

GETTING CLOSE FROM FAR AWAY: THE ROLE OF DEGREE OF ATTACHMENT
SECURITY IN BLOGGING BEHAVIOR

by

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Abstract

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This study examines several aspects of the relationship between blogging and the psychological construct of attachment security. The sample included 150 participants who filled out an online questionnaire comprised of open- and closed-ended measures of attachment, psychosocial functioning and blogging. Results indicated that when compared with published studies using the Experiences of Close Relationship Scale (ECR; Brennan, Clark & Shaver, 1998), bloggers had higher levels of attachment avoidance than most normative samples of undergraduate students and adults. They also had higher levels of attachment anxiety than adults, but lower than undergraduate students. Structural equation modeling was used to analyze a theoretical model derived from the literature, finding that specific blogging behaviors differ based on attachment style. Individuals with greater attachment avoidance tended to maintain higher levels of anonymity in their blogs and report lower levels of blogging intensity. Individuals with greater attachment anxiety were more likely to be motivated by needs for self-expression and self-enhancement, but this did not lead to greater levels of blogging intensity. In contrast to both of these groups, individuals with low levels of avoidance and anxiety were more likely to describe their online and offline selves as being more similar to each other. However, they also portrayed themselves online in a lighthearted and controlled fashion, while bloggers with higher levels of both anxiety and avoidance described portraying their online selves in more authentic and expressive ways. The study concludes that while people perceived blogging to

offer them many benefits, certain online behaviors enabled them to avoid intimacy and enact negative interpersonal dynamics. This supports the notion that attachment is an enduring pattern that carries over to online interaction, but that certain features of online interaction can be used to help mitigate some aspects of the ingrained interpersonal dynamics that characterize insecure attachment.

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I am indebted to the 150 individuals who willingly volunteered their time and effort to complete an in-depth online questionnaire with diligence and care. Their thoughtful responses not only enabled the completion of this dissertation, but contributed insight and sophistication to a phenomenon that researchers are just beginning to understand. My patient, Gloria, deserves special recognition for serving as the inspiration for this project. The hours we spent discussing her blog opened my eyes to an entirely new way of relating which intrigued me academically and clinically. Moreover, her openness and flexibility in considering the role of blogging in her life transformed my thoughts about blogging and ultimately became the foundation of this study.

Finally, I thank my family for the many ways in which they supported me as I worked towards this degree and for instilling in me their values of hard work, dedication and perseverance. They helped me find the elusive balance between setting realistic goals and dreaming big. I thank Adi for meeting me at the final moments of dissertation writing with patience, a clear mind, and a willingness to help in ways big and small – from the nitty-gritty details of formatting to thoughtful consideration of the “bigger picture.”

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Chapter 1: Introduction

My interest in the form of Internet communication known as blogging began as a result of working with a therapy patient, Gloria, who had been using this medium for almost a decade to cultivate an identity and community for herself. As I began to discuss my interest in this area with other therapists, I was surprised by how much they had to say and offer about the role that blogging and similar Internet phenomena play in the lives of their patients, and thus in the discussions that occur in therapy. Moreover, many of the therapists I spoke to – experienced and less experienced therapists alike – expressed the opinion that theory and research in this area would be of great value to clinicians interested in understanding the dynamics underlying Internet behaviors in their patient population.

The best definition of blogging at present is found in Wikipedia, a collaborative online encyclopedia. A blog (a contraction of the term “web log”) is “a Web site, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. ‘Blog’ can also be used as a verb, meaning to maintain or add content to a blog” (“Blog,” 2008).

Many blogs focus on a particular topic while others function as personal online diaries, and most blogs include a combination of text, images, and links to other blogs or Web pages related to the topic being discussed. A defining feature of most blogs is readers’ ability to leave comments about a blog entry (commonly referred to as a “blog post”), which can be read and answered by the blog’s author and/or other readers. Blogging is thus somewhat unique as a phenomenon of computer mediated communication, as it encompasses both the task of creating one’s own individualized personal homepage (unlike communal forums) while participating in

an online community (unlike most personal homepages). While blogs are characterized by a series of posts written by an individual, a great deal of the blog is often devoted to the comments and thoughts of others about the author's posts. Bloggers are thus engaged in the parallel processes of presenting and cultivating an online "self," and receiving and responding to feedback from others on that identity, all of which takes place in virtual space.

Over time, I observed that one of main functions of Gloria's blog was that it provided protection from the intimate nature of face-to-face interactions. For Gloria, a woman who greatly desired closeness with others despite her extreme difficulty tolerating the vulnerability of intimacy, blogging enabled her to experience feelings of closeness and gratification in relationships with others online. Unlike face to face interaction, online relationships are inherently distant, existing in the transitional space between imagination and reality made possible by the Internet. She used this fact to her advantage, fleeing to her online community to feel support and validation from friends, especially when her offline relationships were in shambles.

Because her blog represents an opportunity to overcome the challenges of achieving closeness with others, Gloria found it necessary to keep her blog identity separate from her offline identity. Many of her friends and family members did not know that she blogs; those that did were often not granted access to read her entries. Also, because of her discomfort with showing her "real" self, she was careful about disclosing information on her blog about herself and her feelings about real events going on in her life. Her dual identity thus remained relatively compartmentalized, as she kept her "blog self" a secret from people in her "real" life, and her "real self" a secret from people in her online world.

Decisions about what information to disclose about oneself affect the composition of a blogger's audience, which in turn plays an essential role in blogging behavior. A blogger like Gloria, who kept her identities separate, blogs for an online community -- people she might meet even a handful of times, but who remain primarily online. Other bloggers blog for people they know offline as well as online. Understanding these decisions may thus offer insight into the different psychological functions that blogging can serve.

Until now, most attempts to understand motivations for blogging have been made by social psychologists, and research in this area is in a relatively early stage. Most of the studies involve analyses of survey data, a few of which include direct quotations from study participants. This literature, reviewed below, focuses on a variety of aspects of blogging, including motivations for blogging, comparisons of personality traits of bloggers and non-bloggers, and decision-making processes about self-disclosure (see Herring et al., 2004; Nardi et al., 2004; Viegas, 2005; Qian & Scott, 2007). The original quotations from some of these studies offer rich insight into the complexity of motivations that lead individuals to blog; however, this complexity is not deeply interpreted by the authors of these studies, either in light of existing theories or with the aim of creating new theories. Moreover, consideration of blogging and the psychological functions it serves is absent in contemporary psychodynamic literature, which has only recently begun to address theoretical and practical considerations of the Internet's prevalence in our lives (see Turkle, 2004; Gabbard, 2002; Dryer & Lijmaer, 2007; Gibbs, 2007; Parker, 2007; Sand, 2007; Curtis, 2007; Schirmacher, 2007; Suler, 1998; Suler, 2002a; Suler 2003; Suler 2004a; Suler, 2004b; Suler, 2004c).

Despite the fact that there has been no psychodynamic exploration of blogging, the existing literature on blogging strongly suggests that the distance and relative anonymity offered

by the Internet allows bloggers more freedom to express and explore aspects of themselves that they do not feel comfortable doing in “real life,” as well as pursue social interaction with others (Gumbrecht, 2005; Hodkinson, 2007). The comfort offered by anonymity further raises the question of whether blogging represents a response to discomfort with engaging in close, intimate relationships.

Blogging as a response to this discomfort may mean several things. For example, when beginning to work with Gloria, I immediately saw how the blog offered her a way to avoid face-to-face intimacy. It took me longer, however, to understand its potentially therapeutic power in offering her a safe playground to experiment with vulnerability, authenticity and relatedness - the very things she finds difficult to achieve in her “real” life. Gloria’s blogging community was a place where she felt both desired and desirable, making it distinct from other communities of which she was a part. I then understood that an activity that could be seen as an impediment to her ability to function interpersonally in the “real world” had the potential of not only facilitating her ability to manage closeness with others, but also increasing her sense of self and self-worth as well.

One way to examine people’s feelings of safety in personal relationships is the study of adult attachment, which characterizes individuals by the patterns of behavior they exhibit in close relationships, particularly during the process of separation. Attachment classifications refer to consistent and enduring patterns of behavior that date back to one’s earliest caregiving relationships. Hazan and Shaver (1987) suggest that the same motivational system that triggers the close emotional bond between parents and their children also shapes the bond that develops between adults in emotionally intimate relationships.

Attachment classifications were first conceptualized by Mary Ainsworth (1978) in a laboratory procedure known as the *Strange Situation* procedure. In this procedure, infants and their mothers are observed playing together. The mother then leaves the infant with a friendly stranger, and the infant's reaction to being left and to the mother's reappearance is observed. Responses to the Strange Situation procedure are coded as one of three basic attachment patterns: secure, insecure-ambivalent, and insecure-avoidant. Securely attached infants were found to derive security from the mother that enabled exploration of their environment, and although they became distressed at being separated from her, they sought proximity and derived comfort from her when reunited. Children classified as insecure-ambivalent were distressed during separation from the mother but seemed ambivalent about allowing themselves to be comforted by her upon reunion, often showing overt signs of anger towards her. Children classified as insecure-avoidant showed less distress than the other two groups when separated from the mother, and responded to her return by avoiding contact or actively turning away from her.

As the study of attachment soon grew to address the way early attachment styles play out in adult romantic relationships, Hazan and Shaver (1987) found attachment styles in adulthood to correspond with Ainsworth's (1987) attachment categories. Following this development, Brennan and her colleagues (1998) broke the three types of attachment into Likert-scale items, which they factor-analyzed and turned into two continuous scales that they called anxiety and avoidance.

The avoidance dimension is of particular relevance in the current study due its elaborate description of individuals who respond discomfort in intimate relationships by increasing distance. Avoidant attachment is characterized by a reluctance to get close to others that often leads to the creation of distance in relationships. It is understood to derive from a strong desire

for independence and self-sufficiency in response to expectations of disappointment, and is a defensive maneuver against a deep desire for closeness with disappointing others.

The characteristics of avoidant attachment may provide a useful framework for understanding the research finding that bloggers tend to shy away from intimacy in face-to-face interactions (Nardi et al, 2004; Qian & Scott, 2007). Despite this apparent link, there is very limited research in the area of attachment and blogging. I will examine this phenomenon by testing a theoretical model (see Figure 1) that I have derived based on a review of the literature on blogging and my own observations of Gloria.

Literature Review

Blogging. Blogging, now a phenomenon widely recognized by various forms of mass media and most Internet users, was known to a mere fraction of the population just a decade ago. The earliest weblogs (more commonly referred to as blogs) began in the mid-1990s, although the term “weblog” was not coined until 1997, then shortened to “blog” two years later in 1999 (“Blog,” 2008). After a slow beginning, the popularity of blogging began to rapidly spread into the 21st century. While the earliest blogs were simply common webpages that got manually updated by their authors, blogging was further popularized by the invention of free software that allowed for a blogger’s entries to appear in reverse-chronological order, with the most recent entries appearing at the top of the webpage.

The first weblogs were driven by the inclusion of links to other sites that accompanied the blog author’s commentary on a situation. Blogs today continue to follow the original style, where authors post brief commentary in “an irreverent, sometimes sarcastic tone” (Blood, 2000, para. 6). Many of these blogs serve a filtering function for readers, who can rely on blog authors to pre-surf the Internet and find the “most mind-boggling, the most stupid [and] the most compelling” tidbits of information which they then share with their readership (Blood, 2000, para. 7).

The creation of *Blogger* and other user-friendly blogging software is responsible for the transition of link-driven, filter blogs to blogs that resemble online diaries organized by date of entry, and consisting of personal commentary, links to other blogs and media sources, and ongoing discussion. These blogs, often updated several times a day, are “a record of the blogger’s thoughts -- something noticed on the way to work, notes about the weekend, a quick reflection on some subject or another” (Blood, 2000, para. 12). Blood describes these freestyle blogs as

“nothing less than an outbreak of self-expression,” and argues that blogs represent an unprecedented opportunity for people to publicly express and publish their ideas to the world (para. 26). Indeed, research suggests that while some blogs focus solely on particular topics, the majority (70%) of blogs are personal journals/diaries (Herring, Scheidt, Bonus, & Wright, 2004).

As the breadth and influence of blogs grew, non-bloggers such as reporters and other commentators began to popularize them, often characterizing blogs in ways that bloggers found to be one-dimensional and not reflective of their complexity. In response to her frustration at repeated attempts made by non-bloggers to portray blogging behavior, Meg Hourihan, the creator of an award-winning blog, published *We Blog: Publishing Online with Weblogs*, in collaboration with Paul Bausch, co-creator of the blogging software program, *Blogger*, and Matthew Haughey, creator of a large community weblog (Hourihan, Bausch, & Haughey, 2002). The book describes the evolution and purpose of blogs and offers insider advice about how to create and promote weblogs for personal and business use. Hourihan argued that it is not the content of blogs that unites bloggers, but the medium and the manner of writing - namely, “frequently, ad nauseum, peppered with links” (Hourihan, 2002, A Communication Evolution section, para. 1). Also, over time, as bloggers provided links to other blogs in the service of offering an opinion or making an argument, conversations began to develop between bloggers about the topics covered in their blogs, which led to the creation of blogging networks.

The growth of the blogging phenomenon warrants attention and understanding from psychologists; blogging can hardly be characterized as a fringe behavior as it once was. A study of 308 bloggers published in 2006 found that these bloggers were young (54% under 30 and another 30% between 30 and 50), equally divided between men and women, and somewhat ethnically diverse (60% white, 11% African American, 19% Hispanic, 10% other race). Over a

third of bloggers (37%) had completed a college degree, and an equal percentage (38%) were full- or part-time students (PEW, 2006). By 2008, 12% of Internet users (accounting for 9% of all adults) had created their own blog, and a third (33%) of Internet users (accounting for 24% of all adults) identified themselves as a blog reader, with 11% reading blogs every day (PEW, 2008). More recent trends in blogging indicate that its popularity has decreased among teens and young adults, from 28% of online teenagers keeping blogs in 2007 to 14% in 2010. Meanwhile, blog authorship has risen amongst adults over age 30, from 7% maintaining blogs in 2007 to 11% in 2010 (PEW, 2010).

At the same time, while blogging has undoubtedly become more common, it has still not come to occupy mainstream culture with the same force seen in social networking sites such as *Facebook*. As of 2005, 62% of adult Internet users surveyed by The Pew Internet & American Life Project indicated that they were not fully certain of what constitutes a blog (PEW, 2005). In contrast, *Facebook* has grown to include 500 million users since opening its doors to the public in September 2006 (Facebook, 2011). This gap suggests that blogging has certain characteristics which separate it from other forms of Internet communication, including social networking, that have been incorporated into mainstream culture at a much faster rate.

What makes blogging so attractive to some people and not others? My clinical observations have led me to the conclusion that blogging offers individuals a way to manage interpersonal interactions and relationships -- a notion that I found echoed throughout much of the empirical research on blogging. Hourihan (2002) conceptualized the power and meaning of blogging as lying in the moments of shared experience between individuals. She offered an example, "If I visit your site at 4:02 p.m. and see you just updated at 3:55 p.m., it's as if our

packets crossed in the ether. You, the author, and I, the reader, were ‘there’ at the same time -- and this can create a powerful connection between us” (The Time Stamp section, para. 2).

Hourihan (2002) went on to argue that blogs are distinct from other types of writing in their dual purposes of linking to friends and rivals by commenting on what they are doing, as well as offering regular updates on things that matter to the author in a way that invites comment and discussion. The interactive nature of blogging led her to conceptualize blogs as co-creations of multiple authors -- the creator of a blog is its primary author, and those who write comments or emails are its secondary authors. Indeed, while blogs are characterized by a series of posts written by one individual, a great deal of the blog is often devoted to the comments and thoughts of others about the authors’ posts, “often an opening to a discussion, rather than a full-fledged argument already arrived at” (Our Commonality Section, para. 2).

The uniqueness of blogging as a phenomenon of computer-mediated communication is that it encompasses both the task of creating one’s own individualized personal homepage (unlike communal forums) while participating in an online community (unlike most personal homepages). In arguing about the centrality of the social dimension of blogging, some authors have asserted that blogging truly came into existence only when web journal writers recognized themselves as a community (Zezzatti, Aguilar, Campos, Vasquez, & Gallegos, 2008). Bloggers are thus engaged in the parallel processes of presenting and cultivating an online “self” or identity, and receiving and responding to feedback from others on that identity -- all of which takes place over the expansive distance of virtual space.

If interpersonal motivations are a powerful and significant driving force in the decision to keep a personal blog, then it is necessary to consider why this particular mode of communication is preferable to other forms of communication that do not possess the asymmetry between author

and commenter and inherent distance of communication that characterizes blogs. This is perhaps most succinctly stated by Stefanone and Jang (2007): “It is surprising that bloggers choose to disclose traditionally private information in a public fashion” (p. xxx). At first glance, this might indeed seem surprising; however, the ever-increasing popularity of blogs demonstrates that as counterintuitive as it might seem for people to go public with information that is traditionally kept private, there is something about the act of blogging that offers a unique and compelling opportunity for many people to communicate their thoughts and ideas to others.

As described above, one way to understand the complex nature of people’s interactions with others is the study of adult attachment, which provides a developmental framework for understanding why people have different thresholds for seeking and maintaining intimacy with others. The next sections will examine the unique nature of people’s interaction in blogging and present an overview of attachment theory. In a final section, studies on attachment and blogging will be reviewed and the two phenomena brought together in research questions of the proposal.

Research on Blogging Research on people’s motivations for blogging and how bloggers manage relationships with their readers began to take hold in 2004 with a number of key studies. These included a descriptive study of 203 randomly selected bloggers (Herring, Scheidt, Bonus & Wright, 2004) that focused on author characteristics, reasons for blogging and frequency of blogging behaviors, and an ethnographic study of 23 bloggers by Nardi, Schiano and Gumbrecht (2004) which explored why people blog, and how bloggers manage the relationships they have with their readers. As the latter study included multiple interviews and repeated coding of actual blog posts, this data was elaborated upon in a number of publications (Schiano, Nardi, Gumbrecht, & Swartz, 2004; Gumbrecht, 2005). These latter studies added to the initial finding that the majority of blogs are personal in nature, and that one’s relationship to one’s audience is

of primary importance in keeping a blog. Finally, the PEW Internet and American Life project (2007) began conducting a large-scale study of bloggers in 2005, in which 233 bloggers were interviewed (this represented 8% of 4,753 Internet users they surveyed who reported they had blogs). The study included information on the media and communication habits of bloggers, motivations for blogging, blog content, attitudes about blogging and information about blog audience.

A second group of studies focused upon blogger's decisions about anonymity and disclosure to explore the nature of the interaction with one's readership. These included Viegas' (2005) survey study of blogger's expectations of privacy and accountability, and Qian and Scott's (2007) survey study of bloggers' decisions about anonymity and disclosure. Other studies have also contributed to the current review, particularly the work of sociologist Paul Hodkinson (2007), whose ethnographic research on bloggers in their 20s includes a strong narrative element.

Importance of the audience. The centrality of one's audience has been well established in blogging research. Calling blogging a "minuet between blogger and audience," Nardi and her colleagues (2004) referred to blogging as a "deeply social" activity in which the likelihood that people will continue to blog and the manner in which they will do so is highly related to the feedback they get from others. This finding has been observed in other studies (Trevino, 2005). Qazvinian, Rassoulilian and Adibi (2007) studied the phenomenon of "blogger failure" -- a blog that does not receive any audience feedback and is subsequently abandoned by its author. Blogs are thus co-creations of writer and reader, of a blogger and her audience. The role of the audience is central to all five motivations for blogging found by Nardi et al. (2004) -- reviewing daily events to update others, expressing opinions meant to influence others, seeking the opinions and feedback of others, "thinking by writing," and releasing emotional tension.

Although the final two motivations may not appear to be related to an audience, these authors argued the opposite point: “The presence of the audience and writer’s consciousness of the audience clearly introduce the social into an individual’s thought process...[it is] “the release of emotional tension *with an audience* that was especially powerful for bloggers” (p. 6).

Keeping the audience at a distance. Although the audience is foundational to the act of blogging, bloggers tend to keep their audience at arm’s length. “Interactivity was valued, but only in controlled small doses” (Nardi et al., p. 6). To explain this potential inconsistency, researchers have pointed out that the asymmetry between blogger and reader is crucial to preserving the unique bond that bloggers feel to their readers. “Many bloggers liked that they could be less responsive with blogging than they could in email, instant messaging, phone, or face to face communication” (Nardi et al., 2004, p. 7). These authors argued that blog interactions are less intense due to their lack of immediacy, calling blogs “a kind of preserve, a refuge from the intense interaction of other forms of communication” (p.7). The idea that bloggers use this medium to regulate communication that might normally be emotionally overwhelming suggests that bloggers may have particular difficulty regulating intense affect in face-to-face communication.

This asymmetry extends to the communication “rights” of bloggers and their readers (Hodkinson, 2007; Herring et al., 2004; Gumbrecht, 2005). As the rights, or informal rules, of blogging are constructed by bloggers themselves,¹ it follows that the need of bloggers to keep their audience at arm’s length is directly related to current accepted standards of blogging behavior, in which individuals defer to the blogger when engaging in back and forth commentary on his/her blog. In an ethnographic study of teenage bloggers, Hodkinson (2007) called these

¹ A more complete discussion of the influence of blogs upon people’s use of the Internet and the changing nature of accepted standards of blog interaction may be found in Herring et al. (2004). This article also addresses how the technological changes themselves afford people with different needs a variety of options about how to use the Internet to meet those needs.

informal rules of engagement a “double standard,” in which readers are “regarded not as equal participants in a communal forum but as guests or visitors [who must] respect the sovereignty of their host [by] refraining from direct criticism” (p.16). These findings suggest that people who blog might have a more difficult time feeling entitled to be themselves without concern for the reactions and expectations of others. The presence of a non-critical audience thus provides the sense of acceptance without as much pressure to conform. Seen in this light, blogs offer a built-in sense of entitlement to be yourself, where an individual’s personal journal is his own “sovereign territory” where he can say what he really thinks and feels (Hodkinson, 2007, p. 15).

Feedback from the audience. Given the unique set of restrictions that govern the interaction between bloggers and their readers, it is not surprising that the offering of feedback is delicately managed. As Nardi and her colleagues (2004) pointed out, “Bloggers wanted readers but they did not necessarily want to hear a lot from those readers.” However, while these authors concluded that, “Bloggers wanted to express themselves without the ‘threat’ of immediate feedback,” these same bloggers reported feeling pleasantly surprised, satisfied and motivated when a stranger finds and reads their blog (p. 7).

Many bloggers do have expectations and desires for feedback when blogging about personal topics (Lento, Welsch, Smith, & Gu, 2006; Stephanone & Jang, 2007); this finding has been replicated across gender and culture. In Japan, for example, bloggers respond to negative feedback with lowered satisfaction in self-understanding and feeling less accepted by others; this latter variable was the strongest predictor of the decision to continue blogging (Miura & Yamashita, 2007). In Britain, feedback from others determined the level of satisfaction with blogging, with men being “unexpectedly appreciative of the emotionally supportive aspects” (Pedersen & Macafee, 2007, p. 1480).

Although feedback is gratifying, it also pressures bloggers. In one study, 20% of bloggers admitted that the comments made by others on their blog influence what they write (Viegas, 2005). As pointed out by one blogger in a different study, feedback from others “makes you feel good that people are reading it. You don’t really want too many people reading it, but it’s nice when somebody’s reading it” (Gumbrecht, 2005, p. 4). This statement can be interpreted as expressing ambivalence about one’s audience, and about managing the desire for privacy versus the desire for intimacy with others. In summary, bloggers do engage their audience but find ways to control interaction so that it is infrequent and less emotional than other forms of communication (Nardi et al., 2004).

Based on extensive interviews with bloggers, Gumbrecht (2004) coined the term “protected space” to refer to the carefully controlled nature of interaction on blogs. She offered many examples of the ways in which bloggers take advantage of the perceived interpersonal protection offered by this medium. One blogger discussed his disguising of offensive material to prevent people from feeling offended as well as his use of euphemisms to highlight particular concepts for certain audience members. Another blogger pointed out his ability to say things without having to face feedback or reactions from others, admitting that blogging enables “laziness and cowardice” (p. 3). Yet a third blogger described writing in a manner vague enough to keep from being too vulnerable but explicit enough to ensure that certain readers can recognize the specific nature of her post. This blogger also mentioned feeling able to express herself without actively burdening others with her problems, and pointed out that her blog protects her from feeling too exposed.

These comments reflect divergent ways in which the medium is used by different individuals. The third blogger in the example above uses the Internet as protection against her

preoccupation with worrying about the perception of others, her great desire for attention despite her timidity and shyness, and her overall inability to tolerate vulnerability. This dovetails with Miura and Yamashita's (2007) finding that bloggers tend to score high on private self-consciousness (the tendency to be aware of covert private aspects of the self that are not easily observable) and reassurance seeking (the tendency to demand significant and sometimes excessive contact with others in attempt to reassure oneself of one's worth).

At the same time, other bloggers indicate they like to give advice and are not looking for extensive feedback. One such blogger described his blog as a "monologue" in which "other voices don't intrude" (Gumbrecht, 2004, p. 3). For these individuals, the blog's appeal lies less in the opportunity to be actively engaged by others and more in its offering of a platform to speak to an audience without being interrupted. It is possible that this motivation is more male than female, as suggested by Pedersen and Macafee's (2007) findings that male bloggers are particularly likely to attach importance to gaining support for their ideas, while women value social interaction more.

Self-Disclosure and Anonymity. One way to measure the manner in which people take advantage of the asymmetrical communication pattern in blogging is to evaluate the decisions that people make about what personal information to share with their audience. Bloggers are quite open with their readers, some choosing to reveal very personal information including links to personal homepages that are replete with identity and contact information (Bortree, 2005; Huffaker & Calvert, 2005; Miller & Shepherd, 2004; Nardi et al., 2004; PEW, 2006; Qian & Scott, 2007). Herring and her colleagues (2004) found a third of the blogs in their sample to include the bloggers' full name and another third to include the blogger's first name. More than half of the blogs provided other kinds of explicit personal information such as age, occupation,

and geographic location. Data collected by the PEW Internet & American Life project reflected consistent findings, with less than half (45%) of bloggers including their full name and the remaining 55% blogging with a pseudonym (PEW, 2006).

These patterns of disclosure suggest that blogs are an ideal medium for managing self-presentation and the formation of relationships. However, authors have come to different conclusions about why this is so. Some researchers propose that the Internet enables interpersonal trust, both because of its utility in fostering community and social interaction and its utility in mitigating uncertainty in communication (Beaudoin, 2008).

At the same time, the Internet offers individuals a greater sense of control in managing the impressions they make upon others (Ellison, Heino & Gibbs, 2006; Qian & Scott, 2007; Trevino, 2005). For some, this means portraying a self that is more similar to who they would like to be than how they see themselves at present. In a study aimed at identifying the motivating factors behind those who offer free information to others in online settings, Lampel and Bhalla (2007) asserted that individuals feel more positively about themselves as they gain higher levels of status among an online community. Status is based on presentation of an ideal self, which sustains the desire to continue offering such information and maintains this ideal self-presentation. This suggests that heavy Internet users who communicate with an exclusively online audience are people who feel discomfort with portraying themselves realistically to real-life others as they simultaneously place great emphasis on achieving high status amongst people they do not know personally.

In a study of impression management in online dating, Ellison and her colleagues (2006) found that while those engaging in online interactions experienced the same pressures and desires as people who engaged in offline dating, the former group had the freedom to manage

their impressions more strategically through self-censorship. This was due to the asynchronous nature of communication as well as the reliance upon what a person writes rather than how they look in forming an impression. In fact, in a sample of bloggers who disclosed significant amounts of personal information on their blogs, a very small proportion (17.5%) chose to display photos of themselves (Herring et al., 2004).

Displaying a more idealized version of oneself can have a paradoxical effect, as people gain validation and acceptance based on an idealized expression of themselves that hides certain aspects of their personalities (Qian & Scott, 2007). The strategic selection of how to present oneself and manipulate others' perceptions through decisions about what to exaggerate and what to hide has become expected in online interaction, even when people are likely to meet face-to-face at a later point (Walther, Anderson & Park, 1994). Thus, while the competing pressures of highlighting one's positive attributes with presenting oneself authentically exists both online and offline, the Internet affords people the opportunity to manage this balance in a safer way (Ellison et al., 2006).

Kiesler, Siegel and McGuire (1984) noted that people who communicate through the computer are less inhibited and less self-aware, behavior commonly characterized as deindividuated. Deindividuation is used to describe behavior that individuals engage in when faced with situational factors such as group immersion, anonymity, and reduced identifiability, and has long been observed to play a role in computer mediated communication (Spears & Lea, 1994). Similarly, Miller and Shepherd (2004) described online self-disclosure as a form of mediated exhibitionism (see also Amichai-Hamburger, Wainapel, & Fox, 2002), which both allows for greater manipulation of others' perceptions of oneself and leads to better self-understanding by confirming these perceptions. As people lose control over what they share with

others, they expect others to share more about themselves. This dynamic may be due, in part, to the recent popularity of reality TV shows, which have made it socially permissible to know the intimate details of peoples' lives.

Qian and Scott (2007) offered a different explanation, suggesting that disclosure of personal and intimate information is highly related to the blogger's perceived anonymity online. They argued that for many bloggers, anonymity enhances their comfort level with sharing aspects of themselves. This relative anonymity might offer bloggers a sense of protection against rejection, ridicule, and the vulnerability of disclosing personal information to people in their lives. In a sample of 242 university students and individuals recruited from blogger forums, a negative correlation between anonymity and self-disclosure indicated that people who provided less identifying information tended to disclose more.

Some bloggers do keep their online and offline selves separate, and may exhibit different methods of social interaction online than offline. Hodkinson (2007) pointed to the relationship between maintaining anonymity and "uprooting [one's] identity from the constraints of the physical body," which may free bloggers to adopt different personas and ways of being. Many authors have pointed out the advantage of being able to eliminate physical characteristics from computer-mediated social interaction. For example, Kiesler et al. (1984) found that the absence of non-verbal cues mean that charismatic and high status people had less influence in computer mediated interactions. There is a price to be paid for this, however, as someone who is popular in his or her online world but remains anonymous cannot transfer this social capital to their life outside the blog (Pederson & Macafee, 2007).

