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Online Self-Disclosure Behaviors

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ABSTRACT

Self-disclosure, the sharing of personal information between communication partners, has long been a topic of interest due to the large impact it plays in the development of interpersonal relationships (Altman & Taylor, 1973). As the use of computer-mediated communication (CMC) has increased, so has the interest in the impact it may have on self-disclosure and relationship development. Several theories have been posited to explain the impact that the medium of communication has on self-disclosure. Although some theories have predicted a negative impact of CMC on self-disclosure (Daft & Lengel, 1986; Kock, 2005), several researchers have found that CMC increases self-disclosure (McKenna & Bargh, 2000; Valkenberg & Peter, 2009a; Walther, 1996). This article discusses the main theories that explain the nature of online self-disclosure, the possible mechanisms by which CMC serves to increase self-disclosure, and impact that online self-disclosure has on interpersonal relationships and well-being.

INTRODUCTION

Self-disclosure occurs when a person provides (i.e., discloses) information about him/herself to another person. The basic parameters of self-disclosure include: (1) amount of information disclosed; (2) intimacy of information disclosed; and (3) duration of disclosure (Cozby, 1973). Examples include revealing minor personal details such as preferences, opinions, or marital status, to more intimate disclosures such as discussing health status, personal secrets, or embarrassing behaviors. According to social penetration theory, self-disclosure is a form of interpersonal communication that is central in the development and maintenance of relationships, which promote
personal well-being (Altman & Taylor, 1973). Therefore, as society increases the use of electronic media for interpersonal communication (e.g., e-mail, instant messaging, and social networking sites), it is important to examine the impact this shift has had on self-disclosure behaviors as well as the implications for interpersonal relationships and well-being.

**OVERVIEW**

Self-disclosure has a long history of investigation by interpersonal communication researchers because of its importance for relationship formation and personal well-being. Social penetration theory suggests that relationships develop through a process of reciprocal self-disclosure resulting in intimacy and a close interpersonal bond (Altman & Taylor, 1973). There is a reciprocal nature to self-disclosure; the more people disclose about themselves, the more their communication partners will disclose as well. High levels of self-disclosure in dyads has been associated with higher levels of reported liking by communication partners. Similarly, people disclose more information to friends than strangers and people who disclose more information about themselves have more friends than those who disclose less. Therefore, it is not surprising that higher self-disclosure is associated with better mental health. Although the relationship is likely curvilinear, with levels of disclosure that are too high associated with poor mental health (Altman & Taylor, 1973).

Traditionally, there have been two primary methods for examining the amount, content, and duration of self-disclosure (Cozby, 1973). First, researchers have had participants complete self-reports describing their self-disclosure in specific situations. Second, researchers have enlisted behavioral measures such as recording conversations between two participants in a study or having participants complete written self-descriptions. Self-report measures have been criticized for their lack of predictive validity for actual self-disclosure when using behavioral measures. One reason for the lack of correlation between self-report and behavioral measures may be a response bias on self-report measures (e.g., a recall bias or a social desirability bias). Another reason for the discrepancy may be the communication recipient. Self-report measures typically ask participants about disclosure to their “best same-sex friend,” whereas studies using behavioral measures of self-disclosure often have participants disclosing information to a stranger (e.g., the experimenter or another participant). The research attempting to assess self-disclosure online is also plagued by these measurement issues first encountered in offline studies.

Interpersonal communication research has identified several factors that affect the amount, content, and duration of self-disclosure in person settings (Cozby, 1973). First, women tend to be both the initiator and recipient of more self-disclosure than men. This difference is relevant to online studies of self-disclosure because women are more likely to be communicating online (Valkenburg, Schouten, & Peter, 2005) and more likely to participate in research studies in general (Rosenthal & Rosnow, 1992). A second characteristic that affects self-disclosure is the socioeconomic status (SES) of the conversants. People from a low-SES background tend to disclose less information about themselves than people from middle- or upper-SES backgrounds (Cozby, 1973). The income differential is important given the “digital divide” in access to computer-mediated forms of communication in society. A third characteristic that has been widely examined in terms of its relationship to self-disclosure is level of extraversion. People who are extraverts both initiate and receive more self-disclosure than people who are introverted (Cozby, 1973). Therefore, studies of online self-disclosure behaviors should examine the personal characteristics of participants in the communication exchange.
Each time a new form of communication technology is introduced, researchers express concern over the impact it will have on the quality of communication and relationships (Ledbetter, Mazer, DeGroot, Meyer, Mao, & Swafford, 2011). In recent years, the use of the Internet for interpersonal communication has expanded rapidly (PEW, 2007; Valkenburg & Peter, 2009a). In 2007, approximately 86% of young adults reported using the Internet occasionally or more frequently (PEW, 2007). Therefore, researchers have begun to examine how self-disclosure, and subsequently relationship formation and personal well-being, are affected when people participate in computer-mediated communication (CMC) rather than face-to-face (FTF) communication.

