, Valkenburg, & Peter, 2007). Affordances are best understood through the subjective experience of those who are engaging with a given technology (Chan, 2017). Thus, one social networking site user may have a completely different experience on the same site as another user, all because of how they are

interpreting their use of the site (Chan, 2017; Fox & McEwan, 2017). Affordances are both shaped by social experience and determined by one's understanding and use of the technology. The objective qualities of a channel are defined, but the subjective use is key to understanding affordances (Chan, 2017). Thus, affordances are considered social based on the subjective experience of those using them to achieve human connection in some capacity (Fox & McEwan, 2017). As a result, technological affordances are often studied as *social affordances* when they may have implications for human interactions (Fox & McEwan, 2017).

Numerous affordances have been studied in relation to CMC. This includes *accessibility*, or the possibility for anywhere-anytime connectivity to others (Bayer, Campbell, & Ling, 2016). CMC channels create opportunities for individuals to reach each other with little time restriction or physical limitation; for example, mobile phones allow individuals to be reached even when they are away from traditional desktop computers (Bayer et al., 2016). Being inaccessible to others is problematic for those who do not have mobile phones or devices, and this inaccessibility can have negative consequences for their personal relationships (Ling, 2012). Accessibility is similar to *perpetual contact*, the feeling of being able to be reached and to reach others anytime via CMC (Mascheroni & Vincent, 2016). Unlike FtF interaction, which has limitations such as physical distance, CMC channels can overcome time and place to connect with others (Chan, 2017).

CMC channels can allow for increased opportunities for an increased sense of contact. These channels also offering varying levels of *bandwidth,* the number of social cues the channels can provide (Short, Williams, & Christie, 1976). In text-based CMC, for example, social cues are limited to what users can type; a user can create an emoticon from text, but otherwise is limited in what can be shared. Yet in synchronous video chat, CMC users can approximate FtF contact

by seeing one another's body language and hearing the other's voice (Fox & McEwan, 2017). Social information processing theory incorporates the bandwidth of a channel (Walther, 1996), as users of CMC are suggested to adapt to the online space for the sake of relational development. Bandwidth also allows for *social presence*, the feeling that a CMC partner is close; it feels like the conversation partner could be in the same physical space (Daft, Lengel, & Trevino, 1987). Greater bandwidth means greater feelings of social presence.

CMC channels also afford *conversational control,* the ability to manage a conversation (Feaster, 2010). By using certain CMC channels, individuals can control what social information they share with another. People have the ability to not only share online, but can also choose what not to express online (Walther & Parks, 2002).

Conversational control is enabled by the affordances of *asynchronicity* and *editability* (Walther, 1996). CMC channels can be asynchronous, meaning that communication via these channels does not have to occur in real-time. Instead, individuals can take advantage of time to wait to respond to messages and to think about what they might say next (Fox & McEwan, 2017; Walther, 1995). Some channels are more synchronous than others: Video conferencing can allow for synchronous communication between parties with greater ease than text-based CMC, for example. Similar to asynchronicity is editability, the ability to revise and rewrite messages and change one's online profile (Walther, 1996). Whereas FtF communication has little opportunity for editing one's vocalizations, CMC can afford careful crafting of messages, including deleting and rewording messages before ever sending them (Fox & McEwan, 2017).

CMC users can also achieve varying degrees of *anonymity* by being online. CMC users can take advantage of the system to reveal as many cues about themselves as they want, including no cues about who they are as a real person at all (Rains, 2007). Being anonymous can

influence one's self-presentation, allowing for people to take on other identities if they so choose (Rains, 2007). Anonymity can also encourage different kinds of expression; for example, recent work has found that anonymous social networks encourage greater political expression (Lane, 2019). It is difficult to achieve anonymity in FtF settings; yet CMC users can enter into various channels and take on other identities with relative ease.

As CMC technologies change, affordances are critical to consider in the study of CMC. CMC users have varying perspectives of what emerging technologies afford for them as they communicate with others. Certain channels allow for greater approximations of FtF contact than others; it is important to understand what technologies are able to facilitate and the perceptions of that ability as classic CMC theories are revisited and updated.

Cues-Filtered Out Perspective

As CMC platforms emerged where communicators could connect with each other, researchers argued that relationships that developed in CMC lacked the quality of those that formed in-person because of the lack of nonverbal cues online. CMC, researchers argued, featured reduced bandwidth, which meant a reduction in the social presence of communicators (Short et al., 1976). With fewer nonverbal cues available for people to use and thus make inferences about their communication partners, their ability to know those online partners could never reach the knowledge possible from meeting FtF (Culnan & Markus, 1987; Rice, 1984; Sproull & Kiesler, 1986). Because online communication often does not have the same cues as in-person interaction, including one's physical appearance and nonverbal behaviors, then CMC is assumed to be impersonal compared to FtF interaction (Culnan & Markus, 1987; Rice, 1984). The family of theories regarding CMC as impersonal are called the cues-filtered-out perspective (CFO).

Despite these claims, significant research showed that impersonal interactions were not always the case in CMC. In one instance, online communities formed, displaying behaviors similar to those found in in-person communities (Hiltz & Turoff, 1978). Socioemotional language was detected in an online bulletin board greater than what was found in some in-person groups (Rice & Love, 1987). Online-based groups who were given enough time to reach agreement on their given task demonstrated similar outcomes to groups that were FtF (Rice & Love, 1987).

Thus, even with considerable research claiming that CMC featured more impersonal behavior, some research suggested otherwise: that relationships could form online. As a result of these inconsistencies, Walther (1992) pushed back, considering how CMC could foster relationships.

Social Information Processing Theory

Walther (1992) developed social information processing theory (SIPT) in response to the CFO perspective, considering that some relationships formed online were equivalent to relationships that formed FtF. Of primary importance was the role of time in developing relationships: Relationships that begin FtF typically take time to develop. For relationships to develop in CMC, then, time may also be of importance. CMC users having discussions in groups were able to experience positive relational outcomes as messages between them accumulated (Walther & Burgoon, 1992; Walther, 1993). According to SIPT, relationships can be formed through CMC by taking advantage of the channel and the context where partners are interacting. Those engaging with CMC partners working for the same company can make inferences about one another based on their shared work environment (Walther, 1992). Though the number of

interpersonal cues available online may be reduced, users can find ways to create meaningful interactions.

SIPT includes five assumptions about communication that can extend to online communication. First, people affiliate and have a need to do so. Because of this, humans use communication to influence their affiliations. Second, interpersonal impressions are achieved through both verbal and nonverbal cues, and verbal-textual channels can provide these cues. Third, for any kind of developmental change to occur, individuals need to have impressions of one another already formed. Fourth, relational messages are both encoded and decoded through nonverbal cues as well as verbal and textual manipulations. Fifth, messages that are sent via CMC take longer to process than those messages that are exchanged FtF (Walther, 1992).

These assumptions lead to the main propositions of SIPT, which are that CMC communicators need more time to process messages and for interpersonal, not impersonal, communication to emerge; CMC can be relational with enough time for people to interact. The fifth proposition, that messages sent via CMC may take longer to process, supports the crux of SIPT: online communication can, with enough time, be relational (Walther, 1992). As more messages are exchanged online, the nature of the relationship will also change, meaning that the communication at the earliest stages of interaction is different from the communication that occurs later. Those changes also take longer compared to those that happen FtF (Walther, 1992; Walther & Burgoon, 1992). Taken together, this suggests that, with enough time, CMC at later stages of relational development should not be that different from FtF communication at the same stages. CMC can eventually facilitate conversations and relationships that are similar to those that occur FtF.

Chapter 4. The Hyperpersonal Model

The hyperpersonal model was developed as Walther (1992, 1994) discovered that many interactions happening in online settings seemed to surpass the quality of FtF interactions. In considering these heightened interactions and extending SIPT from simply relational development to perhaps even stronger relationships, Walther (1995, 1996) offered the hyperpersonal perspective and suggested that there were four components within these highly positive online interactions. Drawing on the transactional model of communication, Walther (1996) considered the sender, receiver, channel, and feedback and how these components differed in a CMC setting compared to a FtF setting. The four components of the hyperpersonal model are selective self-presentation (the sender's perspective), asynchronicity and editability (affordances of the channel), idealization and overattribution (the receiver's perspective), and behavioral confirmation (the feedback loop between the sender and receiver solidifies the sender's self-presentation; Walther, 1995, 1996, 1997, 2011). These four components together can create interactions that exceed those that might occur in FtF settings.

Selective Self-Presentation

A sender in CMC is able to manage impressions of themselves to their given audience, whether in a discussion forum, online dating application, social networking site, or other CMC environment. Individuals have identities that they build for themselves (Schlenker & Leary, 1985) and those identities can be transmitted via CMC in a motivated performance. This selective self-presentation is enabled by the limited cues, asynchrony, and editability of CMC. *Selective self-presentation* occurs when a sender in CMC only reveals certain qualities or characteristics of themselves online. Senders can choose what they share about themselves and manipulate the information receivers have about them. Senders have the ability to choose which

aspects of their personality to enhance or dampen and the cues by which they do so (Toma, Hancock, & Ellison, 2008; Walther, 1996, 1997, 2007). When senders engage in this selective presentation, they are putting on a performance, and that performance is enacted to achieve some particular outcome (Goffman, 1959). Selective self-presentation draws on Goffman's concept of facework, as people can choose what they share of themselves publicly versus privately (Goffman, 1959). Indeed, when someone goes online and interacts with others, the self-presentation they choose may vary from site to site, even from receiver to receiver. The public versus private nature can shift, and the version of oneself shared can shift with this.

Selective self-presentation can be achieved through manipulation of text-based social cues, such as what one writes about oneself in a biography and the written messages exchanged via CMC (Fiore & Donath, 2004; Hancock, Landrigan, & Silver, 2007; Walther, 2007, 2011; Walther, Loh, & Granka, 2005). In one test of textual manipulation as a predictor of liking, CMC users' partners liked them more when they praised the partners and changed the subject based on the prompt they had received (Walther et al., 2005). The individuals in this study were only using the text-based functions of CMC, without any other information about each other. The textual information they provided through the messages sent was enough to maintain feelings of warmth between the partners.

Photographic images can also contribute to one's self-presentation online. When individuals first meet in CMC, photos can be interpreted positively. They offer an impression of the sender that gives additional cues to the sender's personality (Walther, Slovacek, & Tidwell, 2001). Yet photos also offer an additional dimension to selective self-presentation. With digital photos, senders are able to edit the photos to show a different version of themselves than has ever existed (Hancock & Toma, 2009). CMC users building an online profile or in an exchange where

they share photos can choose certain photos to emphasize aspects of their personality that they find desirable for the setting (Gibbs, Ellison, & Heino, 2006; Hancock & Toma, 2009; Walther, 2011). If senders do not have photos that demonstrate what they think the audience wants, though, they can manipulate the photos into showing something that may not be true (Hancock & Toma, 2009).

This editing of pictures, as well as the overall ability to manipulate information about oneself, leads to potential dilemmas for those who engage in selective self-presentation (Gibbs et al., 2006; Whitty, 2008). Senders have to consider just how much to change information, as they may deceive a receiver into thinking things about the sender that are not true or cannot be achieved, especially if they should eventually meet in person (Gibbs et al., 2006). Online daters revealed in one study that they engaged in small deceptions, often in hopes that they could achieve the lies that they had put online (Toma et al., 2008). Their lies were about their height, weight, and age, which all daters felt were lies that could be overcome if not fulfilled. Online daters in another study reckoned with the meaning of this: In some cases, being honest about oneself led to fewer dates than deceiving receivers in small ways, such as lying about one's height or weight (Gibbs et al., 2006). Some daters expect a small amount of deception on the part of the sender, recognizing the affordances of the platform they have chosen (Toma et al., 2008; Toma & Hancock, 2012).

Senders can selectively self-present in CMC settings. Senders have the ability to manipulate text and photos as they interact with others online and often for a variety of goals. Users of CMC are able to achieve this selective self-presentation by taking advantage of channel characteristics.

Channel Characteristics

Walther (1996, 1997) considers the reduction in nonverbal cues, the asynchrony of messages in CMC, and the editability of both profiles and messages to be characteristics of CMC channels. *Asynchrony* is the affordance by which communication between two people does not happen concurrently; instead, communication happens at different times. Time is easier to manipulate online; senders can carefully construct profiles and messages with no need to synchronously engage a conversation partner (Walther, 1992, 1996; Walther et al., 2015). Asynchrony allows for planned discourse, where those who are sending messages can consider what they will say and can reframe what they will say before writing and sending it online (Ochs, 1979; Walther, 1996). The manipulation of time also affords *editability*, meaning that those who are presenting themselves online can edit their profiles, including photos and textual information like biographies, as well as the messages they send to receivers (Walther, 1996, 1997).

Asynchronous communication is critical for hyperpersonal interactions to occur in CMC. Users in CMC can take time to craft their online personas; asynchrony includes the passage of time, which is how CMC levels of attraction are able to reach FtF levels (Walther, 1995, 1996, 1997). For CMC users to grow in attraction comparable to how they would FtF, more time is needed (Walther, 1996). For example, one study tested asynchrony versus synchrony and number of cues provided as predictors of social attraction and certainty in a CMC group setting (Nowak, Watt, & Walther, 2005). Those who met using low cue media asynchronously reported greater feelings of certainty about their group compared to those who were in a high cue asynchronous setting; there was no significant difference between those in the high- and low-cue synchronous conditions (Nowak et al., 2005). Though asynchrony did not predict higher social attraction, the lower-cue media condition did (Nowak et al., 2005).

Editing behaviors and language complexity have also been examined as an aspect of self-presentation within channel characteristics of the hyperpersonal model (Walther, 2007). In one study, participants were told that they would be interacting with a highly regarded professor, an uninterested high school student, or a control college student like themselves. The greatest language complexity was found for those who thought they were interacting with a college professor, the person deemed the most socially desirable of the possible options (Walther, 2007). This work demonstrates not only how selective self-presentation can be achieved via text, but also considers a motive, social desirability, for selective self-presentation (Walther, 2007).

In summary, characteristics of CMC channels can help a sender to selectively self-present. These characteristics include asynchronicity, whereby the sender can take time to craft messages and their profiles, as well as editability. Senders can rewrite messages and edit photos for a receiver's consumption. Characteristics of CMC channels, in combination with the sender's selective self-presentation, may together lead a receiver to form an idealized impression of a sender.

Idealization

The hyperpersonal model suggests that an individual, receiving a message from a sender who has engaged in selective self-presentation through editability and asynchronicity, may in turn idealize the sender as a result of the limited cues from and about the sender (Walther, 1996). In discussing the receiver's impression of the sender, idealization is often labeled as the receiver effect or outcome from hyperpersonal interaction (Hian et al., 2004; Jiang et al., 2011; Walther, 1997; Walther et al., 2018; Yao & Flanagin, 2006). Despite over two decades of work on the hyperpersonal model, conceptualizations of idealization and the receiver effect remain inconsistent. Idealization is often used in conjunction with terms like overattribution (Hancock &

Dunham, 2001; Walther, 1996) and intensification (Jiang et al., 2011). Though these terms are interrelated, it is important to first distinguish what each term means and how idealization is a distinct concept.

Conceptualization

The receiver's experience of interacting with the sender has been classified as overattribution (Hancock & Dunham, 2001), intensification (Jiang et al., 2011), and idealization (Yao & Flanagin, 2006). *Overattribution* occurs when a receiver finds cues of similarity between themselves and the sender; through this, they focus on what makes them alike (Hancock & Dunham, 2001). An overattribution process involves creating stereotypical impressions of another through the limited cues made available via CMC and failing to consider those cues as limited due to the context where they are shared (Walther, 1996). These limited cues are similar to group identity cues: In some interactions, the channel includes cues about what might make someone similar to themselves (such as both individuals engaging in an online dating situation or on a forum about a specific topic of interest; Hancock & Dunham, 2001; Lea et al., 2001; Walther, 1997). Similarity between oneself and another often leads to liking; people tend to like those who are similar to them (Sprecher, 2014). Feeling similar to another person can increase feelings of interpersonal closeness as well as attraction (Sprecher, 2014; Walther et al., 2015). When discussing overattribution in terms of the hyperpersonal model, the receiver is finding heightened similarity with another through the limited cues available (Walther, 1996, 1997).

Similarly, when idealization is talked about as an outcome of *intensification*, the cues that the receiver has available to interpret about the sender are intensified (Jiang et al., 2011; Rains et al., 2019). Though this might include cues about similarity, it can also be an enhancement of other cues that are being shared, such as one's openness in CMC conversations (Jiang et al.,

2011; Rains et al., 2019). Instead of an attribution of similarity, intensification considers interpersonal cues that a receiver may interpret without having a focus on the relation to themselves (Rains et al., 2019). Intensification of cues is often discussed in terms of social support and disclosure; self-disclosure situations may not reveal information related to similarity, but instead offers personal information about the sender that can be interpreted (Kashian et al., 2017).

Idealization is often conceptualized as an outcome resulting from either intensification of limited cues or an overattribution of similarity through interpretation of limited cues. Yet many studies fail to define idealization beyond overattribution or intensification. *Idealization* is thinking about another in overly positive ways (Hian et al., 2004). Idealization is also defined as experiencing positive illusions about another in work on long-distance relationships (Stafford & Merolla, 2007). Research on long-distance relationships has considered how partners separated by geographic distance might think positively about each other despite the distance. As a result of numerous studies, idealization is clearly defined in this literature and merits transition to the study of CMC effects. Positive illusions are distinct from liking another individual. Liking another is rooted in a sense of attraction to an individual based on known qualities of that person, such as their physical or social qualities (McCroskey & McCain, 1974). Idealization stems from an inaccurate assessment of another, in part due to limited information available about another. Positive illusions are illusions first and foremost, developed by a receiver with the information available. Positive illusions about another may stem from overattributions of similarity and intensification of limited cues; some research in CMC suggests this already (Hian et al., 2004; Yao & Flanagin, 2006). However, a consistent conceptualization of idealization is necessary for this work.