The anonymity of Internet interaction plays a role in enabling more openness, honesty and willingness to communicate negative aspects of the self that people might wish to express in

real life but feel unable to (Ellison et al., 2006). This echoes Hodkinson's (2007) description of bloggers as people who struggle to maintain a sense of entitlement to be themselves in the company of others in their offline lives. The protection of one's true identity may be particularly important, similar to disclosing information to a stranger on an airplane specifically because of the anonymity and protection it offers (Qian & Scott, 2007). When blogs are used as an emotional outlet for a completely online audience, they may need to be hidden from family and friends, who might be personally affected by the bloggers' words.

Despite people's attraction to the Internet for its anonymity, many people use blogs as a way to communicate with family and friends (Qian & Scott, 2007). This finding is consistent with earlier findings by Viegas (2005), though he noted that while people reportedly engage in self censorship on blogs, over 35% of bloggers in his study had gotten into some kind of trouble with a friend, family member or employer as a result of their posts. Thus, becoming too trusting of others on the Internet can lead to problems with offline relationships to employers, family members, and friends (Stephanone & Jang, 2007).

In sum, the anonymous and asynchronous nature of blogs enables some people to "safely" reveal aspects of themselves, while others rely upon the lack of immediacy and the capacity for editing to reveal only certain aspects of themselves. Either way, perceived control over impression management plays an important and motivating role for bloggers' continued use of this medium to share personal thoughts and feelings. People's decisions about anonymity and self-disclosure are thus central to understanding the role that blogging plays in the internal and external lives of individuals.

Blogging as a tool for identity development. Clearly, the relational interactions that take place between bloggers and their readers represent a crucial aspect of blogging. However, these

interactions represent only part of the story, and do not address the defining feature of blogs that distinguishes them from other modes of online communication: A blog belongs, first and foremost, to the person who created it and composes its posts. Thus, the feedback and validation from the blogger's audience serves, at least in part, to enable or enhance a process of exploration and expression of identity.

Given the centrality of identity development in adolescence (Erikson, 1968), adolescent bloggers may provide the best "clues" to the process. Adolescents may be particularly drawn to the anonymity of the Internet to explore and present themselves in ways that would minimize the discomfort or embarrassment of face-to-face interactions. Indeed, adolescents have been found to use the Internet to overcome social issues such as shyness as well as to create or strengthen relationships (Schmitt, Dayanim, & Matthias, 2008). Having a personal webpage facilitates two important parallel processes of adolescence: the expression of a variety of self-presentations and the receipt of feedback on those self-presentations. The sense of camaraderie with others and the freedom offered by the Internet to share things that might otherwise be kept private further facilitate an ongoing process of identity development in adolescents.

It is not only adolescents, however, who use blogs in this way. To the contrary, blogs serve an important role for adults and adolescents alike in developing identity (Herring et al., 2004). Researchers have focused on two ways that blogging facilitates identity building. First, blogging offers people the freedom to explore more playful and fantastical identities than they are free to do in face-to-face interactions with others (Ellison et al., 2007). Bloggers may use the medium to play with different identities without feeling the pressure to commit to any one identity (Hodkinson, 2007).

Second, bloggers can focus on the deeper exploration of one identity if they choose (Schmitt et al., 2008). Readers expect to read posts by the same author, whose ‘voice’ becomes recognizable as a continuous presence. Even on group blogs, bloggers tend to identify themselves by the same name when adding an entry or comment, so that over time, what emerges is an evolving portrait of the bloggers’ interests and experiences (Viegas, 2005). For example, one blogger compared the customization of her blog to decorating or furnishing a bedroom (Hodkinson, 2007); another stated, “Blogging is about yourself, unlike avatars or other digital identities” (Nardi et al., 2004, p. 8).

Seen in this light, a blog may act as an “extended self” of the individual. The ongoing communication with readers motivates the blogger to update her blog more frequently (Huang, Shen, Lin, & Chang, 2007). It is not uncommon to hear bloggers say that despite being tired or not feeling like blogging, they will post anyway so as not to disappoint readers (Nardi et al., 2004). The blog’s format, where posts exist in a reverse-chronological order, with the most recent post carrying a time stamp and preceding everything else, facilitates audience expectations of regular updates from a blog’s author (Hourihan, 2002).

The debate about the role that blogs play in identity construction remains somewhat open. Although Hodkinson (2007) concluded that interactive online journals are liable to be better suited to the development of a multiplicity of identities and interactions, he also offered counterexamples of bloggers who asserted that their blogs offer them a sense of integration; these bloggers find other users with whom they identify and develop a sense of camaraderie and community. Putting the literature together, one gets the sense that different identities expressed on the Internet may merge together to form a more comprehensive and integrated self.

Hodkinson (2007) noted that the transition that many people make from discussion forums (which emphasize group identity) to personal blogs parallels normal developmental processes in adolescence. Social location within a group often paves the way for individual identity formation. Although the individuals he studied were brought together by a common interest that enabled them to feel a sense of community, they then used the community to explore and define themselves as individuals. Meredith Badger, a blogger who writes about blogs, discussed this dichotomous position of bloggers. “They wish to stand out and present an individual voice, but they also want to fit into the genre of weblogs -- to be instantly recognizable as being part of a community. Weblogs are forever hovering on the border between public and private” (Badger, 2004, *Being Public, Privately* section, para. 2).

The intersection between one’s online identity and the desire to become instantly recognizable is similar to establishing influence among one’s audience (Hsu & Lin, 2008; Trevino, 2005; Zezzati et al., 2008). It has been suggested that people who spend time and energy sharing information online with strangers, without any obvious economic or social advantage, may be motivated by a psychological ego reward. This ego reward can be anything from admiration from others to the generation of more social contacts. Self-presentation is often the predecessor of status seeking in online settings, where status is achieved through the written word as opposed to through physical characteristics that play a greater role in traditional face-to-face interaction (Lampel & Bhalla, 2007).

Bloggers who do not receive as many comments or responses from others are more likely to discontinue their blogs (Lento et al., 2006). At the same time, knowing that people blog for their comments doesn’t make it possible to determine whether a discontinuation of blogging is related to the lack of achieving a reputation or to the lack of social connectedness. This gap may

be indicative of a more general gap in our understanding of these phenomena: existing data do not offer an answer to the question of the role that status, community interaction, or other distinctly personal motivating factors play in a blogger's decision to stay active. What they do conclude is that the number of ties is not as important as the strength of those ties.

In short, blogging is understood to be primarily a social activity (Hodkinson, 2007), in which the desire to generate conversation serves as a prime motivation for posting entries to one's blog, and where the responsibility of commenting on the blogs of others is taken as seriously as updating one's own blog. Although these interactions are often short lived and superficial, they enable feelings of belonging and security. It should be noted that participants in Hodkinson's study identified as "goths," so that the emphasis on community involvement may be particularly related to a feeling of marginalization in their offline lives. This feeling can potentially be ameliorated through the unique opportunity to meet people with similar identities. However, as Hodkinson suggested, the feeling of connectedness offered by involvement in an online community gives way to other processes, as illustrated in the move made by participants in his study from involvement in online forums, which act as collective and communal online spaces, to developing personal blogs. Blogs can thus be understood as playing dual roles in helping individuals carve out a space for themselves that is simultaneously highly individualized while enhancing a feeling of connectedness to others.

Blood (2004) wrote about this more personally, pointing out that she was surprised to notice two side effects of blogging that she was not expecting. "First, I discovered my own interests. I thought I knew what I was interested in, but after linking stories for a few months I could see that I was much more interested in science, archaeology, and issues of injustice than I had realized. More importantly, I began to value more highly my own point of view. In

composing my link text every day I carefully considered my own opinions and ideas, and I began to feel that my perspective was unique and important” (para. 18). Then, almost paradoxically, she turned to discussing the importance of keeping distance from readers even as she commented on how their very presence enabled this process. “Lacking a focus on the outside world, the blogger is compelled to share *his* world with whomever is reading... Being met with friendly voices, he may gain more confidence in his view of the world” (para. 19).

Thus, blogging is mediated both by ongoing interaction and by the autonomy created by having a webpage that uniquely belongs to the blogger. This suggests an interplay between a blog’s utility in enhancing the author’s sense of herself and her identity as she simultaneously receives feedback and support from her community.

Blogging as a therapeutic tool Blood (2000) offered her thoughts on how blogging can enable profound personal growth. “As he [the blogger] enunciates his opinions daily, this new awareness of his inner life may develop into a trust in his own perspective. His own reactions--to a poem, to other people, and, yes, to the media--will carry more weight with him. Accustomed to expressing his thoughts on his website, he will be able to more fully articulate his opinions to himself and others. He will become impatient with waiting to see what others think before he decides, and will begin to act in accordance with his inner voice instead. Ideally, he will become less reflexive and more reflective, and find his own opinions and ideas worthy of serious consideration” (para. 23).

While Blood’s description may be extremely compelling, one is left to wonder how specific this process is to her, and how blogging might impact people with different traits and motivations. As there are multiple motivations for blogging, the likelihood for therapeutic potential will vary from blogger to blogger -- both in relation to identity development as well as

relationship formation. Researchers have attempted to explore this through inquiry into the personality traits and other common characteristics of bloggers. Guadagno, Okdie and Eno (2007) found that individuals, especially women, who are high on neuroticism (characterized by emotional reactivity, anxiety, worry and nervousness) may blog to alleviate loneliness or as an effort to form social connections. These findings replicate national survey data that indicated that bloggers are likely to use other modes of computer-mediated communication in addition to blogs to socialize with others. In their conclusion, the authors suggest that individuals who use blogs as a coping mechanism may gain some positive emotional benefit from the process of blogging.

Similarly, Swickert, Hittner, Harris and Herring (2002) found that individuals who are high on neuroticism were likely to engage in high levels of “technical Internet use” (referring to bulletin boards, chat rooms, web pages and other sites that have much in common with blogs) and report lower levels of perceived emotional support than other individuals. Because the findings are cross-sectional, this could imply that neurotic individuals who use the Internet are at risk for lowered social support or neurotic individuals who do not feel they have social support use these Internet services more, perhaps as a compensatory measure.

Baker and Moore (2008) went a step further in explicitly evaluating the mental health of bloggers. They found an association between the amount of intention to blog and higher levels of anxiety, depression, and stress in a sample of 134 bloggers. Bloggers were also more likely than non-bloggers to use the coping strategies of self-blame and venting. Finally, bloggers scored lower on social integration and satisfaction with their current friends, both online and face-to-face. The authors suggested that individuals may use blogging to cope with distress in situations where they feel inadequately supported, and comment on its therapeutic potential for people who do not feel validated by their offline relationships. Like journals, blogs may enable reflection and

insight, and reduce distress through venting and processing painful emotions. In addition, blogs offer the author the opportunity for validation and feedback in a relatively safe and less vulnerable setting (Baker & Moore, 2008). In a study of blogging in Japan, Miura and Yamashita (2007) came to a similar conclusion, suggesting that blogging can have a positive effect on the blogger's social life due to her heightened sense of self-understanding and acceptance by others.

The potential therapeutic value of blogging suggests that blogging may lead people to feel more comfortable asserting their identity, as well as facilitate a decrease in symptom levels. As the Internet offers a unique way of interacting with others that some people feel is safer, less exposing and non-threatening, it has the potential to impact positively upon offline social interactions as well.

Blogs also may serve as an additional channel to communicate with preexisting strong ties (eg. family and close friends). In one study (Stephanone & Jang, 2007) bloggers who scored high on extraversion and self disclosure were more likely to report more intimate, trusting relationships in their offline lives. Extraverted bloggers may leverage blogging as an efficient mode of communication to not only maintain ties with close contacts but also to augment their weak tie associations. This supports the "rich get richer" hypothesis (Kraut et al., 2001): People who are highly sociable and have existing social support will gain even more contacts and support on the Internet. Individuals who wish to have a large community of casual relationships can easily attain this through this medium. The authors did not address, however, the role that blogs might play for people who are more introverted and/or disclose personal information less readily. They found that extraverts benefit more from Internet use than introverts in increasing community involvement and self-esteem, while decreasing loneliness and negative affect. Similarly, others have voiced concern about the impact of Internet use for people who are low on

social support, community engagement and attachment, based on their findings that the Internet increases social capital only for individuals who are more extraverted and already connected to others. This may be due to a lack of motivation, self-efficacy and/or collective efficacy, or other factors not yet studied (Kavanaugh, Carroll, Rosson, Zin, & Reese, 2005).

Exploration of the impact of blogging for introverts should not be overlooked, especially given the finding that people who are introverted and shy are most likely to be heavy Internet users (Amichai-Hamburger et al., 2002; Chak & Leung, 2004; Ebeling-Witte, Frank, & Lester, 2007; Ward & Tracey, 2004). For such individuals, Internet use has the potential for both positive and negative consequences. In a study of 40 adults working in the hi-tech industry who identified themselves as chat users, Amichai-Hamburger et al. (2002) concluded that introverted and neurotic people locate their “real” selves on the Internet, while extroverted and non-neurotic people locate their “real” selves through traditional social interactions. In a different sample of 85 adults who described themselves as Internet users, Amichai-Hamburger and Ben Artzi (2002) found that lonely women use the Internet to assuage their loneliness. Examining students in five separate structured Internet chat sessions, Shaw and Gant (2002) found that Internet use decreased loneliness and depression, while increasing social support and self esteem over time. Other research also suggests that the opportunity to interact in a medium other than face-to-face communication is preferable for people who are shy or socially anxious (McKenna & Bargh, 1998; Ward & Tracey, 2004).

Although shy people may be more likely to seek out online relationships, these relationships are not necessarily satisfying (Moody, 2001; Ward & Tracey, 2004). Moody (2001) compared emotional versus social loneliness among Internet users and found that high Internet use was related to low social loneliness but high emotional loneliness. In another study shy

people were less inhibited online than offline, but were more inhibited than non-shy people in actively engaging with others in their online relationships, particularly in initiating contact and disclosing personal behavior (Ward & Tracey, 2004). Socially anxious people may be drawn to the Internet because they perceive greater control over self-presentation online than they do in face-to-face interactions, which may lead to problematic Internet use (Caplan, 2007). The Internet may enable feelings of hyper-intimacy and lead to highly exhibitionistic behaviors (Aviram & Amichai-Hamburger, 2005).

The nature of online interaction may enable people to hold unrealistic expectations about social interactions that are not likely to be met. One blogger compared a diary and a blog: “With a diary there’s ‘no interaction’ and ‘it won’t change my life,’” whereas “with a blog, there is the possibility of ‘life-altering exchanges’ with others and the intrigue of a wide audience beyond one’s friends” (Nardi et al., 2004, p. 11). Kraut et al. (2001) warned that the ease of Internet communication can encourage some people to spend more time alone, talking online with strangers, or forming “superficial ‘drive by’ relationships at the expense of deeper face-to-face discussion and companionship with friends and family” (p. 2).

In a study of 206 students that explored the impact of Internet activity upon social interaction, Swickert and her colleagues (2002) dismantled the arguments made by previous research that use of the Internet either facilitates or degrades social support. Rather, personality factors such as neuroticism mediated the relationship between Internet use and social support, suggesting that highly neurotic Internet users are at risk for lowered perception of social support, or that highly neurotic individuals with very low levels of perceived support might seek out Internet activities in an effort to compensate for their lowered sense of support. Hardie and Tee (2007) came to a similar conclusion in an online survey study of 96 adults: High levels of

Internet use were beneficial for socially isolated or socially anxious people by offering greater opportunities for support and interaction, but resulted in dependency and dysfunction for less socially anxious people, including neglect of work, family and offline social life.

Zhao (2006) found the nature of online activity to be an important variable in determining the impact on one's social ties. In a study of 2,817 adults who participated in the 2000 General Social Survey conducted by the National Opinion Research Center, solitary online activity was not correlated with a greater number of social connections, but interpersonal online contact (email and chat) was. Notably, chat users were found both to have more relationships restricted to online interaction and to report lower levels of contact with offline friends and family. Blogs share characteristics of both social and solitary use of the Internet, making it somewhat difficult to generalize Zhao's findings to blogging. At the same time, his point about the need to differentiate between people whose online readers are exclusively online versus being also offline may be crucial in exploring the therapeutic potential of blogging.

In summary, studies of the relations between heavy Internet use, social networks and personality have yielded mixed findings (Hardie & Tee, 2007). Although many studies have found a link between heavy Internet use and loneliness, others report that Internet users have larger social networks and higher levels of perceived social support. In the following section, attachment theory is explored as a possible theoretical framework for further understanding the interpersonal dimension of blogging detailed above.

Attachment theory. John Bowlby, a psychoanalyst, first conceptualized attachment theory to explain his own observations of the intensity of the attachment that infants and young children feel towards their caregivers, as well as the dramatic response that is often elicited during separation from the caregiver. He noted the existence of three phases that children go

through in response to the absence of a caregiver -- first, protest of the separation through crying and distress; second, despair at the loss of the caregiver through passivity and sadness; and finally, detachment as a defense against the grief which can manifest as avoidance of the mother when she returns (Bowlby, 1959). He later emphasized the relationship between these three phases as being part of a single pattern of feelings and behaviors that get activated when a child feels fear, fatigue, illness or anxiety and the attachment figure is not available to soothe and protect the child. Bowlby thus posited that the goal of the attachment system is to keep the mother close in proximity to maintain a sense of security -- a process that is at the core of human experience (Bowlby, 1960).

Bowlby first summarized the principles of attachment theory in a series of three papers on separation, attachment and loss that were eventually published in three volumes (1969; 1973; 1980). A child's confidence in the availability of his attachment figure is necessary for him to be able to engage with the world without experiencing intense or chronic fear. Repeated interactions with the parent produce internal representations and models of behavior that reflect the *actual* experiences of the caregiver's responsiveness to the child's needs. These dyadic interactions not only inform the child's internal representation of the availability of others to him, but also of his own self as self reliant and valued, or unworthy and unreliable. Although these internalized models of the self and of the attachment figure are conceptually separate, they develop in ways that are complementary and mutually confirming. In other words, the child's sense of whether someone else is likely to be helpful is highly related to his sense of whether he is the kind of person that people respond to in a helpful way (Bowlby, 1979).

Childhood is the time that these internal working models and confidence in oneself and in other's likelihood to offer protection and comfort develop: they become increasingly stable with

age. These internal working models influence how individuals predict the behavior of others and plan their own responses, and they are transmitted through generations from parent to child (Bowlby, 1979).

To test Bowlby's theory of attachment, Mary Ainsworth developed a laboratory separation procedure called the *Strange Situation* that allowed her to observe the ways that infants and children respond to being left with a friendly stranger and how they respond to their mother upon her return (Ainsworth, Blehar, Waters, & Wall, 1978). Ainsworth found that children regularly used their mothers as a secure base in order to engage in exploration of the world, particularly in unfamiliar environments. Although such exploration was interrupted by the anxiety elicited by separation from the mother, the mother's overall sensitivity and responsiveness to her child's needs allowed the child to safely engage with the world. Some mothers were less sensitive to their children's needs, which was manifest in two ways: a rejection of the infant's attempts for physical closeness, comfort and security or a thwarting of the child's autonomy by intruding upon these attempts at exploration. Attachment behaviors in one-year-olds were significantly correlated with mothers' sensitivity to their infants' needs (Ainsworth et al., 1978).

These behavioral patterns fell into three categories. Securely attached children derived security from the mother that enabled their exploration: although they became distressed at being separated from her, they sought proximity and derived comfort from her when reunited. Children in the insecure-ambivalent category were distressed during separation from the mother and seemed ambivalent about allowing themselves to be comforted by her upon reunion, often showing overt signs of anger towards her. Insecure-avoidant children -- of particular relevance in

the current study -- showed less distress when separated from the mother, and responded to her return by avoiding contact or actively turning away from her.

Avoidant children differed from the other two categories of children in their tendency to minimize emotional expression during the *Strange Situation* procedure. These children made no attempt at gaining proximity or closeness with the parent, showed neither overt distress upon separation, nor pleasure upon reunion. These behaviors were understood to be a response to the mother's inconsistent unavailability, which caused infants to respond to her as if she was unavailable, even upon reunion (Ainsworth et al., 1978). In other studies of the *Strange Situation* procedure mothers of avoidant children have been observed to have blunted emotional expression, often becoming hostile, critical and averse to physical contact with their children (e.g., Crowell & Feldman, 1991; Haft & Slade, 1989).

Cassidy and Berlin (1994) offered a comprehensive review of attachment studies that demonstrated a clear link between parent unavailability and insecure attachment. The review provides evidence for Bowlby's theory that children with an insecure-avoidant attachment develop an internal working model of the mother as rejecting, to which they respond by becoming excessively self-reliant. However, because children cannot help but experience attachment needs, children characterized as avoidant pay a price in successfully managing normal developmental processes.

Although avoidant children do not exhibit overt distress towards the parent upon separation, they experience an equal or greater amount of distress as other children in separation situations (Spangler & Grossmann, 1993). Having experienced the parent as rejecting in times of distress or great need for comfort, they may have learned that strong emotional expression is inappropriate (Ainsworth et al, 1978). The resulting strategy of minimizing negative emotional

expression allows the infant not only to avoid the risk of further rejection, but also to remain close to the parent and therefore protected (Cassidy, 1994). Minimization of negative emotions serves the additional function of protecting the child from acting aggressively or expressing anger towards the caregiver (Bartholomew, 1990). In fact, insecure-avoidant children tend to turn to the parent for support more often when in a state of low physiological arousal, because they sense that the mother could become overwhelmed by their less regulated states of need, which will render her unable to give care. This can transcend to joyful feelings as well, as any strong emotions signal openness and readiness for interaction that may not be welcome within the relationship (Cassidy, 1994).

The child's avoidant behaviors may thus develop both as a result of repeatedly prohibiting angry impulses in the self and sensing a similar muting of negative affect in the mother. Furthermore, because the representation of the parent is internalized, the child learns to minimize strong emotions with other people as well, even when there is no history of neglect or rejection (Cassidy, 1994). Bartholomew (1990) pointed out that avoidant children have consistently been characterized by "a deep distrust of others and a failure to conform to social norms of reciprocity" (p. 153). This can be self-defeating, as it causes skepticism of friendly overtures and leads to social rejection that serves as behavioral confirmation of the child's low expectations.

Another area in which insecure-avoidant children become restricted is in exploring the world around them. The attention that gets devoted to maintaining attachment to the caregiver is taken away from attention generally devoted to exploration. This leads to restriction and inhibition in the child's capacity for exploration with objects (such as toys) as well as with peers,

though insecure-anxious (insecure-ambivalent) children are found to be more severely impacted in this area than those characterized as insecure-avoidant (Cassidy & Berlin, 1994).

Bartholomew (1990) pointed out that avoidant attachment is a somewhat adaptive response to “an irresolvable approach-avoidance conflict” (p.156). In other words, the avoidant child’s tendency to shift attention onto other objects may be an attempt to deactivate the attachment system, in response to the lack of an available attachment figure when faced with situations that cause the child to feel fearful, anxious or in need of protection and comfort. With repeated experiences of suppressing and denying attachment needs, a child develops a stronger capacity for emotional control. While this strategy is adaptive in the relationship with the primary caregiver, it is likely to have detrimental effects upon the child’s later capacity to form close relationships.

Adult Attachment Although neither Bowlby nor Ainsworth geared their observations towards adults, they believed that early attachment has a predictive and lasting influence in people’s lives (Ainsworth et al., 1978; Bowlby, 1979). Main and her colleagues (1985) developed an interview procedure designed to translate Ainsworth’s infant-mother attachment patterns into corresponding adult patterns. The *Adult Attachment Interview* classifies adult’s attachment styles retrospectively by asking questions that tap into thoughts and feelings regarding attachment to one’s own caregivers and then coding the responses to obtain the classification which best matches their narrative. The detached or dismissing category of adult attachment was viewed as analogous to the insecure-avoidant attachment pattern of infant-parent attachment. These adults talked about their early attachment caregivers in a manner that denied their importance and influence, and described not feeling supported by their parents, especially in times of stress. Narratives of their childhood and descriptions of their parents often lacked

coherence, such as offering comments of idealization which were belied by stories of cold, disinterested or rejecting behavior of their parents.

As the study of adult attachment grew, the study of attachment patterns of relationships between adults also began to emerge, mainly focusing on adult romantic relationships. Hazan and Shaver (1987) provided early empirical evidence of a link between childhood and adult attachment in a study of love relationships conducted using a newspaper survey that asked people to check one of three descriptions of behavioral and emotional patterns in romantic relationships that best applied to them. They wrote these descriptions to match the three types of attachment found by Ainsworth, and found them to reflect a similar distribution. *Secure individuals* described their love relationships as happy, friendly, trusting, supportive and longer lasting. *Preoccupied individuals*, similar to children with insecure-ambivalent attachment, experienced extreme emotional volatility, feelings of obsession, the desire for reciprocation and union, and extreme sexual attraction and jealousy towards their love partners. *Avoidant individuals* reported their love relationships as being characterized by fears of intimacy, emotional volatility, and jealousy. Moreover, they could not trust others to provide them with care, to which they responded by becoming excessively self-reliant.

In later studies, Shaver and his colleagues found that avoidant individuals' characterizations of love relationships were influenced by their tendencies to actively resist and/or be relatively unaware of a partner's sensitivity and supportiveness (Mikulincer & Shaver, 2007). In addition to avoidant individuals' reluctance to disclose inner feelings, the minimization of strong emotions also appeared to inhibit nonverbal expression of one's feelings as well as sensitivity towards a partner's needs. As in childhood, this minimization serves the function of preventing activation of the attachment system (Mikulincer, Shaver, & Pereg, 2003). Similar

patterns have also been detected in non-romantic adult relationships; for example, Davidovitz, Mikulincer, Shaver, Ijzak and Popper (1997) found that avoidant army officers were more likely to be viewed by soldiers under their command as rejecting, critical, insensitive and unavailable.

Bartholomew (1990) expanded upon the conceptualization of adult avoidant attachment. Although a classification of avoidance in childhood may be sufficient for identifying a common pattern of defensive self-reliance against attachment needs, she argued that there is a need to distinguish between those children who grow up to become adults that deny attachment needs altogether and adults who avoid intimacy because they fear it. This distinction originates from a difference in Bowlby's notion of the internal working model of the self. All avoidant individuals have a negative internal working model of the other as rejecting, uncaring and distant; however avoidant individuals differ from each other in the representation of the self. Some avoidant individuals exhibit a positive concept of the self as worthy of love and attention (dismissing-avoidant), whereas others exhibit a negative concept of the self as unworthy (fearful-avoidant).

Fearful-avoidant adults were characterized by a fear of attachment and social avoidance. These individuals are afraid to trust others and worry that others will hurt them if they become too close. They desire social contact and intimacy, but avoid social situations and close relationships that are vulnerable to rejection, and are hypersensitive to approval from others. In addition, they often view themselves as unworthy of their partner's attention, and are skeptical of their partner's intentions in being affectionate and responsive to their needs. In both groups, the constellation of attitudes and feelings towards self, other and intimacy lead them to avoid intimacy and create distance in their relationships, as well as to suppress and hide their feelings from others. As these individuals tend to suffer from poor self-esteem and a lack of autonomy,

they are more prone to experience distress, loneliness and depression stemming from a lack of social contact (Bartholomew, 1990).

In contrast, dismissing-avoidant individuals were characterized by a successful denial of attachment needs and a strong desire for independence and self-sufficiency. These individuals are comfortable without close emotional relationships, instead focusing their energies upon their work and hobbies. They prefer neither to depend on others nor to have others depend upon them. They do not seek a great deal of intimacy with others, whom they tend to view less positively than they view themselves. They instead place great emphasis on impersonal aspects of life, such as work or hobbies. These individuals have managed to achieve autonomy and a sense of self-worth. One possible explanation for this is that by avoiding intimate relationships, they also avoid the emergence of strong emotions that tend to arise in the context of close relationships. They thus remain detached, unaware of their emotions and the desire for intimacy that may lie beneath them (Bartholomew, 1990).

Of particular relevance to the current study is the question of how avoidant individuals regulate interpersonal interaction. Bartholomew (1990) hypothesized that avoidant individuals select social partners with whom a safe distance can be maintained. This prediction is built on approaches that recognize that conceptualizations of the self are developed and maintained within social contexts, such as the way in which individuals seek social contact that verifies their own self-image. Citing Bowlby's observation of individuals who often choose not to utilize available sources of social support in time of crisis, Bartholomew linked this to a hesitancy to trust others and a fear of dependence. Fearful-avoidant individuals tend to act in an introverted, aloof or socially avoidant way, which evokes hostility or rejection from others, thereby confirming their negative and unworthy sense of self. In contrast, dismissing-avoidant

individuals interact in a controlling and hostile manner that also elicits hostility and rejection from others, while simultaneously retaining a more positive sense of themselves. When in relationships, they are likely to experience their partners as being overly dependent, and they are at risk for becoming involved in a variety of maladaptive dynamics in love relationships that serve to reinforce their disinterest or fear of closeness.

Empirical evidence for these two types of behavioral patterns that fall under the category of avoidant attachment has been demonstrated in two studies that involved a combination of semi-structured interviews and quantitative measures to investigate attachment patterns in a sample of undergraduate students (Bartholomew & Horowitz, 1991). Almost half of their sample (47%) was found to be classified as secure, 18% as dismissing-avoidant 14% as preoccupied and 21% as fearful-avoidant. Dismissing-avoidant individuals downplayed the importance of close relationships, were emotionally restricted and emphasized the importance of independence and self-reliance, whereas fearful-avoidant individuals expressed overt mistrust of others and fears of rejection. In a study of the motivations of people who engage in romantic or sexual behavior with someone other than their primary partner, fearful-avoidant individuals more often reported intimacy motivations whereas dismissive-avoidant individuals reported self-esteem motivations (Allen & Baucom, 2004).