The research and theory on the impact of CMC on self-disclosure, interpersonal relationships, and well-being is in its infancy. Although it has been studied for over 20 years by a variety of researchers in multiple disciplines, there is still considerable debate over the impact of online communication. The debate may partially be due to the constantly evolving nature of the communication technologies that are available as well as how they are used by the public. However, two generally opposing views have emerged. The first view suggests that the nature of CMC should result in less self-disclosure and, consequently, reduce interpersonal relationship strength and personal well-being. The opposing viewpoint has generated research indicating that self-disclosure increases during CMC compared to FTF communication. Key researchers from these two camps will be discussed as well as some of the factors that could account for the discrepancies in their findings.

**THEORIES PREDICTING LESS SELF-DISCLOSURE ONLINE THAN IN-PERSON**

Daft & Lengel (1986) proposed the Media Richness Hypothesis, which classifies communication media along a continuum based on four characteristics, including: (1) bandwidth/ability to convey non-verbal cues; (2) speed of feedback; (3) message personalization; and (4) language naturalness. They suggested that people attempt to match their communication task to a form of media with the appropriate level of richness on these four traits. If a sub-optimal mode of communication is used, then task performance will be adversely affected. Walther & Parks (2002) reviewed studies testing the Media Richness Hypothesis and concluded that while studies that ask people to hypothetically match media to communication task do support the Media Richness Hypothesis, observational studies of natural medium choice have not. A major criticism of the theory comes from studies finding that social influences (e.g., the culture of e-mail in an office setting) shape people’s use of a technology independent of the richness of the medium. In the end, people’s perception of appropriateness of CMC for a task, rather than the objective features of the medium, seems to be what is critical.

Kock (2005) offered the Media Naturalness Hypothesis as an alternative to Media Richness. He suggested that humans’ evolutionary history makes FTF communication exchanges the most natural and satisfying form of communication (e.g., specialized areas of the brain for processing facial expressions used during FTF exchanges). FTF communication is characterized by (1) the participants being physically co-located; (2) synchronous responding; and (3) full access to non-verbal cues such as facial expression, body language, and tone of speech. Media Naturalness has some similarities with Media Richness; however, the key outcomes of interest are different. Whereas Media Richness is concerned with the impact of media choice on task efficiency, Kock has suggested that the more a form of media diverges from FTF communication, the more it increases cognitive burden during communication due to lack of nonverbal cues, increases ambiguity of communication exchanges, and decreases...
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physiological arousal making CMC exchanges less engaging than FTF. Some studies have found that there is increased cognitive burden when using CMC without a detriment in task performance, which supports the media naturalness over Media Richness Hypothesis. People were able to compensate for the shortcomings of communicating through e-mail by writing well thought out and focused responses.

Based on this hypothesis, Kock (2005) proposed that adding streaming video of a customer service representative during an online inquiry would result in higher perceived quality by customers due to reduced cognitive load resulting from availability of the speaker’s nonverbal cues. Although, this hypothesis remains to be tested, the prediction contradicts research that has found people rate a CMC partner more positively than a FTF communication partner if they are not presented with streaming video of their partner (Antheunis, Valkenburg, & Peter, 2007). In addition, Walther & Boyd (2002; as cited in Walther & Parks, 2002) concluded that it is erroneous to assume in-person communication is always better because there are characteristics of the Internet that make it ideal for providing social support (e.g., access to experts, anonymity to avoid embarrassment, management of interaction, and 24/7 access).