Time and Idealizing

The definition of idealization as "positive illusions about another" is not enough to understand idealization as an outcome of hyperpersonal interactions. What many studies have yet to consider is the importance of time in studies of receiver effects and the subsequent idealization of a sender (Walther, 1996, 1997; Yao & Flanagin, 2006). Timing is important to understanding how one comes to idealize another, as multiple interactions are needed for one to be able to assign meaning to the cues they are receiving (Hian et al., 2004; Walther, 1996; Yao & Flanagin, 2006). Meaning is often determined through repeated interactions with another (Yao & Flanagin, 2006). In this way, idealization is a process; positive illusions take time to develop.

Timing is often left out of these studies as idealization is conflated with liking and affinity for another as the result of a one-time experiment (Walther, 1995, 1996; Walther et al., 2005; Walther et al., 2015). Recent work on the hyperpersonal model has pushed for measuring idealization in line with Stafford and Merolla's (2007) definition of positive illusions, instead of considering increased liking or affection (Sumner & Ramirez, 2016). Liking may be necessary for one to idealize another, but the terms, as previously discussed, are not interchangeable. Two common idealization scales that measure idealization using the operationalization guidance with a focus on positive illusions of another are the idealistic distortion scale (Fowers & Olson, 1993) and the positive affective thinking scale (Cate, Koyal, Lloyd, & Wilson, 1995). These scales measure one's thinking about another and determine the intensity of one's positive feelings toward another. However, these do not incorporate timing as a critical component of the process.

Operationalizations

Conceptualizations of idealization are varied; thus, operationalizations of idealization are also varied. Idealization is often measured as liking for and attraction to the sender, as well as

perceptions of intimacy between the sender and receiver. Measures of social attraction (McCroskey & McCain, 1974), liking (Rubin, 1970), and intimacy and affection (Burgoon & Hale, 1987) are among the most common within the hyperpersonal paradigm. For example, in a study of group identity versus individual identity, participants interacting via text-based CMC rated each other on measures of social attraction, task attraction, and physical attraction as well as intimacy and affection (Walther, 1997).

Hancock and Dunham (2001) measured idealization by assessing how individuals assigned personality traits to individuals with whom they interacted. Zero-history dyads either met in the lab FtF or through text-based CMC, a common procedure for investigating hyperpersonal effects. Participants were assigned to complete a problem-solving task with no time limit. Those who interacted via CMC rated the intensity of their impressions stronger than those who met FtF; the authors liken this to idealization effects (Hancock & Dunham, 2001). Another study using a task-based discussion included measures of intimacy (using Burgoon & Hale, 1987) as well as social, task, and physical attraction as outcomes related to idealization (Yao & Flanagin, 2006). For physical attraction, they adopted their measurement to include idealized physical attraction, attempting to measure how individuals perceived another despite only interacting via text-based CMC (Yao & Flanagin, 2006). This work emphasized the need for better conceptualizations and operationalizations of idealization and attempted to do so through adjustment of McCroskey and McCain's (1974) physical attraction measurement.

Not all studies attempting to understand idealization have used task-based manipulations for having participants interact. Considerable work exists that analyzes the relationship of self-disclosure to idealization. Participants in one study were assigned to disclose to either a friend or a stranger; they were given up to 30 minutes to interact via text-based CMC (Kashian et al.,

2017). The outcome of self-disclosure was liking, using Rubin's (1970) scale. Questions related to liking included whether or not the participant wanted to be friends with the other. Thus, in this research, greater liking was equated with idealizing the other, the discloser (Kashian et al., 2017). Liking was also the outcome of analysis related to the depth of one's disclosure and subsequent feelings about the discloser (Walther et al., 2018).

An investigation of online dating behaviors reduced the amount of time that participants could interact with one another (Antheunis et al., 2019). Many studies of hyperpersonal effects allow participants between 20 and 30 minutes to interact with a partner. Because the context of online dating was being analyzed, participants instead interacted in a virtual speed-dating simulation with five partners with time limits of three minutes per partner (Antheunis et al., 2019). The partners were zero-history, as is also common in this research (Hancock & Dunham, 2001), but they were randomly assigned to either a CMC videoconference or text-based CMC. This work once again used social attraction and romantic attraction as the outcomes for understanding idealization (Antheunis et al., 2019).

Recent hyperpersonal research has attempted to measure idealization with the measurements employed in long-distance research. In one study, parent-child relationships were analyzed after a child went away to college (Sumner & Ramirez, 2016). Using both the idealistic distortion scale and the positive affective thinking scale, results showed that children started to idealize their parents after moving away from them and engaging in CMC interactions (Sumner & Ramirez, 2016). In a similar study, partners who lived geographically close together but still communicated often via CMC were measured on their levels of idealization for one another (Toma & Choi, 2016). Those who had more regular CMC contact had greater idealization (Toma & Choi, 2016). However, these studies are not truly hyperpersonal in nature. Though they

measure idealization in a clearer conceptual way, following in line with work on long-distance relationships, they do not consider the relationships of CMC-only or even CMC-first partners (Walther, 1996). Instead, they are focusing on relationships where individuals already know each other FtF, and thus can carry cues from memory over to their CMC interactions.

Other weaknesses exist in research that considers idealization as an outcome. The conceptualization of idealization matters for the study of the hyperpersonal model (Walther et al., 2015). Many experiments utilizing the hyperpersonal model are one-shot experiments, meaning that there is no long or ongoing exposure to a CMC partner (Walther, 1996, 2009). Participants interact once for limited periods of time, unable to take the time needed to interpret the cues from another (Walther, 1996; Walther et al., 2015). Further, timing is an important consideration as idealization is a process that includes intensification of cues and an overattribution of similarity (Jiang et al., 2011; Rains et al., 2019). Idealization as an outcome only does not fully illuminate what is happening as the receiver interprets messages and cues from a sender. Including timing allows for greater boundary precision and overall conceptualization of the hyperpersonal model (Walther, 2009). A clear conceptualization of idealization that includes time as a focal element can improve further research on receiver effects in the hyperpersonal model.

Behavioral Confirmation

As senders receive feedback on their self-presentation, the hyperpersonal model suggests they experience an identity shift, where their in-person self becomes more like the self presented online (Walther, 1996, 2011; Walther et al., 2010; Walther et al., 2011). The selective self-presentation feedback loop has its roots in behavioral confirmation. *Behavioral confirmation* occurs as one individual has an impression of a target partner and shares that impression through

behaviors toward the target; the target adjusts their behavior based on that feedback, continuing to produce a selectively edited self (Snyder, Tanke, & Berscheid, 1977). Behavioral confirmation was demonstrated in a study where males' initial impressions of their female partners led the females to reflect the males' impressions of them, influencing male ratings of the female target (Snyder et al., 1977). Selective self-presentation and the subsequent feedback on that presentation transfers this concept into the CMC context via hyperpersonal effects. As a sender receives confirmation on their selective self-presentation, they continue to share cues related to that self-presentation while also becoming more like that presentation (Walther, 1996, 2011; Walther et al., 2011).

The concept of identity shift stems from behavioral confirmation and is in part influenced by the perception of an audience (Carr & Foreman, 2016; Gonzales & Hancock, 2008). *Identity shift* occurs as a sender's selective self-presentation is reinforced by a receiver; the sender's identity adjusts to feedback from the receiver (Walther, 1996; Walther et al., 2010). Participants in a study of private versus public trait expression were more likely to internalize the trait if they had publicly posted about it and received reinforcement of their behavior (Gonzales & Hancock, 2008). This finding was extended by additional research demonstrating that feedback from a relationally close partner further influenced identity shift: Not only was the publicness of the identity important, but someone relationally close to the participant believing this presentation aided in solidifying the self-presentation (Carr & Foreman, 2016). Thus, feedback from a receiver on a sender's self-presentation can help to adjust a sender's overall identity, whether the identity is crafted for that receiver or a larger audience (Carr & Foreman, 2016). As identity shift occurs on the part of the sender, the receiver may engage in more idealized thinking about the

sender due to the sender presenting in a way that aligns with the receiver's supportive feedback (Walther, 1996, 1997; Walther et al., 2010).

This internalization of selective self-presentation feedback can have positive consequences for the sender across CMC settings. Bloggers who received affirmative feedback on their sites felt greater feelings of acceptance in their online community (Miura & Yamashita, 2007). Through selective self-presentation and support for one's identity, individuals can experience positive psychological outcomes. However, these positive outcomes are not guaranteed. Other research has found that selective self-presentation behaviors that include lying about oneself on social media can predict greater anxiety in adolescents (Wright, White, & Obst, 2018). Posting false status updates or photos can lead to concerns about achieving what one has posted as well as concern about others discovering the lies. Online communication also leads to greater reciprocity of negative feedback, which leads to reductions in self-esteem for senders; if one individual receives negative feedback online, they are more likely to be negative in return (Vossen, Koutamanis, & Walther, 2017).

A sender's selective self-presentation may be reinforced through interactions with the receiver, leading to a shift in the sender's identity (Carr & Foreman, 2016; Walther, 1996, 1997). The sender, receiving positive feedback on what they have shared, may continue to share in such a way as to continue to make the receiver feel positively toward them (Carr & Foreman, 2016). This ongoing selective self-presentation, performed in part because of the receiver's positive feedback, may in turn lead the receiver to feel even more positively toward the sender, including allowing the receiver to develop additional positive illusions about the sender (Walther, 1996). The receiver's positive illusions about the sender may also be facilitated by additional interactions with the sender, particularly as the sender continues to selectively self-present.

Anticipated Future Interaction

Receiver effects are typically studied by analyzing the interactions of unacquainted, zero-history dyads (Hancock & Dunham, 2001; Walther, 1997; Walther et al., 2015), with limited studies investigating hyperpersonal effects in existing relationships (for examples of studies that do study existing relationships, see Sumner &Ramirez, 2016; Toma & Choi, 2016). Often, participants are brought into a lab and either engage with a new acquaintance via CMC or FtF. (Rains et al., 2019; Walther et al., 2015). FtF interaction is often used as the comparison condition. These studies demonstrate that participants experience more positive feelings for one another after engaging in the CMC condition compared to the FtF (Hian et al., 2004; Rains et al., 2019; Walther et al., 2015), with perceptions of one's partner heightened in the CMC conditions (Hancock & Dunham, 2001; Yao & Flanagin, 2006). One weakness that is consistent across these studies is that when unacquainted dyads are studied they are rarely planning to meet again; there is no anticipated future interaction, a key component of the hyperpersonal model (Hancock & Dunham, 2001; Jiang et al., 2011; Walther, 1994, 1996).

Walther (1994) specifically tested anticipated future interaction when working to extend SIPT. In one experiment, participants in one condition were told that they were going to interact with the same person over the course of three tasks; in the other condition, participants were told that they would be interacting with a different partner for each task (Walther, 1994). Participants who knew they were going to interact again had more positive interactions and shared more personal information, with the ultimate conclusion that those who knew more interactions would happen in the future were more willing to invest time into interacting (Walther, 1994). Thus, anticipated future interaction is likely a key component leading to a receiver's idealization of a sender. Existing research suggests that senders are considering future interactions when self-

disclosing to receivers (Gibbs et al., 2006); the other side of this interaction needs to be investigated to further test the hyperpersonal model. Considering a receiver's thinking about a sender, over time and with or without anticipation of additional interactions, can add nuance to research on receiver effects.

The hyperpersonal model has been probed in online dating through the modality switching perspective, which considers the roles of both idealization and anticipated future interaction in initial CMC interactions. *Modality switching* involves moving from one communication platform to another, typically from first meeting online to meeting in-person (Ramirez & Zhang, 2007). The modality switching framework combines the selective self-presentation of the sender with the asynchrony of the channel and a consideration of anticipated future interaction to offer a glimpse into what outcomes may stem from receiver idealization. Ramirez and Zhang (2007) found that timing was important in this switch: Partners who met sooner, rather than later, were more likely to report positive outcomes, including better evaluations of a potential partner. CMC-only partners who never met face-to-face maintained positive impressions, perhaps because their impressions of the partner were not challenged (Ramirez & Zhang, 2007). However, those who waited too long to meet were disappointed with the in-person meeting, likely because the individual they were meeting could not live up to the expectations developed for them via their ongoing hyperpersonal interactions. As individuals considered their future interactions with the potential partner, they began to idealize them more. An important next step is to understand the cognitive mechanisms facilitating such idealization.

The hyperpersonal model is a well-established, long-tested communication theory. Its core components have been tested in CMC settings including online dating, in virtual communities, and in organizational settings. Different CMC channels can facilitate selective self-

presentation and asynchronous communication. As shown in the modality switching perspective, the hyperpersonal model's propositions about the role of future interaction and subsequently developing expectations for the other individual are supported. However, it has not been clarified how individuals think about each other when engaging online. Walther and colleagues (2015) suggest that there are still gaps in our understanding of the hyperpersonal model, particularly when it comes to understanding those situations where effects arise and are stronger: "[The hyperpersonal model] needs greater specification of when hyperpersonal processes should be expected to arise, and the model may draw on other theories to help do so" (p. 388). Although the hyperpersonal model is well-established, a newer theoretical concept may further illuminate the underpinnings of the hyperpersonal model.

Chapter 5. Imagined Interactions

Individuals spend a great amount of time thinking about their current or desired relationships, including romantic, friendly, familial, and work relationships. They even spend time thinking about strangers they have encountered and people they have yet to meet. Relational daydreaming that focuses on the upcoming interactions or previous conversations one has had is referred to as an imagined interaction (Edwards, Honeycutt, & Zagacki, 1989). An *imagined interaction* (II) involves mentally replaying and restructuring previous conversations or planning how future interactions will be enacted.

Honeycutt and Cantrill (2001) consider IIs a form of social cognition, or a way that humans think about, reflect on, and plan the relationships they have. IIs can help individuals rehearse messages while anticipating responses to those messages. They can also use IIs to review previous conversations and practice ways the conversations might have gone differently. IIs help to explain how individuals create and maintain relational development expectations for any number of potential partners in a number of settings, both past and future (Honeycutt & Cantrill, 2001).

An II primarily comprises thinking related to a verbal script as well as supporting imagery in a potential or previous interaction (Honeycutt, Vickery, & Hatcher, 2015). IIs are unlike inner speech, as inner speech is conceptualized as a monologue. IIs, unlike inner speech, require other characters to be present (Honeycutt, 2019). IIs have been studied in numerous contexts, both by Honeycutt and others. IIs have been studied in comparison to mindfulness or mindlessness (Honeycutt, 1991), in relation to their daily use (Honeycutt et al., 2015), and in understanding how IIs help in relational talk, particularly in marriages (Honeycutt & Wiemann, 1999). IIs have been studied in relation to racial inequalities and the potential of reducing

prejudice through their use (Bergsieker, Shelton, & Richeson, 2010). Essentially, any instance where there is the potential for interpersonal communication lends itself to daydreaming that interaction. In addition to planning future interactions, every interaction humans have can be replayed and reconsidered over and over again, even reenacted to have different outcomes. IIs could help someone to keep a relationship intact or rehearse its ending; an II can also assist in the initiation of a new relationship altogether.

Individuals everyday think about the interactions that they have had and will have with others, including romantic partners, parents, coworkers, friends, and many others. IIs can be retroactive or they can be future-oriented. However individuals are using them, IIs are frequently used for their features and functions.

Features of IIs

Certain features and functions can distinguish IIs (Honeycutt, 2015). Research has identified seven features that an II may have. These features are not consistent for every II that an individual will have, and different features may be present depending on the communicative encounter an individual is imaging.

Frequency, how often a particular II occurs, is one attribute (Honeycutt, 2015; Honeycutt & Sheldon, 2018). Frequency of IIs can predict openness to others and one's relational satisfaction (Honeycutt, Pence, & Gearhart, 2013). *Emotional valence* is another feature; IIs can range in how enjoyable they are or are not for the individual experiencing them. If an II comes before a real interaction, *discrepancy* is also a feature. An II may vary from the actual interaction, should the interaction occur. Discrepancy can occur through both rehearsal for an upcoming conversation and review of a conversation that has already happened (Honeycutt & Sheldon, 2018). Similarly, an II can be *proactive* or *retroactive*, meaning it can involve a

forthcoming or previous interaction (Bodie et al., 2013). A proactive II is future-oriented; when someone is using a proactive II, they are thinking about upcoming conversations, not those that have already happened (Honeycutt, 1991). A particular character may dominate the II, making *dominance* another feature (Honeycutt, 2015).

The *specificity* of an II is also a feature, as some IIs may contain more or less details than other IIs. When individuals have IIs using the specificity feature, they are considering all of the aspects of a possible interaction (Honeycutt et al., 2009). IIs can vary in their specificity, including who is present in the II, where it is taking place, and when (Zagacki, Edwards, & Honeycutt, 1992). For an individual who has multiple IIs, *variety* becomes a feature. Variety can mean the number of topics that IIs cover or the variety of partners the individual images engaging with (Honeycutt, 2015; Honeycutt & Sheldon, 2018).

Functions of IIs

The functions of IIs are similar to the features of IIs: Not all functions are required to be present in every II. The six functions of IIs are: (1) Maintaining relationships, (2) managing relational conflict, (3) rehearsing messages prior to a relational conversation, (4) aiding individuals in self-understanding, particularly through clarifying one's own thoughts and feelings, (5) providing emotional catharsis as a way of relieving stress from interactions, and (6) compensating for a lack of real interaction.

The relational maintenance function of IIs draws on similar research conducted by Dindia and Canary (1993). Relational maintenance has been defined as keeping a relationship in existence or in a specific state (instead of escalating the relationship to a new phase; Dindia, 2003; Dindia & Canary, 1993). By imagining an interaction with a partner, whether a romantic partner or a platonic friend, one can manage the relationship and its trajectory (Honeycutt &

Cantrill, 2001; Honeycutt & Keaton, 2012). IIs can be used to improve overall relational satisfaction (Honeycutt & Keaton, 2012). The management of relational conflict is similar to management of the whole relationship: After an episode where partners get into a fight, for instance, they can take time to think through their next steps (Honeycutt, 2003). They can think about what they might say about the conflict later and can imagine how the other will respond (Honeycutt & Cantrill, 2001).