Bartholomew's (1990) conceptualization of the two types of avoidant attachment may offer the impression that dismissing-avoidant individuals are better off than fearful-avoidant individuals because they do not have the same negative internal representation of the self. Although Bartholomew suggested that there are serious and negative implications of having a dismissing-avoidant style of attachment, the lack of empirical evidence for this claim makes it hard to draw firm conclusions.

One way to explore the mental health of fearful-avoidant versus dismissing-avoidant individuals is to look at the defense mechanisms used by both types of people. Blatt (1990) noted that fearful-dismissing individuals consciously acknowledge their desire for relatedness and their corresponding fear of rejection, whereas dismissing-avoidant individuals deny any need or desire for closeness with others. Thus, although fearful-avoidant individuals may experience more overt distress than dismissing-avoidant individuals, the former group actually operates at a higher conceptual level, relying less on defensive denial of the desire for closeness and exhibiting a more adaptive expression of avoidant attachment. This was illustrated in Levy, Blatt and Shaver's (1998) study of young adults, in which fearful-avoidant individuals described early attachment experiences with their caregivers in a less idealized and more complex way than dismissing-avoidant individuals. Further, fearful-avoidant participants were able to differentiate themselves more fully from their parents and recognize more of their own ambivalence towards their parents, whom they often described as punitive and malevolent.

Blatt (1990) also described a more overarching link between insecure attachment and psychopathology, noting that insecurely attached individuals are more predisposed to various forms of psychopathology, especially depression. People characterized by anxious attachment tend to develop a dependent, anaclitic (Blatt, 1974) type of depression, which is precipitated by disruptions in interpersonal relationships, feelings of loneliness, and fears of abandonment. In contrast, people characterized by avoidant attachment are more likely to develop a self-critical introjective (Blatt, 1974) type of depression, which is precipitated by loss of self-esteem and is characterized by feelings of worthlessness and guilt (Blatt, 1974). In Bartholomew's terms, anaclitic depression corresponds to the fearful-avoidant type of attachment, whereas introjective depression corresponds to the dismissing-avoidant attachment pattern. Blatt (1990) also noted

that clinically, insecure attachment causes a preoccupation with relatedness that can be expressed through becoming either a compulsive care-seeker or a compulsive caregiver. Compulsive caregivers provide care to others that they would wish to have, but cannot tolerate receiving from others, while compulsive care-seekers seek unilateral relationships that provide nurturance, gratification, approval and acceptance from others. Once again, it is possible to detect two different ways of managing avoidance, where fearful-avoidant individuals would be more likely to become compulsive care-seekers than their dismissing counterparts.

Measuring adult attachment. A variety of measures of adult attachment have been developed since Ainsworth's (1978) original conceptualization of attachment categories (Bartholomew & Shaver, 1998). The earliest measure was designed by Hazan and Shaver (1987); the measure designated three patterns of behavior that corresponded with their conceptualization of what each one of Ainsworth's attachment categories would look like in an adult romantic relationship. When completing this measure, individuals simply choose the pattern that best describes their behavior and feelings in romantic relationships. Subsequently, a number of investigators wrote closed-ended items to assess these conceptualizations, which were factor-analyzed and turned into continuous self-report scales (see review by Shaver & Fraley, 2010). Of these, one of the most commonly used self report measures, *Experiences of Close Relationships scale* (ECR, Brennan, Clark, & Shaver, 1998), identified two factors, which were labeled avoidance and anxiety. Another measure, *Relationships Questionnaire* (RQ; Bartholomew & Horowitz, 1991), was designed to correspond to Bartholomew's (1990) expanded conceptualization of attachment, including the finer-grained differentiation of insecure-avoidant attachment into a dismissing-avoidant type and a fearful-avoidant type. Currently, most authors recommend conceptualizing attachment patterns in dimensional terms

rather than trying to develop categories because of a loss of precision that occurs in categorical analysis (Shaver & Fraley, 2010). The two dimensions of the ECR capture multiple aspects of attachment. The first dimension, *attachment anxiety*, refers to how much a person worries that a partner will not be available or adequately responsive in times of need. The second dimension, *attachment avoidance*, refers to how much a person distrusts his or her relationship partners' goodwill and strives to maintain autonomy and emotional distance from the partner. People who score low on both dimensions are said to be secure, or securely attached.

In contrast, the *Relationships Questionnaire* (Bartholomew & Horowitz, 1991) separates individuals into distinct categories of attachment described above, albeit along same dimensions of attachment anxiety and avoidance proposed by Brennan, Clark and Shaver (1998). Roughly, secure attachment corresponds to low scores on both anxiety and avoidance; preoccupied attachment corresponds to low levels of avoidance and high levels of anxiety; dismissing-avoidant attachment corresponds to low levels of anxiety and high levels of avoidance; and fearful-avoidant attachment corresponds to high levels of both anxiety and avoidance. Bartholomew and Shaver (1998) compared the classifications obtained from Hazan and Shaver's (1987) three category measure and the four categories measured by the RQ by asking 840 college students to place themselves into one of the prototyped categories in both systems. The two systems were found to be strongly related ($\chi^2(6) = 370.31, p < .001$). Correlations between parallel ratings were highly significant and ranged from .46 to .55. The only rating that was not correlated with any of the dimensions on Bartholomew and Horowitz's (1991) model was dismissing-avoidant, which was expected since there is no corresponding category in the three-category measure. However, its correlation with the most conceptually similar rating of avoidant attachment was highly significant ($r = .23$). Thus, while this study will use the ECR's continuous

dimensions of attachment avoidance and anxiety, per Mikulincer and Shaver's (2003) conceptualization, the convergence between the two different classification systems should be kept in mind.

Attachment and Online Interaction. As illustrated in the previous section, attachment theory has provided a common language for researchers and clinicians to better understand people's interpersonal behaviors and attitudes. Only in the last few years, however, have researchers begun to explore online relational interactions, and to employ psychological paradigms to understand it, such as attachment theory. The study most relevant to the current research was a cross sectional study of online interaction and attachment among 113 individuals recruited from Google Newsgroups (Ye, 2007). Using Bartholomew and Horowitz's (1991) four categories of attachment, Ye (2007) found that dismissing-avoidant and preoccupied individuals have less deep and less broad online relational interactions than secure and fearful-avoidant individuals. Interestingly, the level of satisfaction with closer online relationships did not differ significantly across attachment categories, although dismissing-avoidant individuals expressed the greatest level of satisfaction with their casual online relationships, while fearful-avoidant individuals expressed the lowest level of satisfaction. This finding corresponds to Bartholomew's descriptions of the differences between these two types of attachment: Dismissing-avoidant individuals are more comfortable in less intimate relationships, while fearful-avoidant individuals are highly sensitive to disapproval from others, which they internalize into negative views of themselves while also feeling rejected by those people who they perceive to maintain distance from them.

The majority of studies that have demonstrated a link between attachment classification and Internet interaction have been conducted mostly in Japan and are cross-sectional (Lin, Wang,

& Wu, 2005; Wu & Lin, 2005). Overall, they suggest that insecure-avoidant attachment is related to heavy Internet use. However, as only the article abstracts have been published in English, and the studies are cross-sectional, the findings need to be taken with extreme caution.

A variety of explanations have been proposed for this association. Most bloggers are Internet veterans, or people who have been online for at least six years (PEW, 2005): therefore, some of the characteristics of heavy Internet users -- heightened social anxiety, introversion, and low self-confidence -- may also characterize heavy bloggers. Some investigators have suggested that this relationship is mediated by the tendency for individuals to become disinhibited online, engaging in higher levels of disclosure, uncertainty and intimacy in their online interactions than they do in their offline lives (Lin et al., 2005). This seems to stand in contrast to the idea that individuals with high levels of attachment avoidance may prefer the Internet because of the built in opportunity for distance from others (Ye, 2007). Another possible factor may be that the Internet offers individuals who are lacking emotional support and closeness in their lives an alternative for receiving such support. For instance, although it is developmentally normative for adolescents to turn to the Internet as a means of establishing identity as they rely less on support from parents, attachment security in adolescence may be central to how the Internet is used in this process of separation. Lei & Wu (2007) theorized that adolescents who feel alienated from their fathers may use the Internet to achieve the emotional support that is lacking in their lives, which could lead to unhealthy Internet use.

A third viewpoint suggests that once casual online relationships develop to a deeper level, certain characteristics of online interaction such as the lack of non-verbal cues and perceived similarity can function as a “leveler” for individuals with different attachment styles. Ye (2007) found that the level of satisfaction in close online relationships did not differ across attachment

categories, and suggested that online communication may deactivate attachment systems, enabling dismissing-avoidant individuals to feel they can effectively derive comfort and security from others online without openly expressing their attachment needs.

A few qualitative studies provide additional clues about the link between blogging and attachment. One blogger stated that she “likes attention but doesn’t like being really personal” (Nardi et al., 2004, p. 7). Her blog relieves her of the pressure to directly reveal how she is really feeling while enabling her to communicate it anyway. This statement appears to illustrate the simultaneous craving of intimacy and discomfort with intimacy that one finds in fearful-avoidant adults. It also illustrates a pattern described earlier by Nardi and colleagues (2004), in which bloggers chose to interact with their audience in less frequent and less emotional ways than is characteristic of face-to-face communication. Gumbrecht (2004) conceptualizes blogging as “protected space.” For example, one blogger stated that feedback from others “makes you feel good that people are reading it. You don’t really want too many people reading it, but it’s nice when somebody’s reading it” (Gumbrecht, 2004, p. 4). This statement seems to illustrate this individual’s ambivalence about having his blog read by others, which he wants even as he desires to maintain his autonomy and privacy. Another blogger, in pointing out that the blog allows him to say things without having to face the reactions of others, uses his blog to regulate communication with others that might be offensive or distressing by avoiding having to deal directly with the emotional consequences of his words.

Thus, there are many reasons why blogs might offer an attractive alternative for individuals who want to avoid intimacy with others. Physical distance, anonymity, absence of physical cues or non-verbal feedback, absence of triggers for the attachment systems, and the unofficial “rules” of online interaction (e.g., the prohibition against direct criticism and blunt

feedback from others) might all contribute to the Internet being an easier place for avoidant individuals to engage with others.

Internet Use and Attachment: Psychoanalytic Consideration. Psychoanalytic conceptualizations of the role of the Internet in people's internal lives offer another layer of depth to the idea that the Internet may replace human attachment figures by become a vehicle for individuals to find new attachment figures or even by becoming an attachment figure itself (Lei & Wu, 2007). Turkle (2004) has referred to computers as "relational artifacts." One example of a relationship artifact is a doll that is programmed to have "feelings" or produce requests. Since a computer can be active and responsive while simultaneously under the control of its owner, it may actually offer a comparative advantage over a friend or family member as it offers a sense of aliveness without being disappointing. In other words, the owner of a computer can dictate his relationship to it in a way that is less easily accomplished with humans.

This makes the computer particularly ripe for becoming the object of *transference*, which refers to the redirection of unconscious expectations and desires onto the computer that were originally associated with caregivers and others in childhood (Freud, 1940). When faced with ambiguous, unknown others, people instinctively fall back on old, familiar models of relationships in order to interpret the behavior and responses of others to them. The computer, being "vaguely human and programmable to be whatever we make them to be," is an easy target for transference (Suler, 1998). Turkle (2004) and Suler (1998) both found that people express feelings of attachment to their computers and imbue their computers with lifelike characteristics such as fragility, power and companionship. This is further complicated by the Internet, which introduces the possibility for interaction with people who are real, but likely to be experienced

mainly in controlled doses which makes the possibilities of transference and projection infinitely greater.

These effects are often magnified by the *disinhibition effect*, which illustrates people's tendencies to share very personal things online and do or say things online they wouldn't do in face-to-face interaction. Sitting with the vulnerability of expressing hidden aspects of the self makes people even more likely to project their own wishes and fears upon the listener, who then unwittingly comes to represent a feared or desired other. As will be discussed below, developing such transferences to computers and the Internet can be both beneficial and harmful.

It is usually through case illustrations of individuals whose Internet interactions reflect some aspect of their difficulties that psychoanalysts explore the ways in which the Internet can be adaptive in some ways while addictive in others (Dryer & Lijtmaer, 2007; Gabbard, 2001). They use Winnicott's (1951) notion of transitional space to explain the adaptive possibilities of the Internet; in their view, the Internet provides an intermediary dimension between internal projections and fantasies, on the one hand, and external reality, on the other. Transitional space was first conceptualized to help explain the psychological bond that children develop to certain physical objects by imbuing them with the characteristics of the caregiver. The child knows that his teddy bear is an external object but enlivens it through assigning it real characteristics through his fantasies, wishes and emotions. The child thus creates the object by giving it life, but simultaneously, in his belief that the object is real, he also discovers and plays out the dynamics of human interaction.

Likewise, this process works with online interaction. Online communication is paradoxical, interpersonally related even as it is distant and anonymous, a "two-dimensional perception and experience, thereness and non-thereness, on or off" that stands in contrast to real

life, which is “experienced three-dimensionally, with multiple gradations” (Dryer & Lijtmaer, 2007, p. 52). Sheltered from many verbal and nonverbal cues that usually guide social interaction, the Internet is an ideal transitional space that can expand a person’s internal world by creating a new space between self and other. People can go online to play creatively with various self-presentations, affective states, fantasies, and ways of relating to others. They can be simultaneously present and not present in their interactions, practice being intimate in different ways, and back away from intimacy when it gets to be too overwhelming. Like the child interacting with his teddy bear, this transitional space can be both a place to try out different roles and work out aspects of identity as well as a place to unconsciously enact or create experiences with online others driven by fantasy and desire (Dryer & Lijtmaer, 2007).

These processes can take many forms. Turkle (1995) wrote that the lifelike characteristics and active nature of computers enable people to explore unexplored aspects of themselves by trying out multiple identities at the same time or identities that run counter to their offline selves. In offering new alternatives for self-presentation, the computer comes to occupy a central role in identity development (Turkle, 1995). At the same time, the Internet enables people to act in a more disinhibited fashion, which is enhanced by many features of the Internet described above including anonymity, invisibility, the leveling out of status, and the asynchronicity of communication that allows people to express thoughts and feelings without having to deal with someone’s immediate reaction (Suler, 2004a).

Once again, this disinhibition works in both positive and negative ways. On the positive side, the asynchronicity of communication stretches interaction over a time span that offers people a chance to reflect thoughtfully on their motivations and behaviors (Suler, 2002a). In another way, disinhibition in transitional space offers greater freedom to play creatively with

identity, which enables a deepening of the capacity for integration of the good and bad aspects of the self and others in what may feel like a consequence-free safety zone. When people can act out feelings and desires in a way that is kept separate from their life, they may feel less anxious and vulnerable about expressing shameful or unpleasant aspects of themselves. When the Internet and Internet-based relationships are used as transitional spaces to repair or find empathy for the different parts of the self that had perhaps previously been more split off from awareness, it can be a positive growth experience (Dryer & Lijtmaer, 2007)

At the same time, the simultaneous real and not real nature of Internet interaction makes it dangerously conducive to the interpersonal dynamics of particular individuals. Disinhibition coupled with the tendency to create a rigid split between online and offline relating may allow people to act more cruelly and not feel responsible for online actions that may feel more like a game to them. Similarly, one can get lost in play space and avoid the complexities of having to recognize and deal with people in their entirety. This is particularly concerning for people who operate at a more primitive level of *object relations*, which refers to people's inner images of themselves and others that manifest in current interpersonal situations. People with primitive object relations have had particular difficulty establishing a sense of separation between themselves and others, and also struggle to merge good and bad aspects of people into an integrated whole (Klein, 1946).

Online interaction can exacerbate poor object relations, where a blog reader or online community member may easily be experienced not as a full, complex person with a range of characteristics and feelings but rather in much simpler terms – perhaps labeled as “good” if he or she expresses a sentiment that is to the user's liking, or as “bad” if the expressed sentiment opposes the user's views. Online others thus come to represent extensions of the self or bolster

internal representations of the self, which is already a problematic aspect of how someone with strong narcissistic features relates to others (Suler, 2003).

In addition to the narcissist who may take advantage of the Internet as an easy opportunity to acquire an admiring audience, Suler (2004b) suggests that other personality types also seek out online interaction modes that match their modes of relating – both healthy and unhealthy. Antisocial and schizoid personalities may be drawn in by online anonymity, which makes it easier to engage in antisocial behavior and also enables avoiding intimacy; dissociative personalities may use the Internet to create distinct identities without a sense of integration between them; compulsive personalities enjoy the sense of control they can achieve in their online relationships; and histrionic people may be compelled by the dramatic displays of affect that are allowed in online groups.

In the same vein, people with a history of relational trauma may turn to the Internet because of the comfort of expressing themselves through text only, which may prevent them from becoming overwhelmed by too much stimulation. Finally, people with a developmental disorder such as Asperger's Syndrome or who have difficulty processing social information for any number of reasons may find that communicating through text only enables them to be clearer and more organized while also more creative and expressive (Suler, 2004c). Suler (2004b) also suggests that while some people choose online communication modes that are compatible with their personality styles and the expression of underlying needs and emotions, it is also possible that people use the Internet to help themselves stretch beyond their usual modes of relating to others.

Computers can provide important regulatory functions for individuals and families of this generation, across personality types and styles. Most relevant to the current discussion is the idea

that having a computer as a companion can prevent loneliness. “If one is afraid of intimacy yet afraid of being alone, a computer offers an apparent solution: the illusion of companionship without the demands of friendship. In the mirror of the machine, one can be a loner yet never be alone” (Turkle, 2004, p. 21). This implies that the Internet may offer individuals who avoid close attachments the possibility of escaping the danger of close ties, providing the optimal distance to keep people from being lonely without threatening their autonomy. Suler (2002a) adds that the disinhibiting effect of anonymity can both enable people to be more honest about feelings that are hard to discuss with others while also allowing them to act out unpleasant affective states of need or anger.

While Turkle used the word mirror to describe the computer, some might be more inclined to compare it to rose-colored glass. As Gonzales and Hancock (2011) recently discovered in a study of 63 students who experienced increases in self-esteem after checking their Facebook pages, the Facebook “mirror” does not necessarily reflect an accurate picture of the self, but a positive, ideal version of the self, replete with photos, constant activity and ongoing chats with large numbers of “friends.” Seeing the self in this light understandably made students feel better, particularly when they had amended something on their online profile.

On the flip side, while seeing oneself in this light may initially bring positive shifts in self-esteem, inhabiting a more ideal version of oneself encompasses some aspects of falseness that can lead to disillusionment. Once again, the computer is particularly conducive to reflecting back a self without the parts of ourselves that we loathe, and a self with greater control over uncomfortable emotions such as anger, disgust, desire and anxiety. This makes it easier to avoid having to work through disappointment about parts of the self that don’t fit the ideal, which is an

important developmental step towards accepting one's realistic set of strengths and weaknesses (Dryer & Lijtmaer, 2007).

Finally, it is important to acknowledge the ways in which we have come to expect the Internet to interact with us and give us the feedback we want to make us feel a certain way. When it fails to be reliable and dependable, our reactions say a lot about our anxiety about not being able to control the computer and everything it has come to stand for in our lives and relationships (Suler, 2002b). All the authors cited here avoid taking a side about whether Internet communication is simply good or bad for the psyche, instead maintaining that the way in which people bring computers and the Internet into their internal lives can be both enriching and damaging. The best way to navigate that balance is to be as aware as possibly of the purposes the Internet is serving. As Turkle (2004) argues, people who demonstrate self-awareness about the role of the computer in their lives are more likely to succeed in using the Internet to transform themselves personally and socially, both online and offline.

Specific Aims and Model to be Tested

It is the aim of the study – the first in the U.S. to examine the relationship between attachment style and blogging – to address whether psychosocial functioning and decisions about self-disclosure and anonymity in blogging mediate the way attachment style is related to blogging intensity. In the current study, I will test a hypothetical model (Figure 1) that I developed based on my clinical observations and the review of the literature on blogging by studying variation amongst bloggers along the two dimensions of attachment (anxiety and avoidance). I will also explore the relationship between attachment anxiety and avoidance and decisions about self-disclosure and anonymity; that is, what to share on blogs, with whom and what motivates those decisions. Taken together, these data will shed light on the unique purposes served by blogs in regulating self-esteem and social relationships, which are themselves manifestations of attachment in the external world.

Aim 1: To compare the distribution of attachment avoidance and anxiety in the blogging population with the general population. It is hypothesized that bloggers will have higher levels of attachment avoidance because of the unique possibility offered by online communication of establishing closeness with people without having to interact with those people face to face. No specific hypothesis is being put forward about people who score high on attachment anxiety.

Aim 2: To test the mediational model shown in Figure 1. The model addresses the nature of the relationship between attachment and blogging intensity. In general, it predicts that individuals with more insecure attachment will blog with greater intensity and will use their blogs to meet their specific relational needs. The remainder of the model addresses the mechanisms of how and why this occurs.

The relationship between attachment and blogging intensity is mediated first through psychosocial functioning and then through blogging behaviors and personal and interpersonal motivations for blogging. Levels of attachment anxiety and avoidance are hypothesized to predict psychosocial functioning, defined by self esteem, loneliness and level of social constraints on emotional disclosure, or the degree to which perception of one's social network make it difficult to share personal thoughts and feelings with them. This hypothesized relationship is consistent with other studies showing that insecure attachment leads to heightened loneliness and lower self esteem. This is due to the negative internalized models of both self and other that develop in people with more insecure attachment and lead to difficulty in managing needs for intimacy with needs for autonomy.

It is hypothesized that bloggers with higher avoidance and lower levels of psychosocial functioning will be more likely to blog anonymously than those with lower levels of avoidance. It is also hypothesized that bloggers with higher anxiety will be more likely to be motivated to blog by desires for self-expression, self-enhancement (feeling better about themselves), and community forum participation than bloggers with lower anxiety. The rationale for these hypothesized relationships is that individuals who are lonely, have low self esteem and feel they cannot open up to people in their lives will exhibit similar patterns of behavior online as they do in face to face interaction in attempting to address their relational difficulties. More avoidant bloggers will likely blog in such a way that protects themselves from too much intimacy by maintaining anonymity, and more anxious bloggers will use their blogs in an attempt to eradicate distance between themselves and others to meet their desires for closeness.

To test the model, I pose three research questions that address these relationships.

Research Question 1: Are attachment avoidance and attachment anxiety related to blogging intensity?

It is hypothesized that higher levels of attachment avoidance and anxiety will be related to higher levels of blogging intensity. The rationale for this lies in the dissertation's central thesis; namely, that the distance and possibility of anonymity offered by the Internet will be particularly attractive to people with greater difficulty balancing their needs for intimacy and autonomy in relationships.

Research Question 2: Do psychosocial functioning and blogging behavior mediate the relations between attachment security and blogging intensity?

If a significant relationship between attachment dimensions and blogging intensity is demonstrated, the mediational model will be tested. Levels of attachment anxiety and avoidance are hypothesized to predict psychosocial functioning, as defined by self esteem, loneliness and level of social constraints on emotional disclosure, or the degree to which perception of one's social network make it difficult to share personal thoughts and feelings with them. Next, psychosocial functioning is hypothesized to predict decisions about anonymity and self-disclosure in blogging and personal and interpersonal motivations for blogging, which involves motivations for self-expression, self-enhancement and desires for community. Decisions about anonymity and personal and interpersonal motivations for blogging are hypothesized to predict degree of blogging intensity, or the centrality of blogging in daily life.

As stated above, it is hypothesized that people scoring high both on attachment avoidance and attachment anxiety will blog with greater intensity than those with lower anxiety and avoidance ratings. However, the specific paths to blogging behavior are likely to differ for the two individual dimensions. First, both higher avoidance and higher anxiety will relate to lower

psychosocial functioning, which is characterized by higher levels of loneliness, lower self esteem and greater perception of social constraints on emotional disclosure. Insecure attachment on both dimensions often leads to loneliness and decreased well-being because of the negative internalized models of self and other, which render people unable to strike a healthy balance between achieving intimacy with others and maintaining a healthy and individualized sense of self. For example, the love relationships of individuals scoring high on attachment avoidance are typically characterized by fears of intimacy and an inability to disclose inner feelings or to trust others, which results in excessive self-reliance. The love relationships of individuals scoring high on attachment anxiety are typically characterized by extreme emotional volatility, feelings of obsession, the desire for reciprocation and union, and extreme sexual attraction and jealousy towards their love partners (Hazan & Shaver, 1987).

This preoccupation with maintaining distance from others (for individuals who are high on attachment avoidance) or eradicating distance from others (for individuals who are high on attachment anxiety) has negative effects on self-esteem (Blysmá, Cozzarelli & Sumer, 1997; Brennan & Bosson, 1998) and causes loneliness (Rubenstein & Shaver, 1982). Although no studies have specifically looked the relationship between attachment and social constraints on emotional disclosure, it is likely to follow a similar pattern to loneliness and self esteem given the conceptual overlap between these constructs and the fact that both the anxiety and avoidance dimensions manifest themselves in negative perceptions of others – either as being unwilling (in the case of individuals with greater anxiety) or unable (in the case of individuals with greater avoidance) to provide satisfactory emotional support. Social constraints (Lepore & Revenson, 2007) was added to the group of psychosocial functioning constructs because it addresses the

additional dimension of perceptions of others' receptiveness to emotional disclosure that extends past questions about loneliness.

Lower levels of psychosocial functioning are hypothesized to predict higher levels of anonymity for more avoidant bloggers. This model does not attempt to predict the relationship between attachment anxiety and anonymity. As described previously, there are a variety of explanations as to why the anonymity of the Internet makes it easier for some people to share aspects of themselves with others, such as the (illusion of) control it offers over self-presentation and the protection against the vulnerability of sharing intimate details with others. Both explanations are likely to be particularly attractive to individuals with higher avoidance, who tend to shy away from interactions that pose a threat of becoming too intimate and overwhelming.

The model also proposes that for individuals with higher attachment anxiety, lower levels of psychosocial functioning may predict greater likelihood of being motivated to blog by personal and interpersonal needs. This model does not attempt to predict the relationship between avoidance and motivations for blogging. These motivations relate to ways in which individuals not only use blogging to express their feelings and thoughts to others who they perceive as having a similar mindset to their own, but may also use blogging to feel better about themselves. Individuals with higher anxiety scores, who tend to struggle with maintaining appropriate distance from others, are likely to exhibit similar patterns in online interaction and respond to the Internet's allure of immediate gratification through having an open and unlimited forum to express thoughts and feelings to others.

This analysis rests upon a central argument of this thesis -- that blogging offers people different ways to manage their needs for closeness and separateness, and is likely to be

particularly attractive to individuals who have experienced difficulties managing their relational needs in face-to-face interaction with others. This will manifest in decisions about anonymity and motivations for blogging, which will lead to greater frequency and intensity of blogging, as measured by the Blogging Intensity Scale.

Understanding how blogging shapes interpersonal relationships and whether it is driven by attachment is a necessary step towards a more sophisticated understanding of why blogging has such appeal for certain people. Exploring the role that blogging plays in people's relational lives not only has potential to contribute to the field of psychology in the treatment of individuals who blog, but also enable a greater general understanding of this ever-growing phenomenon.

Chapter 2: Method

Overview

The study used an Internet-based survey questionnaire to collect data from bloggers at one point in time. An online survey was chosen instead of face-to-face interviews as the individuals in the study have themselves chosen to engage in online interaction with others. Face-to-face interviewing could have resulted in a biased sample, whereby individuals who chose to participate in the study may have represented only those bloggers who are more comfortable discussing aspects of their personal experience, as opposed to only writing about it.

Sample Eligibility and Recruitment

A sample of adult bloggers was recruited that met the following eligibility criteria: (a) age 21 or over; (b) maintains an English language blog that is personal in nature; (c) has maintained the blog for at least six months; and (d) updates or visits the blog at least twice a week. Individuals younger than 21 years old were excluded because many teenagers use blogging and other forms of Internet communication to explore aspects of identity in line with normal adolescent developmental processes; the current study aims to explore the role of the more enduring psychological construct of attachment security. As for the second and third eligibility criteria, it was necessary to study people whose blogging behaviors occur often enough to encompass a significant amount of their daily lives as this study aims to explore the psychological processes that take place as a result of blogging. Finally, a personal blog is defined in this study as an ongoing diary or commentary by an individual, where the content of the blog is not limited to a specific topic such as politics or sports. Topic-blogs were excluded from this study because they represent a different form of blogging that is not necessarily linked to interpersonal and relational motives.

A number of different strategies were used for recruitment in order to obtain a varied and representative sample of English-speaking bloggers. First, participants were recruited from Wordpress, a major blog software company. “Search tags” were used to identify personal blogs (including “life”, “personal”, “thoughts”, “me”, “my life”, “random”, “journal”, “reflections”, “family”, “blog”, “blogging”, “relationships”, and “people”); individuals with personal blogs were then recruited through individual postings in the comments section of their blog. These postings described the study and asked the blogger to send an email to the author requesting a link to the survey if they were interested in participating (see Appendix A). Second, a profile called “YDoUBLog” was created on Twitter, a social networking and micro-blogging service that allows users to send brief text updates; many bloggers use Twitter to publicize their blogs. Individuals who expressed interest or had already participated in the study were asked to “retweet” (or update) a shortened version of the call for recruitment (see Appendix B) so it would reach all of their contacts on Twitter. Third, snowball sampling was used with participants who agreed to complete the survey by offering them the option to refer other bloggers to the study, and/or to post the recruitment posting on their own personal blog.

Recruitment occurred from March to August 2010 when the sample size reached 160, which satisfied requirements for statistical power. This number is double the number of participants necessary to have enough power to run multiple regression analysis including three independent variables, with statistical significance set at $p < .05$ and a medium effect size. Of the 895 recruitment postings sent out between March and August, some of which were to multiple blogs authored by the same individual, 187 people responded with a request to participate. Of those who responded, 160 (86%) started the survey. Eight individuals were not included in the final sample because they did not meet one or more of the eligibility criteria, and another two

were eliminated because they did not complete the central measure of attachment. The remaining 150 individuals completed, at minimum, the demographic variables and the attachment measure; 143 individuals (95% of those included in the study) completed the entire survey.