Although neither the media richness nor media naturalness hypotheses specifically address self-disclosure as a specific outcome variable, both would suggest that people should disclose less information through CMC than in-person. From the Media Richness perspective, the lack of nonverbal cues and asynchronous nature of CMC as well as the reduced ability to convey personality traits and use natural language indicate that electronic media are less rich for the task of relationship formation. Similarly, the Media Naturalness Hypothesis suggests that FTF is always the most optimal form of communication. Therefore, people should be less likely to disclose personal information about themselves through CMC because it is more cognitively effortful and less enjoyable. In addition, the information that is disclosed is more likely to be misinterpreted by the recipient, which would reduce the effectiveness of the disclosure for relationship formation or maintenance.

THEORIES PREDICTING MORE SELF-DISCLOSURE ONLINE THAN IN-PERSON

Suler (2004) coined the phrase “the online disinhibition effect” to summarize the notion that people frequently do things online that they would not do in person. He suggests that this disinhibition can take either a benign (e.g., increased self-disclosure or idealized representations of communication partner) or a toxic (e.g., flaming or cyberbullying) form. Suler hypothesizes that disinhibition occurs due to the characteristics of the internet as well as because people dissociate their online behavior from their offline behavior (i.e., online actions do not impact real life) and that lines of authority are obscured on the Internet due to lack of nonverbal cues making people more willing to speak or act out. The following research and theories in three specific areas address why people may be disinhibited and disclose more about themselves online than in-person.

Characteristics of the Internet that Affect Disclosure

McKenna and Bargh (2000) describe four major characteristics of communication over the Internet that differentiate it from in-person. First, there is a great deal of anonymity to communicating over the Internet that ranges from creating an entirely false personal identity (e.g., posing as someone older or a member of the opposite sex) to simply interacting with people you do not know personally. Second, physical distance no longer poses a barrier to who people can meet and form relationships with, which drastically increases the number of potential interaction partners. Third,
CMC lacks visual cues available in-person, such as attractiveness, body language, and facial expressions. Finally, there is more control over self-presentation due to asynchronous responding and lack of time pressure to formulate a response.

Social Identity/Deindividuation (SIDE) theory suggests that communicating without nonverbal cues and in physical isolation promotes greater group identity (e.g., strangers who belong to the same news group; Spears & Lea, 1992). Early researchers were concerned that this would lead to deindividuation, resulting in anti-normative behaviors and aggressive acts. Although “flaming” (i.e., posting or sending hostile messages on the Internet) and cyber-bullying continue to be a public concern and focus of study, experimental research has not supported negative consequences of deindividuation during Internet interactions (Coleman, Paternite, & Sherman, 1999; Joinson, 2001). In fact, many studies have found benefits of online communication. For example, people tend to perceive themselves to be more similar to their CMC partners than they actually are and have more positive perceptions of their communication partner online than in person (Antheunis et al., 2007; Bargh et al., 2002). These findings are consistent with research on FTF self-disclosure in which individuals who disclose more also rate their partners as more agreeable and likeable than those who disclose less (Altman & Taylor, 1973). Regardless of whether it occurs online or off-line, self-disclosure seems to have a similar impact on relationship development.

An additional benefit of CMC associated with the characteristics of the Internet identified by McKenna and Bargh (2000) has been increased self-disclosure compared to FTF interpersonal communication (Antheunis et al., 2007; Boneva et al., 2006; Coleman, et al., 1999; Gross et al., 2002; Joinson, 2001; Schouten, Valkenburg, Peter, & Antheunis, 2006; Tidwell & Walther, 2002). For example, Antheunis et al. (2007) conducted an experiment by randomly assigning participants to either a text-only CMC, a visual CMC, or FTF communication conditions. They found that participants in the text-only condition disclosed more about themselves and asked more questions about their communication partner, which resulted in increased interpersonal attraction. Studies have also found that people not only engage in more frequent self-disclosure online, but also more intimate disclosure (Coleman et al., 1999; Joinson, 2001), and that the intimacy of the self-disclosure directly impacts the effects that online self-disclosure has on the development of relationships (Valkenberg & Peter, 2009a, 2009b). The breadth and depth of self-disclosure observed on the Internet indicates that it may be a viable medium for developing intimate relationships and increasing well-being.