Instead of rehearsing messages to achieve a goal with another individual or to manage a relationship, one might experience an II that centers on themselves to promote self-understanding (Honeycutt, 2015). Though other individuals may be present in the II, an imaginer may think about why they said something or acted a certain when (Honeycutt, 2003). Through this reflection, the others in the II are secondary; the individual doing the imagining is focused on learning about themselves (Honeycutt, 2015).

Other functions of IIs include emotional catharsis and compensation for a lack of regular interaction. These functions in particular draw on social skills explanations of interpersonal communication, allowing individuals to hone in on appropriate reactions and expressions without having to do so in front of a conversational partner. The catharsis function of IIs has been show not just to relieve tensions surrounding a communicative encounter, but to act as an uncertainty reducer (Honeycutt, Choi, & Deberry, 2009; Vickery, Keaton, & Bodie, 2015). Cathartic IIs helped participants to more specifically imagine encounters and manage uncertainty around them. Those who lack social connections, on the other hand, are able to imagine interactions with others who are not present to reduce feelings of loneliness (Honeycutt, 2015).

The rehearsal function of IIs may be the most commonly used function (Honeycutt, 2015). Rehearsal is also likely the most relevant function when considering hyperpersonal

interactions, as rehearsal may be part of the cognition a receiver engages in when thinking about the sender and their future interactions. Individuals can engage in rehearsal of IIs to achieve numerous goals; many kinds of interactions can be imagined and planned through use of IIs. Using the rehearsal function of IIs can help individuals to overcome communication apprehension (Bodie et al., 2013; Choi, Honeycutt, & Bodie, 2015). Participants in one study were either told to rehearse a speech that would then be given in front of an audience or were distracted prior to giving the speech. Those participants who were able to rehearse had more specific IIs than those in the non-rehearsal group (Choi et al., 2015). Specificity of IIs suggests greater planning of the communication, as individuals think more about what might be involved in the encounter. Specificity also aids individuals in recall of a scene within an II. Thus, together, rehearsal and specificity predicted the greatest reduction in communication apprehension when individuals were going to give a public speech (Choi et al., 2015). Specific, rehearsed IIs led to the most improved communication.

Chapter 6. The Hyperpersonal Model and Imagined Interactions

Hyperpersonal interactions need time to occur (Walther, 1997). A receiver does not idealize a sender without the passage of time, allowing for the accumulation of messages and impressions (Walther, 1996, 1997, 2007). As more messages are sent, though, how the receiver is thinking about these messages and what is leading to idealization still needs to be interrogated. The imagined interactions framework (Honeycutt, 2015) may add clarity to this thinking-of-other process that is a key part of the hyperpersonal model.

Certain features and functions of IIs can be integrated with the hyperpersonal model to better understand the full process of idealization. The rehearsal function of IIs has been shown to reduce communication apprehension and increase communication competence in FtF settings (Bodie et al., 2013). Rehearsal also leads to greater confidence in the outcomes of conversations (Choi et al., 2015). Individuals who are rehearsing for FtF interactions can also rehearse for online interactions. Use of CMC channels can reduce communication anxiety and can aid those who suffer from social anxiety (High & Caplan, 2009). Blending the rehearsal function of IIs with CMC can allow for greater clarity into the planning of CMC interactions. Rehearsal also aligns with the asynchronicity and editability of some CMC channels, as outlined by Walther (1994, 1995, 1996). CMC users can edit messages and take advantage of timing when crafting messages, perhaps rehearsing what they might say to another and anticipating how the interaction may unfold (Walther, 1996, 2007).

Like the rehearsal function, the II feature of proactivity may help in explaining how individuals plan for CMC interactions. A future-orientation combined with rehearsal when thinking about a CMC partner may further increase idealization of that partner, as a future-orientation suggests the passage of time and additional thinking as required by the hyperpersonal

model (Walther, 1996). Proactivity aligns with anticipated future interaction, such that individuals having proactive IIs could be thinking about their next interactions with a CMC partner (Gibbs et al., 2006; Honeycutt, 2015; Walther, 1994).

IIs that are more specific are often more pleasant and closer to real-life interactions (Zagacki et al., 1992). Specific IIs are also more likely to reduce communication anxiety (Honeycutt et al., 2009). Thus, specific IIs that are rehearsed can lead to greater reductions in communication anxiety. In this way, specific, rehearsed IIs with an online interaction partner may also add clarity to how idealization happens via CMC.

Overall, IIs can be used to increase relational satisfaction (Honeycutt & Keaton, 2012). Individuals who had frequent, specific, and proactive IIs with relational others reported improvements in their relationship satisfaction (Honeycutt & Keaton, 2012). Frequent IIs also predict one's openness to others, which in turn can also predict relationship satisfaction (Honeycutt et al., 2013). Using IIs in this way can also predict future relationship satisfaction. Thus, the combination of frequent, specific, and proactive IIs may also be able to explain how one comes to idealize another online. The existing research demonstrates that individuals feel more positively about those they already know when having these kinds of IIs about them; it is worth extending this framework to CMC-first or CMC-only relationships to better understand the hyperpersonal model (Honeycutt & Keaton, 2012).

Research related to IIs has suggested the possibility of an idealization effect but has yet to test this possibility. In discussing the feature of compensation, Bodie et al. (2013) consider that individuals may imagine interactions with those who are not present. They suggest that, when a known other is not present, individuals imagine them in a more positive light. Yet they remain skeptical about technology's role in this increased positivity, arguing for more research into

whether or not technology can facilitate positive impressions of others through imagination (Bodie et al., 2013). The assumption of the authors is that idealization of known others would decline through use of technology, yet newer research suggests the opposite: that technology can facilitate idealization in the physical absence of another (Toma & Choi, 2016). It is worth investigating this with unknown others, and it is especially worth considering how IIs may facilitate idealization beyond one function of IIs. There are numerous features and functions that could lead to idealization of a CMC-first or CMC-only partner.

IIs are a way of planning future interactions. As individuals swipe through potential matches on dating apps or seek social support in forums online, they are making judgments about the potential for future interactions with those they are interacting with as they go. When considering CMC and IIs, the hyperpersonal model can both illuminate and be illuminated by IIs. Integrating IIs into the hyperpersonal model as a way of explaining idealization via social cognition offers insight into a process that has been long discussed and yet rarely tested (Walther et al., 2015). The hyperpersonal model can also be used to push the concept of imagined interactions further, allowing a test of what IIs can predict and how they might be used in theoretically meaningful ways.

Chapter 7. The Current Study

The aims of the current study were as follows: (1) to conceptually clarify idealization as a process within the hyperpersonal model; (2) to investigate the role of IIs as a cognitive mechanism for explaining idealization over time; and (3) to investigate other predictors of idealization to better explain the hyperpersonal model. The hyperpersonal model suggests that idealization is a receiver effect occurring as a result of interaction with a sender who is selectively self-presenting. This study sought to isolate idealization and to understand the process through which idealization develops, considering the cognitions one is experiencing through repeated interactions.

Hypotheses

Social Anxiety Hypotheses

Individuals with social anxiety are worried about evaluations of themselves by others (Schlenker & Leary, 1982). Social anxiety includes concerns about self-presentation, such as what one says and does when engaging with others. The prospect of interacting with others is anxiety inducing for those with social anxiety, and thus should predict uncertainty throughout interactions with a new and unknown acquaintance:

H1: Greater social anxiety will predict greater uncertainty at all time points (T1, T2a, T2b, T3).

In addition to increasing uncertainty, social anxiety should also increase uncertainty discrepancy. Those who are socially anxious likely experience high uncertainty while desiring less uncertainty, leading to a greater discrepancy than those who are not socially anxious. This would be especially true in situations where socially anxious individuals are interacting with unknown others for the first time:

H2: Social anxiety will lead to a greater discrepancy between desired and actual uncertainty at all time points (T1, T2a, T2b, T3).

Socially anxious individuals are worried about how they are going to present themselves to others (Schlenker & Leary, 1982). Often, socially anxious individuals turn to the Internet for interactions, as online interactions can provide a greater sense of control compared to FtF interactions (Caplan, 2005, 2007). Even when the Internet is involved, though, these individuals still try to plan for and anticipate how conversations may unfold (High & Caplan, 2009). Thus, socially anxious individuals are more likely to use imagined interactions as they prepare for conversations with new acquaintances:

H3: Greater social anxiety will lead to greater a) frequency of IIs (T3) and b) specificity of IIs (T3).

Uncertainty Hypotheses

Individuals like being able to explain and predict what is happening in their surroundings (Berger & Bradac, 1982). This explanation happens in part through an individual's information seeking, particularly about those who have entered the environment and are not yet known (Hendrick, 1981). As more becomes known about another person, uncertainty is reduced. Individuals in this study will interact with each other twice, meaning that they will have multiple opportunities to information seek.

Some individuals desire more uncertainty than others (Solomon & Knobloch, 2001). Uncertainty can be exciting or interesting; it is not always anxiety-inducing. However, as individuals continue to interact with an unknown other, their desired and actual uncertainty should come closer, regardless of their motivation for uncertainty. Thus:

H4: The discrepancy between desired and actual uncertainty will be greatest after the initial interaction (T2a) and continue to reduce at each subsequent time point (T2b, T3).

For those with a high discrepancy between actual and desired uncertainty, there may be greater attempts to reduce the discrepancy (Afifi & Weiner, 2006). In this instance, individuals may try to imagine how a conversation will go as an uncertainty reducer, making their actual uncertainty closer to their desired uncertainty. Thus:

H5: Greater discrepancy between desired and actual uncertainty (T2b) will lead to more a) frequent IIs (T3) b) and specific IIs (T3).

Affordances Hypotheses

When using a CMC channel, one may feel more connected to an interaction partner if they feel they are truly able to convey their own emotions and receive emotional communication from another (Fox & McEwan, 2017). Bandwidth of a channel may also amplify the limited cues made available by the CMC system, furthering the positive impressions that are developing about another. Thus:

H6: Perceived bandwidth of the channel (T2) will decrease uncertainty about the partner (T2a, T2b, T3).

Imagined Interactions Hypotheses

Episodic use of II features can help an individual in anticipating future interactions, including the conversational planning that may accompany this. IIs can also be used to reduce uncertainty about future encounters; IIs have been used in research on conversation planning (Honeycutt, 2003; Honeycutt & Cantrill, 2001). When IIs are used in studies of communication apprehension, for example, those who used IIs experienced reduced anxiety (Bodie et al., 2013).

Anticipating future interaction with another should, then, increase one's IIs about the future encounter. The episodic nature can aid in reducing uncertainty about the coming encounter.

Similarly, as one has more frequent IIs about a new partner, one should also think more specifically about the coming interaction. Previous research on IIs suggests that those who engaged in more IIs had IIs with greater detail about scenery and the individuals who were part of the interaction (Choi et al., 2015; Honeycutt, 2015). If someone is anticipating future interaction with a new partner and trying to reduce anxiety about the encounter, specific IIs can further reduce potential anxieties about that encounter. Thus:

H7: Social anxiety will predict greater a) frequency of IIs and b) specificity of IIs, which will in turn decrease uncertainty discrepancy (T3).

As one uses IIs, they may feel that they are getting to know the person they are imagining better (Choi et al., 2015; Honeycutt & Cantrill, 2001). In this process, they may give them attributes that they do not have but that the imaginer assigns to them (Honeycutt, 2015; Honeycutt & Cantrill, 2001). Thus, in imagining interactions, one may think that they want to continue interacting with the individual as they have already come to know them through the IIs.

H8: A) Frequent and b) specific IIs will increase desired future interaction (T3).

Similarly, as one has more specific and frequent IIs, they feel more comfortable in their communication environments and with interaction partners (Bodie et al., 2013; Choi et al., 2015; Honeycutt, 2015). In using IIs for communication planning, individuals may think of ways that their communication partner could be the best possible version of themselves; they are already getting to know the interaction partner through the facets of one's imagination, which may in turn mean hoping for positive outcomes (Bodie et al., 2013). The more frequent and specific IIs

are, the more likely they are to have positive outcomes for those who use them (Honeycutt, 2015). Thus, in thinking about a new acquaintance:

H9: A) Frequency of IIs and b) specificity of IIs will increase idealization (T3).

Anticipated Future Interaction Hypotheses

The possibility of meeting a relatively unknown other can produce feelings of uncertainty, as individuals have limited information about the other and therefore cannot set and manage expectations for their future interactions (Solomon & Knobloch, 2001). Anticipating future interaction with a new acquaintance should increase one's feelings of uncertainty, thereby increasing the discrepancy between desired and actual uncertainty:

H10: Anticipated future interaction will increase uncertainty discrepancy (between T2a and T2b).

The rehearsal function of IIs can also help in the management of interpersonal uncertainty (Honeycutt & Cantrill, 2001). Rehearsing future interactions can make individuals more comfortable with anticipated interactions (Honeycutt, 2015). When individuals are aware that they are going to interact with a new acquaintance in the future, they should engage in rehearsal to prepare for that conversation (Honeycutt, 2015). Thus:

H11: Anticipated future interaction will lead to greater rehearsal of IIs.

Research on couples in existing relationships suggests that they engage in positive ruminations about each other, more so when they are apart (Honeycutt, 2003). Research in modality switching suggests that newly acquainted individuals think about each other in positive ways, particularly when they are thinking about meeting at a future time (Ramirez & Zhang, 2007). Thinking about future interactions with a partner can alleviate uncertainty about the interaction as well as about the individual with whom one is conversing. Positive ruminations are

thought to lead to idealization of another, particularly when there is a likely future encounter between the two (Stafford & Merolla, 2007). As individuals expect to interact again after an initial meeting, they should think about each other in positive ways. This process of idealization requires a cognitive mechanism to understand.

Further, individuals who interact as CMC-first partners have limited cues to work with about one another. Those limited cues that are available are likely to be intensified by a receiver in ways that make the receiver feel positively about the sender (Jiang et al., 2011; Lea et al., 2001; Rains et al., 2019). Intensification of limited cues is part of the path to idealization, as one ruminates on future interactions with an online partner amplifying those cues (Ramirez & Zhang, 2007). As individuals plan future interactions with a CMC-first partner, with access to only limited information about them, individuals should think positively about the sender (Walther, 1996, 1997). It is not enough to know that a future interaction is coming; individuals need to think on the limited cues that have been provided to them about the sender in order to achieve idealization.

Individuals can imagine future interactions with others in different ways, taking advantage of both features and functions of IIs. Functions of IIs appear to be more stable characteristics (Honeycutt, 2015; Van Kelegom & Wright, 2013). Those who use IIs for certain functions tend to use them for those functions with regularity. Features of IIs, on the other hand, are more episodic and can be adjusted depending on the specific communication an individual is facing (Van Kelegom & Wright, 2013). Someone using an II may be using it for a similar function over time while engaging with different features.

H12: Anticipated future interaction will increase a) frequency of IIs (T3) and b.) specificity of IIs, which will in turn increase idealization (T3).

Anticipating future interaction with another does not guarantee that the future interaction is wanted by an individual. In fact, being told that one may interact with someone again may reduce desired future interaction. Inducing someone to expect a future interaction can take away wanted uncertainty about the relationship or can increase one's anxiety about interacting again. Thus:

H13: Anticipated future interaction (T2) will decrease desired future interaction (T2b, T3).

Theoretical Boundary Conditions

Multiple theoretical boundary conditions were also tested in this work. Two questions emerged from the literature on IIs specifically that may offer greater theoretical insight into this framework. Rehearsal, a proposed function of IIs, is not conceptually distinct from proactivity of IIs. When one rehearses using an II, they are thinking about what they may say in a communicative situation and planning for responses from another (Honeycutt, 2015). Proactivity is a proposed feature of IIs; when one has a proactive II, it is future oriented, meaning individuals are thinking about how future encounters may unfold (Honeycutt, 2015). These definitions are not conceptually distinct from one another; they have overlaps in how IIs might be used and when. Further, given that existing research on IIs relies heavily on the rehearsal function, I ask:

RQ1: Is the rehearsal function of imagined interactions a consistent function of an imagined interaction?

Further, frequent and specific IIs are proposed to increase one's idealization of their conversation partner. However, it remains unclear if there is an indirect relationship between IIs and desired future interaction through idealization. If one is anticipating future interaction, IIs

may help for planning that encounter, making one feel more comfortable. However, it remains unclear whether or not IIs may lead one to desire that future interaction. Thus:

RQ2: Is there an indirect relationship between imagined interactions and desired future interaction through idealization?

Chapter 8. Method

Sample

After receiving IRB approval, this study was posted in the Ohio State University communication research pool online portal for participants to sign up. Participants could choose this study from among a list of studies in which they could participate and received course credit for their participation. Participants had to be 18 years old or older to participate and had to be able to both understand and be able to type in English. Participants had to participate in all three time points (T1, T2a and T2b, and T3) to be included in the sample. There were initially 108 people signed up; of those, 19 failed to complete the first survey or did not show up to the first lab session. Five individuals did not show up to the second lab session, and another five failed attention checks in the second lab session. There was no significant difference is drop-out across conditions for the second lab session. The lab study ran from January 2020 through the first week of March 2020. In the second week of March, in-person data collection was suspended due to the COVID-19 outbreak and a suspension of all in-person research studies in The Ohio State University School of Communication.

The final sample ($N = 79$) consisted of 56 women and 23 men, with an average age of 19.75 years ($SD = 1.78$). Participants were 48.1% Asian or Asian American; 32.9% White; 7.6% Black or African American; and 3.8% Hispanic/Latino/a/x, with 10.2% identifying as bi- or multi-racial. Participants were also asked to identify their sexual orientation; the majority of participants (91.0%) were heterosexual; 1.3% were gay, 1.3% were lesbian, and 6.4% were bisexual.