Participants

The sample is comprised of 150 bloggers ages 21 to 65 ($M = 37.72$; $SD = 12.47$). Almost two-thirds of the sample (63%) was female; two people self-identified as transgender. (These individuals were coded as missing in the gender analyses.) A majority of the sample reported being heterosexual (87%), another 5% was homosexual, 7% was bisexual, and 2% self-identified as unsure of their sexual orientation. Half (53%) of the participants in the sample were married, while 11% were divorced, separated or widowed at the time of the study. A third of the sample (35%) had never been married. The sample was primarily White (73%), but also included individuals self-identifying as Asian (15%), Black (6%), American Indian (less than 1%) and mixed racial descent (6%).

The participants were well educated: 56 (37%) had completed a professional degree and another 32% had completed a college degree. A quarter of the sample (25%) had completed some college, 5% had a high school diploma and only one person had not completed high school. Most participants (70%) were employed; 10% described themselves as seeking work; 3% described themselves as keeping house or not working by choice, 9% were full time students, 3% were retired, and 5% were on disability.

Procedures

The survey questionnaire (see Appendix C) was converted into an electronic file that was stored on a web-based system, SurveyMonkey (www.surveymonkey.com). Data were maintained on a secure server to which only the PI had access until they were converted into data

files for analysis. Bloggers who responded to the recruitment posting contacted the PI by email to request a personalized link to the online survey. Participants who followed the link were presented with a detailed description of the study, eligibility requirements, and informed consent information, which indicated what was being asked of them and reminded them of their right to exit the survey at any time. Potential participants were informed that if they completed the survey they would be included in a raffle for three \$75 gift cards. After reading the informed consent information, participants clicked “yes” to consent and continue with the study or “no” to decline and discontinue. A copy of the informed consent is found in Appendix D.

Potential participants were then directed to a page that indicated they should only complete the survey if they were able to work for approximately 45 minutes without interruption. Those respondents who replied, “no” to this question were asked to discontinue and return at a later time. Two people responded “no”, and neither one returned to finish the study. Those who responded “yes” were asked to complete four screening items to determine eligibility once again (at least 21 years of age, maintenance of an English language blog that is personal in nature for at least six months that they visit or update at least twice a week). Individuals who did not meet eligibility criteria were thanked and exited the website. Participants were able to terminate their participation at any time by clicking on the “Exit Survey” button on each page.

After completing the survey, participants were asked if they would be willing to provide an email address with which they could be contacted for future research, and to share their blog name for the purpose of content analysis that might add to information gained through the questionnaire. They were informed that they would be included in the raffle whether they provided their contact information or not. Of the 143 participants who completed the survey, all but 13 (91%) agreed to be contacted in the future and all but 10 (93%) offered the web address of

their blogs. Finally, participants were brought to a web page thanking them for their participation and providing referral information (Appendix E) for the unlikely possibility that someone may have become distressed while taking the survey.

Measures

The measures assess constructs in the theoretical model: adult attachment security; psychosocial functioning (loneliness, self esteem and perceived social constraints on emotional disclosure); anonymity; personal and interpersonal motivations for blogging; and blogging intensity. Most of the measures were closed-ended. Open-ended questions were included to allow the participants opportunities for elaboration. All measures are presented in Appendix C. Descriptive statistics and alpha coefficients for all scales can be found in Table 1.

Attachment style. Attachment was measured by the *Experiences of Close Relationships scale* (ECR; Brennan, Clark, & Shaver, 1998), a 36-item self-report measure.² Half the items on the ECR comprise the Attachment-related Avoidance scale, which measures discomfort with closeness or discomfort with depending on others. The other 18 items comprise the Attachment-related Anxiety scale, which measures fear of rejection and abandonment. Exemplary items for the Anxiety Scale are “I worry about being abandoned” and “I get frustrated if romantic partners are not available when I need them.” Exemplary items for the Avoidance Scale are “I prefer not to show a partner how I feel deep down” and “I find it difficult to allow myself to depend on romantic partners”. Participants are asked to indicate how much they agree or disagree with each item using a 7-point strongly disagree-strongly agree format. When completing this measure, participants are asked to consider their general feelings about being in emotionally intimate

² There is a revised version of the ECR called the ECR-R, but there are no proven advantages to using the ECR-R over the ECR. These measures have been found to be identical measures of adult attachment for all practical purposes (Fraley, Waller, & Brennan, 2000).

relationships, rather than basing responses on their current relationship status. Instructions from a more recently modified version of the ECR were used for this dissertation (Brennan et al., 1998): “The following statements concern how you generally feel in close relationships (e.g., with romantic partners, close friends, or family members). Respond to each statement by indicating how much you agree or disagree with it.” These modifications were used as they move the focus from romantic relationships to encompass other close relationships.

The Avoidant Attachment score was computed by averaging the 18 odd-numbered items (after reversing particular items). Higher scores reflect greater avoidance. The Attachment Anxiety score was computed by averaging the 18 even-numbered items (after reversing particular items). Higher scores reflect greater anxiety. Past studies have demonstrated the scale’s excellent reliability (Brennan et al., 1998) and validity (Lopez, Mitchell & Gormley, 2002; Mallinckrodt & Wei, 2005; Shaver & Mikulincer, 2002; Wei, Heppner & Mallinckrodt, 2003). In this study, the alpha coefficients for the Avoidant and Anxious Attachment subscales were excellent, .94 and .93, respectively. The correlation between the two scales was $r = .43$, $p < .001$.

In addition to computing the ECR’s scores for anxiety and avoidance, categorical scores were computed for the ECR. Median splits on the avoidance and anxiety scales created four groups: secure (51 individuals), high anxiety-low avoidance (25 individuals), high avoidance-low anxiety (25 individuals) and high anxiety-high avoidance (49 individuals). These categories generally correspond to Bartholomew and Horowitz’s (1991) four categories of attachment described in the literature. However, Fraley and Waller (1998) found no empirical evidence for conceptualizing attachment as a typology, and recommended that these conceptual types remain

in a two dimensional space. Thus these categories will only be used to augment the closed-ended data in describing participants' blogging behaviors and to illustrate concepts in the model.

Blogging. Many closed-ended questions assessed blogging style, including orienting information about the blog, degree of self-disclosure, anonymity, audience and control features, the nature of people's personalities online versus offline, blogging intensity and motivations for blogging. As detailed below, some items were adapted from existing studies (Viegas, 2005; Ellison, Steinfeld & Lampe, 2007; Huang et al., 2007) and others were written for this study based on pilot interviews with two women who self-identified as bloggers.

The blogging items included descriptions of participants' behaviors, beliefs and motivations for blogging, which were used to provide a rich description of blogging. This large set of descriptive questions was reduced to a more parsimonious set of constructs to be used in the statistical analyses testing the model. Three aspects of blogging were included in statistical analyses: anonymity, personal and interpersonal motivations for blogging, and blogging intensity. However, because many other blogging variables are described or alluded to in the Results, all blogging variables included in the study are described here, by domain.

Orienting information included items that address the nature of the blog's content and the amount of time each participant spends blogging. Two items were taken from Viegas' (2005) study of 492 bloggers' expectations of privacy and accountability: "How long have you been blogging?"; and "How would you characterize the kinds of entries you publish on your blog?" Bloggers reported the date of their first blog post to get a more objective measure of how long they have been blogging, and were given an opportunity to describe the kinds of entries they write in both closed- and open-ended formats. The PI added two questions addressing the average amount of time participants spend on their blog, and if they are ever paid to blog.

Finally, participants were given the opportunity to write about what inspired them to start a blog in the first place in an open-ended format.

Self-disclosure in Blogging included questions about decisions that bloggers have made regarding privacy. Two items were taken from Viegas' (2005) study of 492 bloggers' expectations of privacy and accountability: "How private are the things you write about on your blog?"; "How often have you written highly personal things on your blog?" Three additional items were written by the PI: "Have you ever regretted writing something on your blog?" "Has something you written in your blog negatively affected a relationship you had with someone?" "Has something you written in your blog positively affected a relationship you had with someone?" Responses to all questions were in five-point Likert scale format. Individuals who checked any response other than "never" to the final three items were given the chance to elaborate on their response in an open-ended follow-up question.

Anonymity was measured by three items. The first item assessed the level of anonymity a blogger maintains in identifying him/herself based on the inclusion of the blogger's name and other identifying information. Participants could choose from a list of possible response options that were taken from survey research by Viegas (2005), and modified to include an option which is currently used by bloggers in which they do not include their name on their blog, but link to another webpage (such as Facebook or other social networking site) where they can quickly be identified. Response options were: "first and last name"; "first name, but not last name"; "not directly on the blog, but it links to a website with my name, such as Facebook"; and "nickname or pseudonym". The second item, developed by the PI, used a five point Likert scale to assess the extent to which participants try to control the impression made upon others about them: "To

what extent have you changed identifying information about yourself on your blog?" Participants were given an opportunity to elaborate upon this question in an open-ended format.

Lastly, participants were asked if they keep their blog a secret from people in their life, and offered a range of options, including family member, employer, friend, or other. They were then asked to explain why they have chosen to keep the blog a secret from this person(s). An equal interval scale with five intervals was created from the data on the number of people from whom the blog was kept a secret, starting from zero to indicate the blog was not kept a secret from anyone. This score was combined with the first two questions to generate the *Anonymity* scale, which had an alpha coefficient of .62. The descriptive data from the open-ended questions was used to elaborate upon the scale's meaning.

Audience and Control Features included eight items that assessed the ways in which bloggers manage relationships with their readers, with a particular emphasis on whether bloggers share their blogs with individuals in their offline lives. The first item asked for an estimate of the number of visitors that check the blog each day. Participants were then asked to indicate whether they have ever met anyone who started out as a commenter on the blog, and if so, how many. An additional four items were taken from survey research by Viegas (2005): "How often do you monitor how many people visit your blog?"; "How well do you feel you know your blog's audience?"; "How much do the comments that people write affect the entries you write?"; and "Do you do anything to limit who can read what you post?" The first three items are answered on 5-point Likert scales ranging from "everyday" to "never"; "not well at all" to "extremely well"; and "none" to "almost all". Participants responded yes or no to the fourth question, and had an additional open-ended question to explore the specifics of how they limit audience access to their

blogs. Bloggers were also asked how many blogs they include in their blogroll and how many other bloggers include their blog in a blogroll.

Online and Offline Identities were measured by a series of items written for this study. Participants were asked to list the top three adjectives they think people in their lives would use to describe them, and were asked to do the same for people in their blogging audience. They were asked to explain why they chose those adjectives. They were then asked which list offers a more accurate depiction of their personality, to which they could respond “the first list,” “the second list,” or “they are the same.” Finally, participants were asked, “How similar do you think your blog self is to your offline self?” Response options included: “totally different,” “a little similar,” “something in common but not others,” “very similar,” and “exactly the same.”

Personal and Interpersonal Motivation for Blogging was assessed with eight items; six items were taken from Huang et al. (2007) and two items were added by the author based upon pilot interviews with two bloggers. The original items pertained to the ways in which bloggers might be motivated by needs for self expression of thoughts and feelings and by needs for membership or belonging to a community: “I use my blog to free my mind when I am moody; I express myself by writing in my blog; My blog is the place where I express what I feel; In my blogroll I have friends with whom I can share personal thoughts, feelings and events; Blogging has helped me make more like-minded friends; By blogging I interact with a set of blogs that have content similar to what I have put in my blog.” Two items added by the PI pertained to the extent to which people might be motivated by an internal change in an individual’s feelings of loneliness and acceptance by others that may be triggered by the act of blogging: “Blogging helps me feel more popular and interesting” and “I feel less lonely when I blog”. All items were answered with 5-point Likert scales ranging from “strongly agree” to “strongly disagree.” The

eight item scores were summed, with higher scores indicating higher *Personal and Interpersonal Motivation for Blogging*.³ The alpha coefficient for the scale was .76.

Bloggng Intensity. was assessed by a 7-item scale drawn from a study of Facebook usage (Ellison et al., 2007). The items attempt to capture the centrality of the role of blogging in one's life, above and beyond measures that only assess time spent online. The question wording was not changed from the original scale, with the exception that the word "Facebook" was replaced with "my blog" or "blogging" in each item. The items were presented with a 5-point Likert scale response format with response options ranging from "strongly agree" to "strongly disagree": "Blogging is a part of my everyday activity"; "I am proud to tell people I have a blog"; "Blogging has become part of my daily routine"; "I feel out of touch when I do not blog in a while"; "I feel I am part of a blogging community"; "I would feel upset if I had to shut down my blog". Item scores were summed, with higher scores indicating greater intensity. The alpha coefficient for the scale was .74.

³ In Huang and his colleagues' (2007) study of Taiwanese bloggers, the six items formed two factors, *Bloggng for Self Expression* and *Bloggng for Community Forum Participation*. Because I added two items, an exploratory principals components factor analysis was computed with the current sample to see if the same factor structure would be replicated. The three-factor solution accounted for 69.2% of the common variance, and the first two factors were identical to those found by Huang and his colleagues (2007). However, as the intercorrelations among the three factors were moderate and significant (r 's = .29 - .47, all $p < .001$) they were combined into a single scale.

Psychosocial functioning. Psychosocial functioning was measured with a composite score of three scales that measured self-esteem, loneliness and perceived social constraints on emotional disclosure. Loneliness and self-esteem were included as they tap into important perceptions about the self and the self in relation to others. Social constraints was added to the group of psychosocial functioning constructs because it addresses the additional dimension of perceptions of others that is not addressed by either the loneliness or self esteem measures. After reversing the self-esteem scale, the intercorrelation among the three scales was found to be strong, ranging from .51 to .76. (all $p < .001$). They were therefore combined to create a composite measure of psychosocial functioning by standardizing the total scores on each of the three scales and adding them together. Each of the component scales is described next.

Loneliness. Loneliness as measured by the UCLA Loneliness scale, which measures subjective feelings of loneliness or isolation (Version 3; Russell, 1996). It is comprised of 20 items, answered on a 4-point Likert scale from “often” to “never”. Exemplary items include: “How often do you feel that there are people who really understand you?”; “How often do you feel alone?”; and “How often do you feel left out?” After reversing the necessary items, all item scores were added together to generate a total score, with higher scores indicating greater loneliness. Other studies have demonstrated this scale’s high reliability (Russell, 1996) and validity (Rubenstein & Shaver, 1982; Schmidt & Sermat, 1983; Russell, Peplau & Cutrona, 1980); in this study, the coefficient alpha was .95.

Self Esteem. Self-esteem was measured by the Rosenberg Self Esteem Scale (Rosenberg, 1965), a well-used scale in developmental, social, and personality psychology research that consists of 10 statements related to overall feelings of self-worth or self-acceptance and yields a unidimensional self-report measure of global self-esteem. Items include: “I am able to do things

as well as most other people, and “I feel I do not have much to be proud of” (reversed). The items are answered on a four-point response option scale, ranging from strongly disagree to strongly agree scale.

Social constraints on emotional disclosure. were measured by the General Social Constraints Scale (Lepore & Fernandez-Berrocal, 2004). This scale assesses perceptions of one’s network that make it difficult to share personal thoughts and feelings with family, an intimate partner, and friends (Lepore & Revenson, 2007). Specifically, it assesses the extent to which one perceives negative responses from people when expressing thoughts and feelings. The scale is composed of 15 items asking people to assess how often friends and family engaged in certain behaviors over the past month (e.g., “How often in the past month have your friends or family members trivialized your problems?”; “how often in the past month have your friends or family members act uncomfortable when you talked about your problems?”) rated on a scale of (1) *never* to (4) *often*. Scores on the 15 items were averaged, and higher scores indicate greater levels of social constraints. The alpha coefficient for this scale was excellent, .93.

Demographic data. Demographic data included age, gender, race/ethnicity, marital status, employment status, sexual orientation, and education level. Participants who were not married at the time of the study were asked additional questions designed to have them elaborate upon their relationship status, dating behaviors and desire related to intimate relationships. All participants were asked to describe how their blogging is affected by their relationship status.

Chapter 3: Results

Before addressing the Specific Aims, I present descriptive data on participants' blogging behaviors. This is important because research on blogging is still relatively new, with few studies depicting bloggers' behaviors and motivations. Much of the data in this study on blogging behavior is consistent with existing findings; at the same time, the present study adds new information. The participants' words offer rich insight into the way that attachment style may contribute to how people make decisions related to blogging.

Blogging Attitudes and Behaviors

The study included 150 bloggers with as little as six months and as much as 15 years of blogging experience ($M = 2.86$; $SD = 2.41$ years). All participants wrote blogs that were personal in nature, with 98% indicating that they use their blog to share "personal musings." Although a small percentage of bloggers denied ever disclosing personal things on their blogs (6%) or that their blogs were at all private in nature (7%), most considered their blogs to be at least moderately private (63%) and used their blogs to share personal material with some regularity (77%).

Most study participants described their blogs in general terms: "thoughts that are itching to get out"; "brainfarts and quick releases"; "philosophical musing"; "journal of sorts"; "personal, opinions, I blog about everything." Some, however, mentioned specific genres of exploration, such as parenting, faith and religion, photography, feminism, personal experiences with mental illness, exploring the mysterious circumstances of a family members' death while serving in the military, and "reflecting on my journey as a child abuse survivor." Participants described their blogs as focusing on a wide range of topics including academic or professional brainstorming (40%); political opinions (43%); hobbies (64%); and gossip (7%).

Participants varied widely in how much time they spent blogging, with half (51%) spending less than 3.5 hours per week on their blogs and 7% claiming to spend more than 15 hours per week ($M = 6.63$; $SD = 7.64$). Many (62%) described themselves as feeling part of a blogging community. Participants were intensely emotionally involved with their blogs; this was particularly true for those who spent more hours per week blogging ($r = .26$, $p < .001$). They reported that blogging has become a part of their daily routines and expressed pride in telling others they have a blog. They also admitted to feeling out of touch when they do not blog for a while. Most (85%) said they would feel sorry if they had to shut down their blogs for some reason. Interestingly, bloggers with greater emotional investment in their blogs tended to be less lonely ($r = -.34$, $p < .001$) and reported greater self esteem ($r = .25$, $p < .002$).

Who are bloggers “talking” to? Most software allows bloggers to monitor visitors to their blog through a visitors log. Participants kept close tabs on their visitor logs: Over half (59%) monitored their number of visitors at least once a day, with another 14% checking every other day. However, participants varied widely in their reported daily readership, with some bloggers (30%) reporting fewer than 15 daily visitors, and others (15%) reporting numbers in the hundreds and even thousands ($M = 79.97$; $SD = 105.75$).

Given this large range in daily readership numbers, it follows that participants would also vary in how well they knew their audience. One-third (32%) reported that they only know a few of their readers (32%) or barely know their readership at all (10%). Slightly less than half of participants (42%) described their audiences as an equal combination of strangers and people they know. Few bloggers (16%) reported that they know most or all of their readers well. Although slightly over a third of the participants (37%) had met people in person who started out as commenters on their blogs, most of these people (80%) had met five or fewer individuals who

had commented on their blog. The remaining 20% claimed they had met up to 40 individuals who started out as commenters, which may be at least partially a function of how many years they had been blogging ($r = .35, p < .001$).

Most participants (80%) included a blogroll, or links to a list of other blogs that they recommend, on the front page of their blog. Given the important role of audience and community in blogging, it was not surprising that about the same proportion of participants (85%) were also listed in the blogrolls of others.

How much do bloggers disclose? Although all of the bloggers in the current study maintained blogs that were personal in nature, this says little about the amount and type of disclosures they make to their readers. Disclosure practices may shed light on the meaning that blogs have to their authors; it may also shed light on how attachment plays a role in the decision to use blogs as a safe space for personal disclosure. One half of the sample identified themselves by their given full name (32%) or just their first name (21%); another third (36%) only included a pseudonym or nickname. A few participants who did not identify themselves directly on their blogs still provided a link to a webpage, such as Facebook, that has identifying information. Similarly, almost 2/3 of the sample (64%) reported they changed no identifying information about themselves on their blogs. Those who changed at least a few details about themselves mainly did so for security and/or privacy purposes, such as changing – or just omitting, in the case of most participants – their own name and the names of others, birthdate, and place of residence. A few said they keep even greater amounts of information private, such as gender and sexual orientation. Finally, only a couple of people reported that they changed information for purposes other than security: One man described making himself seem “sexier” than he is and

another admitted to writing about certain experiences in the third person to disguise their personal nature.

Given the high degree of personal material shared on blogs, it is not surprising that a third of the participants (37%) chose to keep their blogs a secret from certain people in their lives. Of this 37%, participants kept their blogs secret from family members (86%), an employer (66%), friends (60%), and a partner or spouse (22%). (Participants could check as many of these categories as applied.) Although some of the participants in this group identified specific individuals such as an ex-husband, members of their church, clients, colleagues or family members, the rest kept their blogs almost completely anonymous, claiming to keep it secret from at least 20 people spanning at least two, and often three, of the four categories listed above.

As described earlier, the commenting that goes on between bloggers and their readers plays a crucial role and is the most important predictor of someone continuing to maintain a blog (Qazvinian et al., 2007). With only one exception, the participants in this study allowed readers to comment on their posts, although 20% did place password protection on certain posts, particularly when writing about something personal that was meant only for select individuals or even to be kept entirely private. These private topics included dreams, explicit sexual encounters, badmouthing the birth family of newly adopted children, and “venting” posts that involved highly emotionally charged material.

Participants ranged in the extent to which their posts directly or indirectly responded to their audience. A third of the sample (30%) claimed that comments from readers do not influence what they write on the blog, while the rest reported that comments have a mild (32%), moderate (29%) or strong (9%) influence on what they write. On the whole, respondents wrote that their blogs had impacted positively upon their relationships with others. Many participants wrote

about the indirect impact of blogging upon their offline relationships as being due to the greater level of ease with which they are able to communicate thoughts and feelings to those people online; these online disclosures enable friends and family to know and understand them better. One man referred to his blog as a “springboard for conversations that have deepened friendships;” another called it a “catalyst for getting to know someone [referring to both blogger and reader] on a new level and learn something new about his or her thought process.” Others cited specific occasions when something they had written led to greater closeness with a reader, such as when a reader reached out to them after a post talked about the bloggers’ loneliness or isolation. Sometimes online dialogues were used to work through a difficult situation in a relationship that would have been more difficult to do in person. Finally, 15% of the sample reported new friendships made through their blogs.

Not everyone felt this way: A quarter of the participants reported that their blog had not positively influenced relationships either on- or offline. Participants who did not report positive effects of blogging on relationships were lonelier ($r = .27, p < .001$), had lower self esteem ($r = .31, p < .001$), and were somewhat more likely to keep their blog a secret from at least some individuals in their lives ($r = .40, p < .07$).

For the most part, bloggers denied that there had been any negative effects on their relationships due to blog posts. The majority (70%) did not feel they had written something that negatively affected a relationship. For the remainder of the participants, this was rarely (19%) or sometimes (11%) the case. A few participants reported situations where family members disagreed with them sharing their own memories or perspectives of events that had transpired in the family, and a couple of individuals mentioned how political disagreements online had caused rifts in offline relationships.

Do bloggers regret their posts? Although 40% of the participants said they never regretted writing something on their blogs, an equal proportion (39%) did express such regret. In some instances, feelings of regret were related to having offended someone either through the reader's misinterpretation of a post or by their own impulsivity. As one blogger noted, "Anger mixed with typing can be deadly. I have deleted a post the next day when I had a clearer head." Only a few people regretted instances in which they had shared highly personal information, and usually it was related to specific individuals, such as sharing feelings about a break-up with a significant other which was then read by that individual, having feelings about parenthood read by a mother-in-law, or writing negative things about a new neighborhood that were then read by "locals". On the other hand, some participants pointed out that although a blog post may have triggered strife or conflict, it was still positive from the standpoint of having engaged in authentic communication of their thoughts or feelings about a topic.

Summary of Current Sample

The current sample portrays a diverse group of bloggers, representing a wide range of attitudes and behaviors related to blogging. Although many individuals were still somewhat new to the enterprise, others had started blogging alongside the very first pioneers in the 1990s. All participants maintained blogs that were personal in nature, though almost half focused at least some of their posts on politics and professional or academic material. The majority of bloggers considered their blogs to be private and used their blogs for disclosure of personal thoughts and ideas, but there was a small percentage who did not report using their blog for this purpose. Participants tended to express sentiments of pride and emotional investment in their blogs, maintaining its importance in their daily lives.

At the same time, there was great variation in the types and amount of identifying information participants disclosed on their blogs. Participants tended to keep close tabs on their visitor logs, but varied widely in their reported audience numbers – from one or two visitors to thousands of visitors on a daily basis. Most bloggers indicated that their readership consisted of a combination of people they know and do not know. On the whole, participants described their blogs as having positively impacted upon their relationships with others, while only a third had experienced negative consequences due to a blog post they had written on a few occasions. At the same time, more than half of the sample regretted something they had written on their blog, at least on occasion.

How Similar Do These Bloggers Look to Those in Previous Research?

Because blogging is still somewhat new and constantly changing, comparing the current sample to other studies is useful in helping paint an even broader picture of who bloggers are and why they blog. The furthest-reaching study of bloggers was conducted by the PEW Internet and American Life project (2007). This project interviewed 233 bloggers over age 18 over the phone as a follow-up to a large-scale telephone survey of 4,753 Internet users, 8% of whom were bloggers. Although statistical comparisons were not made (and could not be in many cases), I did a more “birds-eye” comparison of the blogging behavior between the PEW sample and my own.

Although there was a good deal of variation in the amount of time people spent updating their blogs, the average amount of time in my sample was only slightly less than the five hours a week that a “typical” blogger in the PEW sample spent updating his/her blog. Both studies found a small minority of bloggers who spent more than 10 hours a week on their blogs. Participants in this study were about 20% less likely to blog with a pseudonym than bloggers in the PEW study.

Both studies found that about three quarters of bloggers use their blogs to document and share personal experiences with some regularity.

Only a small proportion (16%) of the current sample believed their readership was mostly comprised of people they know, much less than 50% in the PEW study. It is difficult to draw conclusions about daily readership due to the fact that half of the PEW sample used older blogging software that did not include an option to track traffic. However, the behavioral patterns of the current study are consistent with those bloggers in the PEW sample who had more sophisticated software; both samples showed wide variation in readership numbers. Nearly all the bloggers in the current sample allowed people to comment on their posts, in contrast slightly less (87%) reported by PEW. There was an equal proportion of bloggers in both samples who say they blog mostly to entertain or engage an audience (38% in this study; 32% in PEW). Yet, the participants in the current sample were twice as likely to keep a blogroll (80% as compared to 41%) and to be listed in someone else's blogroll (85% vs. 46%).

When considered together, the current study and the PEW study suggest that most bloggers spend less than an hour per day on their blogs, while a handful of bloggers spend up to three or four times that amount of time. Most bloggers include personal material in their blogs on a regular basis and pay attention to audience. Some discrepancies were found between the studies: bloggers in the current study were somewhat more likely to include identifying information on their blogs, but less likely to feel they knew the majority of their audience members. Also, bloggers in the current sample were more likely to actively promote other blogs and allow their blogs to be promoted on the blogs of others.

This section has painted a broad picture of the bloggers who participated in this study, and of their motivations and beliefs about blogging, as well as offering a basis for comparing this

set of bloggers to other bloggers who have been the subject of research. This information offers a backdrop to the analysis of the two aims in this study, and is particularly relevant in analyzing the meditational model, which attempts to link attachment dimensions to blogging behaviors.

AIM 1 Comparing Bloggers to non-Bloggers in Attachment Style

The first aim addressed whether bloggers have higher scores than non-bloggers on measures of attachment as measured by the two dimensions of anxiety and avoidance. To test this, I compared mean scores on the anxiety and avoidance scales of the ECR between the sample of bloggers and means in published studies of college students and community-residing individuals. Although Brennan et al. (1998) tested the original ECR on a large sample of more than 1,000 participants, they did not report means and standard deviations for the scales. To locate studies that had used the ECR and contained the statistical data to compute t-tests, I conducted a systematic literature search using PsychInfo, an electronic database that provides systematic coverage of psychological literature from the 1800s to the present.

I used the search term “Experiences of Close Relationship(s) scale”, the delimiters of English language only and human studies only, and restricted the search to articles published since 1998, the year the scale was created. The initial search yielded 195 entries, including 163 peer-reviewed journal articles, 31 dissertations and one book chapter. Of the 163 journal articles, two duplicates were excluded and three articles were excluded because the ECR was not administered. Of the remaining 158 articles, 62 were excluded because of non-equivalence of the measure: 19 studies used the ECR-R, the revised version of the Experiences of Close Relationships scale (ECR-R); 7 used a shortened version of the ECR; 5 modified the scale in a significant way that precluded comparisons; and 31 articles used versions of the ECR in other languages. Another 12 articles were excluded because the scoring was not consistent with the

dimensional scoring procedures used in this study. Another 29 articles were excluded because they did not report mean scores for at least one of the ECR dimensions, and three articles were excluded because the samples were of adolescents. These exclusionary criteria left 52 articles to which the current study could be compared. One article included two studies and one was excluded because it divided the sample based upon an assessment of secure or insecure attachment to the participants' mother. It can therefore be considered a validation study of the ECR, but was not appropriate for comparing to the current sample.

The 52 studies (which can be found in Appendix F) contained 77 samples that were classified by the PI and dissertation chair (TAR) into four categories: students (n=30 studies/43 samples, primarily undergraduates, a few studies had graduate students); adults (n=13/19); people in therapy or diagnosed with a psychological disorder (n=7/9); and the final group, individuals coping with major life stressors such as physical illness (n=5/6). These categories are conceptual only, for examining differences, as shown in Tables 2-5.