Although some researchers suggest that it is the lack of visual and non-verbal cues online (i.e., cue deficits) that results in increased self-disclosure (McKenna & Bargh, 2002; Suler, 2004), the Social Information Processing (SIP) theory provides an alternate perspective (Tidwell & Walther, 2002). Tidwell and Walther propose that CMC participants compensate for the lack of nonverbal cues through other means (e.g., content, style, and timing of messages) to reduce interpersonal uncertainty, form impressions, and develop relationships online.

Research supporting this theory has found that although more complete impressions may form faster during FTF interactions, overtime relationships become indistinguishable from those formed through CMC. Tidwell and Walther (2002) found that CMC dyads engaged in more episodes of self-disclosure and asked more questions, especially personal questions, than FTF partners. They also rated their partners as more effective communicators and more positively, in general, than FTF dyads.
Hyperpersonal Communication Theory

During the early days of Internet communication, accounts of rapidly developing Internet romances led Walther (1996) to suggest that the internet not only allows for meaningful interpersonal communication, but that it often increases the amount and quality of information shared between partners. He proposed that the CMC leads to a phenomenon known as ‘hyperpersonal communication’ which he defined as “CMC that is more socially desirable than we tend to experience in parallel FTF interaction” (Walther, 1996, p.17) Walther described four elements that affect online communication: the sender of message, the receiver, the channel, and the feedback received about the communication attempt.

The sender takes advantage of the characteristics CMC (e.g., lack of visual or nonverbal cues) to control their self-presentation. While this allows the sender to possibly be dishonest about his or her identity, it may also have benefits which increase the quality of the communication. Because there are no visual cues in CMC, partners no longer have to monitor their physical presentation (e.g., posture, looking interested, etc.) and can focus more of their cognitive resources on the content of the conversation.

The recipient of the message tends to develop an overly idealized representation of the sender by reading more meaning into smaller amounts of information. This idealized representation may stem from the group identity formed (see SIDE theory) when communicating online that is magnified by the lack of nonverbal cues and physical isolation compared to FTF group identity formation. In addition, people using CMC may further idealize their communication partner because they are using the internet to seek out interaction with people whom they anticipate future FTF interaction. The idealization of the message sender by the recipient leads to greater self-disclosure online compared to in-person.

The properties of the communication channel (e.g., asynchronicity) provide the sender with more control over message construction than in FTF settings. Asynchronicity also allows the individuals communicating to respond when they are not occupied with other obligations, leading to a more relaxed communication environment, which may further foster self-disclosure.

Finally, feedback from the receiver who has an idealized representation of the sender results in a self-fulfilling prophecy of responding behavior. As the receiver’s impressions of the sender become more and more positive, he or she reacts to his or her partner in a more positive way, which in turn impacts the quality of the communication. Again this would imply increased self-disclosure between CMC partners compared to FTF. As each member’s perception of their partner becomes more positive, they begin to behave more socially and warmly in their interactions. This intensified feedback loop further creates an environment in which self-disclosure becomes more likely.

These four elements interact resulting in increased self-disclosure among people communicating online compared to FTF to offset the reduction in visual cues available (Tidwell & Walther, 2002; Walther, 1996). The characteristics of CMC often lead to increases in self-disclosure, but only when positive impressions are formed. Although some research has supported this theory, it has been criticized for lacking an integrated theoretical approach that explains the relationship between the four components specified.

Internet-Enhanced Intimate Self-Disclosure Hypothesis

Valkenburg and Peter (2009a, 2009b) have examined the effects of Internet usage on well-being and existing relationships, with a focus on self-disclosure through CMC. They proposed the Internet-enhanced intimate self-disclosure hypothesis, which predicts that the positive impact of CMC on existing relationships can be

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accounted for by the amount of intimate information one discloses online (Ellison, Steinfield, & Lampe, 2007; Valkenburg & Peter, 2009a, 2009b). Valkenburg and Peter (2009a, 2009b) describe intimate information as topics that are not easily discussed, such as worries, secrets, or embarrassing experiences. Their hypothesis has three assumptions, including (1) self-disclosure is more frequent during CMC than FTF; (2) more self-disclosure enhances relationships; and (3) stronger relationships result in greater personal well-being. A longitudinal study of the effects of CMC on the quality of future friendships found that the relationship was completely mediated by the amount of intimate information disclosed when using CMC (Valkenburg & Peter, 2009b). This provides substantial support for the intimate self-disclosure hypothesis, where the quality (i.e., intimacy) of the disclosure is key in explaining CMC’s impact on well-being and relationship formation.