Procedure

This study consisted of four time points, starting with an online survey sent to participants upon signing up for the study (time 1). Participants came to a lab to have a text-based chat with an unknown partner, a confederate research assistant hired for the study, at time 2A. After the first chat and a survey, participants were given a distractor task before receiving an experimental manipulation and a follow-up survey (time 2B). In the experimental manipulation, participants were either told they would meet their partner in a face-to-face interaction at the next lab session (n = 42) or were told that they were nearly done with the first session, with no additional insight into the chat partner (n = 37). Participants came back to the lab two days later for a second chat; upon arrival, they completed a survey about any thinking about their partner from the previous two days (time 3).

Confederates

Confederates were five undergraduate research assistants hired for this project. Confederates were trained for two weeks prior to the start of the study. Training consisted of practice chats with friends or family members to get comfortable with the possible topics (drawn from the profile questions participants were asked) that they would chat about as well as to practice remaining anonymous. Confederates were given strict instructions to ensure that they did not share identifying information about themselves (similar to what participants were told to do; see Appendix A for instructions to research assistants); confederates also used numerical identifiers in the chat. Because the confederates were also undergraduate students, they were not allowed to share what courses they were in, as well as being unable to share their name or a nickname. However, they could share what their major was to achieve a sense of similarity.

Time 1

During recruitment, participants were told that they would be chatting online with a new partner, someone they had never met. Upon signing up for the study, participants were emailed a link to a survey. This first survey had to be completed prior to individuals coming to the lab; this first survey started with the consent form. The first survey included a section where participants could make a "profile" about themselves. Participants were not explicitly told that the profile would be sent to their partner; instead, they were only told that the information may be made visible to others. Participants included who their favorite musical artist (or artists) was, their current favorite movie, their favorite place they have traveled to, their interest in museums and true crime, as well as their astrological sign (due to astrology's popularity among Millennials and Generation Z, Smallwood, 2019). At the end of this survey, participants also received a randomly generated ID number and were told to share this number in the chat in place of their first name, nickname, or other identifier. This allowed participants to remain anonymous to who they were chatting with, in hopes that they may not recognize their chat partner from a previous class or other campus engagement.

Time 2A

Participants came to the first lab session and were directed to a private computer. Participants logged into a text-based chat hosted by PureChat in a private browsing window. PureChat is customizable, and the chat for the study was made so that participants only had to put in their five-digit number to initiate the chat. Participants were instructed to share no personal, identifiable information in the chat (see Appendix B for instructions to participants). This included their first names, last names, or nicknames, as well as information such as specific classes that they might be enrolled in (as a chat partner might be able to identify them in a small

class). Therefore, no personal participant information was inputted into the system. Participants could only send text messages (instant messages) or emojis provided by PureChat. PureChat also automatically generates transcripts from chats, so all transcripts were exported for future analysis.

Participants were given a cover story about their chat partner; they were told that they would be chatting with another student and that they could chat about a variety of topics. Topics were then suggested, based off of the questions that participants previously answered (for example, "You might want to chat about music or movies"). Participants then chatted for approximately 20 minutes with a confederate. After chatting, participants were given a link to the next survey (T2A), where they completed items measuring feelings about and perceptions of their chat partner, including feelings of uncertainty about the partner. At the end of the T2A survey, participants were given a distractor task. Participants were given a word search on a neutral topic (the 12 months of the year) and told to take approximately five minutes to complete this word search.

Time 2B

Following completion of the distractor task, participants were told that they would either meet their partner face-to-face in the next lab session or were told nothing else about the partner (just that they were nearly done with the first lab session). This was done to induce anticipated future interaction and to be able to test differences between those who should more strongly feel anticipation (following Walther, 1994). Another survey (T2B) asking the same questions as before in regards to their uncertainty about their partner and their desired uncertainty was then administered. When participants completed the second survey, they were thanked for their participation and given a reminder to return for their next lab session in two days.

Time 3

At T3, participants returned to the lab for a second time. This second lab session occurred exactly two days after the first. Upon arriving to the lab, participants were given another survey to complete and were given another cover story about their chat partner; they were told that they would be chatting again with the same rules applied upon completion of the survey. Participants completed another survey (T3) that survey measured their feelings about their partner, as well as asked about their imagined interactions with their partner from the previous chat. Upon completion of the survey, participants chatted with their partner once more. However, this study only analyzes results from T1 through T3. The second chat and subsequent survey items will be analyzed at a later time.

Measurements at Time 1

All items are available in Appendix C. This survey was administered online.

Gender identification. Participants were asked their gender identification. Participants were not limited to male or female, but this sample only identified as male or female. Gender identification was included as a covariate in all analyses and was coded as male = 0 and female = 1.

Adult attachment. Adult attachment was measured using 12 items from the experiences in close relationships (ECR) short form scale (Wei, Russell, Mallinckrodt, & Vogel, 2007). These items were measured on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*); six items measured avoidant attachment ($M = 2.31$, $SD = 0.73$; $\alpha = 0.77$) and six items measured anxious attachment ($M = 2.96$, $SD = 0.81$; $\alpha = 0.75$).

Uncertainty. Uncertainty about one's partner was measured with eight items adapted from Knobloch and Solomon's (1999) relational uncertainty measure, following their

recommendations for context-specific adaptation of items (Knobloch & Solomon, 2003). Items were measured on five-point Likert scale, from 1 (*very uncertain*) to 5 (*very certain*), $M = 3.50$, $SD = 0.92$, $\alpha = 0.92$.

Uncertainty discrepancy. One's uncertainty discrepancy was measured by asking participants for their desired level of uncertainty using adapted items from Knobloch and Solomon (1999). The final desired level was subtracted from the actual level of uncertainty ($M = -0.49$, $SD = 0.92$). Items for desired uncertainty were measured on five-point Likert scale, from 1 (*very uncertain*) to 5 (*very certain*), $M = 4.00$, $SD = 0.85$, $\alpha = 0.94$.

Trait social anxiety. The 18-item Social Phobia and Anxiety Index (de Vente, Majdandžić, Voncken, Beidel, & Bögels, 2014) was used to measure participants' trait social anxiety. Items were measured with a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*), $M = 2.72$, $SD = 0.66$, $\alpha = 0.89$.

Gender identity. Participants were asked to pick the gender identity that they most identified with. Participants were not limited to a gender binary; however, participants in this sample only identified themselves as male or female. Thus, 70.9% (56) were self-identified females and 29.1% (23) were identified as males. For analysis purposes, males were coded as 0 and females as 1.

Measurements at Time 2A

All items are available in Appendix D. This survey was administered on a lab computer after the first chat was completed.

Perceived similarity of partner. Three items were used to measure perceived similarity (based on two items from Tidwell, Eastwick, & Finkel, 2012). These items were also measured

using a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.79$, $SD = 0.80$, $\alpha = 0.73$.

Liking of partner. Liking of one's partner was measured using McCroskey and McCain's (1974) five-item social attraction scale. These items were measured using a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*), $M = 3.91$, $SD = 0.66$, $\alpha = 0.81$.

Uncertainty (T2A). Uncertainty about one's partner at T2A was measured again with eight items adapted from Knobloch and Solomon's (1999) relational uncertainty measure, using a five-point Likert scale, from 1 (*very uncertain*) to 5 (*very certain*), $M = 3.26$, $SD = 0.79$, $\alpha = 0.89$.

Uncertainty discrepancy (T2A). Desired uncertainty was again measured using the adapted items from Knobloch and Solomon (1999) ($M = 3.55$, $SD = 0.89$, $\alpha = 0.94$), and uncertainty discrepancy was derived by subtracting the desired from the actual amount of uncertainty, following Afifi and Weiner (2004) ($M = -0.30$, $SD = 0.73$).

Idealization. Idealization of one's interaction partner was measured using an adapted version of Fowers and Olson's (1993) five-item idealistic distortion scale, written to reflect thoughts and feelings about a specific chat partner. Items were measured on five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.81$, $SD = 0.64$, $\alpha = 0.72$.

Perceived bandwidth of channel. Perceived bandwidth was measured using items from the bandwidth subscale of the perceived social affordances of communication channels scale (Fox & McEwan, 2017). Items were measured using a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.47$, $SD = 0.87$, $\alpha = 0.90$.

Measurements at Time 2B

All items are available in Appendix E. This survey was administered on a lab computer after the distractor task was completed (Appendix F).

Anticipated future interaction. Three items measuring anticipated future interaction were developed for this work, drawing on Walther (1994). These items were also measured using a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*), $M = 3.32$, $SD = 0.85$, $\alpha = 0.77$.

Uncertainty (T2B). Uncertainty was measured again at T2B using a five-point Likert scale, from 1 (*very uncertain*) to 5 (*very certain*), $M = 3.24$, $SD = 0.82$, $\alpha = 0.90$.

Uncertainty discrepancy (T2B). Desired uncertainty was again measured at T2B ($M = 3.61$, $SD = 0.96$, $\alpha = 0.96$), and uncertainty discrepancy was derived by subtracting the desired from the actual amount of uncertainty ($M = -0.36$, $SD = 0.63$).

Desired future interaction. Participants' desire to have future interactions with their chat partner was measured with items similar to the anticipated future interaction scale (Walther, 1996) and measured on a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.81$, $SD = 0.71$, $\alpha = 0.75$.

State social anxiety. Participants' state social anxiety was measured at T2B using Kashdan and Steger's (2006) scale. These items were measured on a five-point Likert scale, 1 (*strongly disagree*) to 5 (*strongly agree*). The scale was reliable, $\alpha = 0.90$ ($M = 2.29$, $SD = 0.91$).

Measurements at Time 3

All items are available in Appendix G. This survey was administered on a lab computer at the start of the second lab session; the second lab session occurred two days after the first.

Frequency of imagined interactions. All imagined interaction measures were prefaced with the definition of an imagined interaction for participants to read. Frequency of imagined interactions was measured using an adapted version of the four-item frequency subscale from the survey of imagined interactions (SII, Honeycutt, 2010). Items were rated on a five-point Likert scale, from 1 (*never*) to 5 (*frequently*), $M = 1.80$, $SD = 0.73$, $\alpha = 0.85$.

Specificity of imagined interactions. Specificity of imagined interactions was also measured using an adapted subscale of the SII. The adapted subscale for specificity included four items. These items were rated on a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 2.57$, $SD = 0.95$, $\alpha = 0.85$.

Proactivity of imagined interactions. Proactivity of imagined interactions was measured using an adapted subscale of the SII. These items were rated on a five-point scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 2.98$, $SD = 1.05$, $\alpha = 0.76$.

Valence of imagined interactions. The valence of imagined interactions was measured using an adapted subscale of the SII; higher scores indicate positive valence, lower scores indicate negative valence. These items were rated on a five-point scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.36$; $SD = 0.94$, $\alpha = 0.67$.

Rehearsal of imagined interactions. To measure the rehearsal function of IIs, an adapted subscale of the SII was also be used. These items were rated on a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 2.61$, $SD = 1.07$, $\alpha = 0.90$.

Desired future interaction. Participants' desire to have future interactions with their chat partner was assessed again at T3 and measured on a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*), $M = 3.35$, $SD = 0.69$, $\alpha = 0.74$.

Uncertainty. Uncertainty was again measured with the adapted Knobloch and Solomon (1999) scale at T3, $M = 3.19$, $SD = 0.73$, $\alpha = 0.88$.

Uncertainty discrepancy. Desired uncertainty was assessed at T3 ($M = 3.48$, $SD = 0.94$, $\alpha = 0.94$); uncertainty discrepancy was determined by subtracting desired uncertainty from uncertainty ($M = -0.32$, $SD = 0.81$).

Idealization. Idealization was measured again at T3 using the adapted items ($M = 3.44$, $SD = 0.58$, $\alpha = 0.70$).

State anxiety. Participants' state anxiety was again measured using items from Kashdan and Steger (2006) ($M = 2.29$, $SD = 0.87$, $\alpha = 0.89$).

Manipulation Checks

Manipulation checks were included to ensure that the study followed existing hyperpersonal literature (Walther, 1994, 1996). Therefore, both similarity and liking were included as both measures and manipulation checks. Participants generally felt similar to their chat partner ($M = 3.79$, $SD = 0.80$), further confirmed during debriefing with participants. Participants also liked their chat partners ($M = 3.91$, $SD = 0.66$), also confirmed during debriefing discussions.

The anticipated future interaction (AFI) manipulation was checked at T2B, immediately following the induction. The two groups were not meaningfully different in their anticipation of future interactions, $t(77) = -1.59$, $p = .12$. The group anticipating future interaction had a slightly higher mean score for AFI ($M = 3.48$, $SD = 0.81$) compared to those who did not receive the manipulation ($M = 3.17$, $SD = 0.87$), but both score above the midpoint on expecting a future interaction. The manipulation was probed during the debriefing and revealed that most

participants expected some future interaction with their partner. Thus, AFI is tested as a continuous variable in these analyses, except where noted.

Chapter 9. Results

Exploratory Factor Analysis

Idealization items were subject to an exploratory factor analysis with varimax rotation to ensure items were one factor (Kline, 1994). Varimax rotation allows for the sum of the variance of squared loadings to be maximized, which results in higher loadings for a smaller number of items (Kline, 1994; Manly, 2004). Items loaded onto one factor explaining 50.74% of the variance. Factor loadings ranged from .46 to .84. The full factor loadings are available in Table 1.

Imagined interaction items were also subject to an exploratory factor analysis using varimax rotation (Howard, 2016; Kline, 1994). The imagined interactions items were largely subject to rewritten operationalizations; thus, these items were subject to an exploratory and not a confirmatory factor analysis. Items loaded onto four factors, explaining a total of 70.59% of the variance. Items had to load at .40 or above to be included in their primary factor (Howard, 2016). Further, items also had to be below .35 on other factors, if there was cross-loading (Howard, 2016). Specificity was the first factor; four items loaded onto the specificity component, as expected, explaining 18.83% of variance. Factor loadings for specificity ranged from .69 to .83.

Frequency of IIs was also one component with three items, explaining 18.42% of the variance. Factor loadings for frequency items ranged from .72 to .85. Rehearsal of IIs loaded onto another component, explaining 18.03% of the variance and with loadings ranging from .50 to .58.

Finally, valence of IIs and proactivity of IIs loaded onto one component, explaining another 15.31% of the variance. The loadings for valence were not strong; these ranged from .32 to .68. One valence item was dropped for its bad loading (.32). The loadings for proactivity, on

the same component, were .55 to .78. All components and factor loadings are available in Table 2.

Hypothesis Tests

Participants' gender identification was controlled for in all analyses. All corresponding tables are in Appendix H. Correlations for key variables are presented in Table 3.

Trait Social Anxiety Hypotheses

H1 suggested that trait social anxiety would predict uncertainty at all time points. Linear regressions tested this relationship. This trended in the predicted direction, with greater trait social anxiety predicting greater uncertainty at T1 (see Table 4). However, this was not significant (b = -0.27, SE = 0.17, p = .12, R = .18); this trend continued at all time points (T2A: b = -0.12, SE = 0.14, p = .39, R = .16; T2B: b = -0.10, SE = 0.15, p = .50, R = .11; T3: b = -0.20, SE = 0.13, p = .13, R = .20). Therefore, H1 is not supported.

H2 predicted that greater trait social anxiety would also lead to a greater discrepancy between one's actual uncertainty and desired uncertainty. This was also tested with multiple regressions, with social anxiety as the predictor. Similarly, H2 trended in the proposed direction, with trait social anxiety predicting a greater discrepancy between actual and desired uncertainty (Table 5). However, this was not significant at T1 (b = 0.16, SE = 0.17, p = 0.35, R = .13) or at T2A (b = 0.18, SE = 0.13, p = .18, R = .18). At T2B, trait social anxiety predicted uncertainty discrepancy, b = 0.31, SE = 0.11, p = .01, R = .33. At T3, the relationship trended again in the proposed direction but was not significant, b = 0.16, SE = 0.15, p = .28, R = .22. H2 is partially supported.

H3 proposed that one's trait social anxiety would increase both frequency of imagined interactions and specificity of imagined interactions. The relationship between trait social anxiety

and II characteristics was tested using linear regression (Table 6). Trait social anxiety did not predict frequency of IIs (b = 0.01, SE = 0.13, p = .97, R = .17); it also did not predict specificity of IIs (b = -0.08, SE = 0.17, p = .63, R = .17). H3 is not supported.

Uncertainty and Uncertainty Discrepancy Hypotheses

H4 proposed that uncertainty discrepancy would decrease over time, with the greatest discrepancy at T2A (after the initial chat) and the least at T3. This was tested using a repeated measures analysis of variance (ANOVA), with uncertainty discrepancy treated as the within-subjects repeated factor. The repeated measures met the conditions of sphericity, reducing the chance of Type I error, Mauchly's W = .97, p = .87. The relationship over time was not linear, $F(1, 74) = 1.49$, p = .23, $\eta_p^2 = 0.02$ (Table 7). However, the within-subjects contrasts analysis showed a quadratic relationship, $F(1, 74) = 7.20$, p = .01, $\eta_p^2 = 0.10$, with discrepancy the greatest at T2B and reduced again at T3 (Table 8). Therefore, H4 is not supported.

H5 proposed that uncertainty discrepancy at T2B would lead to increases in features of IIs at T3. Linear regressions were used to test this relationship (Table 9). Uncertainty discrepancy at T2B did not predict an increase in the specificity of one's IIs (b = 0.16, SE = 0.17, p = .39, R = .19). It also did not predict an increase in frequency of one's IIs (b = 0.17, SE = 0.13, p = .21, R = .22). H5 is not supported.