Table 2 compares the current sample of 150 bloggers to 43 samples of undergraduate students. Bloggers had significantly lower anxiety than 25 samples, equivalent levels to 16 samples (i.e., the t-test was non-significant), and significantly higher anxiety scores than only 2 samples. Further examination revealed that in cases where no differences were found or where bloggers were found to have higher levels of attachment anxiety, the studies were more likely to be those that studied students in romantic relationships. Specifically, of the 14 studies of undergraduates in romantic relationships, 3 had higher levels of attachment anxiety than bloggers and the rest showed no differences. The findings for avoidance were different: In a majority of samples (81%), bloggers had significantly higher avoidance than undergraduate students, and

were only found to have lower avoidance than one sample. No differences were found in the remaining 6 samples.

Table 3 presents the comparisons between bloggers and studies of adult participants. When considering attachment anxiety, an opposite pattern occurred compared to the set of undergraduate studies: in a majority of these studies (74%) bloggers had *higher* levels of anxiety than adults in the general population. The only study in which bloggers had lower attachment anxiety was a sample of gay men. In a few remaining studies (4), no differences were found, and interestingly, both samples of adults in training to become psychotherapists (Romano et al., 2008; Romano et al., 2009) were among them. Bloggers had higher avoidance than a majority (84%) of the adult samples, and in the remaining samples (3 or 16%), no differences were found.

Table 4 compares the current sample of 150 bloggers to 9 samples of adults in therapy or diagnosed with a mental health issue. In about half of these samples (5) bloggers had lower anxiety, and in the rest, no differences were found. A different pattern was found for avoidance: Bloggers had higher avoidance than half (4) of the samples, and lower avoidance than only one sample. Mean scores were equivalent in the remaining half (4).

Table 5 presents the comparisons of my sample with the 6 studies of people coping with major life stressors. Half of the studies found no differences in anxiety; 2 studies found bloggers to have higher levels of anxiety and one found bloggers to have lower levels of anxiety than individuals coping with major stressors. Findings for avoidance were similar: 3 studies found bloggers to have higher avoidance, 2 studies found bloggers to have lower avoidance than individuals coping with major life stressors, and one found no difference.

In summary, with regards to attachment anxiety, bloggers in the current sample tended to have lower levels than samples of undergraduate students, but higher levels of attachment

anxiety than samples of adults in the general population. Anxiety levels were comparable between bloggers and samples of undergraduate students in romantic relationships and adults in training to become therapists. Bloggers had lower or equivalent levels of attachment anxiety than samples of individuals in therapy or diagnosed with psychological disorders, and did not differ from people coping with major life stressors. With regard to attachment avoidance, bloggers had higher levels than samples of undergraduate students, community-residing adults and, for the most part, individuals in therapy or diagnosed with psychological disorders, but did not differ from people coping with major life stressors.

The previous section summarized the findings of the first aim of the study, which revealed the differences and similarities in attachment avoidance and anxiety between the current sample of bloggers and published studies of other samples. The following section will address the second aim, testing the mediational model proposed in Figure 1.

AIM 2: Testing the Mediation Model

Many of the study's questions about the relationship between attachment style and blogging, and about the psychosocial variables that mediate that relationship (loneliness, self esteem and social constraints), are embedded in the conceptual model presented in Figure 1. Thus, Figure 1 also serves as the model to be tested empirically. The model was analyzed using structural equation modeling (SEM), which examines both the direct and indirect effects of variables upon the other variables that follow. It also tests the amount of variance in the dependent variables that are accounted for by the independent variables in each step of the equation. Finally, by correcting for measurement error, structural equation modeling offers a more accurate estimation of both the direct and indirect effects being tested than would otherwise be obtained (Hayduk, 1987).

Demographic variables as potential covariates. Before testing the model, it was important to determine whether there were demographic differences in the attachment dimensions of avoidance and anxiety or in the dependent blogging variables so that their influence could be co-varied. Seven demographic variables were examined: Age, gender, race, sexual orientation, relationship status, educational background and work status.

Demographic variables related to attachment. Three of the seven demographics variables – sexual orientation, relationship status and age –were significantly related to both avoidance and anxiety. As shown in Table 6, individuals who identified themselves as homosexual or bisexual had higher levels of attachment avoidance and attachment anxiety than heterosexual individuals. Individuals who had never been married had higher levels of both anxiety and avoidance than individuals who were currently married. Younger age was correlated with greater avoidance and anxiety.

Demographic variables related to blogging. Relationships between the same set of demographic variables and the blogging variables (anonymity, personal and interpersonal motivations, and blogging intensity) were examined next. As shown in Table 7, gender, age and sexual orientation were each significantly related to at least one of three blogging variables, but not in the same pattern. Women exhibited higher levels of blogging intensity and anonymity and were more motivated by personal and interpersonal needs of self-expression, self-enhancement and connection to a community than were men. Age was positively related to blogging intensity but negatively related to being motivated to blog out of personal and interpersonal needs. Sexual orientation was related to motivations for blogging only: Participants who self-identified as homosexual and bisexual were more motivated to blog by personal and interpersonal needs than were participants who identified as heterosexual.

In summary, significant differences in sexual orientation, relationship status and age were found for attachment avoidance and attachment anxiety. Significant differences in age and gender were found for the study's main dependent variable, blogging intensity. Significant differences in age, gender and sexual orientation were found for personal and interpersonal motivations for blogging, one of the proposed mediators in the study. Finally, significant differences in gender were found for anonymity only, the other mediating blogging variable. Therefore, five variables were included as "covariates", which is further detailed in the following section: age, gender, race, sexual orientation and relationship status.

Are attachment avoidance and attachment anxiety related to blogging intensity?

This is the central relationship in the model. Both attachment dimensions were negatively correlated with blogging intensity, ($r = -.21$, $p < .001$ for anxiety and $r = -.36$, $p < .001$ for avoidance). Thus, individuals with greater attachment anxiety and attachment avoidance blogged with less intensity.

Do psychosocial functioning and blogging behavior mediate the relations between attachment security and blogging intensity? The central research question involved determining whether the relation between attachment anxiety and avoidance and blogging intensity is mediated through a) psychosocial functioning and b) blogging behaviors and motivations. Residualized variables were created for all variables in the model. Because of the large number of variables in the model, demographic variables were not in the model itself; instead, their influence was statistically controlled by partializing these demographic variables out of each variable in the model in accordance with the suggestions of Newcomb & Bentler (1988). This process of residualization created six new variables that represented the baseline levels of each construct in the model *controlling for the effects of age, gender, race, sexual*

orientation and relationship status. The variation that these demographics accounted for in the constructs ranged from 8%-24% before residualization.

After these residualized scores were converted into standardized scores, all of the equations that comprised the model were estimated simultaneously using multiple regression analysis testing for direct and indirect effects. This is depicted in Figure 2. That is, analyses were conducted for the relationship of anxiety and avoidance on psychosocial functioning, for the relationship of psychosocial functioning on anonymity and motivations for blogging, and for the relationship of anonymity and blogging motivations on blogging intensity. Statistical tests were conducted to determine if a significant proportion of the variance of each dependent variable in the equation was accounted for by the variables that preceded it.

First, the analysis of whether anxiety and avoidance, psychosocial functioning, anonymity, and personal and interpersonal motivations for blogging explained the blogging intensity measure was examined through correlations. Table 8 contains the zero-order correlations between each of the six residualized variables. All six variables were significantly correlated with blogging intensity, but not all in the same direction. Greater anxiety, avoidance, psychosocial functioning and anonymity were related to lower blogging intensity. Motivations for blogging were positively and significantly related to blogging intensity. This correlation matrix was compared with the population covariance matrix produced through structural equation modeling using goodness of fit statistics. The model provided an excellent fit to the data: the difference between the observed and reconstructed correlation matrixes was not statistically significant, ($\chi^2(1) = .0001, p > .98$). Other goodness-of-fit indexes produced the same result, providing excellent fit for the Comparative Fit Index (1.00) and Root Mean Square Error of Approximation (.00). This excellent fit is in part a function of the high “saturation” level

of the model, meaning that the model estimates almost as many parameters as there are data points.

The regression analyses can be found in Table 9. Anxiety and avoidance attachment together account for a large and significant proportion of the variance (72%) in psychosocial functioning. Direct effects were found for avoidance and anonymity, and for anxiety with blogging motivations. The combined effect of anxiety, avoidance and psychosocial functioning accounted for a significant portion of the variance (27%) in the anonymity measure, but did not account for a significant proportion of the variance (7%) in personal and interpersonal motivations to blog. Finally, avoidance and blogging motivations were significantly associated with blogging intensity; however, the finding for anonymity only approached significance ($p < .07$). Collectively, the direct effects of all variables in the model accounted for over a third of the variance (36%) in the blogging intensity measure.

Specific indirect effects for each proposed mediation were also tested. No significant indirect effects were found, and thus no evidence for mediation was found. The only relationship that approached significance was that between anxiety and blogging intensity as mediated by personal and interpersonal motivations for blogging ($\beta = .11$; $t = 1.72$, $p < .09$). In sum, the data show that while most variables were significantly related to each other, none of these variables acted as mediators. Figure 2 displays the model with the significant relationships between variables.

Deepening our understanding of the concepts in the model with open ended data.

Open-ended questions followed many of the closed-ended scales to offer participants the opportunity to explain their responses. In order to more deeply understand the ways that privacy, secrecy and motivations to blog are related to – or may reflect – attachment styles, I examined

these dimensions as a function of attachment anxiety and attachment avoidance and illustrate these quantitative findings with the respondents' own words.

Median splits on the anxiety and avoidance scales were used to create four attachment groups that I labeled secure (51 individuals who were below the mean on both dimensions), high anxiety-low avoidance (25 individuals), high avoidance-low anxiety (25 individuals) and high anxiety-high avoidance (49 individuals). With one exception, differences between the four attachment groups on all the blogging variables in the model (Figure 2) were tested with 2-x-2 ANOVAs in order to determine both main and interaction effects (see Table 10). In the case of a dichotomous variable – Do you keep your blog a secret from anyone? (yes/no) – a chi-squared analysis was used. When the ANOVA or chi-square was significant, open-ended responses were reviewed and are presented. To offer additional context for quotes from specific participants, each participants' age and gender is noted alongside the quote.

Anonymity. Table 10 shows that bloggers with high levels of avoidance (regardless of avoidance level) have higher levels of anonymity as defined by the inclusion of identifying characteristics and the extent to which the blog is kept secret from people. For the dichotomous variable of whether one keeps the blog a secret from anyone or not, there was a main effect for attachment avoidance: more avoidant participants were more likely to keep their blogs a secret from people in their lives ($X^2(1) = 17.45$). Of the 56 bloggers (37%) who kept their blogs a secret from others, 40 (71%) were in the high avoidance-low anxiety or high avoidance-high anxiety groups. Some of these individuals kept their blogs secret from specific people out of concern for jeopardizing their employment, their relationships with family members or members of their religious communities, or out of a desire to maintain separation between work and personal life. Others maintained high levels of anonymity overall. Although many of these

individuals kept their blogs secret out of a fear of what people would think reading their “unedited thoughts” (Participant 187, M, 46), or of people “standing in disapproval” of their thoughts and actions (Participant 121, F, 46), others focused on how their blogs are a place to be open and honest without having to worry about offending others or having to explain themselves to anyone, such as “non-survivors [of abuse] that wouldn’t understand” (Participant 20, F, 54). As Participant 13 (F, 29) wrote, a blog offers “the same freedom as being alone or being alone in a foreign land where nobody knows you.” Another (Participant 153, F, 24) described her blog as “a room of one’s own... a room with a lock and a single key.” These participants placed a high value on their right to have personal space for their ideas and feelings.

The fact that many participants actively kept their blogs outside the awareness of people in their lives brings up the question of how bloggers’ relationships, interactions and experiences online differ from those offline. Only a small proportion of the participants in this study (15%) felt that people in their online worlds knew them better than people in their offline worlds; notably, people who felt this way were likely to be more avoidant in their attachment than participants who did not feel this way ($t(145) = -3.15, p < .01$). These participants discussed being able to be more open and honest with their thoughts and feelings online than offline. As Participant 39 (F, 22) wrote, “I put on too stable a front for the [perceptions of people in face-to-face interaction] to be accurate. But online, no one really knows me, so I don’t care. And they get to see all of me, the parts they do and don’t like.” Another (Participant 129, F, 42) wrote, “Much of my ‘real life’ is filtered very carefully. I only allow people to see what I think they can handle. But, when I blog, I am able to present more the ‘raw’ me...” Yet another respondent (Participant 54, F, 42) wrote, “Online, I’m free of the shackles of my sometimes difficult family, so I can just be myself.”

Participants who felt that people in their offline worlds know them better of as well as people in their online worlds to have lower levels of avoidance. Some participants suggested that the lack of control over peoples' perceptions of them offline leads the offline perceptions to be more accurate. For example, Participant 182 (F, 42) wrote, "Even though I am transparent on my blog, those who can see me face-to-face and observe me with others learn things about me that even I do not know about myself." Others, particularly securely attached participants, reasoned that their offline communities know them better simply because they are more intimately involved in their lives than their online readership.

Participants were also asked to rate their perceptions of the level of similarity between the "self" they have cultivated online with their "self" in offline settings by rating the level of similarity between their on- and offline personalities on a 5 point scale between "they are completely different" and "they are exactly the same." Participants who perceived a greater difference between their on- and offline selves were participants with high levels of anxiety or avoidance. Some people who felt this way noted how being able to edit themselves enables them to display a different persona, such as the individual (Participant 117, M, 42) who wrote, "My online persona is more confident and eloquent than the real person. This requires heavy editing." Most people who described their on- and offline selves as being very different, however, emphasized that the blog represents a *more* authentic and honest version of themselves, such as Participant 169 (M, 46) who wrote, "I deliberately try to be true to myself when blogging. I may remain anonymous but I'm not trying to pretend to be anything other than myself." Others echoed this sentiment in different ways. "The whole point in using a pseudonym is that I don't have to pretend to be something I am not. In the real world, I pretend" (Participant 6, M, 30); "Online I am able to express myself better than offline. I can say things how I want to say them

without social pressures or politically correct expectations” (Participant 136, F, 40); “I think that the ‘me’ that people get to know on my blog is paradoxically more authentic, yet also much more distanced from the ‘shallow’ aspects of my everyday existence” (Participant 74, M, 31).

In comparison, secure individuals were more likely to describe their on- and offline personalities as sharing many things in common. Some participants argued these two personalities are exactly the same, such as Participant 101 (M, 54), who wrote, “I don’t write any different from how I speak and my blog is not part of myself, it’s the same self.” Others acknowledged that they show different parts of themselves on- and offline, but pointed out that they are all valid. As Participant 19 (M, 62) wrote, “We all wear different hats depending on our relationship with a person. Everyone sees a different side of you but all have some truth to them.”

Finally, participants were asked to choose three adjectives that they thought their on- and offline communities would use to describe them, and then reflect upon why they chose those adjectives. There were important differences in the different adjectives used by individuals in the four attachment categories. On the whole, while there were exceptions on both sides, participants with secure attachment tended to describe their online selves as more positive and controlled versions of themselves, while participants with high anxiety and, to a lesser extent, avoidance, used their blogs to portray their more “raw”, “authentic” selves.

Some adjectives used by secure participants to describe their online selves were funnier, more light-hearted, more logical, calmer, more daring and outgoing, less insecure, more positive, more insightful, more polished and not as serious. There were a few exceptions of secure participants who described being more open about certain feelings online. Some adjectives used by participants in the high avoidance-low anxiety group were funnier, less shy, more sociable,

more extraverted and less guarded. These individuals described the blog's unique role in enabling certain of their traits to become more apparent. As Participant 36 (F, 29) pointed out, the offline world is a place where "I generally try to keep my head down and try not to attract attention to what I really think and feel." Those in the high anxiety-low avoidance and high anxiety-high avoidance groups described themselves as being more open in both positive and negative ways through adjectives such as more expressive, more unrefined, more outgoing, more talented, more critical and insensitive, more "myself," snarkier, more confident and eloquent, more passionate, more vocal, letting out more "chaos," more honest, less filtered, more "raw," and more able to speak freely. As one Participant 146 (F, 25) wrote, "I write what I really feel. I don't show much of my concern offline to people around me; I act happy all the time." Another (Participant 188, F, 57) noted, "I can be vulnerable when I am just me out there in my blog."

Personal and interpersonal motivations for blogging. The survey offered participants several opportunities to comment on the different personal and interpersonal purposes served by their blogs. Table 10 shows that bloggers with high levels of anxiety (regardless of avoidance level) describe feeling more motivated by needs for self-expression and self-enhancement than those with lower levels of anxiety. No significant differences in either anxiety or avoidance were found to exist based on motivations for community involvement. Although the open-ended data do support the finding that anxious participants feel particularly motivated by needs for self-expression and self-enhancement, bloggers across all attachment styles wrote about being motivated by such needs. These are described below, followed by the themes that were particular to participants with high attachment anxiety.

The first type of personal motivations described by participants across attachment groups was having a creative outlet for their writing and other artistic expression. Participants said that

the presence of an audience enhanced their motivation by making them more accountable to others. Many participants used blogging as a place to document their daily lives, thoughts and observations – both for their own benefit in gaining perspective on their thought processes, as well as for the benefit of their friends and children. As one respondent (Participant 76, F, 25) shared, “I believe that even an ordinary man can share his/her life through blogging and can be an inspiration for more than thousand years to come.” Others also commented on the desire to be remembered, such as one person (Participant 41, F, 22) who wrote, “I have this sense of wanting to be remembered in some way after I am gone, and what one puts on the Internet is out there forever”; another (Participant 38, F, 57) described blogging as “a way to create a footprint in the sand – one that when I am long gone it will still be there.”

The second type of personal motivation was in keeping with a statement made by one Participant 121 (F, 46) who called her blog a “journal that keeps offering feedback.” While some focused on the benefits of expressing themselves in helping to clarify thoughts and feelings, most participants specified the value of processing things aloud in an atmosphere that provides empathy, support and validation. This acts as positive reinforcement for many people, making it easier to be emotionally expressive again. One woman (Participant 157, F, 50) credited blogging with making her a “better person – more aware of others!”

Those who felt this way described blogging as therapeutic, helping them work through difficult life experiences such as diagnoses of physical illness, depression, history of physical and spiritual abuse, break-up of relationship or marriage and miscarriage. As one person (Participant 77, F, 22) wrote, “Blogging helps to relieve me of my inner struggles, thoughts that I can’t map out or decipher without having them written out. Writing helps me get it off my chest, leaving me a bit more care-free.” Another (Participant 20, F, 54) added to this idea: “it adds to

my stability because things are not whirling around inside of me.” For many, the opportunity to gain greater distance from their own emotional reactions helps them make better choices. Others talked about the cathartic and stress-relieving nature of having a place to “vent.”

The last type of personal motivation was a process of self-exploration that had the capacity to boost self-esteem and confidence. Many perceived that blogging has led to greater honesty, deeper clarity of thoughts and better insight, and greater capacity for self-definition and finding a voice and place in the world. For many, blogging offered a sense of accomplishment, pride and greater confidence in their talents and capacity for creativity. As Participant 110 (M, 45) wrote, “I’ve discovered that I can write silly children’s stories and poems, have a talent for wordplays, and possess a deep reserve of sarcasm.” Finally, a few participants wrote that blogging kept them structured around specific goals such as fitness or “a more ethical lifestyle” (Participant 161, F, 31), and even offered opportunities and motivation to find new hobbies and interests.

Although participants in all four attachment groups expressed these sentiments, some things were emphasized more strongly by participants with high levels of anxiety (regardless of avoidance), supporting the findings in Table 10. These individuals put greater emphasis on their blogs’ role in deepening their relationships and increasing the bonds between them and others. Some described feeling that people who read their blogs understand them much better, and a few used the blog to escape a world in which they did not feel understood or accepted. As Participant 129 (F, 42) wrote, “Blogging is my one link to the rest of the world that helps me stay in touch with what’s going on with me – where I find out from others that the things I think and feel are not ‘bad’ or ‘wrong’ and not ‘out of whack’.” Relatedly, participants with high levels of anxious attachment felt it was important that their readership be voluntary. For example, Participants 114

(F, 21) credited her blog with helping “get in touch with my personal feelings and share my thoughts with confidence, because I know that unlike in real life, I am not ‘forcing’ people to listen to what I have to say...I feel better about myself when I know that there are people who are actually interested in reading about my life.”

Also, participants with high anxious attachment scores were more explicit about the role their blogs have played in helping them regulate strong emotions. One person (Participant 115, F, 27) explained, “Because my emotions cloud my ability to present a reasoned argument, I write and can work out my thoughts in the privacy of my home where it doesn’t matter how emotional I get – the writing is clear.” For yet another participant (Participant 39, F, 22), the blog increased “effectiveness in identifying and dealing with fallout from emotional situations that are heightened.” For another participant (Participant 45, transgender, 45), it “helps towards sorting out mental and emotional triggers” and “developing better reasoning processes in certain areas.”

Finally, participants in the high anxiety-high avoidance group, many of whom were among the group who kept their blogs a secret from people in their lives, focused on the importance of being able to write without worrying about reactions or judgments of others. For one participant in this category (Participant 59, F, 29), what started as a place to vent away from a specific family member turned into “my personal online home”. Another participant (Participant 104, M, 21) wrote that he “love[s] how it makes me feel, when I get to express myself without fear of immediate or face-to-face confrontation or judgment.” A third (Participant 124, F, 45) expressed that, “people in offline life are far too impatient and judgmental, in my opinion, and I often feel like I’m walking through a social minefield. Blogging relieves the pressure, and it is also comforting to know I’m interacting with people who WANT to read what I’m writing, and have found me for a reason.”

Participants in all attachment categories offered similar explanations of their interpersonal motivations for blogging. Many focused on the chance blogging gave them to create and expand creative networks. Blogging offered many people in the study more opportunities for recognition of their own work as well as the benefit of meeting other “inspirational” artists. People without such creative aspirations still expressed similar sentiments about their online communities, which offer opportunities to share thoughts, ideas and interests with like-minded people. As one participant (Participant 10024, M, 34) wrote, “I needed to start writing about the things that puzzled me, inspired me, or intrigued me, in hope that some of the same things that attracted and confused me were also the same things that attracted and confused others.”

Many participants, particularly those with secure attachment, use their blogs to maintain friendships through keeping in better touch. One (Participant 134, F, 34) compared blogging to “scrapbooking, writing a diary, keeping in touch with friends through emails and photos – all rolled into one easy application.” Some participants in all attachment categories went a step further, claiming that blogging enables greater intimacy by allowing people in their (offline) lives to get to know them in them in a deeper way and vice versa. Similarly, blogging appeared to have improved communication for some people, especially those who feel that it is easier to take risks related to self-expression through writing rather than talking. Many participants also felt their blogs have allowed them to help and inspire others who are going through similar life circumstances. Some expressed the belief that they provide a model for others that enables others to show greater courage in expressing certain feelings and dealing with tough and unexpected situations.

Lastly, people's motivations for blogging are likely related to the benefits or drawbacks they have experienced when blogging, which may have influenced their expectations of which needs will be met through blogging. Participants were asked to rate how often they had experienced a positive or negative impact on a relationship due to something they had posted on their blog. These questions can offer insight into the extent to which people are motivated to blog by interpersonal needs. Table 10 compares people in the four attachment groups on these dimensions. This table indicates that participants with high anxiety levels reported negative impacts upon their relationships with greater frequency than individuals with low anxiety. Of the 17 people (11%) in this study who reported that they experienced a negative impact upon a relationship due to something they had blogged on more than the rare occasion, 12 of them had high levels of attachment anxiety. These participants described experiencing conflict with family and/or friends due to sharing opinions or perceptions of events on their blogs that angered or hurt those individuals.

Summary

In summary, the open-ended responses offer a more nuanced look at the concepts included in the model. Participants with avoidant attachment were more likely to keep their blogs a secret from at least one – and often many – people in their lives. Some did this out of a fear of rejection or judgment, while others focused on the importance of having a space of their own to be open and honest without having to explain themselves to anyone. Also, unlike secure and anxious participants, they expressed the perception that their online audiences know them better than people in their offline lives. Lastly, participants with high attachment avoidance and high attachment anxiety described their on- and offline selves as being more dissimilar from one another than did individuals with secure attachment.

Participants' descriptions of their personal and interpersonal motivations for blogging more often transcended attachment categories, although individuals with high levels of attachment anxiety more strongly emphasized the role of blogging in enabling greater self-expression and enhancing self-confidence. In particular, they described feeling that getting to express thoughts and feelings in their blogs helped to deepen their relationships with people they already know in their offline lives. They also wrote more about the role of their blogs in helping them regulate powerful emotional states. At the same time, participants with high attachment anxiety were also more likely to report negative impacts upon their relationships due to their blogs.

Chapter 4: Discussion

Summary of Results

The study had two objectives. The first was to determine whether bloggers are more avoidant in their attachment than other normative samples of adults within the population. The second objective was to determine whether psychosocial functioning, decisions about anonymity, and motivations provide independent effects to enhance or reduce the level of behavioral and emotional involvement with one's blog, also termed, blogging intensity.

The results of the comparison between the current sample and other published samples supported the hypothesis that bloggers are more avoidant in their attachment than most normative samples of undergraduate students and adults. In fact, the results suggest that bloggers' avoidance levels are more similar to individuals coping with difficult life circumstances such as living with chronic illness or people who experienced past interpersonal trauma. With regard to attachment anxiety, the results suggested that bloggers have lower levels of anxiety than undergraduate students, but relatively higher levels of anxiety than most adults.

Despite the finding that bloggers tend to be more avoidant than people who do not blog, participants represented a wide range on both attachment dimensions, which shows that blogging is not exclusively attractive to individuals with relatively high levels of avoidance. Moreover, bloggers with lower levels of avoidance reported *greater* blogging intensity than individuals with higher levels of avoidance. A similar pattern was found to exist between attachment anxiety and blogging intensity, with less anxious participants reporting higher levels of blogging intensity.

The model examined the roles of psychosocial functioning, blogging motivations and level of anonymity in blogging as mediators of the relationships between attachment anxiety and avoidance and blogging intensity using structural equation modeling. In the model, a negative

association between both attachment dimensions and psychosocial functioning indicates that participants with higher levels of both avoidance and anxiety were lonelier, had lower self-esteem, and felt greater constraints against sharing emotional material in their close relationships. However, it was around motivations for blogging that the paths for attachment anxiety and attachment avoidance began to diverge.

Participants with higher levels of attachment anxiety were more likely to be motivated by desires for self-expression and to feel better about themselves. Open-ended opportunities for elaboration suggest these individuals were motivated by the desires expressed by bloggers of all attachment styles: to have a creative outlet with an audience, an opportunity to document and share their daily lives with others and reflect upon themselves, a space for venting and working through issues with an audience that provides support and feedback, and a venue for self exploration and enhancing self confidence. In addition, they also used blogging to deepen the levels of intimacy in both their online and offline relationships, as a tool for regulating emotional states, and as a way to feel more accepted by a community of people they perceive as making the conscious choice to read their blogs, as compared to people in their (offline) lives. Despite the increased presence of these personal motivations, participants with higher levels of anxiety reported more instances where something they posted had a negative impact on one of more of their relationships. As will be discussed below, this may in part account for the finding that the association between motivations and blogging intensity did not hold true for individuals with greater levels of anxiety.

Individuals with higher attachment avoidance, in contrast, maintained greater anonymity on their blogs through the decision to include fewer identifying details about themselves, including their name, and by keeping their blogs a secret from certain people in their lives. The

latter decision was often made in the service of having a space to express thoughts without having to worry about the responses or feelings of others, including disapproval or judgment. Participants with higher levels of avoidance were also more likely to express the sentiment that their online audiences know them in a deeper way than people in their offline lives.

Despite these differences, participants with high levels of anxiety and high levels of avoidance were similar to each other in many ways and differed from individuals with low levels of both anxiety and avoidance, signifying secure attachment. In general, securely attached participants reported greater similarity between their online and offline selves. Interestingly, in reflecting upon the different adjectives that people in their online and offline worlds would use to describe them, secure participants wrote that they portrayed themselves in a more lighthearted and controlled fashion online, while bloggers with higher levels of both anxiety and avoidance described portraying their online selves in more authentic and expressive ways. Many of these individuals credited their blogs with enabling them to display parts of themselves that they do not perceive to be as welcome or safe to express in their offline lives.

In summary, participants with higher levels of attachment anxiety and avoidance had lower levels of psychosocial functioning, which replicated previous research findings. Those with greater attachment avoidance were more likely to maintain high levels of anonymity and report lower levels of blogging intensity, while individuals with greater attachment anxiety were more likely to be motivated by needs for self expression and self enhancement. While the presence of these motivations on their own is strongly related to greater blogging intensity, this does not hold true for bloggers with higher levels of attachment anxiety.

Interpreting the Findings

The strong correlation between the anxiety and avoidance dimensions ($r = .43$) on the attachment measure must be acknowledged before I can talk about attachment styles or the different influences these dimensions had on blogging. Although anxiety and avoidance were originally conceptualized by Brennan et al. (1998) as two dimensions of one construct (attachment security), their weak correlation in early studies led researchers to discuss their effects separately. Subsequent research found higher correlations between the two dimensions to be more prevalent in samples of people with romantic relationship experience (Mikulincer et al., 2010), which may account for the relatively high correlation found in the current study. While these authors did not define the parameters of this term or address possible explanations for this discrepancy between people with and without relationship experience, it seems likely that having an actual relationship partner would be a useful condition for recognizing in oneself some of the thoughts and behaviors included in attachment questionnaires. Therefore, it is plausible that people with relationship experience would be more aware of the dialectic between discomfort with closeness and depending upon others, on the one hand, and fears of abandonment and rejection on the other. From this perspective, high attachment anxiety and high attachment avoidance represent two manifestations of the absence of feelings of safety and security in relationships with others, which can both operate within the same person.

Despite the presence of a strong correlation between anxiety and avoidance in the current study, the results of Aim 1 supported keeping them separate in the model when considering the marked difference between the current participants' levels of anxiety and avoidance compared to other samples. The fact that bloggers have significantly higher levels of avoidance than anxiety

when compared to other samples suggests that each of these two dimensions offers a unique perspective into the role that attachment security plays in blogging behaviors and intensity.