Valkenburg and Peter (2009a) summarize a decade’s worth of research that supports the three assumptions of the Internet-enhanced intimate self-disclosure hypothesis. The research that supports the first assumption (i.e., self-disclosure occurs more frequently online) draws from the “reduced cue” theories, which suggest that the lack of non-verbal cues online reduce people’s self-consciousness and increase the amount of information they share about themselves, resulting in hyperpersonal communication online (Walther, 1996). According to Valkenburg and Peter (2009a) “the finding that online communication enhances self-disclosure is one of the most consistent outcomes in CMC research” (p. 3). In examining the relationship between CMC and friendship quality, Valkenburg and Peter (2009b) found that self-disclosure to existing friends through instant messaging fully mediated this relationship.

In summary, people tend to disclose more online than in-person and this self-disclosure increases the quality of their existing relationships, which results in higher levels of personal well-being. However, the researchers note the limitations of this hypothesis. They suggest that there are several variables that moderate the relationship between CMC and well-being, such as the type of technology used during communication attempt, the sex of the communicator, and the communicators’ levels of social anxiety. First, the Internet-enhanced intimate self-disclosure hypothesis may only apply to situations in which people are communicating online with their existing friends rather than strangers. There are specific forms of technology that are geared toward communicating with existing friends (e.g., instant messaging) that might be more beneficial than those that are not. In terms of the sex of the communicator, some research suggests that the enhanced self-disclosure online might be more likely to occur for boys than girls, because boys are less likely to disclose FTF than girls, especially during adolescence. Finally, the topic of how people who are socially anxious use and benefit from CMC is discussed further below.

**Impact of Personality Characteristics on Self-Disclosure**

Researchers have examined some personality characteristics that may moderate the amount of self-disclosure people engage in online (Valkenburg & Peter, 2009a). The most frequently studied characteristic is the extent to which someone was introverted or extraverted; however, there is disagreement in the literature over how this characteristic affects self-disclosure. Early speculation suggested that CMC might serve as an alternate, more comfortable mode of communication for people who are shy, lonely, and introverted. Some research has supported the social compensation (i.e., poor-get-richer) hypothesis, which indicates that people who are socially isolated or lonely will benefit from using the Internet due to the physical distance between them and the communication recipient as well as the increased control over self-presentation allowed through asynchronous
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responding (LaRose, Eastin, & Gregg, 2001; McKenna & Bargh, 1999 as cited in McKenna & Bargh, 2000; Mesch, 2001; Valkenburg & Peter, 2007b; Ward & Tracey, 2004; Wolak et al., 2003). However, some studies have found no benefits of Internet use among introverted persons (Bonebrake, 2002; Valkenburg & Peter, 2007a).

In contrast, the social enhancement (i.e., the rich-get-richer) hypothesis suggests that people who are extraverted are more likely to benefit from CMC because they use the Internet to build their existing relationships. Several studies have also supported the rich-get-richer hypothesis (Bryant et al., 2006; Kraut et al., 2002; Liu & LaRose, 2008; Ma & Leung, 2006; Peter, Valkenburg, & Schouten, 2005; Sheldon, 2008; Valkenburg & Peter, 2007b; van den Eijnden et al., 2008). In general, people who are more extraverted have been found to disclose more than introverts on the Internet resulting in greater well-being. However, people who are introverted or socially isolated typically disclosure more through CMC than during FTF communication, which increases the social support they receive (Peter et al., 2005; Valkenburg & Peter, 2007b; Ward & Tracey, 2004). It appears that both groups disclose more online compared to in-person benefiting their relationships and well-being.