Perceived bandwidth of the channel was proposed to reduce uncertainty about one's chat partner at all time points for H6. This hypothesis was tested using linear regression (Table 10). Perceived bandwidth of the channel predicted reduced uncertainty about the partner at T2A, b = 0.54, SE = 0.09, $p < .001$, R = .58. H6 is supported.

Imagined Interactions Hypotheses

H7 was tested using the PROCESS Macro for SPSS (Hayes, 2018). A parallel mediation model was used to test trait social anxiety as a predictor of II frequency and specificity, and II frequency and specificity as predictors of uncertainty discrepancy at T3 (Table 11). Model 4 of the macro was used, with 5,000 bootstrap samples. Trait social anxiety did not predict II frequency (b = 0.02, SE = 0.14, p = .87, R = .16), nor did it predict II specificity (b = -0.06, SE = .18, p = .75, R = .16). II frequency did not predict uncertainty discrepancy (b = 0.17, SE = 0.14, p = .22, R = .27). II specificity also did not predict uncertainty discrepancy (b = 0.02, SE = .87, R = .27). The direct effect of trait social anxiety on uncertainty discrepancy was also not significant, b = 0.14, SE = 0.15, p = .32 [95% CI -0.15 to 0.44]. H7 was not supported.

H8 suggested that features of IIs would have a relationship with desired future interaction. This relationship was tested with a linear regression (Table 12). II frequency tended to lead to an increase in desired future interaction, but results were not significant (b = 0.18, SE = 0.12, p = .13). II specificity did not predict desired future interaction (b = 0.04, SE = 0.09, p = .64). The overall R = .26; H8 is not supported.

H9 proposed II features as predictors of idealization at T3 and was tested using a multiple regression model (Table 13). II frequency did not predict increased idealization (b = -0.04, SE = 0.07, p = .67). II specificity, however, did predict increased idealization (b = 0.18, SE = 0.07, p = .02). The R for the overall model was .30. H9 is partially supported.

Anticipated Future Interaction Hypotheses

H10 suggested that uncertainty discrepancy would increase between T2A and T2B as a result of anticipated future interaction. This hypothesis was tested using the PROCESS macro for SPSS (Hayes, 2018). Model 6 of the macro was used to test a serial mediation, with the AFI

manipulation as the independent variable and the manipulation check as the first mediator (though not testing a mediated relationship) (O'Keefe, 2003). Uncertainty discrepancy as T2A was a mediator, with uncertainty discrepancy at T2B the dependent variable. As noted, the AFI manipulation failed, so the manipulation produced no differences in the manipulation check, b = -0.32, SE = 0.19, p = .10, R = 0.19. The manipulation did not predict an increase in uncertainty discrepancy at T2A, b = 0.01, SE = 0.16, p = .94. The continuous measurement of AFI, though, did predict uncertainty discrepancy at T2A, b = 0.27, SE = 0.10, p = .01. The R for this stage of the model was 0.33. A similar trend continued for uncertainty discrepancy at T2B, with the manipulation not predicting discrepancy, b = 0.05, SE = 0.10, p = .62 but AFI as a continuous variable approaching significance in predicting an increase in discrepancy, b = 0.12, SE = 0.06, p = .07. Uncertainty discrepancy at T2A predicted uncertainty discrepancy at T2B, b = 0.57, SE = 0.07, p < .001, overall model R = 0.72. Neither the direct nor indirect effects were significant (all analyses are reported in Table 14). H10 is not supported.

Model 4 of the PROCESS macro was used to test H11, which suggested a relationship between AFI and rehearsal of IIs. The manipulation was the IV, with the continuous manipulation check being used as a mediator and rehearsal of IIs as the outcome. The AFI manipulation did not have a relationship with the AFI manipulation check, b = -0.32, SE = 0.19, p = .10, R = 0.19. The AFI manipulation also did not have a relationship with II rehearsal, b = -0.12, SE = 0.24, p = .60. The continuous AFI variable did predict an increase in rehearsal of IIs, b = 0.37, SE = 0.14, p = .01, R = 0.32. The indirect and direct effects on rehearsal did not achieve significance (all analyses are in Table 15). H11 is supported.

H12 suggested that features of IIs would moderate the relationship between AFI and idealization. Model 14 of the PROCESS macro was used to run moderated mediation analyses

for both frequency and specificity of IIs. Frequency of IIs was tested first. The AFI manipulation had no relationship with the AFI manipulation check, b = -0.32, SE = 0.19, p = .10, R = 0.19. The AFI manipulation also had no relationship with idealization, b = -0.15, SE = 0.13, p = .27. AFI as a continuous variable approached significance in predicting idealization, b = 0.42, SE = 0.21, p = .06. Frequency of IIs did not predict idealization, b = 0.34, SE = 0.38, p = .38, nor did the interaction of continuous AFI and II frequency, b = -0.10, SE = 0.11, p = .37, R = 0.41. The direct and indirect effects of this model were not significant (presented in Table 16).

II specificity was also tested as a moderator using Model 14. The AFI manipulation did not have a significant relationship with the continuous manipulation check, b = -0.32, SE = 0.20, p = .10, R = 0.20. The AFI manipulation also had no relationship with idealization, b = -0.08, SE = 0.13, p = .50. AFI as a continuous variable also did not predict idealization, b = 0.26, SE = 0.20, p = .19, and specificity of IIs did not predict idealization in this model, b = 0.17, SE = 0.26, p = .52. The interaction of AFI and II specificity did not predict idealization, b = -0.02, SE = 0.08, p = .77, R = 0.43. The direct and indirect effects were not significant (results are presented in Table 17). H12 was not supported for either frequency or specificity of IIs.

Finally, H13 predicted that AFI would lead to a decrease in desired future interaction (DFI). Model 4 of the PROCESS macro was used, again with the AFI manipulation as the independent variable and the manipulation check as a mediator. The relationship between the manipulation and manipulation check remained the same, b = -0.32, SE = 0.19, p = .10, R = .19. The manipulation also did not predict DFI, b = -0.20, SE = 0.15, p = .18. Continuous AFI predicted DFI, b = 0.24, SE = 0.09, p = .01, R = 0.37. The direct and indirect effects were not significant (all results are in Table 18). H13 is not supported, as the relationship between AFI and DFI was opposite of what was hypothesized.

Research Questions

The first research question asked whether the proactivity functions of IIs was distinct from the rehearsal function of IIs. Proactivity and rehearsal were highly correlated, Pearson's r = 0.52, $p < .001$, with a strong positive linear relationship. Proactivity and rehearsal tended to trend together, suggesting similarity between the two concepts. Proactivity and rehearsal loaded onto their own factors in the EFA as well, suggesting they are distinct from each other despite high similarity.

The second research question wondered if imagined interaction features might predict idealization, which would in turn predict desired future interaction. The features of frequency and specificity were tested as predictors using the PROCESS macro for SPSS (Hayes, 2018).

In the first model, frequency of IIs was the predictor, with idealization as the mediator and desired future interaction as the outcome (Table 19). PROCESS Model 4 was used for this test. Frequency of IIs did not predict idealization (b = 0.07, SE = 0.09, p = 0.44). Idealization, however, did predict desired future interaction (b = 0.35, SE = 0.14, p = .01). The direct effect of II frequency on desired future interaction was also not significant, b = 0.18, SE = 0.10, p = .08 [95% CI -0.02 to 0.39].

The second model used II specificity as the predictor, idealization as the mediator, and desired future interaction as the outcome, tested using Model 4 of PROCESS (Table 19). Specificity of IIs predicted idealization, b = 0.16, SE = 0.07, p = .01. Idealization predicted desired future interaction, b = 0.40, SE = 0.15, p = .01. The direct effect of specific IIs on desired future interactions was not significant, b = 0.04, SE = 0.08, p = .64 [95% CI -0.13 to 0.21].

Follow Up and Additional Analyses

Additional tests were run following completion of hypothesis testing. These include questions that arose during hypothesis testing and from interpreting the correlations of key variables. Some hypothesis tests were also rerun with the inclusion of previously excluded cases.

Hypothesis Testing

H1 and H2 were reran with participants who failed to come to the lab at T3. These participants were included to improve the power of the tests (an additional *n* of 5 cases was added). There was no significant change in the results of H1 for T1 through T2B. Trait social anxiety trended in the expected prediction, with greater trait social anxiety predicting greater uncertainty about one's partner, but this did not achieve significance at any time point included. At T1, trait social anxiety did not predict greater uncertainty, $b = -0.25$, $SE = 0.16$, $p = .12$, overall model $R = 0.17$. At T2A, this trend continued, $b = -0.18$, $SE = 0.14$, $p = .20$, overall model $R = 0.19$. Finally, T2B was much the same, $b = -0.15$, $SE = 0.14$, $p = .30$, overall model $R = 0.12$.

H2 predicted that trait social anxiety would also predict a greater discrepancy between desired and actual uncertainty. This was not significant at T1, $b = 0.17$, $SE = 0.16$, $p = .30$, model $R = .12$. This was also not significant at T2A, $b = 0.18$, $SE = 0.13$, $p = .16$, $R = 0.18$. However, as in the previous test, this relationship was significant at T2B, with greater trait social anxiety predicting greater uncertainty discrepancy, $b = 0.34$, $SE = 0.11$, $p = .002$, $R = 0.35$. Thus, the addition of previously excluded cases did not change the results of H1 or H2 in exploring the relationship between trait social anxiety and uncertainty.

H6 predicted that one's perceived bandwidth of the channel would reduce uncertainty about their partner at T2A, immediately following the chat. This test achieved significance

initially. With additional cases, the test remained significant, with greater perceived bandwidth predicting greater certainty, $b = 0.57$, $SE = 0.09$, $p < .001$, $R = 0.61$.

State Social Anxiety Tests

Because the trait social anxiety measure focused on social anxiety and phobia in a clinical sense, additional social anxiety tests were run to probe the relationship between one's state social anxiety and outcomes. Perhaps individuals in this study were low on social phobia but still experienced momentary social anxiety when interacting with an unknown other. Though trait social anxiety did not predict uncertainty about one's partner, state social anxiety did. The relationship between state social anxiety and uncertainty about the partner was tested using linear regression (Tables 20 and 21). At T2B, one's state social anxiety trended toward greater uncertainty about one's chat partner, $b = -0.13$, $SE = 0.11$, $p = .22$, $R = .16$. This continued at T3, with state social anxiety predicting greater uncertainty about one's partner, $b = -0.21$, $SE = 0.10$, $p = .04$, $R = .26$.

Following up on H3, state social anxiety at T2B was tested as a predictor of II features using a linear regression (Table 22). State social anxiety did not predict either specific ($b = 0.14$, $SE = 0.12$, $p = .24$, $R = .21$) or frequent IIs ($b = 0.04$, $SE = 0.10$, $p = .69$, $R = .17$). The features of IIs were then tested as potential predictors of one's state social anxiety at T3 (Table 23), given that the IIs would have happened prior to the state anxiety at that time. Neither specific IIs ($b = .04$, $SE = .12$, $p = .76$) nor frequent IIs ($b = .22$, $SE = .15$, $p = .15$, overall model $R = .23$) predicted one's state social anxiety at T3.

Both trait social anxiety and state social anxiety at T2B were tested as predictors of II rehearsal as well, using a multiple regression analysis (Table 24). Trait social anxiety did not predict one's rehearsal IIs, $b = 0.10$, $SE = 0.21$, $p = .67$. State social anxiety at T2B, however, did

predict one's rehearsal IIs, b = .30, SE =. 15, p = .05; the model R = .29. With that, rehearsal of IIs then predicted one's state social anxiety at T3 using linear regression (Table 25), b = 0.33, SE = 0.08, p < .001, R = .42.

Anticipated Future Interaction Tests

It is likely that anticipating future interaction with another individual may lead to idealizing them (Ramirez et al., 2015). To further probe this relationship between AFI and idealization, the PROCESS macro for SPSS was used to run a parallel mediation test (Table 26). AFI was analyzed as a continuous variable in these analyses. Model 4 with 5,000 bootstrap samples was used again, with AFI as the predictor, II frequency and specificity as the mediators, and idealization as the outcome. AFI predicted frequency of IIs and approached significance, b = 0.18, SE = 0.10, p = .06, R = 0.21. AFI did predict specificity of IIs, b = 0.37, SE = 0.12, p = .002, R = 0.33. Frequency of IIs did not predict idealization, b = -.05, SE = 0.09, p = .57. Specificity of IIs predicted idealization and approached significance in the model, b = 0.13, SE = 0.07, p = .09. There was, however, a direct effect of AFI on idealization, b = 0.21, SE = 0.07, p = .001, R = 0.42.

Idealization Tests

Following up on H7, it seemed possible that idealization at T2A might influence one's II features, which would in turn influence idealization at T3. In H7, specific IIs were found to predict idealization at T3, but frequency did not predict idealization. A parallel mediation model (Model 4) from the PROCESS macro was used to test whether idealization at one time might impact idealization at another, with II features as the mediators (Table 27). In this model, idealization at T2A predicted frequency of IIs at T3, b = 0.42, SE = 0.12, p = .001, R = .40. Idealization also predicted specificity of IIs at T3, b = 0.60, SE = 0.16, p < .001, R = .42.

However, frequency of IIs then predicted a reduction in idealization at T3, b = -0.17, SE = 0.07, p = .02; specificity of IIs did not predict idealization at T3, b = 0.05, SE = 0.06, p = .39. There was a direct effect of idealization at T2A on idealization at T3, b = 0.64, SE = 0.08, p < .001 [95% CI 0.48 to 0.81]. The R for the model was .72. Thus, frequency of IIs mediated the relationship between idealization over time, but specificity did not.

Both liking and perceived similarity were tested as predictors of idealization at T2A and T3. This was tested with a linear regression model (Table 28). At T2A, both liking (b = 0.49, SE = 0.09, p < .001) and perceived similarity (b = 0.28, SE = 0.70, p < .001) predicted idealization (R = .71). This trend held at T3: both liking (b = 0.34, SE = 0.09, p < .001) and perceived similarity (b = 0.16, SE = 0.08, p = .05) continued to predict idealization (R = .52).

Considering the relationships between these variables further, a serial mediation model was run using the PROCESS macro in SPSS. Model 4 with 5,000 bootstrap samples was used, with liking at T2A as the predictor, idealizing at T2A as the mediator, and desired future interaction at T2B as the outcome variable (Table 29). Liking at T2A predicted idealizing at T2A, b = 0.62, SE = 0.09, p < .001, R = .64; idealizing at T2A then predicted desired future interaction at T2B, b = 0.41, SE = 0.12, p = .001, R = 0.67. The direct effect of liking on desired future interaction was also significant, b = 0.40, SE = 0.12, p = .001 [95% CI .16 to .64]. The indirect effect of liking through idealization was significant, b = 0.26, SE = 0.08 [95% CI .07 to .40].

This was tested again for idealization and desired future interaction at T3 (Table 29). Liking at T2A predicted idealizing at T3, b = 0.42, SE = 0.09, p < .001, R = .48. Idealizing at T3 did not significantly predict desired future interaction at T3, though it trended in the expected direction and approached significance, b = 0.26, SE = 0.15, p = .07, R = .38. The direct effect of

liking on desired future interaction at T3 was also not significant, though it also trended in the expected direction, $b = 0.20$, $SE = 0.13$, $p = .12$ [95% CI -.05 to .46]. The indirect effect of liking through idealization at T3 was thus also not significant, $b = 0.11$, $SE = 0.08$ [95% CI -.02 to .28].

Desired future interaction at T2B was also tested as a predictor of idealization at T3 (Table 30); desired future interaction after the distractor task predicted idealization of one's partner, $b = 0.33$, $SE = 0.09$, $p < .001$. A regression model was used to test this relationship; the overall R for the model was .41.

Debriefing

Upon completion of the second lab session, participants were debriefed about the study. The debriefing consisted of asking participants questions about and perceptions of the study, in part to verify that aspects of the study were working as intended. Participants were first asked what they thought the purpose of the study was; this was asked to disqualify any participants who might have figured the study out and changed answers to questions as a result. No participants had figured out the exact purpose of the study. They were also asked if they suspected who they might be chatting with; this was to ensure that participants were not friends with one of the research assistants and thus might have figured out who they were chatting with, influencing their responses to survey items. No participants knew any of the research assistants. Research assistants were also instructed to alert me if they thought they knew who they were chatting with as a further precaution; no research assistants felt that they had chatted with anyone they knew.

Participants were also asked whether they had heard of imagined interactions or learned the imagined interactions framework prior to participating in this study, again as a way to ensure that previous exposure did not influence responses or participation. Few participants had heard of

imagined interactions at all; many noted that the concept felt familiar, but those that thought it was familiar said that this was because they thought of it like "daydreaming." Many participants admitted that they did not have imagined interactions with their partner frequently in the two days between the labs; however, numerous participants reported that they had imagined interactions just before coming to the lab, as a way to rehearse what they might say. One participant did report that she went home after the first lab session and thought "extensively" about her partner that night. However, most participants only thought of their partner as they were about to return to the lab and attempted to prepare for their next chat.

As checks on the study, participants were asked whether they felt similar to their chat partners as well as whether they liked their partner; this was to verify that hyperpersonal aspects of the study were highlighted in addition to the measurements that were taken. This was also an additional way to check the idealization measure, in hopes that it should work. Similarly, participants were asked to confirm affordances of the channel they used, such that they felt it was editable and that they were able to chat instantly with the other person. All of these aspects of the study were true for those participants who were included in the final analysis. As a final check, participants were asked about their anticipated future interaction. Participants overwhelmingly expected to have some kind of future interaction with their partner; those who received the AFI induction thought they would be meeting face-to-face, but others thought they might chat again or, even more simply, eventually meet on campus. AFI was almost always expected; the type of AFI varied.