It was hypothesized in Aim 2 that the distance and anonymity offered by blogging would be particularly attractive to bloggers with higher levels of avoidance, and they would therefore be more involved with their blogs on a day-to-day basis. The latter part of this hypothesis was not supported, and in fact the opposite pattern emerged: people with lower avoidance (and, to a lesser extent, lower anxiety) reported greater levels of blogging intensity. The findings from Aim 1 and these initial findings from Aim 2 reveal two basic trends: first, bloggers have significantly higher levels of attachment avoidance than most people over age 18 in the general population; and second, bloggers who report higher levels of daily involvement with their blogs (as measured by blogging intensity) are more secure in their attachment than bloggers who report lower levels of blogging intensity.

When considered together, a major implication of these data is that blogging takes different forms and plays different roles for people with different attachment styles. This suggests that personal bloggers are not a single, homogeneous group of individuals; rather, categories or “types” must be identified in order to obtain a more nuanced understanding of the people who build and maintain personal blogs. Moreover, the divergent paths found for anxiety and avoidance in the current model support the notion that one possible way to categorize and better understand bloggers may involve categorizing bloggers based on attachment anxiety and avoidance. Although the variation across both attachment dimensions in many blogging behaviors and attitudes tested in this study suggests that attachment style does not determine the decision to maintain a personal blog in the first place, the intended audience for the blog and anticipated benefits of blogging were found to be a function of attachment.

In the following sections, three types of bloggers will be discussed: Avoidant bloggers, anxious bloggers, and secure bloggers. This tripartite categorization emerged through combining the qualitative and quantitative analyses. However, the reader should be mindful of the high correlation between anxiety and avoidance and the relative absence of interaction effects between the anxiety and attachment dimensions in considering these three types. Although the secure blogger category includes those who are low on both dimensions, the only interaction effect statistically differentiating this type from the others is in expressed levels of blogging intensity as opposed to blogging behaviors or motivations, so I am talking about an additive combination of low attachment and low avoidance. In contrast, I did not create a fourth type of high anxious-high avoidant bloggers, because their behaviors are reflected in the individual anxious and avoidant types, although I will comment on the combination of the two together.

Type I: Avoidant bloggers. In this study, the defining feature of participants with higher levels of attachment avoidance was that they tended to maintain greater anonymity on their blogs through using a pseudonym rather than their given name, and by keeping specific people in their lives unaware of their blogs. As described through their quotes, bloggers with higher levels of avoidance expressed a desire to protect or shield their personal thoughts and feelings from others around them. For many, this entailed confining online readership and offline friends and family to their separate domains. In comparing their online and offline communities, however, avoidant bloggers were more likely to express the sentiment that people who read their blogs perceive them with greater accuracy than people in their offline lives.

This pattern reflects one of the fundamental assertions of the current study – that the distance and anonymity of blogging (particularly when using a pseudonym) enables more authentic and intimate interaction for people who are avoidant in their attachment. As one

individual (Participant 48, M, 39) wrote, “blogging is a way of expressing yourself without having to get too close physically with a person.” Blogging under a pseudonym can be freeing for more avoidant people, removing the need to remain guarded that tends to exist in relationships of closer proximity. “I realized that the more people [who I know] read it, the more I tweak the content,” wrote Participant 32 (F, 29), illustrating this concept. This illustrates how blogging can enable such individuals to derive the benefits of intimate, authentic exchange without the pressure to transform those discrete exchanges into intimate relationships.

In keeping with the proposed theory that anonymity enhances comfort with sharing personal material because it frees the blogger of fears of ridicule and rejection (Qian & Scott, 2007), some participants with high levels of avoidance voiced these concerns in explaining their decision to keep their blogs a secret from others. However, many avoidant bloggers who kept their blogs a secret did not mention concerns about being judged or rejected yet still asserted that their blogs are meant for strangers, and that writing for people they know would compromise what they could share. “It’s my space,” wrote one woman (Participant 13, F, 29). “With people you know, sometimes you need to censor even your innermost thoughts. I’m tired of censoring them.” Another (Participant 36, F, 29) simply asserted, “My online self and my private offline self are the same person but I find it helpful to keep them separate. I really don’t want my blog flooded with my best friends and relatives.” These participants emphasized the importance of having a safe and personal space to express thoughts and ideas that is reminiscent of the “protected space” metaphor used to describe blogger’s predilection for managing interactions in controlled doses (Gumbrecht, 2005).

The “avoidant blogger” is thus someone who takes advantage of the built-in opportunities offered by online interaction for compartmentalization of identity. The Internet offers its users

the ability to divide up the self, tailoring presentations of the self to specific audiences. This can be beneficial in offering suitable and safe spaces to share deeply personal thoughts and feelings. At the same time, the desire to remain anonymous may also reflect “the need to eliminate those critical features of your identity that you do NOT want to display in that particular environment or group” (Suler, 2002b). Suler goes on to argue that although the opportunities for exploration of multiple aspects of self is a benefit of online interaction, maintaining the self in this deconstructed, split-off state prevents healthy integration. As one participant with high levels of both avoidance and anxiety (Participant 174, F, 25) wrote, “Blogging often feels not like another aspect of my life, but almost a second life altogether. An escape from offline life into another [life].”

This seems to reflect a potential paradox: For more avoidant bloggers, the benefits of blogging may lie in the ability to cultivate an online persona that can be kept safely separate from offline manifestations of self. At the same time, to the extent that such individuals perceive and derive benefits from blogging, these benefits may remain in the online realm and not necessarily carry over into offline life.

Type II: Anxious bloggers. If the essence of avoidant attachment in blogging is compartmentalization, then the essence of anxious attachment in blogging may be found in the chance to express thoughts and feelings to willing and accepting “listeners” whose readership and comments provide positive reinforcement for one’s self-image. Like the adolescent bloggers in Hodkinson’s (2007) ethnographic study, many participants with greater attachment anxiety – regardless of their level of attachment avoidance – expressed more feelings of marginalization in their offline lives, for which blogging has become the antidote.

Some researchers (Guadagno et al, 2007; Baker & Moore, 2008) have stated that emotional benefits can be gained from turning to blogging as a way to alleviate loneliness and form social connections (Guadagno et al, 2007). Participants' accounts of the role of blogging in their lives support this notion. As one woman (Participant 3, F, 21) wrote of her offline self, "I can be nervous and awkward. Online, I can get all I need to say out, and the things I say seem important." She added, "It's the best outlet I have found. It makes me feel smarter and not alone."

Her words and others' dovetail with previous research findings that people use blogging to gain validation, feedback and acceptance in a relatively safe and less vulnerable setting, which can lead to greater self-understanding (Baker & Moore, 2008; Miura & Yamashita, 2007). Many stressed the centrality of their blogs in deepening reflective capacity, crediting their blogs with the ability to, as one woman (Participant 69, F, 24) said, "straighten out my thoughts and feelings [and] help me to pinpoint exactly what I feel about situations around me."

For many of these individuals, the perceived benefits of blogging stretch beyond online interaction to directly impact and deepen their offline relationships through increased communication of their thoughts and feelings. Like their avoidant counterparts, people with greater attachment anxiety also rely on the blog's "protected space" (Gumbrecht, 2005) to offer a safer forum for articulating ideas and emotions to others, but the carry-over to offline life may be greater for anxious individuals as a function of maintaining less anonymity. Moreover, these benefits are just the tip of the iceberg for some people who hold their blogs responsible for enabling even more profound and comprehensive shifts in their lives. As one woman (Participant 161, F, 31) wrote, "My blog is increasingly helping me define who I am, what I believe in and where I stand on things. In an odd and unexpected way, my blog has helped me grow and

develop in very positive ways even (or perhaps, especially) in the areas of my life that I do not discuss on my blog. Since I've started blogging I've felt a lot more motivated to do interesting things and push my boundaries as these provide me with interesting blog topics." As described here, seeing oneself through the lens of the Internet can offer fresh motivation to live up to the standards of that image.

Finally, participants with greater anxiety were particularly likely to focus upon the benefits of the asynchronous nature of interaction on the Internet – which enables conversations to be carried out over prolonged periods of time, offering a chance to revise thoughts before communicating them – in regulating communication that might otherwise be emotionally overwhelming. As one woman (Participant 160, F, 29) wrote of herself, "Sometimes in conversation, I get too involved and emotional and can't express myself, or say things ahead of myself." The blog has changed this: "Nowadays, if I'm ever about to go on an issue-based discussion, I'll say [to my husband], 'I have to blog about this first, just read it, then we can discuss'." This comment portrays how the chance to work out thoughts and feelings on highly emotional topics in one's blog can enable the transformation of a natural tendency towards heightened reactivity into the capacity for sublimating strong emotions into articulate thoughts, resulting in reflective, measured exchange with others.

These themes portray the typical "anxious blogger" as someone who is drawn to the Internet's unique capacity as described by Beaudoin (2008) to enable interpersonal trust due to its utility in fostering community and social interaction, and its utility in easing the effects of uncertainty in communication. The Internet offers a haven from the harsher realities of offline interpersonal exchange, where people seem more critical and harder to trust. In another study, Miura and Yamashita (2007) found that bloggers rate highly on the trait of reassurance seeking,

or the tendency to demand significant and sometimes excessive contact with others in attempt to reassure themselves of their worth. Similarly, people with high levels of attachment anxiety tend to rely on others – whom they do not fully trust – to boost their own sense of self, in a self-defeating loop, and in fact an association between attachment anxiety and excessive reassurance seeking has been found (Schachner, Shaver & Mikulincer, 2005). The blog seems to offer a reprieve from this doomsday pattern in accepting such individuals' needs for expressing themselves and feeling better about themselves. While at first perhaps surprising, it becomes deeply gratifying and relieving to find, as did Participant 174 (F, 25) “that I am able to communicate with strangers through creative writing with much more ease than I am able to talk to my own family and friends about experiences in my life.”

As seen in both the quantitative data and open-ended elaboration of blogging motivations and benefits, bloggers with higher levels of attachment anxiety paint a vivid and compelling picture of the many functions blogs can serve. Although this narrative is a powerful one, the picture remains incomplete, leaving questions and inconsistencies: For instance, given the strong correlations between personal and interpersonal motivations for blogging and blogging intensity, and between attachment anxiety and the presence of such personal and interpersonal motivations for blogging, why do more anxious bloggers not blog with greater intensity than less anxious bloggers? Also, what is to be made of the finding that bloggers with higher levels of anxiety report significantly more negative impacts upon their relationships from blogging?

A few possible explanations are presented here. First, the fact that people turn to their blogs when they want to vent or express themselves or need something to make them feel more popular and less lonely does not mean that the blog always delivers that which they crave. To the contrary, such states of mind may put undue pressure on readers to provide compensatory

validation and support. As Suler (2002b) points out, blogging for “purely cathartic act[s] often goes nowhere.” In these moments, the blog represents the possibility of escape in offering the fantasy of an alternative to the crushing disappointment of offline interaction.

At the same time, the strength of these individuals’ motivations for self-expression and self-enhancement may blend together within the “protected space” of the blog to provide at least some of what they are looking for. In comparison to more avoidant individuals who report even lower levels of blogging intensity, the act of turning to the Internet to meet these needs may signify a greater degree of openness to the (realistic) ways in which blogging can enhance sense of self and relatedness to others. Congruent with Ye’s (2007) theory that the Internet may act as a “leveler” of attachment style in deactivating attachment systems and allowing people to get attachment needs met in new ways, the effect of these motivations in cyberspace – which by themselves are strongly associated with higher levels of blogging intensity – may provide a buffer against the way that loneliness and fears of abandonment trigger perceptions of others as disapproving and untrustworthy. As I will discuss below in the section on the clinical implications of these findings, the unique characteristics of online interaction may be particularly effective in equalizing some of the dynamics that tend to pervade the interpersonal lives of individuals with high levels of anxious attachment.

Buried in some of the enthusiastic rhetoric of these individuals about their blogging is the danger of developing an overly simplified and inaccurate split representation of online versus offline life. For some, the online community has all but replaced offline friends and family: “I tend to keep away from people offline which means that I discuss or share very little with them,” wrote one man (Participant 83, M, 37). In contrast, his offline community members “know I share just about everything with them and that they can ask me for just about anything at all.” To

the extent that these individuals are turning to their blogs as an antidote to an all-bad offline world, setbacks seem inevitable. After all, the split is not likely to be foolproof, which may explain the likelihood for individuals with higher attachment anxiety levels to report more negative impacts upon their relationships due to blog posts.

Additive effects of anxious and avoidant attachment styles. The only significant interaction between the avoidance and attachment dimensions of blogging in the analyses of variance and different paths for the avoidance and anxious dimensions in the structural equation model was for the dependent variable of blogging intensity. Even with the absence of such interaction effects in blogging behaviors and motivations, I would like to comment on those bloggers who have high scores on both dimensions. Despite the lack of empirical evidence for singling out this group as representing a specific set of blogging behaviors and attitudes, the prevalence of this attachment style among the current sample (approximately 1/3 of the participants) warrants some acknowledgement of the ways that blogging serves or limits these individuals.

Conceptually, the Internet offers an ideal medium for someone who (consciously) craves the very intimacy he so fears. As described by Dryer and Lijtmaer (2007), a person can go online to get certain needs met, and then quickly jump ship when the nature of that interaction becomes overwhelming. Recalling Bartholomew's (1990) description of adults with fearful-avoidant attachment (corresponding to high scores on both dimensions), these individuals are caught between competing emotional pulls: they possess great desire for social contact and intimacy coupled with deep fears of trusting others not to hurt or reject them. Like people with high levels of avoidance, they avoid intimate relationships and suppress and hide their feelings from others.

At the same time, they share a tendency for low self-esteem and feelings of unworthiness that are more characteristic of people with high levels of attachment anxiety.

In an ethnographic study of teenage bloggers, Hodkinson (2007) emphasized the common struggle of many study participants to maintain a sense of entitlement to be themselves in the company of others in their offline lives. When blogs are used as an emotional outlet for a completely online audience, this is because they must be hidden from family and friends who might be personally affected by the blog's content (at least in the perception of the blogger). Against the backdrop of receiving validating, accepting feedback from other people outside the immediate orbit of a blogger, the "sovereign territory" of the blog, which defines it as personal space where one is entitled to speak one's mind free from the criticism of others, can bolster the capacity to develop a more solid and secure self. While not adolescents, the longstanding negative internal working models of both self (as unworthy of care) and other (as too untrustworthy to provide care) in people characterized by anxious and avoidant attachment compromises certain developmental milestones related to identity and relationships that enable greater stability in adulthood (Schultheiss & Blustein, 1994; MacKinnon & Marcia, 2002; Reich & Sigel 2002).

Blogging may offer repeated opportunities to engage with the challenges of identity development or reconfiguration. In this arena, adults have greater control over the parameters of the process: bloggers can take a "step back" and take time to diminish the intensity of online interactions before re-engaging in them, or one can shut the process down entirely if it makes them feel too vulnerable. To the extent that more anxious and avoidant bloggers use their online personas to represent more raw and authentic parts of themselves, it may make sense that they develop such approach-avoid patterns of blogging behavior (see Lewin, 1935). This might

explain, in part, the lower levels of blogging intensity reported by individuals who were high in both anxiety and avoidance attachment. The emotional magnitude symbolized by the blog create more complicated or ambivalent feelings towards blogging, distinguishing these individuals from securely attached people who choose the same medium for sharing their thoughts and ideas with the world.

Type III: Secure Attachment. Participants with secure attachment – those who had low scores on both the anxiety and avoidance scales –were likely to share their blogs with the important people in their lives and often raised the theme of keeping in touch with people to describe its role. Using blogging as an additional way to communicate with friends and family reflects previous research findings (Qian & Scott, 2007). Although this study did not assess personality traits, this also seems consistent with the view that securely attached bloggers might be more extraverted, and leverage their blogging as an efficient mode of communication to both maintain ties with close contacts and build stronger ties with weak ones (Stephanone & Jang, 2007). The high blogging intensity scores of securely attached individuals reveal that these participants spend a great deal of time and energy writing and maintaining their blogs. This commitment is manifested in their enthusiastic narratives. To cite just one example, Participant 11 (F, 48) wrote, “Blogging has become an important part of my everyday life. It has reawakened my intense desire to write; and it has helped me to connect with and reach out to the world at large, which is one of my dreams. I think that blogging has also helped me to process lessons that I was struggling with, and it has also helped inspire me to know where to go next with my goals and dreams. Blogging has opened up the world for me!”

Many securely attached bloggers described a variety of benefits they derive from blogging that extend well past the function of staying in contact with others. As with anxious

bloggers, secure bloggers use their blogs as a base for exploring and defining themselves, processing thoughts and feelings, and coming to find greater value in their abilities, opinions and writing or other creative work. Their sentiments bring to mind Rebecca Blood's (2000) poetic description of the profound personal growth that blogging can bring: "As [the blogger] enunciates his opinions daily, this new awareness of his inner life may develop into a trust in his own perspective. His own reactions – to a poem, to other people, and, yes, to the media – will carry more weight with him. Accustomed to expressing his thoughts on his website, he will be able to more fully articulate his opinions to himself and others. He will become impatient with waiting to see what others think before he decides, and will begin to act in accordance with his inner voice instead. Ideally, he will become less reflexive and more reflective, and find his own opinions and ideas worthy of serious consideration" (para. 23). It is also worth emphasizing that for many bloggers – secure and insecure – having a forum to practice writing and obtain feedback on the quality of their writing represents an essential part of the energy devoted to blogging.

Although securely attached bloggers echoed the sentiments of anxious bloggers in enumerating personal and interpersonal benefits of blogging, they were less likely to turn to blogging to feel better about themselves or to vent and express feelings. Even so, they reported high levels of blogging intensity. One possible way to conceptualize this inconsistency is to conceive of the measure of blogging intensity as a measure of attachment between the blogger and her blog, as it assesses the centrality and importance of one's blog in everyday life. From this perspective, the more tempered level of emotional needs that get funneled into the blogs of more secure individuals may allow for a close yet less complicated or pressured relationship to the blog and all it represents.

Securely attached bloggers were also likely to perceive their online selves as being similar to their offline selves. Whereas some asserted that these selves are indistinguishable, others described them as manifesting somewhat distinct but equally important aspects of their overall identity. These participants tended to describe their online personas as somewhat more carefully cultivated versions of themselves, and used their blogs as a medium in which to explore and display traits that are not as manifest in their offline lives – for example being funnier and more light-hearted, more daring and outgoing, or calmer and more insightful. The use of blogs in this manner may be an illustration of the freedom the Internet offers to explore more playful and fantastical aspects of identity (Ellison et al., 2007). In contrast to anxious and avoidant bloggers, secure bloggers did not rely on their blogs to share their most authentic selves but rather felt a freedom to play, explore and augment aspects of the self that were less prominent in their offline worlds. The blogs thus became a place where the self could be polished and refined. There is some empirical support for this disparity: Amichai-Hamburger et al. (2002) concluded that introverted and neurotic people locate their “real” selves on the Internet, while extroverted and non-neurotic people locate their “real” selves through traditional social interactions.

One might conjecture that securely attached bloggers, who were less lonely, had higher self esteem and fewer perceived constraints on emotional disclosure in their close relationships would have little reason to cultivate an online identity that presents a relatively less precise and complete depiction of themselves than their offline personas. However, the combination of their high blogging intensity with their descriptions of how their online selves differ from their offline selves suggests that there is something gratifying about presenting a more ideal self. This idea is supported by research findings that people cultivate ideal self-presentations online in order to gain elevated status amongst an online community, which in turns offers validation (Lampel &

Bhalla, 2007). While the adjectives used by these participants to describe their online selves were not necessarily less authentic, the terms used by secure bloggers to describe their online personas carry positive, somewhat idealized connotations. Further research would shed light on the psychological benefits of portraying the self in this way.

The ubiquity of attachment. This typology of bloggers based on attachment styles corresponds to the three attachment styles originally conceptualized by Hazan and Shaver (1987), and brings the discussion to an essential question: As suggested by Ye (2007), does the Internet level out the playing field between individuals of different attachment styles in a way which enables people to form entirely new types of attachment bonds to others? Or is it simply another domain in which people play out and enact longstanding interpersonal dynamics?

Turning to the data for a possible answer leads back to the apparent inconsistency between the fact that bloggers are found to be more avoidant than other adults, while at the same time the more avoidant and anxious participants in this study reported *lower* levels of blogging intensity than those who were more securely attached. Blogging intensity measures the degree to which individuals feel that blogging represents an important part of their everyday life, as well how proud and emotionally connected they feel to their blogs. As suggested earlier, there is reason to believe that blogging intensity can be conceptualized as a measure of the security of one's attachment to his blog and, by extension, to his blogging audience.

From this perspective, it is not surprising that more securely attached individuals also report more secure, unambivalent attachment to their blogs. This argument can be extended to other findings of the study: To the extent that attachment avoidance is a manifestation of people's negative internal representations of others as being neglectful (at best) or dangerous (at worst), it is not surprising that more avoidant bloggers shelter their online selves from people in

their lives by keeping themselves anonymous. Likewise, to the extent that attachment anxiety is a manifestation of people's negative internal representations of both themselves and others, it is not surprising that bloggers with greater attachment anxiety report more negative impacts upon their relationships due to blog posts, even against the backdrop of the clear advantages they perceive their online worlds to have over their offline worlds. The patterns that emerged for each blogging-attachment type suggest usage of blogs that enact ingrained dynamics that are characteristic of each attachment style.

At the same time, the existing literature and comments by participants in the current study suggest that the advantages of blogging are rooted in the possibilities that emerge from the Internet's unique characteristics, especially in offering alternative avenues for human interaction from face-to-face communication. Amidst the varied attitudes and behaviors related to blogging, the individuals who participated in this study collectively celebrated the valuable role of blogging in their lives, even if they did not all agree on the specific functions it serves.

Moreover, their behavior communicates these sentiments in the hours and energy they devote to blogging each week. Even if blogging merely represents another domain for relating, the nature of this domain can be transformative for certain individuals. As one woman (Participant 146, F, 25) simply wrote, "it's important to express ourselves one way or another and since I'm mostly shy, blogging helps me a lot."

There are no simple answers to the dichotomous questions posed above that encapsulate the entire blogging community, or even the sample of bloggers in this study. Rather, individual bloggers seem to play out interpersonal dynamics through blogging while at same time using the blog to soften and change entrenched ways of relating to themselves and others. The next section

attempts to deepen this discussion by adopting a psychoanalytic lens to discuss clinical interpretations and implications of blogging.

Clinical Implications

As previously described, individuals in this study were not shy about enumerating the range of benefits that blogging has brought to their lives. Bloggers along the entire spectrum of attachment security reported that the Internet is an easier and more effective means of communicating deep thoughts and feelings to others. These perceptions emphasize and potentially extend the scope of previous research findings that interacting in a medium other than face-to-face communication is preferable for people who are shy or socially anxious (McKenna & Bargh, 1998; Ward & Tracey, 2004).

Collectively, the perceived benefits of blogging were substantial. Some people, particularly on the more insecure end of the attachment dimensions, went so far as to credit their blogs and blogging communities with preventing them from needing psychiatric help. People of all attachment styles however, described how their blogs have enabled personal growth, deepened the capacity for self-reflection and enhanced a sense of personal value and faith in their abilities. While manifested differently for individuals with different attachment styles, these phenomena fit the metaphor of *transitional phenomena* discussed in the literature review, referring to the possibility offered by the Internet to expand one's internal world by creating space between themselves and others to play creatively with self presentations, affective states, fantasies and ways of relating to others. When used in this way, blogs may represent new alternatives of being in the world that expand upon and deepen ways that may have before seemed more set in stone.

If the transitional space of the Internet has so much to offer, then how are we to know when this playful, creative space becomes a moratorium, a frozen dimension where life gets deferred? How does one know when the blog is being clung to because it makes it “easier to have shallow relationships [and] avoid looking for real relationships in real life,” as one person (Participant 99, M, 44) noted about himself. While individuals like this one are aware of the ways in which the blog enables avoidant behavior in offline life, others maintain that the online world is the best, safest place for them. For example, one participant (Participant 124, F, 45) noted, “People in offline life are far too impatient and judgmental, in my opinion, and I often feel like I’m walking through a social minefield. Blogging relieves the pressure, and it is also comforting to know I’m interacting with people who WANT to read what I’m writing.”

This description is suggestive of a perceived split between online and offline life that is particularly characteristic of more insecure bloggers, especially those with high levels of anxiety. Offline, people are impatient and judgmental, while online, they are patient and supportive; offline, people are inauthentic about their intentions, while online, they behave in true and authentic ways. In short, people offline are bad; people online are good. As Suler (2004c) points out, there are two ways in which people tend to use the Internet to create division in their lives and identities: one is by dividing their interests and activities into different and un-integrated self presentations in discrete settings, and the other is by keeping online and offline lives separate. He notes that this separation may be necessary for aspects of identity that are sensitive, vulnerable or possibly harmful *until* conditions arise that allow it to emerge safely.

This debate is really one of therapeutic integration versus enactment, or working through versus acting out. Ego psychologists define enactments as unconscious entanglements between two people in which both individuals are playing roles in the acting out of unconscious needs and

desires without the capacity for reflecting upon the meaning of these behaviors (Chused, 1991). The Internet is a prime space for such entanglements, as people go on the Internet to get their own needs met from people who are essentially doing the same thing, which makes the possibilities of transference and projection infinitely greater. As one individual (Participant 91, F, 22) said when asked about the level of her blog's privacy, "I was afraid that the people who read the blog would later ask me more, when I didn't feel like revealing more." This statement likely says more about this blogger's ingrained expectations and perceptions of others than it does about the commenters in his audience. Another individual (Participant 163, F, 24) got so caught up in transference feelings that she seems to have forgotten she has freely chosen to blog and can just as freely stop. "Blogging is a tool for disaster. I wish I didn't have to blog, since it might get anyone into trouble with any and everyone over a trivial comment they blogged about."

Just as in all relationships, a variety of unconscious motivations guide bloggers towards their audiences – online others who they feel may be able to address their underlying needs. The process of coming to terms with the way in which people cannot realistically meet all of those needs is an important part of developing more integrated and authentic connections with others and also to the self (Klein, 1946). The main difference between life online and offline is the extent to which people come into contact with the entirety of other people. On the Internet, one is less likely to be faced with an entire person – replete with flaws *and* strengths. Instead, people on the Internet are experienced only in part, making them ideal for the projection of specific characteristics that satisfy unconscious needs and desires.

This aspect of the Internet heightens the chance for some people, particularly those with insecure attachment, to act out impulses in a non-reflective manner as opposed to using online

space to work through aspects of the self towards integration. As an analytic patient addicted to cybersex put it, “I was hoping to find connections and be less lonely. I tried to find out who I am. To like myself. Instead I was just filling a hole – pun intended – in someone else’s life. It wasn’t about me” (Dryer & Lijtmaer, 2007 p. 55). This type of realization can lead to disillusionment when it bursts the “safety bubble,” as one woman (Participant 162, F, 38) called her blog. What does it mean for a blogger like one in this study (Participant 83, M, 37) to suddenly notice, “that the things in life that I do worry about, tend to be about those I care about online more so than offline”? Interestingly, it was two secure participants (Participant 109, M, 60 and Participant 19, M, 62, respectively) in this study who warned against falling prey to the illusion of online intimacy and relatedness. “One must always guard against falling into the trap of 'virtual success.' The blogosphere is fun, but is populated primarily by self-interested parties, and it is rare to find genuine co-operation.” Another stated, “Blogging may after a period of time lead to despair when bloggers realize that (a) they are talking to an empty room or (b) talking to strangers does not really mean much.”

For clinicians working with bloggers, the sustained presence of significant compartmentalization of aspects of oneself, and expressions that connote a rigid split between online and offline life should raise a red flag about the possibility of avoidant attachment dynamics, as described earlier. Understanding the characteristics of online interaction that contribute to disinhibited behavior and increased likelihood for projections can offer clinicians a contextual framework for understanding the online lives of people with whom they work.

Certain aspects of communication in cyberspace can be helpful in enhancing communication and reflectivity. For example, bloggers can utilize the asynchronicity of communication to their benefit by waiting to respond to comments, emails or blog posts of others

that have evoked an emotional response such as hurt, embarrassment or anger. Many of the bloggers in this study spoke of such tactics, such as one (Participant 66, F, 21) who called it “another way in which blogging wins out over normal conversation – you can delete something so it never sees the light of day not matter how far you’ve gotten with it.” Bloggers also have the freedom to re-read such communication later to see if they interpret it the same way, keeping a keen awareness of the role of perception in interpreting meaning especially without non-verbal cues to enhance accuracy. In fact, one benefit of having a record of all interactions is that unlike our memory of verbal interactions in offline life, which are colored by our perceptions and impossible to verify, these interactions have been recorded verbatim. This can be quite useful in offering the individual an ability to revisit entire conversations and witness how interpretations by each party can shape the way that communication unfolds.

In addition to helping individuals use the Internet in ways that meet their needs, Suler (2000) recommends a variety of ways in which individuals can work towards integrating their online and offline selves paving the way towards a more complete and self-actualized state of being. First, telling online friends about offline life can offer insight into aspects of the self that may remain hidden or unexplored in offline life. To this end, participants noted that their online friends perceived things about them that they hadn’t before perceived in themselves. Usually these were positive attributes, leading the individual to realize he is funnier, more prolific, or smarter than he had thought he was before. Similarly, telling offline friends about online life can give them a more complete picture of one’s identity. Both of these behaviors could be beneficial in helping the person become more aware of the aspects of self that remain split off or not fully expressed as part of the self-presentation in each space.

Suler's (2000) second recommendation involves meeting offline companions online, and meeting online companions in person. Both of these can deepen connections with people, and the latter can enable someone to recognize the misconceptions that he may unwittingly be expressing online, which can then be worked through, if desired, for a deeper connection. Finally, bringing aspects of behavior that are only online or offline to the other realm can be a way to test aspects of identity in a new environment. Bringing these behaviors from one realm to another can strengthen those aspects of the self.