Ledbetter, Mazer, DeGroot, Meyer, Mao, and Swafford (2011) attempt to explain the discrepancies seen in the literature by examining the underlying motivations people have for disclosing information online, specifically on Facebook. They suggest that some people prefer online self-disclosure because they lack social competence and want to avoid in-person interactions. This form of online self-disclosure is associated with people who feel lonely and depressed. Alternatively, people who have higher communication competence are often motivated to communicate online to promote social connections. Although online communication was associated with relational closeness in people with both types of motivation, there was a stronger association between offline communication and relational closeness than online communication and relational closeness indicating that people who are socially competent use multiple forms of media to maintain their relationships.

FUTURE RESEARCH DIRECTIONS

Historically, researchers have viewed self-disclosure as a behavior that is beneficial and should be fostered to enhance intimate relationships and personal well-being. However, as early as 1973, Altman and Taylor expressed concern over the “tyranny of openness,” which they described as the demand for full disclosure from others in all social encounters. This concern seems even more relevant today in the age of social networking sites where not only is information disclosed through words, but also through photographs and video of participants posted, frequently, in real time. There has been some research that suggests that too much disclosure may negatively impact interpersonal relationships (e.g., marital satisfaction) due to the boredom it engenders. Therefore, future research should investigate the consequences of this type of extreme self-disclosure on interpersonal relationships and personal well-being.

In addition to the possible drawbacks that over-disclosing may have on relationships and well-being, longitudinal research is needed to better understand the long-term impact that online self-disclosure has on relationships. Most of the literature has focused on the initial formation of relationships; however, there is little research that examines long-term effects of CMC on the maintenance of either relationships formed online or relationships established FTF. Areas of particular interest may be the use of CMC to maintain friendships and even romantic relationships across long distances. There is also a dearth of information on the effect that CMC has on relationships among adults. The majority of current research has focused on youth populations. It may be that
there is a different association between the role of online self-disclosure and relationship formation and well-being in different age groups, especially given that CMC represents a shift in how relationships have traditionally formed and developed for older generations.

The majority of research has classified any form of online-communication (e.g., email, instant messenger, chat rooms, social networking sites, etc.) as CMC. It may be beneficial to examine the impact that specific forms of CMC have on self-disclosure and relationship development. Research has also focused on the role that personality variables such as extraversion may play on the effect that CMC has on self-disclosure and well-being, however more research is needed to understand how specific types of CMC may interact with personality variables to impact self-disclosure. Additionally most of the research has compared CMC such as email and instant messaging to FTF communication; however it may be more accurate to compare certain types of CMC to letter writing, rather than FTF conversations. Pennebaker, Colder, & Sharp (1990) have found several benefits to writing (e.g., better health and accelerated coping), which may be more comparable to CMC.

Lastly, although CMC is on the rise, with more and more people using the internet to communicate with friends and family, people continue to perceive CMC as a less effective and enjoyable way to communicate with others (Schiffrin, Edelman, Falkenstern, & Stewart, 2010). Further research is required to investigate the discrepancy between the positive effects that CMC has been found to have on self-disclosure and well-being and people’s negative perceptions of CMC despite increased reliance on CMC. These perceptions may, in part, reflect the notion put forth in the Media Naturalness Hypothesis in which non-FTF communication increases cognitive load and decreases emotional reactivity, causing individuals to have more negative perceptions of non-FTF communication. Further research is required to better understand the impact that CMC may have on our cognitive resources and emotional reactivity. The use of physiological measures may be particularly useful in this regard.

In the last few decades a significant body of research has been generated to better understand the effect that technology has on self-disclosure. As technology continues to change the scope of interpersonal communication, additional research is required to better understand the ever evolving nature of CMC. Although self-disclosure online has received attention in the research, there continues to be debate over whether self-disclosure is enhanced or diminished during CMC. Further research is needed to examine how the mode of communication (e.g., e-mail, instant messaging, and social networking sites) and characteristics of the communication partners (e.g., biological sex and extraversion) affect self-disclosure online. Understanding the impact of CMC on self-disclosure is critical given the role of self-disclosure in relationship formation and maintenance as well as subsequent interpersonal well-being.

REFERENCES


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**ADDITIONAL READING**