A key part of the debriefing investigated what participants thought the word "idealization" meant when they read the statements about it. Participants reported that idealization, to them, tended to be a way to fill in gaps about another person, often in favorable

ways: “Idealizing is taking the few things you heard and making a better image, like making an ideal friend”; “Not creating the perfect person, but filling in the gaps and making the person more relatable to you.” An ideal friend for many participants was someone “cool” who they had common interests with and wanted to continue chatting with. For example, one said that, “I was thinking like, a cool person, a cool person that I want to talk to. That’s what I had in my head.” Another said that idealization was “like, you can imagine, you can think about how they might be.” Emphasizing that positivity is a key part of the process, one participant put it thusly: “It’s whatever positive imagination you have about someone; if I’m idealizing, it’s going to be positive.” Similarity is a component of this process: “I think about someone I don’t know much and I think about how they might have a lot of similarity with me; ideally, we would be similar.” It is important to note that participants did not mention negative perceptions as an outcome of idealizing. In fact, there was no negativity about the other individual associated with idealizing. The image developed of the partner was always positive, and participants did not report that there was anything wrong with idealizing as a process.

Further probing this, I had participants explain the relationship that they envisioned developing in the chat. Participants overwhelmingly felt that they were talking with a friend or someone who could be a friend; this may be in part due to the fact that it was a lab study they had signed up for with limited knowledge about the other. The study was not listed as an online dating study, nor were the words online dating ever said to participants. However, some participants did feel like they were engaging in an online dating conversation.

Following completion of the interview section of the debriefing, the purpose of the study was then revealed to participants. When the disclosure was complete, participants were given the

option to have their data removed due to the deceptive nature of the study, per IRB guidelines. No participants withdrew their data.

Chapter 10. Discussion

Discussion

This study was designed to test the hyperpersonal model (Walther, 1996, 1997), particularly focusing on the receiver effects the model proposes. The hyperpersonal model suggests that receivers can come to idealize the sender of messages when the two interact in online, text-based communication (Walther, 1995). The research here sought to understand how features of the imagined interactions (II) framework (Honeycutt, 2015) might contribute to idealization. Specifically, this research investigated the roles of specificity of IIs, frequency of IIs, and rehearsal of IIs in the development of idealization. Further, this work also investigated the role of one's social anxieties, uncertainty about the partner, and desire for future interaction with their partner.

Idealization

One major contribution of this work is the emphasis on idealization, in particular offering clarification of its conceptualization and operationalization. Clearly conceptualizing idealization allows for better understanding of additional mechanisms at work in the hyperpersonal model and the predictions that the model may be able to make. Idealization has often been conflated with liking and similarity (Walther, 1996), as well as an overattribution of similarity (Hancock & Dunham, 2001) and an intensification of cues (Jiang et al., 2011). One goal of this research was to demonstrate that idealization is a process distinct from these conflated terms; idealization in this study is conceptualized as having positive illusions about another individual (Hian et al., 2004). Idealization may be influenced by an overattribution of similarity or an intensification of the cues one receives; however, these are not idealization on their own. Further, liking and

similarity are distinct from idealization but can increase one's idealization of another. If someone likes an individual, they are more likely to have positive illusions about them.

The conceptualization of idealization guided the operationalization of idealization in this study; participants answered questions about how positively they felt about their partner, including having positive thoughts about them and feeling as though the partner was a good match for them. Participants did not consider, for instance, whether they were idealizing another based on an intensification of cues (as in Jiang et al., 2011, or Rains et al., 2019). Individuals may overly interpret the cues provided by a partner in an online chat system. No questions were asked about the cues participants received about their partner as part of the idealization operationalization (Rains et al., 2019). Instead, idealization was conceptualized and operationalized as positive thinking about another arising from one's feelings about the partner in the interaction.

In testing Walther's (1995) conceptualization of idealization, which includes both feeling similar to another and liking one's partner, idealization was analyzed in conjunction with similarity and liking in this study. Both feeling similar to and liking one's partner predicted idealizing one's partner, with liking in particular predicting the strength of one's idealization. Participants echoed this further in their responses during debriefing, emphasizing that they found things in common with their partner and felt like their partner was "a cool person" in developing an ideal image of that person. Taken together, these suggest that one's positive thoughts and feelings often require a condition of similarity and liking to be met, but that idealization is itself distinct from these conceptualizations. In this study at least, liking was a prerequisite to idealization of another. Feeling some sense of attraction to one socially led to a greater ability to fill in gaps that, though possibly unrealistic or untrue, led to further illusions about one's partner.

This clarity of conceptualization is a major theoretical contribution in understanding the processes behind the hyperpersonal model. Future research on the hyperpersonal model should incorporate this consideration when seeking to further understand receiver effects.

This study was designed to assess the development of idealization over time, as the passage of time is rarely incorporated into work on the hyperpersonal model (Walther, 1997, 2009; Yao & Flanagin, 2006). Most tests of the hyperpersonal model only test idealization at one time point, and idealization is often measured after only one interaction (such as Hancock & Dunham, 2001; Walther, 1996, 1997). Repeated interactions can strengthen and continue one's idealization of another. This research shows how an initial interaction can lay a groundwork of idealization that can in turn predict a greater desire to interact and continue to grow one's idealization of another. Idealizing one's partner encourages an individual to continue interacting with them, which then furthers the idealization; repeated interactions allow for more gaps to be filled in about the other and therefore the image of that person made more complete. The image built of the other person, however, may not be true to who the partner is in real life. Individuals are limited to the cues provided by the sender and the sender's engagement in selective self-presentation. The gaps that are filled in, then, are still based on the receiver's perceptions of the sender and what the sender has chosen to represent themselves with (Walther, 2007). This may lead to an eventual violation of expectations should the two meet in-person (Ramirez & Wang, 2008). Adding details about a partner leads to idealizing the partner, but may end up being a disappointment when those expectations cannot be met.

Walther (1994) has proposed that anticipating future interaction with another should also lead to idealizing them. This was demonstrated in this research; those who were higher in anticipated future interaction (AFI, as measured and regardless of manipulation) were more

likely to idealize their chat partner. Desired future interaction (DFI) was also analyzed as a separate type of future interaction, as those who anticipate interaction may not desire it. However, AFI and DFI were highly correlated, and both led to idealizing. These findings support Walther's (1994, 1995, 1996) previous suggestions that future meetings will further one's sense of positivity toward a partner and also offers additional support for the modality switching perspective (Ramirez & Zhang, 2007). Individuals who are anticipating a future interaction are idealizing their partner and also desiring additional interactions with them.

Theoretical

This study contributes to theory in numerous ways, particularly through a better understanding of the receiver effects of the hyperpersonal model. In addition to adding clarity to idealization, this work also makes contributions to the imagined interactions (II) framework (Honeycutt, 2015).

IIs may be one way for individuals to keep idealization growing between interactions. If idealization takes time to develop, then IIs may fill that time between interactions. II specificity in particular offers insight into how an individual fills in the details about an unknown other (Honeycutt & Sheldon, 2018). For participants in this study, they had no starting image of their partner to work with; therefore, they could create any image of the person they wanted, with the specifics of the II coming from their own imagination as well as their initial experience with their partner. An increase in the detail of IIs corresponded with an increase in idealization.

This finding is also reinforced by how individuals explained idealization in their open-ended debriefing responses: They were taking what they could from the conversation they had just had to build someone who was entertaining, who shared their interests, and who they liked. The open-ended responses about idealization also suggest that specific IIs may have conceptual

overlap with an overattribution of similarity (Lea et al., 2001). In thinking in great detail about an interaction and about one's partner, this may be how one comes to feel an increasing sense of similarity to the partner. These specific details, including over-attributing similarity to the other, then create an ideal individual. Specific IIs offer insight into how details about a new partner allow for one to idealize another.

Though specificity predicted one's idealization of their partner, other II features and functions did not. Frequency of IIs and rehearsing IIs did not predict idealization of the partner. This may be due in part to a need to continue clarifying the operationalization of II frequency and rehearsal. Though these loaded onto their own factors in the EFA, these items need additional validation to ensure that they reflect what frequency and rehearsal are attempting to capture. There is also the possibility that specificity is all that is needed in achieving an ideal image of an individual. Once an individual idealizes another, the repetition of thought may not be as important as the detail contained within that thought. Though frequency of IIs has been used to predict relational satisfaction (Honeycutt et al., 2013), it is likely that this relationship was still too new for participants to enhance their partner with repetitive thinking. Rehearsal may be one way to plan for a conversation (Choi et al., 2015), but rehearsal may not equate with preparing for the minute details of conversation, either. When one is idealizing another, rehearsal may not feel necessary for idealization; rehearsing for an interaction with an already perfect partner does not help one to achieve any further goals with that partner.

The IIs framework was also tested with the incorporation of social anxiety as both a state and a trait. Previous literature suggests that engaging in IIs may help those who experience anxieties about communication, with IIs as a way to develop communication competence (Bodie et al., 2013). This sample was low in trait social anxiety, and neither frequent nor specific IIs had

a relationship with trait social anxiety. This relationship maintained for state social anxiety as well; even if someone felt anxious at T2B after the initial chat, they did not carry that social anxiety into how often or specifically they thought about their chat partner. Similarly, II features did not, in turn, have any relationship with the social anxiety one experienced upon arriving to the lab for the second chat. Even if they suspected they were chatting with someone, thinking about that conversation did not translate into heightened anxiety. This may be because individuals did not engage in IIs as a way to reduce or manage anxiety, as some previous literature suggests (Choi et al., 2015). Instead, individuals who experienced even momentary social anxiety following the interaction may have avoided thinking about the interaction prior to returning to the lab; if the situation gave them a feeling of social anxiety in the moment, they may have tried to avoid all thinking about it until the absolutely could not avoid it again.

Though neither specificity of IIs nor frequency of IIs had a relationship with social anxiety of any sort, II rehearsal did, in line with the communication competence literature (Bodie et al., 2013; Choi et al., 2015). Individuals who were highly socially anxious after T2B rehearsed more than those who were lower in state social anxiety at that time, suggesting more practice and preparation for a future interaction, even if they were not told about a future interaction. Though individuals may not have rehearsed their IIs with specificity or frequency, some rehearsal did occur for those who felt anxiety after the first chat. Trait social anxiety, unlike state, was still not predictive of rehearsal; neither those who were socially anxious as a trait or those who were not rehearsed for an additional interaction more. Interestingly, rehearsal of IIs led to greater state social anxiety at T3—meaning those who rehearsed the next interaction were still anxious about it. These findings suggest that those who experience social anxiety may not reap the benefits proposed by IIs (Bodie et al., 2013; Honeycutt & Sheldon, 2018); rehearsing future

conversations may increase feelings of anxiety as individuals still feel they are being judged by another, despite not knowing them nor being able to see their reactions face-to-face.

Features and functions of IIs were also considered in relationship to uncertainty and uncertainty discrepancy. Frequent and specific IIs did not help participants to feel as though their desired and actual certainty were equal (Afifi & Weiner, 2004). Perhaps, for some, IIs made them feel even more uncertain; the imagined conversations may have revealed more questions than answers. IIs may have also gone in unexpected directions that made participants uncomfortable or even more unsure about their partner (Honeycutt et al., 2015). This may have also caused fluctuations in one's own desired uncertainty, as well; having an II may have led some participants to want more uncertainty as they considered their partner.

The work here adds theoretical contributions beyond the hyperpersonal model. The II framework is further developed in this work, in part by elucidating some of the features and functions and by testing their predictive power. Uncertainty discrepancy is better understood in an interpersonal context, removed from the health communication context where it is frequently analyzed. Social anxiety, both as a trait and a state, is also better understood through the analysis in this work. In addition to these theoretical contributions, this work also offers a methodological contribution by suggesting a new way of studying the hyperpersonal model and other text-based computer-mediated communication phenomena.

Methodological Contributions

One goal of this study was to make the chat that participants engaged in feel like a more natural getting-to-know-you chat that they might have in real life, opposed to the task-based chats often used in tests of the hyperpersonal model (Walther, 1996, 1997; Yao & Flanagin, 2006). Having participants create profiles with some of their interests further supported the

feeling that the chat could be enjoyable by allowing confederates to build a sense of similarity (Walther, 1995). Training research assistants to chat about topics that they, too, were already familiar with led to conversations that were more consistent across participants and internally valid. These chats fostered a sense of similarity between participant and confederate that is necessary for a valid test of hyperpersonal effects. The design of the research should be implemented in future tests of hyperpersonal communication, due to the validity that this kind of experiment enables.

Operationalization was also critical in this study. In addition to a clear operationalization of idealization, this study also attempted to add clarity to the operationalization of II features and functions included. The existing survey of imagined interactions (Honeycutt, 2010) did not clearly operationalize frequency, specificity, proactivity, valence, or rehearsal of IIs. All of these items were updated for this research; the updates were made using the existing scale but were modified to more closely capture what they purported to capture. As part of this exercise, an exploratory factor analysis showed that proactivity and valence, as written, were still not distinct features of IIs. Frequency, specificity, and rehearsal all loaded onto their own factors, yet valence became a part of proactivity in the factor loadings. The future orientation of an II should not be conflated with the positivity one feels when experiencing it. Valence in particular needs to be updated to adequately capture how positive or negative one feels when they experience an II.

The design of this study and the updated operationalizations are additional contributions that come from this work. The design allows for a more natural experiment that is still controlled; the operationalizations allow for better measurement of predictors and outcomes. Both the design and operationalizations can be used in future work on the hyperpersonal model

and imagined interactions to improve understanding of these frameworks and the predictions that they may make.

Limitations and Future Directions

This study attempted to mimic what a real conversation between unknown others might be like. Considerable work testing the hyperpersonal model has used task-based conversations to understand if individuals are able to idealize each other (Yao & Flanagin, 2006). However, individuals who are new acquaintances rarely engage in these circumstances; plus, other hyperpersonal research has suggested that disclosure is also an important part of the hyperpersonal process (Walther et al., 2018). Though this study does not include the disclosures shared between participant and confederate, the confederate was instructed to find things in common with the participant, more closely mimicking real-life chats these individuals may experience (Antheunis et al., 2019). However, future research should incorporate greater disclosure as a condition to further test the hyperpersonal model.

Numerous future research directions arise from the findings. Future research should probe where state social anxiety stems from for those chatting with new partners, such as concerns about one's self presentation or anticipating what the chat partner might say (Caplan, 2003). Future research should also investigate other mental health indicators, such as loneliness and depression, in understanding approaches to chatting and connecting with unknown others. It will also be worth repeating this research with a group that is higher in trait social anxiety; such a sample may allow for the relationships between trait social anxiety and numerous variables to be clearer.

The choice of trait social anxiety measure may also be a limitation in this study. The measure used assesses one's social phobias and anxieties, and it is a clinical scale (de Vente,

2014). The low mean of this item ($M = 2.72$, $SD = 0.66$) may be in part because these items capture extreme phobias and nervousness around others, particularly in large social settings. This scale was used in an effort to capture severe trait social anxiety. It was unclear if severe trait social anxiety had a relationship with online interaction behaviors and related outcomes. However, future research should incorporate other scales, such as the Social Interaction Anxiety Scale (SIAS; Safren, Turk, & Heimburg, 1998), as these scales may tap into a more generalized social anxiety and not the most extreme feelings.

Further, participants who are already more outgoing may have self-selected into this research because they were comfortable with the idea of getting to know another person. The language used in the recruitment announcement informed participants that they would be chatting with another individual. Though no details were given about the individual or the nature of the chat, participants still knew they were going to meet someone. Thus, designing this study for completely virtual consumption may be one way to elicit those higher in trait social anxiety to participate (Caplan, 2005). However, a completely virtual study also comes with confounds, such as managing chat participation. Other ways, then, to recruit participants high in trait social anxiety should be explored in future research. This might include rewording recruitment announcements to avoid selection bias on the participant's end. Retention of socially anxious participants is also crucial, as these steps would only get them through one chat session, not necessarily two.

Considerations about trait social anxiety also lead to considerations about how to better study and understand state social anxiety. The study of state social anxiety during chats with a new partner offers opportunities to study expectancy violations, for example. If participants are chatting, a partner with unusual behavior or sudden digital outbursts may lead to an increase in

state social anxiety that may not otherwise be found. Increasing disclosure may also cause increases in one's state social anxiety, as questions become more personal (Altman & Taylor, 1973).

Other individual differences may be included in future work related to both the hyperpersonal model and imagined interactions. For instance, attachment may predict how likely an individual is to idealize another or not, as well as how often they think of another person. Similarly, one's previous relationship experience may also influence whether or not they idealize another. Previous relationship experience may inform how individuals interpret instructions related to IIs as well. Other mental health indicators may also be worth including, such as loneliness. Loneliness may be particularly relevant in studies of IIs, as IIs may be used as a form of compensation for individuals feeling lonely (Honeycutt, 2015). Depression may also predict one's use of IIs for compensation and comfort.

Considering IIs and future research more specifically, it will be worth including a measure of one's visual ability or ability to have detailed imaginations. Some individuals are more visual than others, and this may influence how they have IIs and the kinds of IIs they have. This may even influence the features and functions of IIs they use, as someone visual may have detailed IIs because of their general imaginative abilities. A need for cognition may also have a relation with one's II use, with those higher in cognitive needs engaging in more IIs because they are enjoyable.

This study includes other limitations that future research may be able to overcome, including adjusting the sample and recruitment. The possibility of future interaction with a chat partner would likely change drastically with an adult or community sample as opposed to a college student sample. This study also used a college student research pool that was readily

available for researchers. However, the participant pool requires individuals to sign up for parts 1 and 2 of any given study at the same time. Signing up for part 2 at the same time they signed up for part 1 may have influenced perceptions of anticipated future interaction. Participants likely assumed there would be an additional interaction because they knew there was going to be a second lab component. Similarly, the recruitment announcement also included information about a second lab session. Though the recruitment did not mention that the second lab session included another chat session, individuals may have inferred from the task at time 1 that there would be additional interactions. Using a different sample would have likely overcome these challenges, as recruitment would be outside of the participant pool and the restrictions of the pool lifted.