People can and do use blogging to this end: For instance, a few avoidant participants described a process of slowly becoming more comfortable with inviting people in their lives to read their blogs. Other participants, in reflecting on how their blogging behaviors have changed over time, described a process of moving from more narcissistic, ego-driven usage of their blogs to using the relationships with their blogging community to come to understand themselves better and normalize aspects of their development. "I began to get caught up in watching my stats and how many people read my blog and forgot about the point of why I started it," wrote Participant 128 (F, 24). A post she wrote reflecting upon this process "resulted in a lot of people commenting that they had the same experience. In that way, my blog has helped me realize I'm actually quite normal."

My own clinical experience working with Gloria reflected all of the intra-psychic phenomena and therapeutic possibilities described in this section. Growing up, Gloria didn't fit in. Her unique tastes were foreign to those around her; her passion for music went unappreciated. Feelings of rejection and neglect from her family magnified these alienating experiences as she internalized others' perceptions of her as being strange and unworthy of love and membership within groups. She had difficulty establishing healthy boundaries in her relationships, tending to

protect her authentic self from others who she felt could not be trusted with her personal thoughts and feelings. In so doing, she stripped these relationships of even the possibility of offering true support and recognition. Gloria was also fiercely independent, which only further amplified her sense of alienation from her family and surrounding community.

Joining an online forum was Gloria's first step towards finding a community that seemed to appreciate her quirky side, her quick wit and her wry sense of humor while being undeterred by other aspect of her personality. She received recognition for her aptitude towards writing pithy, smart commentary on her own life and the lives she observed around her. Her decision to start a blog was thus an empowered one – a belief in the perceptions of her online community that what she had to say was important, and that how she said it was entertaining. Keeping her blog hidden from her family and the community in which she grew up, Gloria found her antidote to the chronic feelings of neglect and lack of acknowledgement she felt from her family, and the many unsatisfying social experiences in which she rarely had the opportunity to shine. The positive reinforcement she got from her online community inspired her to cultivate a rich online identity of which she felt proud.

When I met Gloria, she maintained a rigid split between her online and offline worlds. When she felt emotionally injured by offline friends and family, Gloria retreated to a safer place where she felt accepted and appreciated. Mirrored by her online community, Gloria could better see her own strengths and this buffered her against feelings of abandonment and rejection. Further examination of the periods where Gloria immersed herself in an online-only world revealed an underbelly to the safe haven she had so carefully built: Gloria feared she was a fraud. While she told herself that she was the fun-loving, funny, intelligent and warm person reflected back to her by her online community, she didn't actually believe it. In her darkest and most

honest moments, she believed that those who knew her online self only would also inevitably reject her if they met her in person. The only antidote to this was an unsustainable one – to deny those deep-seated worries and cling even more rigidly to the artificial split she had created, keeping her offline and online worlds entirely separate.

In therapy, Gloria was able to confront and acknowledge the impasse she had created. Though it was at times painful, honest introspection of the role of blogging in her internal life paved the way for growth. Gloria became aware that blogging fed her positive self-image while at the same time offering a way to avoid feelings of vulnerability and rejection. This realization ultimately allowed Gloria to use the benefits of online space in a more integrated manner with the rest of her life. First, it enabled her to engage members of her online community with greater openness and faith even when their interactions threatened to fill her with negative feelings about herself. She became braver in these interactions, using the asynchronous nature of online interaction to think through her decisions about how to respond to difficult interpersonal situations online. As she recognized how her own avoidant patterns had alienated her from people even as they seemed to protect her, she allowed honesty to guide interactions which might have previously steered her towards deception and empty grandiosity. During this period, Gloria met several members of her online community face-to-face. In doing so, she both confronted her fear of being a fraud and dismantled the unrealistic fantasies she had built up surrounding some of her online relationships. Unsurprisingly, people presented a combination of exciting and disappointing features which Gloria came to accept in most cases.

Another way in which blogging helped Gloria negotiate her needs for intimacy and distance was manifest whenever she wrote a post that was more personal in nature, allowing her readers to gain closer access to her thoughts and feelings about a topic that was meaningful to

her. In some moments, Gloria marveled aloud at how positively people seemed to respond to her more serious posts. While she was tantalized and seduced by their interest, it also put her on guard, causing her to reassert her strong desires to be alone and independent. Such a reaction is quintessential to an individual with both high avoidance and high anxiety, where strong wishes for connection exist side-by-side with the terror and threat of what intimacy will bring (Bartholomew & Horowitz, 1991).

As Gloria spent more time meeting her online friends in person, she also slowly shared her blog name with friends and family offline. While she often second-guessed this decision, implementing informal embargos upon her family's right to visit her blog, the irrevocable act of sharing her blog name symbolized an important step towards cultivating more honest and mature relationships with them. Also at this time, Gloria's blog grew so quickly in popularity that she was offered a possible book deal, which she instantly realized would eradicate some of the barriers she had so carefully set into place between her online and offline personas. While such an idea would have entirely overwhelmed her at the outset of our work together, she was able to enter into a playful, fantasy space about the very real possibility of revealing to everyone the different aspects of herself that had previously been cut off and reserved for specific groups.

Having a therapeutic, non-judgmental space to reflect upon the complex needs being met by her blog enabled Gloria to recognize long-established patterns of relating to others. It also helped her understand how blogging enabled her to embody parts of herself that had been unwelcome in previous settings while at the same time making it easier to ignore difficult interpersonal challenges. This reflective space was invaluable in offering the strength to think about these complex dynamics in attempt to move towards more integrated self.

In summary, clinicians might be advised to open up reflective space for bloggers to think about purposes being served by their blogs – both positive and negative. By helping people become aware of the behavioral and emotional effects of the Internet’s characteristics including anonymity, invisibility, the leveling out of status, the asynchronicity of communication and the likelihood for disinhibition, clinicians can help their clients expand awareness of how they use the Internet and make them more realistic about how others they meet are likely to be falling prey to those very same characteristics. People who can develop and demonstrate such self-awareness not only can mitigate against some of the ways in which they may be using their blogs to avoid or enact unhealthy patterns, but can use that awareness to evolve personally and socially in all realms of their lives.

Theoretical Implications

When the World Wide Web was created 18 years ago, few people foresaw how it would profoundly alter almost every dimension of people’s lives. Towards the end of its second decade, as the Internet continues to grow and change form, researchers are challenged to develop a more complete understanding of how it impacts the lives of its users against the backdrop of a society whose own evolution and growth is now so intertwined with this technology that they can no longer be regarded separately.

Early researchers of the Internet’s impact upon people’s social networks and connectedness to others tended to either sing its praises or bemoan its shortcomings, arguing that it either facilitated or degraded social support (e.g., Kraut et al., 2001; Silverman, 1999). They were followed by a generation of researchers that dismantled such one-sided arguments by comparing Internet users in terms of personality traits including shyness, extraversion, introversion and neuroticism; along the demographic lines of gender; and in terms of

psychological features such as social and emotional loneliness and social anxiety (Swickert et al., 2002; Amichai-Hamburger et al., 2002; Chak & Leung, 2004; Ward & Tracey, 2004; Ebeling-Witte et al., 2007; Hardie & Tee, 2007; Guadagno et al., 2007). Other researchers separated out different types of Internet activity, for instance, chat rooms versus blogs versus email, in an attempt to better understand the Internet's overall impact on people's social and emotional lives (Swickert et al., 2002; Zhao, 2006).

The research findings of these studies are mixed. Although many studies have found a link between heavy Internet use and loneliness (Baker & Moore, 2008), others report that Internet users have larger social networks and higher levels of perceived social support (Hardie & Tee, 2007). Some suggest that benefits exist only for people who are highly sociable and have existing social support, while spending time on the Internet causes individuals who are low on social support to become further distanced from people (Kavanaugh et al., 2005; Caplan, 2007). Others came to the opposite conclusion, finding that Internet use is more beneficial to socially isolated people (McKenna & Bargh, 1998; Ward & Tracey, 2004), while resulting in dependency and dysfunction for less socially anxious people (Hardie & Tee, 2007). Even some of the researchers who came to this conclusion, however, followed up their findings by expressing reservations about the perceived benefits of the Internet enabling the establishment and maintenance of superficial relationships while further compromising the possibility for deeper connections with people (Kraut et al, 2001; Moody, 2001; Ward & Tracey, 2004).

The literature on blogging as a particular mode of Internet usage has produced similar results, with researchers suggesting ways in which the Internet can be used to bolster one's self-image and expand one's social network as a function of personal factors such as levels of extraversion (Stephanone & Jang, 2007), loneliness (Guadagno et al., 2007) and

symptomatology (Baker & Moore, 2008). The current study has addressed similar questions from the perspective of attachment in the hopes of offering ideas about the impact of people's earliest patterns of relating to themselves and others on the use of blogging in their adult lives. Attachment theory looks beyond people's observable characteristics at the underlying conflicts and dynamics that inform their feelings and behaviors both in relationships with others and with themselves. The data from the current study advances theoretical conceptualization of blogging in three ways: First, it provides support for some of the existing findings on blogging; second, it contributes to the existing literature on attachment and online interaction; and lastly, it offers a new model for understanding the functions of blogging in different people based on attachment.

Consistency with previous research. Given the strong association found in the current study between high levels of avoidance and low levels of psychosocial functioning, the current finding that bloggers are significantly more avoidant and somewhat more anxious in their attachment than other adults is consistent with Baker and Moore's (2008) finding that bloggers are more anxious, depressed and stressed than non-bloggers, and that they have lower levels of social integration and satisfaction with friends. Sentiments expressed by bloggers with both greater attachment anxiety and avoidance further supported these authors' suggestion that people who do not feel validated in their offline relationships may use blogging as a less threatening and vulnerable space to find support and validation especially when coping with distress in situations where they feel inadequately supported. This perceived acceptance of others can enhance self-reflection and self-acceptance (Miura & Yamashita, 2007; Blake & Moore, 2008).

Contribution to the literature on Online interaction and attachment. This study contributes to the small amount of research on the relationship between attachment and online interaction, much of which has been conducted in Japan, with only the abstracts available in

English (Lin et al., 2005; Wu & Lin, 2005). One basic finding of this literature is that the Internet offers individuals who are lacking emotional support and closeness in their lives an alternative for receiving such support (Lei & Wu, 2007). This study lends support to this idea: In the words of one man (Participant 113, M, 31), “Loneliness seems to drive my urge to write like a wolf is urged to call by the moon.” At the same time, it suggests that the particular ways people use blogging as an alternative for receiving support are specific to their attachment styles. The distinctions made between anxious, avoidant and secure bloggers above illustrate this idea in greater detail.

Previous researchers have suggested that the relationship between attachment and blogging is mediated by the tendency for anxious and avoidant people to become disinhibited online, engaging in more self-disclosure and more intimate interaction than they do in their offline lives (Lin et al., 2005). This idea finds support in the current study, where anxious and avoidant bloggers expressed greater comfort in sharing aspects of themselves over the expanse of cyberspace – to strangers as well as offline friends and family.

Ye (2007) expanded upon this point to suggest that once casual online relationships develop to a deeper level, certain characteristics of online interaction, such as the lack of non-verbal cues and perceived similarity between oneself and others, can function as a “leveler” for individuals with different attachment styles, circumventing existing attachment patterns to enable the formation of new attachment bonds. Specifically, he argues that Internet interaction can help avoidant individuals by engendering a belief that it is possible to effectively derive comfort and security from others online without openly expressing attachment needs. On the one hand, the current study offers evidence to support the claim that the Internet offers new possibilities for engagement, which mitigate some of the ingrained interpersonal dynamics that characterize

insecure attachment. On the other hand, it does not support the notion that blogging can fundamentally alter people's attachment styles or that people with different attachment styles use blogging in the same way. To the contrary, attachment style strongly influenced people's blogging behaviors and their emotional involvement with their blogs. This supports the notion that attachment is an enduring pattern that traverses the communication domains of face-to-face interaction and cyberspace.

Towards a new conception of blogging. One of the main findings of this study is that blogging can be beneficial for many types of people, in part because it does not represent a homogeneous mode of functioning. The extent to which it is advantageous or promotes more troubling interpersonal patterns, however, may in part be a function of attachment. These findings have the capacity to expand the conceptualization of blogging as well as narrow the search for models that explain differences among bloggers.

One important way that such distinctions can be made is by understanding the extent to which bloggers operate their blogs in a compartmentalized state or in an integrated mode with their offline lives. In his conclusions of a large-scale study of 2,817 Internet-using adults, Zhao (2006) argues the importance of differentiating between people whose readers are exclusively online versus those whose readers exist in their offline lives in determining the function of Internet activity. The current study supports this idea and promotes further exploration of people's notions of how aspects of the self can be divided between online and offline personae.

Like previous research, this study supports the idea that the possible benefits and disadvantages of the Internet are related both to certain traits of its users and to the specific ways in which they use the Internet. However, the ubiquitous presence of the Internet in society necessitates an expansion of the question of how the Internet is good or bad for people with

certain traits as opposed to others. As the Internet becomes more deeply intertwined with our society, it is becoming less and less accurate to conceptualize our research questions in terms of how the Internet affects people; rather we must accept its presence as an entirely other dimension where people can go to meet and connect with others. From this perspective we can begin to ask questions about how the unique characteristics of the Internet match up with people's conscious and unconscious needs, experiences and desires for themselves and their relationships.

In a paper comparing the characteristics of online and offline interaction, Suler (2004c) articulates this new reality. "Whether you like it or not," he writes, "cyberspace has become the new frontier in social relationships. People are making friends, colleagues, lovers, and enemies on the Internet." With the Internet so profoundly transforming all aspects of life many authors have taken stands on this revolution. Turkle, for instance, who initially welcomed the introduction of computers and online networking with curiosity and even admiration, has since come to believe that aspects of the Internet may keep us from developing the type of expectations of others that enable real intimacy (Turkle, 2011). Similarly, Aboujaoude (2011) argues that the disinhibition encouraged by the relative anonymity, lack of accountability and invisibility of the Internet has made us less civil and more insensitive. On the other side of this debate sits Clay Shirky (2010), who expresses nearly limitless enthusiasm about how the Internet has changed us into a more creative and generous society, where increased networking enhances collaborative effort and develops greater opportunities for human interaction.

The growth of the Internet into all facets of human life will surely engender further debates of this nature. While the temptation remains strong to paint black and white pictures of the Internet revolution, this study reminds us of the complex and nuanced space that the Internet can occupy for individuals. The adult bloggers surveyed in this study show us the ways in which

the Internet can offer a profound and meaningful space for growth, self-awareness and self-reflection; at the same time, these bloggers also indicate ways in which online interactions can allow people to avoid real intimacy or enact negative interpersonal dynamics. Ultimately, this study reminds us that we must face the inescapable truth: The good and the bad that the Internet has to offer depends in large part on the person facing the computer screen.

Strengths and Limitations

The study adds to the small but growing literature on psychosocial aspects of Internet use by examining an important personality variable – adult attachment style – and its relation to blogging behavior. The mixed methods approach provides a rich data set: Using standardized measures allowed for a comparison with other studies, and augmenting those measures with additional closed-ended items designed specifically for this study allowed participants to explicate their ideas.

The most significant limitation of the current study is in its cross-sectional design. Although the study tested a causal hypothetical model designed to identify the mechanisms underlying the relationship between attachment and blogging intensity, the cross-sectional nature of the data makes it impossible to infer causality. Therefore, the significant relationships that were found between the variables in this study may operate in a different direction than the direction posited in the model. For example, it may be that blogging intensity determines decisions about anonymity and motivations for blogging rather than the other way around. More likely still is that these variables exist in a cyclical relationship, reinforcing each other as the causal mechanism becomes the outcome variable and vice versa.

Secondly, although random recruitment strategies were done to obtain as representative of a sample as possible, the final set of participants was a self-selected sample of bloggers. The

bloggers in this study had a similar demographic makeup to previous findings in relation to gender and education level, but were older and more likely to be White or of Asian or Pacific Islander descent (PEW, 2007). Possible biases such as these may be due to the fact that individuals who agreed to participate in a study of the interpersonal motivations and benefits of blogging may have spent more of their own time contemplating these ideas and/or be more open to doing so. This may have biased the sample against people who maintain blogs of a personal nature, but are more reticent to discussing such ideas. At the same time, a strength of the sample is that it represented people with secure, anxious and avoidant attachment styles. Due to these factors, it cannot be said that this sample is representative of the entire population of bloggers, and no definite conclusions can be made generalizing these findings to all personal bloggers with English-language blogs.

Third, the current study used structural equation modeling analysis that controlled for demographic differences in the model. Because of the large size of the model, including the five demographic variables that differed in the variables that make up the model would have produced more additional paths than could be accommodated by the sample size. Therefore, while the results offer a statistically sound model for understanding the relationship between attachment and blogging after the elimination of demographic differences, they do not offer insight into the accuracy of the model for each specific demographic group. Further analysis would be useful in gaining understanding of these effects. Similarly, the psychosocial mediators – self-esteem, loneliness and perceived social constraints on emotional disclosure – were found to be strongly correlated and were then combined so they would not take away predictive power from each other when testing the model. The decision to combine them into a single index for the SEM limits the knowledge gained on each of these processes.

The measures of blogging behavior included in the model were limited to motivations and behaviors that were directly related to the way that people may use their blogs to manage needs for closeness and distance. Although the constructs under study are important in understanding the blogging phenomenon and its relationship to adult attachment styles, they are not exhaustive. Although additional items about anonymity and privacy in blogging were created by the principal investigator, but internal consistency reliability was not acceptable.

Future Directions for Research

A number of directions for future research could be explored using the data from the current study in a more detailed fashion. For example, systematic qualitative coding could be done with the open-ended responses to this survey to analyze other motivations and behaviors described by bloggers or found in previous research (Huang et al., 2007), for example, blogging for acceptance, blogging to inspire others and blogging to share creative material. A more systematic coding of the open-ended responses might help create more valid and reliable measures of blogging to be used in future studies.

Similarly, the actual blogs of the participants could be content-analyzed in a systematic fashion. Chung and Pennebaker (2007) have used textual analysis to examine blogs and Internet chat in terms of written emotional disclosure. The text analysis program they used, Linguistic Inquiry and Word Count (LIWC; Pennebaker, Francis, & Booth, 2001), searches for and counts words in several dozen categories, including emotion words, content words and function words such as pronouns or prepositions. A program of this kind is useful for coding large amounts of data to enhance understanding of how people use language when blogging, which could then allow us to answer bigger questions such as how people with different attachment styles use language in ways which are beneficial or detrimental, how language in blogging changes during

times of upheaval versus times of relative calm, and what word types ultimately correlate with health changes.

Third, demographic differences – particularly age, gender, relationship status, and sexual orientation – were not built into the model for the reasons described in the limitations section, even though some differences were found. This study therefore supports and echoes previous researchers (Huang et al., 2007, Qian & Scott, 2007) who call for a more refined taxonomy for categorizing bloggers. Such categorization might involve analyzing the current model separately based on one demographic variable of interest, such as gender, while holding the remaining demographic variables constant, in order to determine whether the model is equally applicable for men and women or if it works differently for men versus women. Another alternative might be to incorporate demographic covariates into sections of the model that could be analyzed using multiple regression analysis, which in a sample this size could better accommodate numerous demographic variables in a sample this size than was possible to do with SEM. Given that significant differences in age were found in almost all of the variables that comprise the model, this might be a good place to start with such analyses. Other than age, of the five demographic variables whose effects were eliminated from the model, gender and sexual orientation were related to multiple variables in the model, and it would be particularly useful to explore their effects on the system.

A discussion of directions for future research beyond the current dataset requires an acknowledgement that the role and functions of blogging in our society have continued to evolve and change in the time since this study began. At that time, the decision to study blogging reflected the unique space that blogs occupied between the uniquely personal domain of personal websites and the exclusively interactive domain of listserves and online forums. Over the past 3-

4 years, social networking sites such as Facebook (which was opened to the general public in late 2006), and micro-blogging programs such as Twitter, have come to dominate the Internet, offering a variety of methods for online interaction that are similar to blogging. Perhaps this may help explain why blogging has become less attractive to younger people and more attractive to adults over 30 over that period (PEW, 2010).

The fast changing online landscape makes a case for expanding the implications of the current research away from an exclusive focus on blogging and towards a broader inquiry into the variety of online interaction modes that bridge the personal and the communal. Keeping an eye on these shifts is imperative to developing a nuanced perspective of the relationship between the role of attachment and the ever-growing presence of the Internet in daily life in determining or mediating people's patterns of relating to themselves and others. It also will help clarify the function of blogging within the changing Internet sphere. Inevitably, questions come up about the extent of convergence and divergence between how people use blogging versus how they use these other online tools. Finally, given the overlapping nature between them, it could be more useful to compare people based on characteristics of Internet behavior such as anonymity, rather than comparing people based on the use of one mode of Internet behavior versus another.

Research on a more extended conceptualization of blogging might also address the differentiation between the effects of blogging and traditional journaling, which has been studied extensively and found to produce considerable benefits to people including enabling insight, self-reflection, self-regulation and self-growth; reducing physical symptoms, maladaptive rumination and the effect of social constraints; and helping people cope with traumatic events in the past and present (Pennebaker & Beall, 1986; Bolton, Howlett, Lago & Wright, 2004; Brewin & Lennard, 1999; Broderick, Junghaenel & Schwartz, 2005; Cameron & Nicholls, 1998; Pennebaker &

Francis, 1996; Sloan, Marx, Epstein & Dobbs, 2008; Zakowski, Ramati, Morton, Johnson & Flanigan, 2004).

Future research into the relationship between these modes of Internet interaction and attachment would benefit from a broader conceptual model than the current study offered. For example, it would be useful to empirically study differences in the nature and level of the social and emotional support people derive from their online versus their offline relationships. Offline and online relationships could be compared in terms of a variety of practical and emotional factors, such as the duration of those relationships and negative and positive feelings towards those people in their lives. This would deepen our understanding of the way that the creation of separate online and offline personas enables people with different attachment styles to benefit from blogging.

Furthermore, one questions whether well-being is a predictor of one's blogging behavior and/or an outcome of the process depicted in the model. Longitudinal studies might offer insight into the processes by which attachment affects the use of blogging and similar online tools and well-being, and changes over time could be tested. Comments from the individuals in this study point to many benefits of blogging across attachment styles, but some quantitative findings suggest that for some people blogging may not be beneficial in the ways they perceive it to be. While this study supported the notion that attachment patterns endure even in online space, it also suggested that this type of online behavior may soften or reify certain patterns of interaction. Only a longitudinal study could address the extent to which these online tools enable new, healthier modes of interaction or further reinforce existing relational styles.

Longitudinal research could also address the possibility that such Internet interaction promotes aspects of well-being that were raised in people's comments but not empirically

addressed in this study, including symptomatology and levels of stress. Studying changes in blogging behaviors and motivations during different periods in people's lives would shed light on whether or not people use blogging effectively to cope with changes in life circumstances that cause stress such as death of a loved one, diagnosis of a terminal illness or communal trauma. This would expand our theoretical and clinical considerations of how to use research to better understand and be of greater use to individuals who turn to the Internet in these ways.

Conclusion

Since 370 BCE, when Socrates and Phaderus debated the positive and negative implications of the technological innovation of writing, cultural observers have grappled with the ways that technology transforms society. Most theorists (Habermas, 1979; Heidegger, 1954) agree that technology is in and of itself value neutral but can be used in both positive and negative ways. This study finds that blogging and the Internet in general offer both opportunities and challenges for individuals. One useful way of conceptualizing these opportunities and challenges is to examine blogging through the lens of attachment. By shedding light on the relationship between attachment style and the behaviors and emotions related to blogging, this study helps us understand how the new and evolving styles of communicating offered by the Internet play out with our ancient and basic human desire to connect with other people.

As demonstrated in this study, the Internet can help individuals learn about themselves and communicate with others in ways that are at once safer, more playful and creative, and more authentic than are usually available offline. At the same time blogging and the Internet in general can allow people to avoid or diminish some of the anxieties of face-to-face interactions. However, these very same capacities have a dark side, especially for people who already struggle in forming and maintaining intimate human relationships. While the Internet can seem to offer a

safe space for such people to connect in ways that are not as fraught as face-to-face interactions, this study indicates that it may also enable more problematic dynamics, giving people the illusion of connection without the growth, meaning and gratification that are the rewards of real intimacy. As the Internet continues to evolve and generate new ways of communicating, it will be important for researchers and clinicians to keep focused on the nuanced ways in which these new tools can both expand and contract our ability to meaningfully connect with other people.

Tables

Table 1: Descriptive statistics and alpha coefficients for scales

Scale	# of items	Mean	SD	reliability coefficient	N
<u>Experiences of Close Relationships Scale</u>					
Avoidance	18	57.80	22.86	.94	150
Anxiety	18	59.37	21.43	.93	150
<u>Psychosocial Functioning</u>	45			.82	143
UCLA Loneliness Scale	20	43.96	11.64	.95	143
Rosenberg Self Esteem Scale	10	31.67	5.94	.91	150
Social Constraints Scale	15	32.74	5.6	.93	146
<u>Blogging</u>					
Anonymity	3	6.51	35.13	.62	146
Motivations for Blogging	8	27.85	5.66	.76	144
Blogging Intensity	6	22.93	4.36	.74	150

Table 2: Comparison of current sample to published studies of undergraduate students

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Alonso-Arbiol, I, Balluerka, N., Shaver, P.R. & Gillath, O. (2008)	1265	3.65	1.19	2.99	1.17		undergraduate students (885 women and 375 men)	t(1413)=3.42***	t(1413)=2.17***
Britton, P.C. & Fuendeling, J.M. (2005)	183	3.67	1.17	2.73	1.14	.11	undergraduate students (66% female)	t(331)=2.86**	t(331)=3.64***
Brumbaugh, C.C. & Fraley, R. C. (2007)	97	3.42	1.02	3.25	1.17	.23	college students (69 women and 28 men)	t(245)=0.83	t(245)=0.24
Cantazaro, A. & Wei, M. (2010)	424	3.63	1.01	2.77	0.92	.13	undergraduate students (263 females and 159 males)	t(572)=3.31***	t(206)=3.91***
Edelstein, R. & Gillath, O. (2008)	189	3.69	1.25	2.96	1.12		undergrad students (57% men)	t(337)=2.93**	t(337)=1.93
Elwood, L.S. & Williams, N.L. (2007)	189	3.76	1.11	2.92	1.21	.33	undergraduate students (76% female)	t(337)=3.60***	t(337)=2.15***

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Elwood, L.S. & Williams, N.L. (2007)	98	4.05	1.14	3.05	1.20	.33	undergrads (76% female) who said they were victims of interpersonal trauma	t(246)=4.94***	t(246)=1.00
Feeney, J.A. (2004)	224	3.63	1.04	2.81	1.09	.02	undergrads in dating relationships for 3+ months (167 women and 55 men)	t(372)=2.83**	t(285)=3.18**
Gable, S.L., Gonzaga, G.C. & Strachman, A. (2006)	50	3.82	0.97	2.39	1.00		women in dating couples.	t(198)=2.80**	t(198)=4.16***
Gable, S.L., Gonzaga, G.C. & Strachman, A. (2006)	38	3.38	1.05	2.40	0.80		men in dating couples	t(186)=0.39	t(90)=4.88***
Gable, S.L., Gonzaga, G.C. & Strachman, A. (2006)	37	3.50	1.08	2.40	0.72		men in dating couples	t(185)=0.94	t(98)=5.15***
Gable, S.L., Gonzaga, G.C. & Strachman, A. (2006)	25	3.85	1.40	2.63	0.79		women in dating couples	t(173)=2.09*	t(47)=3.08**
Haggerty, G., Blake, M., Naraine, M., Siefert, C., & Blais, M.A. (2010)	225	3.65	1.15				undergrad and grad students (183 females and 42 males)	t(273)=2.86**	
Haggerty, G.D., Siefert, C.J. & Weinberger, J. (2010)	79	3.46	1.26	2.64	1.01	.12	undergraduate and maser's students (60 females and 19 males)	t(227)=.96	t(227)=3.46***

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Ho, M.Y., Zhang, H., Lin, D., Aitao, L., Bond, M.H., Chan, C. & Friedman, M. (2010)	214	3.39	1.14	2.38	0.91	.14	students involved in a relationship for 3+ months (112 females and 99 males)	t(362)=0.74	t(252)=6.87****
Impett, E.A., Gordon, A.M. & Strachman, A. (2008)	84	3.50	1.04	2.45	1.01		undergraduate students (37 women and 47 men)	t(232)=1.30	t(205)=5.03****
Impett, E.A., Gordon, A.M. & Strachman, A. (2008)	84	3.52	1.01	2.30	0.73		undergraduate students (47 women and 37 men)	t(232)=1.44	t(231)=6.97****
Locke, K.D. (2008)	60	3.47	1.14	2.79	1.28		undergraduates (50 women and 10 men)	t(208)=0.95	t(208)=2.17*
Lopez, F.G. & Fons-Scheyd, A. (2008)	446	3.34	1.25	2.46	1.01	.24	undergraduate students in romantic relationships (284 women and 162 men)	t(594)=0.36	t(216)=6.54****
Lopez, F.G. & Rice, K.G. (2006)	487	3.32	1.25	2.46	1.02	.23	undergraduate students in dating or marital relationships (313 women and 174 men)	t(635)=0.18	t(211)=6.60****
Lopez, F.G., Fons-Scheyd, A., Morúa, W. & Chaliman, R. (2006)	92	3.40	1.09	2.24	0.96		undergrads in intimate heterosexual relationships (82 women and 39 men)	t(240)=0.66	t(229)=6.74****