Unfortunately, the manipulation of anticipated future interaction failed. One critical addition to this study would have been adjusting the manipulation check to capture the kind of future interaction individuals were anticipating. It would be worth knowing if there were differences between those anticipating an in-person interaction compared to those who anticipated chatting online again. This would likely also explain, at least in part, the failure of the manipulation check. There may be undiscovered differences between those who received the manipulation (such as anticipating an in-person future interaction) and those who did not (perhaps this group still anticipated online future interactions).

Further, the manipulation check and the debriefing both suggested that college students felt that they would interact with their partner again, even if it were not in the context of the study. Previous research has run into a similar issue with the manipulation of future interaction, where college students felt that another interaction with their partner may be inevitable, even though they did not know who they were at the time of the study (Hancock & Dunham, 2001).

This manipulation was modeled on existing research (Hancock & Dunahm, 2001; Hian et al., 2013) in which participants were told they would or would not interact with their partner again. This project updated the manipulation to tell participants that the future interaction would be an in-person interaction, as opposed to another online interaction. However, this manipulation may not have been strong enough, as participants were only briefly told that they would have another interaction. It would have improved the study to make the manipulation bolder, such as telling the participants more details about the meeting or telling them about the future meeting for a longer amount of time. Another way to strengthen the manipulation would have been to email reminders to participants about the study and their future meeting.

Additional work is needed to test the rest of the II features and functions. Only four features and one function were operationalized for this work; the rest of the features and functions should be put through similar treatment. It will be worth understanding how all features and functions act when subject to an EFA. The features and functions tested in this work can still be better opertaionlized, as suggested by the EFA done here. The items testing IIs should be subject to additional updates and rewrites to better measure and thus use IIs in research.

The II measures used were adapted for this study but still based strongly in the original survey of IIs (Honeycutt, 2010). Thus, not all of the wording was changed from the original to this study. This includes keeping items with varying verb tenses, which may have led some participants to interpret items more as a trait than a state. Though instructions given to participants told them to think about their imagined interactions over the past two days, they may have still considered all of their imagined interactions over time. These are scale items that will need to be further adapted, put into a single verb tense, and written for the specific situation where they are being measured. IIs should be treated as a state in research where they are

analyzed over a set period of time and as a trait when considering all IIs one has ever had. However, research needs to make clear which of these is being studied and how.

It will also be important to revisit this work to ensure that features and functions are distinct. Numerous questions about the operationalization of II features and functions remain. One way to approach the challenge of operationalizing IIs may be to take a step back and consider their conceptualization, similar to how idealization was treated in this work. Perhaps the conceptualization of II features and functions is itself a weakness of the current framework. A qualitative approach to updating IIs may be a next step for future work. Further, participants in this study did not have many IIs. Another way to measure IIs would be to induce participants into having an II about their partner, instead of testing to see if an II occurred. Once an individual has an II, even if dictated by a researcher, more detail about features and functions may become available.

With additional clarity about features and functions of IIs, theory can be better tested. The IIs framework still does not meet many of the expectations for a theory (Slater & Gleason, 2012); however, improving the measurement of IIs offers a step toward understanding the predictive power of these social cognitions. This will be especially true if additional research can clarify II features and functions. If these are made clearer, IIs could be used to provide clarity in numerous other studies, including those of online communication. Similar to how IIs were tested with idealization in this study, IIs may offer a way to understanding how one selectively self-presents themselves to others they meet online. Qualitative studies of online communicators who have IIs may offer even greater insight into how similarity and idealization overlap and how individuals prepare to chat with those they are newly acquainted with.

The greatest future research opportunities stem from findings about the hyperpersonal model in this work, especially the findings related to idealization. Future researchers have an opportunity to use a clearer conceptualization of idealization in their work and to incorporate it as both a predictor and an outcome. Many other traits and situations may influence how one idealizes a new partner; future research can now more closely align with Walther's (1995) own proposals about idealization without substituting liking or similarity for idealization. One next step may be to test this conceptualization of idealization alongside the overattribution of similiarity and intensification of cues proposed in other work (Rains et al., 2019).

The relationship between idealization and selective self-presentation may also be tested: A dyadic study incorporating this conceptualization of idealization while also including selective self-presentation would be a significant test of the hyperpersonal model. It will be worth seeing how idealization and selective self-presentation relate to each other, especially in a study with internal validity such as this. This relationship could extend to work beyond the hyperpersonal model, as well. Idealization and selective self-presentation may provide insight into work such as that on support seeking online. Previous research has investigated how individuals perceive support seekers in limited cue environments (Li, Coduto, & Morr, 2019; Rains et al., 2019). Idealization may be one way to explain how those who give that support are perceived in turn. The hyperpersonal model has already been used in some support-seeking contexts, and this is another way to extend the model in that context (Walther et al., 2018). Idealization may also be incorporated into work on existing relationships, especially if those relationships have an online component (Fox et al., 2013). For example, romantic couples who interact online, in addition to FtF, may experience idealization that incorporates their online interactions into their cognitions

about one another. The possibilities for future research stemming from a clearer conceptualization of idealization within the hyperpersonal model are numerous.

The findings in this work provide ample groundwork for future research on the hyperpersonal model and imagined interactions. Updating this study with a broader sample will be one major next step, as will incorporating additional mental health measures. The chat paradigm itself offers a design for other researchers to use when testing other frameworks beyond the hyperpersonal model as well.

Conclusion

This study sought to clarify features of the hyperpersonal model (Walther, 1995), namely the receiver effects proposed. This research offers theoretical contributions to the hyperpersonal model (Walther, 1995, 1996) and the imagined interactions framework (Honeycutt, 1989); it also offers another methodological approach for the study of online communication, especially the study of text-based chats. There are a multitude of future research directions one can take from this research; all offer the opportunity to continue to better understand how people meet and connect in online spaces, even when they know nothing about the person on the other side.

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Appendix A

Instructions for Confederates

Please review the information that the participant has provided us about themselves. Looking at this list of topics they may want to discuss, pick one to start, or, if you are comfortable with any of these, you may ask them to pick one to start the conversation. You are NOT expected to discuss every topic that they submitted; instead, use this as a guide for the conversation generally. The goal is to make sure you are agreeing with the participant and, if asked any questions, answering in ways similar to the participant's answers.

As you are conversing, please remind the participant that they are to remain anonymous. Do not disclose your name or initials; please refrain from talking about specific classes you may be in. You may identify yourself as a student.

Appendix B

Instructions for Participants (T2A)

You are going to instant message with another student shortly. The purpose of this task is to get to know one another. Please do not include any personably identifiable information, including your name or initials. Please also do not disclose any classes you may be in, as this will also to help remain anonymous. You will chat for approximately 20 minutes. If at any time you are uncomfortable or otherwise wish to leave the chat, please notify the researcher. You may leave at any time without being penalized.

If you have questions about the chat, you may also ask the researcher at any time.

Appendix C

Measurements at Time One (T1)

Online Survey

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree.

Experiences in Close Relationships (Short Form) – Adult Attachment Style

Please respond to the following thinking about your current and/or any previous romantic relationships you have had.

Avoidance Subscale

1. I want to get close to my partner, but I keep pulling back.
2. I am nervous when partners get too close to me.
3. I try to avoid getting too close to my partner.
4. I usually discuss my problems and concerns with my partner.
5. It helps to turn to my partner in times of need.
6. I turn to my partner for many things, including comfort and reassurance.

Anxiety Subscale

1. I worry that romantic partners won't care about me as much as I care about them.
2. My desire to be very close sometimes scares people away.
3. I need a lot of reassurances that I am loved by my partner.
4. I do not often worry about being abandoned.
5. I find that my partner(s) don't want to get as close as I would like.
6. I get frustrated if romantic partners are not available when I need them.

Uncertainty (developed from Knobloch & Solomon, 1999)

For the following statements, rate how certain you are, with 1 = very uncertain and 5 = very certain. How certain are you about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Uncertainty Discrepancy (developed from Knobloch & Solomon, 1999; Knobloch & Solomon, 2003)

For the following items, rate how certain you would like to be, with 1 = very uncertain and 5 = very certain. How certain would you LIKE to be about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Social Anxiety: Validated SPAI-18 Scale – Social Phobia and Anxiety Index

For these statements, please think about how much the words presented do or do not describe you. Please respond using 1 = strongly disagree and 5 = strongly agree.

1. I enjoy being the center of attention.
2. Participating in group activities is fun.
3. I can give a speech in front of a group.
4. I do not avoid social situations.
5. I try to leave social situations.
6. I feel tension in small groups.
7. I feel tension in new social situations.
8. I feel tension when confronted with other people.
9. Being in an embarrassing situation feels like the end of the world.
10. I am capable of sharing intimate feelings with others.
11. I am not afraid to give my opinion.
12. I can talk in front of others without being nervous.
13. I regularly attempt to avoid social situations.
14. I find leaving social situations to be awkward.
15. Future social interactions make me nervous.
16. I am constantly nervous around other people.
17. I experience panic around other people.
18. I am afraid I will have a panic attack in a social setting.

Demographics

What is your age in years?

What is your relationship status? Check all that apply: Single, casually dating, in a long-term relationship, in an open relationship, married, widowed, divorced, separated, civil union, other

What is your gender identity? Check all that apply: Male, female, non-binary, transgender

What is your sexual orientation? Check all that apply. Straight, gay, lesbian, bisexual, bicurious, questioning, pansexual, asexual, queer

What is your race/ethnicity? Check all that apply. White/Caucasian, Black/African American, Asian/Asian American, Hispanic/Latinx/a/o, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander

Please fill in the following questions for an online profile. Your answers may be visible to others.

What is your favorite movie (or movies)?

Who is your favorite musical artist?

Where is your favorite place you have traveled?

Do you enjoy going to museums? Why?

Do you enjoy true crime shows or podcasts?

What is your astrological sign?

Appendix D

Measurements at Time Two A (T2A)

In-Lab Study

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree.

Perceived Similarity of Partner

Please respond to the following using 1 = strongly disagree and 5 = strongly agree.

1. My interaction partner and I seemed to have a lot in common.
2. My interaction partner and I seemed to have similar personalities.
3. My interaction partner and I had different opinions.

Liking of Partner (Social Attraction)

Please respond to the following using 1 = strongly disagree and 5 = strongly agree.

1. I think they could be a friend of mine.
2. It would not be difficult to meet and talk with them more.
3. They would fit into my circle of friends.
4. We could establish a personal friendship with each other.
5. I would like to have another friendly chat with them.

Idealization

Please respond to the following using 1 = strongly disagree and 5 = strongly agree.

1. My conversation partner understood me perfectly.
2. I have positive thoughts about my partner.
3. I idealized my partner when thinking about them.
4. I do not think my partner was a perfect conversation partner for me.
5. I think my partner was a great match for me.

Perceived Bandwidth of Channel

Please respond to the following using 1 = strongly disagree and 5 = strongly agree.

1. This channel allows me to convey emotion.
2. This channel allows me to express emotion.
3. This channel allows me to receive cues about how the other person is feeling.
4. In this channel, I can say not just what I want to say, but how I want to say it.

Uncertainty (developed from Knobloch & Solomon, 1999)

For the following statements, rate how certain you are, with 1 = very uncertain and 5 = very certain. How certain are you about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Uncertainty Discrepancy

For the following items, rate how certain you would like to be, with 1 = very uncertain and 5 = very certain. How certain would you LIKE to be about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?

4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Appendix E

Measurements at Time Two B (T2B)

In-Lab Study

Uncertainty (developed from Knobloch & Solomon, 1999)

For the following statements, rate how certain you are, with 1 = very uncertain and 5 = very certain. How certain are you about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Uncertainty Discrepancy

For the following items, rate how certain you would like to be, with 1 = very uncertain and 5 = very certain. How certain would you LIKE to be about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?

7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Anticipated Future Interaction

Please respond to the following using 1 = strongly disagree and 5 = strongly agree.

1. I think I will chat with my partner again.
2. I do not expect to meet my partner.
3. My partner and I will have more conversations in the future.

Desired Future Interaction

1. I want to interact with my conversation partner again.
2. I hope I get to meet my conversation partner.
3. I do not want to have another conversation with my partner.

Appendix F

Distractor Task (T2A – T2B)

Please take approximately five minutes to complete this word search. You are looking for the 12 months of the year. Please do not put any identifying information on this word search, including your name or email address.

L X T W E F Q F L V S N
S M A Y K R J U L Y U O
E Y J U N E M M Q X N V
P C Y F E B R U A R Y E
T V N C H A J I K L D M
E E N K O C T O B E R B
M D E C E M B E R P M E
B Y A A A U G U S T A R
E U P Y O J A N U A R Y
R J R I W Q F D S L C T
P E I R L M X X X C H O
Q W L B E L V C M O O Z

JANUARY	APRIL	JULY	OCTOBER
FEBRUARY	MAY	AUGUST	NOVEMBER
MARCH	JUNE	SEPTEMBER	DECEMBER

Appendix G

Measurements at Time Three (T3)

In-Lab Study

Please respond to the following statements with 1 = never and 5 = frequently.

Frequency of Imagined Interactions

1. I have had imagined interactions with my conversation partner throughout each day.
2. I have imagined conversations with my partner.
3. I have thought about conversations with my partner.

Specificity of Imagined Interactions

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. When I have an imagined interaction with my partner, they tend to be detailed and well developed.
2. It is easy to recall the details of my imagined interactions.
3. My imagined interactions are very specific, because I envision where the conversation is taking place.
4. When I have an imagined interaction, I often have a specific idea of what my partner will say.

Proactivity of Imagined Interactions

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. I have imagined what my next conversation(s) with my partner will be like.
2. I have thought about prior conversations I have had with my partner.
3. I have tried to anticipate what my partner and I will talk about next.

Rehearsal of Imagined Interactions

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. Imagined interactions help me imagine what my partner is going to say for an anticipated encounter.
2. Imagined interactions make me feel more confident in my partner.
3. I have imagined interactions in order to practice what I am actually going to say to my partner.
4. I have imagined interactions with my partner in order to rehearse future conversations.

Valence of Imagined Interactions

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. My imagined interactions with my conversation partner are enjoyable.
2. The conversations I imagined having with my partner are unpleasant.
3. I feel happy when I have imagined interactions with my partner.

Idealization

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. My conversation partner understood me perfectly.
2. I have positive thoughts about my partner.
3. I idealized my partner when thinking about them.
4. I do not think my partner was a perfect conversation partner for me.
5. I think my partner was a great match for me.

Desired Future Interaction

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. I want to interact with my conversation partner again.

2. I hope I get to meet my conversation partner.
3. I do not want to have another conversation with my partner.

Uncertainty (developed from Knobloch & Solomon, 1999)

For the following statements, rate how certain you are, with 1 = very uncertain and 5 = very certain. How certain are you about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?
8. The definition of this relationship (romantic, platonic)?

Uncertainty Discrepancy

For the following items, rate how certain you would like to be, with 1 = very uncertain and 5 = very certain. How certain would you LIKE to be about:

1. What you can say to your partner?
2. The boundaries for appropriate behavior with this partner?
3. The norms for interacting with this partner?
4. How you can behave with this partner?
5. Whether your and your partner feel the same about each other?
6. How you and your partner view each other?
7. Whether your partner likes you?

8. The definition of this relationship (romantic, platonic)?

State Social Anxiety (developed from Kashdan & Steger, 2006)

Please respond to the following statements using 1 = strongly disagree and 5 = strongly agree

1. I worried what my partner thought of me.
2. I was afraid my partner noticed shortcomings about me.
3. I was afraid that my partner did not approve of me.
4. I was worried that I would say the wrong thing.
5. When I was talking to my partner, I worried what they were thinking of me.
6. I felt uncomfortable and embarrassed when the conversation was about me.
7. I found it hard to interact with my partner.

Appendix H
Tables for Statistical Analyses

Table 1

Factor Loadings for Idealization Measurement Items, Varimax Rotation

Item	Factor loading
My conversation partner understood me perfectly.	**.84**
I do not think my partner was a perfect conversation partner for me.	**.81**
I have positive thoughts about my partner.	**.76**
I think my partner was a great match for me.	**.62**
I idealized my partner when thinking about them.	**.46**

Table 2

Factor Loadings for Imagined Interaction Measurement Items, Varimax Rotation

Items	1	2	3	4
Specificity				
1. When I have imagined interactions with my partner, they tend to be detailed and well developed.	**.83**			
4. When I have an imagined interaction, I often have a specific idea of what my partner will say.	**.82**			
3. My imagined interactions are very specific, because I envision where the conversation is taking place.	**.78**			
2. It is easy to recall the details of my imagined interactions.	**.69**			
Frequency				
1. I have had imagined interactions with my conversation partner throughout each day.		**.85**		
2. I have imagined conversations with my partner.		**.85**		
3. I have thought about conversations with my partner.		**.72**		
Rehearsal				
1. Imagined interactions help me imagine what my partner is going to say for an anticipated encounter.			**.86**	
2. I have imagined interactions in order to practice what I am actually going to say to my partner.			**.81**	
3. I have imagined interactions with my partner in order to rehearse future conversations.			**.80**	
Proactivity and Valence				
3. I have tried to anticipate what my partner and I will talk about next. (P)				**.78**
1. My imagined interactions with my partner are enjoyable. (V)		.44		**.68**
2. I have thought about prior conversations I have had with my partner. (P)			.37	**.62**
2. The conversations I imagined having with my partner are unpleasant. (V)		.42	.47	**.59**
1. I have imagined what my next conversation(s) with my partner will be like. (P)	.30		.36	**.55**
3. I feel happy when I have imagined interactions with my partner. (V)		.47		.32

Table 3

Means, Standard Deviations, and Zero-Order Correlations for Key Dependent Variables

	1	2	3	4	5	6	7
1. Trait Social Anxiety	1	-.03	-.09	.21	-.03	-.15	.12
2. II Frequency		1	.45***	.21	.35**	.24*	.10
3. II Specificity			1	.33**	.29**	.16	.29*
4. AFI				1	.32**	.31**	.37***
5. DFI, T2B					1	.53***	.40***
6. DFI, T3						1	.31**
7. Idealization (T3)							1
M	2.72	1.80	2.57	3.32	3.81	3.35	3.44
SD	0.66	0.73	0.95	0.85	0.71	0.69	0.58

** indicates significance at .05*

*** indicates significance at .01*

**** indicates significance at .001*

Table 4

Linear Regression Analysis for Trait Social Anxiety as a Predictor of Uncertainty

	Uncertainty T1			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	-0.27	0.17	-0.19	.12
Gender	0.04	0.24	0.02	.88
Constant	4.15	0.54		.000
$R = 0.18$				
$F(2, 75) = 1.29$, $p = .28$				

	Uncertainty T2A			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	-0.12	0.14	-0.10	.39
Gender	0.26	0.20	0.15	.20
Constant	3.17	0.46		.000
$R = 0.16$				
$F(2, 75) = 1.00$, $p = .37$				

	Uncertainty T2B			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	-0.10	0.15	-0.08	.50
Gender	0.18	0.21	0.10	.40
Constant	3.24	0.47		.000
$R = 0.11$				
$F(2, 75) = 0.49$, $p = .62$				

	Uncertainty T3			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	-0.20	0.13	-0.18	.13
Gender	0.22	0.19	0.14	.25
Constant	3.36	0.43		.000
$R = 0.20$				
$F(2, 75) = 1.53$, $p = .22$				

Table 5

Linear Regression Analysis for Trait Social Anxiety as a Predictor of Uncertainty Discrepancy

	Uncertainty Discrepancy T1			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.16	0.17	0.11	.35
Gender	-0.18	0.24	-0.09	.46
Constant	-0.60	0.54		.27
$R = 0.13$				
$F(2, 73) = 0.59$, $p = .56$				

	Uncertainty Discrepancy T2A			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.18	0.13	0.16	.18
Gender	.10	0.19	0.06	.60
Constant	-0.95	0.49		.03
$R = 0.18$				
$F(2, 73) = 1.28$, $p = .28$				

	Uncertainty Discrepancy T2B			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.31	0.12	0.33	.01
Gender	-0.21	0.16	-0.15	.19
Constant	-0.83	0.35		.02
$R = 0.33$				
$F(2, 73) = 4.35$, $p = .02$				

	Uncertainty Discrepancy T3			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.16	0.15	0.13	.28
Gender	0.26	0.21	0.15	.21
Constant	-1.20	0.48		.01
$R = 0.22$				
$F(2, 73) = 1.82$, $p = .17$				

Table 6

Linear Regression Analysis for Trait Social Anxiety as a Predictor of Imagined Interaction Frequency and Specificity

	Frequency			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.01	0.13	0.00	.97
Gender	-0.27	0.19	-0.17	.15
Constant	2.25	0.43		.000
$R = 0.17$				
$F(2, 75) = 1.10$, $p = .34$				

	Specificity			
	Estimate	*SE*	β	*p*
Trait Social Anxiety	-0.08	0.17	-0.06	.63
Gender	-0.30	0.24	-0.15	.22
Constant	3.31	0.55		.000
$R = 0.17$				
$F(2, 75) = 1.10$, $p = .34$				

Table 7

Repeated Measures Analysis of Variance for Uncertainty Discrepancy over Time, Linear Within-Subjects Contrasts

	MS	*df*	*F*	*p*	η_p^2
Time	0.23	1	1.49	.23	0.02
Time x Gender	0.19	1	1.22	.27	0.02
Error	0.15	74			

Table 8

Repeated Measures Analysis of Variance for Uncertainty Discrepancy over Time, Quadratic Within-Subjects Contrasts

	MS	*df*	*F*	*p*	η_p^2
Time	1.00	1	7.20	.01	0.09
Time x Gender	1.22	1	8.83	.00	0.12
Error	0.14	74			

Table 9

Linear Regression Analysis of Uncertainty Discrepancy as a Predictor of II Frequency and II Specificity

	Frequency			
	Estimate	*SE*	β	*p*
Uncertainty Discrepancy, T2B	0.27	0.13	0.14	.21
Gender	-0.26	0.18	-0.16	.16
Constant	2.29	0.32		.000
$R = 0.22$				
$F(2, 75) = 1.92$, $p = .15$				

	Specificity			
	Estimate	*SE*	β	*p*
Uncertainty Discrepancy, T2B	0.16	0.17	0.11	.34
Gender	-0.32	0.24	-0.15	.18
Constant	3.17	0.42		.000
$R = 0.19$				
$F(2, 75) = 1.45$, $p = .24$				

Table 10

Linear Regression Analysis of Perceived Bandwidth as a Predictor of Uncertainty (T2A)

	Estimate	*SE*	β	*p*
Perceived Bandwidth	0.54	0.09	0.60	< .001
Gender	-0.13	0.17	-0.08	.43
Constant	1.61	0.36		.000
$R = 0.58$				
$F(2, 75) = 19.12, p < .001$				

Table 11

Parallel Mediation Analysis for Social Anxiety, II Features, and Uncertainty Discrepancy

	Frequency (M1)		*Specificity (M2)*		*Uncertainty Discrepancy (T3)*	
	b(SE)	*p*	*b(SE)*	*p*	*b(SE)*	*p*
Trait Social Anxiety	0.02(0.14)	.87	-0.06(0.18)	.75	0.15(0.15)	.32
II Frequency	-	-	-	-	0.17(0.14)	.22
II Specificity	-	-	-	-	0.02(0.11)	.87
Gender	-0.26(0.20)	.19	-0.31(0.25)	.22	0.31(0.21)	.15
Constant	2.18(0.45)	.000	3.26(0.58)	.000	-1.61(0.60)	.01
	$R = 0.16$ $F(2, 72) = 0.90$, $p = .41$		$R = 0.16$ $F(2, 72) = 0.96$, $p = .39$		$R = 0.27$ $F(4, 70) = 1.37$, $p = .25$	

Table 12

Linear Regression Analysis for II Features as Predictors of Desired Future Interaction (T3)

	Estimate	*SE*	β	*p*
II Specificity	0.04	0.09	0.06	.64
II Frequency	0.18	0.12	0.20	.13
Gender	-0.14	0.17	-0.09	.44
Constant	3.15	0.42		< .001
$R = 0.26$				
$F(3, 74) = 1.79, p = .16$				

Table 13

Linear Regression Analysis of II Features Predicting Idealization (T3)

	Estimate	*SE*	β	*p*
II Specificity	0.18	0.07	0.30	.02
II Frequency	-0.04	0.10	-0.05	.67
Gender	-0.09	0.14	-0.07	.53
Constant	3.19	0.34		< .001
$R = 0.30$				
$F(3, 74) = 2.44$, $p = .07$				

Table 14

Serial Mediation Model of Anticipated Future Interaction and Change in Uncertainty Discrepancy

	AFI Continuous			*Uncertainty Discrepancy (T2A) (M)*			*Uncertainty Discrepancy (T2B)*		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
AFI Manipulation	-0.32	0.19	.10	0.01	0.16	.94	0.05	0.10	.62
AFI Continuous	-	-	-	0.27	0.10	.01	0.12	0.06	.07
Uncertainty Discrepancy (T2A)	-	-	-	-	-	-	0.57	0.07	<.001
Gender	0.14	0.21	.50	0.13	0.18	.46	-0.19	0.11	.10
Constant	3.24	0.38	<.001	-1.41	0.44	.002	-0.28	0.30	.35
	$R = 0.19$ $F(2, 76) = 1.48, p = .23$			$R = 0.33$ $F(3, 75) = 2.95, p = .04$			$R = 0.72$ $F(4, 74) = 19.84, p < .001$		

Table 15

Regression Analysis of Anticipated Future Interaction and II Rehearsal

	AFI Continuous			*II Rehearsal*		
	b	*SE*	*p*	*b*	*SE*	*p*
AFI Manipulation	-0.32	0.19	.10	-0.13	0.24	.60
AFI Continuous	-	-	-	0.37	0.14	.01
Gender	0.14	0.21	.50	-0.22	0.26	.39
Constant	3.24	0.38	< .001	1.84	0.65	.01
	$R = 0.19$			$R = 0.32$		
	$F(2, 76) = 1.48$, $p = .23$			$F(3, 75) = 2.83$, $p = .04$		

Table 16

Moderated Mediation Analysis of Anticipated Future Interaction and Frequency of IIs Predicting Idealization

	AFI Continuous			*Idealization (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*
AFI Manipulation	-0.32	0.19	.10	-0.15	0.13	.27
AFI Continuous	-	-	-	0.37	0.14	.01
II Frequency	-	-	-	0.34	0.38	.38
AFI x II Frequency	-	-	-	-0.10	0.11	0.37
Gender	0.14	0.21	.50	-0.08	0.15	.61
Constant	3.24	0.38	< .001	2.26	0.80	.01
	$R = 0.19$ $F(2, 76) = 1.48$, $p = .23$			$R = 0.41$ $F(5, 73) = 2.86$, $p = .02$		

Index of Moderated Mediation: 0.03, *SE* = 0.05
[-0.08, 0.14]

Table 17

Moderated Mediation Analysis of Anticipated Future Interaction and Specificity of IIs Predicting Idealization

	AFI Continuous			*Idealization (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*
AFI Manipulation	-0.32	0.20	.10	-0.08	0.13	.50
AFI Continuous	-	-	-	0.26	0.20	.19
II Specificity	-	-	-	0.17	0.26	.52
AFI x II Specificity	-	-	-	-0.02	0.08	0.77
Gender	0.15	0.21	.49	-0.11	0.13	.41
Constant	3.24	0.38	< .001	2.56	0.67	< .001
	$R = 0.20$ $F(2, 75) = 1.49$, $p = .23$			$R = 0.43$ $F(5, 72) = 3.35$, $p = .01$		

Index of Moderated Mediation: 0.007, *SE* = 0.03
[-0.05, 0.08]

Table 18

Regression Analysis of Anticipated Future Interaction and Desired Future Interaction

	AFI Continuous			*DFI (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*
AFI Manipulation	-0.32	0.19	.10	-0.20	0.15	.18
AFI Continuous	-	-	-	0.24	0.09	.01
Gender	0.14	0.21	.50	-0.20	0.16	.23
Constant	3.24	0.38	< .001	3.02	0.41	< .001
	$R = 0.19$			$R = 0.37$		
	$F(2, 76) = 1.48, p = .23$			$F(3, 75) = 4.07, p = .01$		

Table 19

Mediation Analysis of II Features and Idealization on Desired Future Interaction (T3)

	Idealization (M)		*DFI*	
	b(SE)	*p*	*b(SE)*	*p*
II Frequency	0.07(0.09)	.44	0.18(0.10)	.08
Idealization	-	-	0.35(0.13)	.01
Gender	-0.09(0.15)	.53	-0.12(0.16)	.47
Constant	3.47(0.33)	.00	2.02(0.58)	.01
	$R = 0.12$		$R = 0.39$	
	$F(2, 76) = 0.59$, $p = .56$		$F(2, 76) = 4.42$, $p = .006$	

	Idealization (M)		*DFI*	
	b(SE)	*p*	*b(SE)*	*p*
II Specificity	0.16(0.07)	.01	0.04(0.08)	.64
Idealization	-	-	0.40(0.14)	.01
Gender	-0.08(0.14)	.55	-0.13(0.17)	.43
Constant	3.14(0.32)	.00	2.11(0.58)	.00
	$R = 0.30$		$R = 0.37$	
	$F(2, 75) = 3.61$, $p = .03$		$F(2, 75) = 3.80$, $p = .01$	

Table 20

Linear Regression Analysis of State Social Anxiety as a Predictor of Uncertainty (T2B)

	Estimate	*SE*	β	*p*
State Social Anxiety (T2B)	-0.13	0.11	-0.14	.22
Gender	0.20	0.20	0.11	.35
Constant	3.23	0.39		< .001
$R = 0.16$				
$F(2, 75) = 1.02$, $p = .37$				

Table 21

Linear Regression Analysis of State Social Anxiety as a Predictor of Uncertainty (T3)

	Estimate	*SE*	β	*p*
State Social Anxiety (T3)	-0.21	0.10	-0.26	.04
Gender	0.21	0.18	0.15	.13
Constant	3.30	0.38		< .001
$R = 0.26$				
$F(2, 73) = 2.71$, $p = .07$				

Table 22

Linear Regression Analysis of State Social Anxiety (T2B) as a Predictor of II Features

	II Specificity			
	Estimate	*SE*	β	*p*
State Social Anxiety (T2B)	0.14	0.12	0.14	.24
Gender	-0.39	0.24	-0.19	.11
Constant	2.92	0.45		< .001
$R = 0.21$				
$F(2, 75) = 1.70, p = .19$				

	II Frequency			
	Estimate	*SE*	β	*p*
State Social Anxiety (T2B)	0.04	0.10	0.05	.69
Gender	-0.29	0.19	-0.18	.13
Constant	2.92	0.35		< .001
$R = 0.17$				
$F(2, 75) = 1.72, p = .32$				

Table 23.

Linear Regression Analysis of II Features Predicting State Social Anxiety (T3)

	Estimate	*SE*	β	*p*
II Specificity	0.04	0.12	0.04	.76
II Frequency	0.22	0.15	0.19	.15
Gender	0.30	0.22	0.14	.22
Constant	1.34	0.53		.01
$R = 0.23$				
$F(3, 74) = 1.38$, $p = .26$				

Table 24

Linear Regression Analysis of Social Anxiety (State and Trait) Predicting II Rehearsal

	Estimate	*SE*	β	*p*
Trait Social Anxiety	0.10	0.21	0.05	.67
State Social Anxiety (T2B)	0.30	0.15	0.26	.05
Gender	-0.37	0.27	-0.16	.17
Constant	2.31	0.61		< .001
$R = 0.29$				
$F(3, 75) = 2.28$, $p = .09$				

Table 25

Linear Regression Analysis of II Rehearsal Predicting State Social Anxiety (T3)

	Estimate	*SE*	β	*p*
II Rehearsal	0.33	0.08	0.41	< .001
Gender	0.28	0.20	0.15	.16
Constant	0.96	0.43		.03
$R = 0.42$				
$F(2, 76) = 8.18$, $p < .001$				

Table 26

Parallel Mediation Analysis for Anticipated Future Interaction, II Features, and Idealization

	Frequency (M1)			*Specificity (M2)*			*Idealization (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
AFI	0.18	0.10	.06	0.37	0.12	.002	0.21	0.07	.01
Frequency	-		-	-		-	-0.05	0.09	.57
Specificity	-		-	-		-	0.13	0.07	.09
Constant	1.20	0.33	.001	1.34	0.41	.002	2.49	0.26	.001
	$R = 0.21$ $F(1, 76) = 3.45, p = .06$			$R = 0.33$ $F(1, 76) = 9.54, p = .01$			$R = 0.42$ $F(3, 74) = 5.29, p = .002$		

Table 27

Parallel Mediation Analysis for Idealization over Time with II Features as Mediators

	Frequency (M1)			*Specificity (M2)*			*Idealization (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
Idealization (T2A)	0.42	0.12	.001	0.59	0.16	.001	0.65	0.08	.01
Frequency	-		-	-		-	-0.17	0.07	.02
Specificity	-		-	-		-	0.05	0.06	.39
Gender	-0.22	0.17	.21	-0.25	0.22	.25	-0.08	0.10	.43
Constant	0.58	0.58	.32	0.77	0.74	.30	1.30	0.34	.01
	$R = 0.40$ $F(2, 75) = 6.95, p = .002$			$R = 0.42$ $F(2, 75) = 8.24,$ $p < .001$			$R = 0.72$ $F(4, 73) = 19.16,$ $p < .001$		

Table 28

Multiple Regression Analysis of Liking and Similarity as Predictors of Idealization

	Idealization (T2A)			
	Estimate	*SE*	β	*p*
Similarity	0.28	0.07	0.35	< .001
Liking	0.49	0.09	0.50	< .001
Gender	-0.11	0.12	-0.08	.34
Constant	1.03	0.40		.01
$R = 0.71$				
$F(3, 75) = 25.90, p < .001$				

	Idealization (T3)			
	Estimate	*SE*	β	*p*
Similarity	0.16	0.08	0.22	.05
Liking	0.34	0.09	0.39	.001
Gender	-0.12	0.13	-0.09	.37
Constant	1.70	0.44		< .001
$R = 0.52$				
$F(3, 75) = 9.23, p < .001$				

Table 29

Mediation Analysis of Liking and Idealization on Desired Future Interaction

	Idealization (T2A) (M)			*DFI (T2B)*		
	b	*SE*	*p*	*b*	*SE*	*p*
Liking	0.62	0.09	< .001	0.40	0.12	.001
Idealization (T2A)	-		-	0.41	0.12	.001
Gender	-0.16	0.12	.21	-0.09	0.13	.51
Constant	1.66	0.39	< .001	0.83	0.46	.08
	$R = 0.64$			$R = 0.67$		
	$F(2, 76) = 25.93, p < .001$			$F(3, 75) = 20.90, p < .001$		
	Idealization (T3) (M)			*DFI (T3)*		
	b	*SE*	*p*	*b*	*SE*	*p*
Liking	0.42	0.09	< .001	0.20	0.13	.12
Idealization (T3)	-		-	0.26	0.15	.07
Gender	-0.14	0.12	.27	-0.19	0.16	.25
Constant	2.06	0.41	< .001	1.99	0.59	.001
	$R = 0.48$			$R = 0.38$		
	$F(2, 76) = 11.33, p < .001$			$F(3, 75) = 4.16, p = .01$		

Table 30

Linear Regression Analysis of Desired Future Interaction (T2B) Predicting Idealization (T3)

	Estimate	*SE*	β	*p*
DFI (T2B)	0.33	0.09	0.40	< .001
Gender	-0.08	0.13	-0.06	.56
Constant	2.26	0.35		< .001
$R = 0.41$				
$F(2, 76) = 7.49, p = .001$				