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Lopez, F.G., Fons-Scheyd, A., Morúa, W. & Chaliman, R. (2006)	24	3.60	1.18	3.39	1.26	.16	undergrads who recently broke up with heterosexual romantic partner	t(172)=1.15	t(172)=0.64
Mallinckrodt, B. & Chen, E.C. (2004)	76	3.94	1.36	2.66	1.18	.28	graduate students (263 females and 159 males)	t(224)=3.65***	t(224)=3.16**
Mallinckrodt, B. & Wei, M. (2005)	430	3.72	1.16	2.87	1.17		undergraduate students (258 women and 164 men)	t(578)=3.81***	t(578)=3.01**
Mosko, J.E. & Pistole, M.C. (2010)	249	3.86	0.57	2.72	1.08	.12	college students (129 females and 119 males)	t(397)=6.30***	t(274)=3.92***
Ng, K. & Smith, S.D. (2006)	153	3.23	1.14	2.15	1.02	.16	undergraduate and graduate students (84 females and 69 males)	t(301)=0.51	t(285)=8.01***
Pistole, M.C., Roberts, A. & Mosko, J.E. (2010)	138	3.78	1.08	2.51	0.88	.29	undergrad and grad students (122 females and 16 males)	t(286)=3.60***	t(265)=5.48***
Riggs, S.A. & Kaminski, P. (2010)	285	2.85	1.19	1.51	1.13	.28	college students in relationships 5+ months	t(433)=3.74***	t(433)=14.29***
Shaver, P.R., Schachner, D.A. & Mikulincer, M. (2005)	72	3.55	1.10	2.03	0.72	.16	women in heterosexual couples	t(220)=1.51	t(213)=8.82***

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Shaver, P.R., Schachner, D.A. & Mikulincer, M. (2005)	72	3.57	1.00	2.05	0.79	.13	men in heterosexual couples	t(220)=1.67	t(205)=8.33****
Shea, A.J., Slaney, R.B. & Rice, K.G. (2006)	280	3.93	1.03	2.81	1.08	.29	undergrads (205 women and 74 men)	t(428)=5.76****	t(266)=3.26**
Snir, S. & Wiseman, H. (2010)	60	2.88	0.78	2.49	0.69	.39	men in heterosexual couples of 6+ months	t(208)=2.51**	t(189)=5.28****
Snir, S. & Wiseman, H. (2010)	60	3.58	0.97	2.27	0.57	.32	women in heterosexual couples of 6+ months	t(208)=1.63	t(205)=7.40****
Swanson, B. & Mallinckrodt, B. (2001)	65	3.77	1.06	2.72	1.21	.29	female undergraduate students	t(213)=2.76**	t(213)=2.64**
Swanson, B. & Mallinckrodt, B. (2001)	60	3.73	1.00	2.99	0.98	.18	male undergraduate students	t(208)=2.48*	t(139)=1.35
Wang, C.D. & Mallinckrodt, B.S. (2006)	204	4.13	0.91	3.54	0.89		female undergrad students	t(268)=7.16****	t(251)=2.72**
Wang, C.D. & Mallinckrodt, B.S. (2006)	64	4.25	1.06	3.35	0.85		male undergraduate students	t(212)=5.53****	t(173)=0.94

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Wei, M. & Ku, T. (2007)	390	3.59	0.97	2.86	0.99	.11	undergraduate students (244 women and 145 men)	t(538)=2.98**	t(538)=3.38***
Wei, M., Russell, D.W., Mallinckrodt, B. & Vogel, D.L. (2007)	122	3.73	1.11	2.79	1.05		undergraduate (68 females and 54 males)	t(270)=3.04**	t(269)=3.02**
Wei, M., Russell, D.W., Mallinckrodt, B. & Zakalik, R.A. (2004)	296	3.65	1.10	2.63	1.05	.24	Whites undergrad students	t(444)=3.13**	t(254)=4.87***
Wei, M., Russell, D.W., Mallinckrodt, B. & Zakalik, R.A. (2004)	196	3.83	1.03	2.88	1.07	.21	Asian American undergrad students	t(344)=3.88***	t(289)=2.55*
Wei, M., Russell, D.W., Mallinckrodt, B. & Zakalik, R.A. (2004)	176	3.58	1.11	2.88	0.99	.16	Black undergrad students	t(324)=2.21*	t(279)=2.58*
Wei, M., Russell, D.W., Mallinckrodt, B. & Zakalik, R.A. (2004)	163	3.85	1.15	2.77	1.09	.28	Hispanic undergrad students	t(311)=4.17***	t(311)=3.32**

Note: ***p<.001; **p<.01; *p<.05

Table 3: Comparison of current sample to published studies of adults

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Ben-Ari, O., Findler, L., Bendet, C., Stanger, V., Ben-Shlomo, S., & Kuint, J. (2008)	88	2.86	1.08	2.91	0.97		mothers of twins	t(236)=2.84**	t(220)=2.06*
Ben-Ari, O., Findler, L., Bendet, C., Stanger, V., Ben-Shlomo, S., & Kuint, J. (2008)	82	2.88	0.89	2.97	0.88		mothers of singletons	t(230)=2.79***	t(217)=1.70
Diamond, L.M. & Hicks, A.M. (2005)	75	2.20	0.55	1.83	0.60	.14	men	t(221)=9.46***	t(222)=11.07***
Fuertes, J.N., Mislouack, A., Brown, S. Gur-Arie, S., Wilkinson, S. & Gelso, C.J. (2007)	59	2.39	1.10	2.00	0.87	.54	therapists (42 women and 17 men)	t(207)=5.08***	t(153)=7.88***
Horne, S.G. & Biss, W.J. (2009)	158	1.86	0.80	1.67	0.85	.63	women in same-sex relationship for 6+ months	t(258)=12.37***	t(306)=12.56***
Little, K.C, McNulty, J.K. & Russell, V.M. (2010)	135	2.04	0.95	2.04	0.89	.46	Husbands in newlywed couples	t(283)=9.79***	t(283)=8.92***

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Little, K.C, McNulty, J.K. & Russell, V.M. (2010)	135	2.00	0.98	1.79	0.84	.46	wives in newlywed couples	t(283)=9.68***	t(283)=11.01***
Little, K.C, McNulty, J.K. & Russell, V.M. (2010)	72	2.14	0.97	2.06	0.88		husbands in newlywed couples	t(220)=7.19***	t(192)=7.85***
Little, K.C, McNulty, J.K. & Russell, V.M. (2010)	72	2.02	0.85	1.82	0.68		wives in newlywed couples	t(188)=9.16***	t(217)=10.62***
Morris-Rothschild, B.K. & Brassard, M.R. (2006)	283	2.96	1.06	3.08	0.90		teachers (80% female)	t(431)=3.03**	t(230)=1.12
Phillips, J., Sharpe, L., Matthey, S., Charles, M. (2010)	64	2.78	1.08	2.07	0.93	.53	64 Australian women	t(212)=3.00**	t(160)=7.33***
Roberto, A.J., Carlyle, K.E., Goodall, C.E. & Castle, J.D. (2009)	507	3.17	0.92	2.60	0.78	.08	adults	t(655)=1.40	t(655)=7.19***
Romano, V., Fitzpatrick, M., & Janzen, J. (2008)	59	3.38	0.84	2.36	0.98	.22	therapists (55 women and 4 men)	t(207)=0.48	t(207)=4.63***
Romano, V., Janzen, J.I., & Fitzpatrick, M.R. (2009)	24	3.32	0.88	2.46	0.85	.44	therapists (22 women and 2 men)	t(172)=0.08	t(172)=2.80**

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Shiota, M.N., Campos, B., Gonzaga, G.C., Keltner, D. & Peng, K. (2010)	25	2.76	0.64	2.77	0.56		European women in monogamous, heterosexual relationships	t(56)=3.35**	t(74)=2.89**
Shiota, M.N., Campos, B., Gonzaga, G.C., Keltner, D. & Peng, K. (2010)	25	2.42	0.74	2.87	0.79		European men in monogamous, heterosexual relationships	t(173)=3.57****	t(47)=1.81
Shiota, M.N., Campos, B., Gonzaga, G.C., Keltner, D. & Peng, K. (2010)	24	3.06	0.84	2.55	0.35		Asian American women in monogamous, heterosexual relationships	t(172)=0.94	t(131)=5.25****
Shiota, M.N., Campos, B., Gonzaga, G.C., Keltner, D. & Peng, K. (2010)	24	2.68	0.79	2.81	0.60		Asian American men in monogamous, heterosexual relationships	t(41)=3.29**	t(62)=2.50*
Zakalik, R.A. & Wei, M. (2006)	234	4.03	1.29	2.64	0.95	.25	gay males	t(382)=5.59****	t(382)=5.04, p<.00

Note: ***p<.001; **p<.01; *p<.05

Table 4: Comparison of current sample to published studies of adults in therapy or diagnosed with a mental health issue

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Gilbert, P., McEwan, K., Bellew, R., Mills, A., & Gale, C. (2009)	62	4.48	1.26	3.80	1.25		patients diagnosed with depression (36 females)	t(210)=6.46***	t(210)=3.06**
Mallinckrodt, B., Porter, M.J. & Kivlighan, Dennis M. (2005)	38	4.35	1.24	3.29	1.37	.18	adults in therapy (24 women and 14 men)	t(186)=4.82***	t(186)=0.34
Mansfield, A.K., Addis, M.E., Cordova, J.V., Dowd, L. (2009)	92	3.87	1.36	3.23	1.26	.26	adults in therapy for emotion regulation or anger management (43 women)	t(240)=3.40***	t(240)=0.09
Phillips, J., Sharpe, L., Matthey, S., Charles, M. (2010)	25	4.16	1.15	2.73	1.23	.53	Australian women with recurrent depression	t(369)=4.35***	t(369)=9.98***
Phillips, J., Sharpe, L., Matthey, S., Charles, M. (2010)	24	3.56	1.29	2.51	1.15	.53	Australian women with post-partum depression	t(172)=0.98	t(172)=2.54*
Phillips, J., Sharpe, L., Matthey, S., Charles, M. (2010)	27	3.71	1.34	2.81	1.05	.53	Australian women with prior diagnosis of depression	t(175)=1.62	t(175)=1.55
Romano, V., Fitzpatrick, M., & Janzen, J. (2008)	59	3.45	1.07	2.62	1.18	.23	students in therapy (54 women and 5 men)	t(207)=0.85	t(207)=3.09**

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Romano, V., Janzen, J.I., & Fitzpatrick, M.R. (2009)	24	3.85	1.38	2.62	1.39	.18	students in therapy (17 women and 7 men)	t(172)=2.06	t(172)=2.09*
Woodhouse, S.S. & Gelso, C.J. (2008)	80	3.78	0.92	2.98	0.94	.14	students in therapy (42 women and 38 men)	t(198)=3.40***	t(204)=1.57

Note: ***p<.001; **p<.01; *p<.05

Table 5: Comparison of current sample to published studies of adults coping with a major life stressor

Citation	N	Anx M	Anx SD	Avo M	Avo SD	r=	Sample population characteristics	Anxiety t test	Avoidance t test
current sample	150	3.30	1.19	3.21	1.27	.44	bloggers (62.7% female)		
Cassidy, J., Ziv, Y., Stupica, B., Sherman, L.J., Butler, H., Karfgin, A., Cooper, G., Hoffan, K.T. & Powell, B. (2010)	54	3.29	1.33	3.82	1.09		pregnant women, 63% with history of childhood sexual or physical abuse	t(202)=0.04	t(22)=3.13**
Haggerty, G., Hilsenroth, M.J. & Vala-Stewart, R. (2009)	406	2.40	1.01	3.05	0.93		participants with late stage gastrointestinal or lung cancer	t(554)=8.86***	t(117)=2.43*
Hwang, K., Johnston, M. & Smith, J.K. (2007)	50	3.78	1.30	2.89	1.15		individuals with congenital physical disability	t(198)=2.42*	t(198)=1.58
Hwang, K., Johnston, M. & Smith, J.K. (2007)	50	3.33	1.31	2.81	0.91		individuals with spinal cord injury	t(198)=0.16	t(198)=2.06*
Riggs, S.A., Vosvick, M. & Stallings, S.(2007)	288	4.02	1.36	3.70	0.88	.20	people with AIDS (48% women)	t(463)=5.49***	t(463)=4.71***
Wood, E. & Riggs, S. (2008)	61	3.23	1.35	2.73	1.08	.31	convicted child molesters	t(209)=0.36	t(209)=2.60**

Note: ***p<.001; **p<.01; *p<.05

Table 6: Relationships between demographic variables and attachment scales

	Attachment Measures					
	Anxiety	Mean	SD	Avoidance	Mean	SD
Age	$r = -.38^{***}$			$r = -.17^*$		
Gender						
Male	$t(146) = 0.13$	56.65	21.48	$t(146) = -1.07$	57.5	22.01
Female		60.56	21.44		56.99	22.58
Race						
White		57.38	21.41		57.94	23.51
African American/Mixed Race/American Indian	$F(2) = 3.10^*$	57.94	25.87	$F(2) = .35$	53.31	26.13
Asian/ Pacific Islander		69.43	16.3		59.35	18.23
Sexual Orientation						
Heterosexual	$t(145) = -3.28^{***}$	57.17	20.88	$t(145) = -3.14^{**}$	55.53	22.67
Homosexual or bisexual		74.82	21.03		73.59	19.43
Relationship Status						
Married		52.05	19.3		52.15	22.73
Never married	$F(2) = 5.79^{**}$	69.64	19.19	$F(2) = 12.45^{***}$	65.15	19.39
Once married		60.63	25.13		62.13	28.01
Education						
No college degree	$t(148) = 1.31$	62.8	23.08	$t(148) = -.24$	57.13	22.15
College degree		57.86	20.59		58.1	23.27
Work Status	$F(2) = 2.27$			$F(2) = 1.68$		

Employed	57.32	21.47	55.57	22.1
Unemployed	61.88	21.36	63.16	26.54
Student	69.77	18.92	62.62	17.17

*Note:****p<.000; **p<.001; *p<.05

Table 7: Relationships between demographic variables and blogging behaviors

	Blogging Variables							
	Anonymity		Personal and Interpersonal and Motivations for Blogging				Blogging Intensity	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	r=-.06		r=-.17*				r=.22**	
Gender	t(142)=-2.36*		t(140)=-3.21**				t(146) = -2.59*	
Male	5.70	2.96	25.94	5.96	21.76	4.82		
Female	6.97	3.19	29.01	5.23	23.66	3.96		
Race	F(2)=.18		F(2)=2.35				F(2)=.15	
White	6.49	3.28	27.92	5.62	23.14	4.06		
African-American/Mixed Race/American Indian	6.80	3.38	25.07	5.42	22.69	3.81		
Asian/ Pacific Islander	6.18	2.20	29.10	5.76	22.74	4.89		
Sexual Orientation	t(16.73)=-1.37		t(139)=-2.30*				t(145)=-.69	
Heterosexual	6.30	2.88	27.48	5.58	22.88	4.31		
Homosexual or bisexual	7.81	4.31	30.93	4.61	23.65	4.17		

Relationship Status	F(2)=.29		F(2)=.11		F(2)=3.05
Married	6.34	3.23	27.61	6.35	23.38 4.52
Never married	6.64	3.06	28.08	4.42	21.83 3.96
Once married	6.93	3.22	27.67	5.74	24.38 4.40
Education	t(144)=.91		t(142)=.76		t(148)=-.48
No college degree	6.87	3.34	28.39	5.10	22.67 4.62
College degree	6.36	3.05	27.61	5.89	23.05 4.35
Work Status	F(2)=.15		F(2)=.13		F(2)=.86
Employed	6.43	3.22	27.69	5.96	22.81 4.55
Unemployed	6.78	3.26	28.25	5.00	23.72 3.62
Student	6.54	2.22	27.85	5.07	22.00 4.35

Note:***p<.000; **p<.001; *p<.05

Table 8: Intercorrelations among variables in mediational model

	<u>Attachment</u>		<u>Blogging Variables</u>		
	Anxiety	Avoidance	Psychosocial functioning	Anonymity	Motivations for Blogging
<u>Attachment</u>					
anxiety					
avoidance	.36***				
Psychosocial functioning	.57***	.66***			
<u>Blogging Variables</u>					
Anonymity	.11	.38***	.30***		
Motivations for blogging	.19*	-.03	-.04	-.02	
Blogging intensity	-.17*	-.36***	-.24**	-.27***	.25**

Note: ***p<.000; **p<.001; *p<.05

Table 9: Summary of direct effects in model

	Beta	t value
Psychosocial functioning →		
Anxiety	.43	6.32***
Avoidance	.58	9.20***
Anonymity →		
Anxiety	-.17	-1.07
Avoidance	.39	2.11*
Psychosocial functioning	.24	.96
Motivations →		
Anxiety	.31	2.10*
Avoidance	-0.09	-0.47
Psychosocial functioning	-0.09	-0.37
Blogging Intensity →		
Anxiety	-0.24	-1.60
Avoidance	-0.35	-2.01*
Psychosocial functioning	-.19	.82
Anonymity	-0.25	-1.83
Motivations	.36	3.55***

Note:***p<.000; **p<.001; *p<.05

Table 10: Tables of means for the four attachment groups

	main effects		Interaction effect	Total Equation	Low Anxiety		High Anxiety	
	Anxiety	Avoidance	Anxiety x Avoidance		Low Avoidance	High Avoidance	Low Avoidance	High Avoidance
Anonymity	F(1)=3.29	F(1)=10.52***	F(1)=1.59	F=7.25***	5.41	6.44	5.70	8.04
Similarity of offline and offline selves	F(1)=12.58***	F(1)=4.94*	F(1)=2.26	F=9.45***	4.35	4.24	4.04	3.49
Personal and Interpersonal Motivations	F(1)=3.90*	F(1)=.00	F(1)=1.59	F=2.01	26.45	27.76	29.65	28.47
Motivations for self expression	F(1)=8.7**	F(1)=.00	F(1)=.01	F=3.26*	11.37	11.40	12.57	12.61
Motivations for community	F(1)=.16	F(1)=.03	F(1)=1.46	F=.55	9.70	10.36	9.57	10.09
Motivations for self enhancement	F(1)=5.47*	F(1)=.00	F(1)=2.40	F=2.81*	5.39	6.00	6.96	6.32
Positive Impact	F(1)=.87	F(1)=3.10*	F(1)=.03	F=1.91	3.29	2.92	3.08	2.78
Negative Impact	F(1)=8.51**	F(1)=.25	F(1)=.00	F=3.65*	1.22	1.28	1.56	1.61
Blogging Intensity	F(1)=5.02*	F(1)=9.95**	F(1)=4.68*	F=8.86***	24.30	24.24	23.60	20.51

Note:***p<.000; **p<.001; *p<.05

Figures

Figure 1: Structural equation model accounting for relationship between attachment dimensions and blogging intensity as a function first of psychosocial functioning and then blogging behaviors and motivations

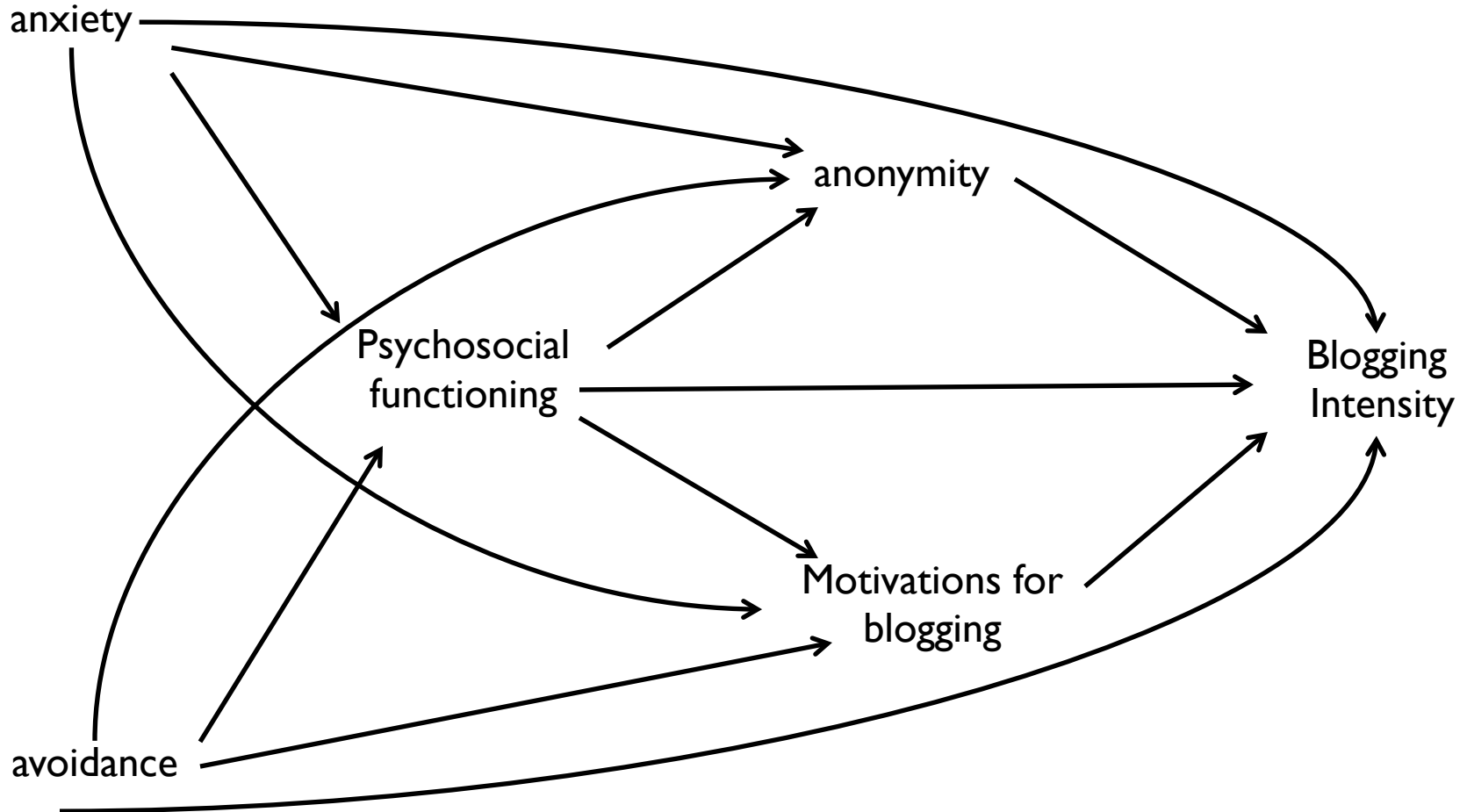
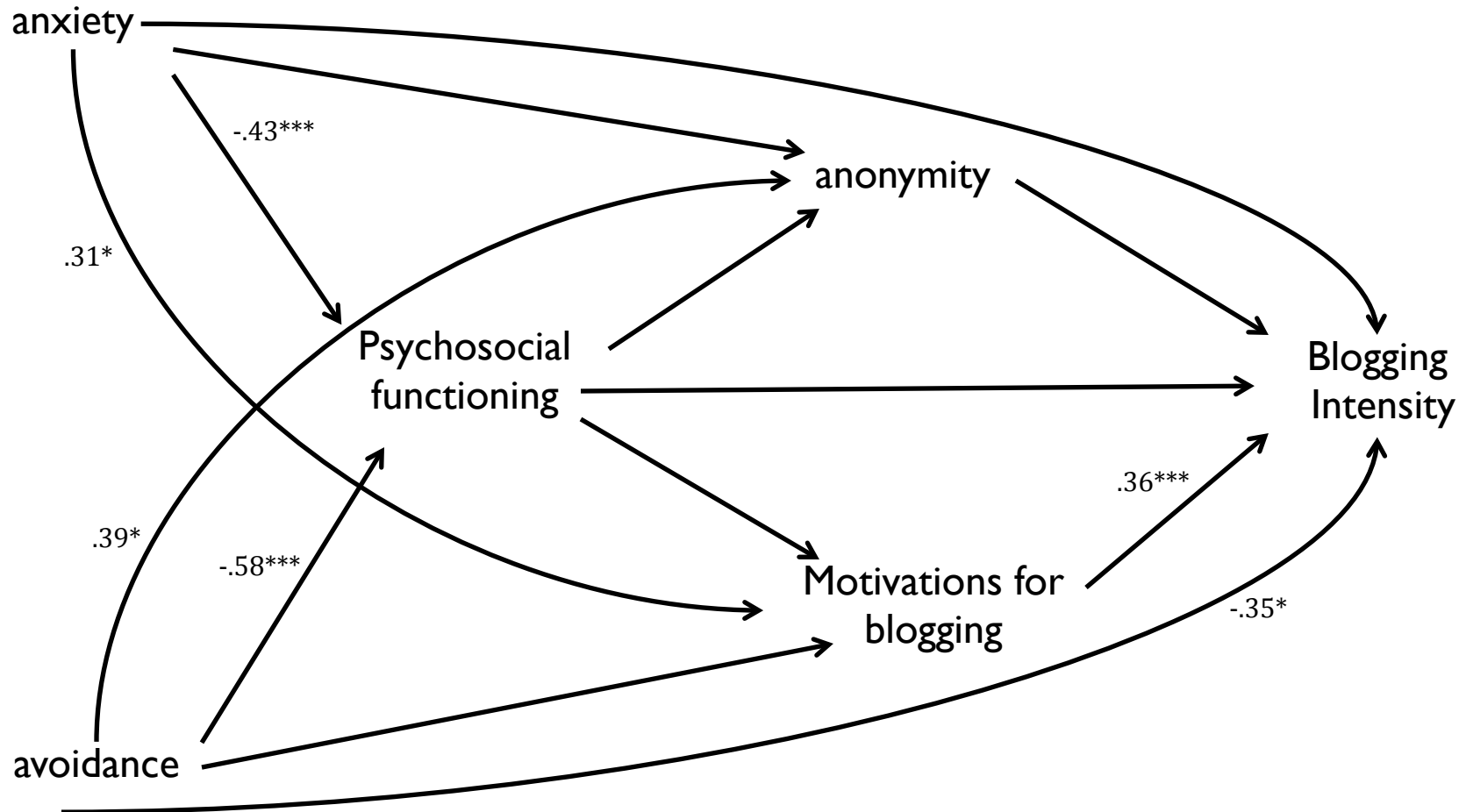


Figure 2: Significant correlations in structural equation model accounting for relationship between attachment dimensions and blogging intensity as a function first of psychosocial functioning and then blogging behaviors and motivations



Appendices

Appendix A

Recruitment Email

Dear _____:

My name is Leora Trub and I am a student in the Clinical Psychology Ph.D. Program at The Graduate Center of the City University of New York (CUNY). I am conducting a study of the reasons that people blog and what benefits it brings, which at this point are still largely unexplored in research studies. I am therefore reaching out to you as a blogger who can help deepen our understanding of this phenomenon. I believe that your voice is an important one to be heard and hope you will enjoy participating in the study. I have developed an online questionnaire that asks about specific aspects of blogging as well as asking about feelings about yourself and others. The survey is a mix of numerical scales and opportunities to reflect in an open-ended format about the role of blogging in your life, and how it has changed over time. You are eligible to participate if you are at least 21 years of age and have been maintaining an English-language personal blog for at least six months that you update on average at least twice a week. Your participation involves completing a confidential online questionnaire. The data will be downloaded onto a secure server to which only I have access. No identifying information, such as your names or address, will be collected, and you will be given the opportunity to be identified by a code name in research reports and to have your blog description changed slightly so it cannot be identified if you wish.

The survey takes approximately 45 minutes to complete and participation is completely voluntary. If you begin to fill out the survey and decide you no longer want to participate, you may exit the survey at any time. Three participants who complete the survey will be randomly selected by a lottery to receive a \$75 cash prize.

There are no foreseeable risks to participation in the study. Although some of the questions are personal in nature, participation in the study provides an opportunity to think about the role that your blog plays in your life.

If you have any questions about this research, you can contact me at (732) 407-7928 or ltrub@gc.cuny.edu, or my advisors Dr. Arietta Slade at (212) 650-5658 or aslade@dphd@earthlink.net and Dr. Tracey Revenson at (212) 817-8709 or trevenson@gc.cuny.edu.

The study has been approved by the Institutional Review Board of the Graduate School of the City University of New York and meets of their guidelines as well as all state and federal guidelines for research with human participants. If you have any concerns about the project at any time, you can contact Ms. Kay Powell, Institutional Review Board at the Graduate School of the City University of New York (212) 817- 7525 or kpowell@gc.cuny.edu.

I hope that you will decide to follow the link [URL] and share it with others if you decide you would like to. Please feel free to contact me with any questions.

Sincerely,

Leora Trub, M.A.
Doctoral student in Clinical Psychology
Graduate School of the City University of New York
365 Fifth Avenue, New York, NY 10016-4309
ltrub@gc.cuny.edu

Appendix B

Online posting call for recruitment

You are invited to participate in a study of

Interpersonal motivations and benefits of blogging

If you are at least 21 years of age and have been maintaining an English-language personal blog for at least six months that you update at least twice a week, you are eligible to participate by completing a confidential online questionnaire.

We are interested in learning more about the factors that lead people to start and maintain blogs, and any benefits or risks that are related to blogging. Help us to do so by completing our online questionnaire.

Please email ltrub@gc.cuny.edu to learn more about the study and complete the online questionnaire.

Subject title should read "Blogging Study"

Three participants will be randomly selected by a lottery to receive \$75.

Contact the principal investigator at ltrub@gc.cuny.edu or 732 407 7928 if you have any questions about this research.

This research has been approved by the Institutional Review Board of the Graduate School of the City University of New York.

Appendix C

Online questionnaire

Screening Questions

This survey will take approximately 45 minutes to complete. If you exit the survey you will NOT be able to return to it, so please only begin the survey if you have enough time to complete it at this time. Upon your completion, you will be given the opportunity to enter a raffle for the chance to win \$75.

When completing this survey, you will be able to go back to previous pages in the survey and update existing responses until the survey is finished, or until you have exited the survey. After the survey is finished, you will not be able to re-enter the survey.

1. Do you expect that you will be able to proceed for approximately 45 minutes without interruption?

- Yes
- No

Thank you for your interest in participating in this study. Since you do not currently expect to have enough time to complete the study at this time, you are welcome to return at a later time when you expect to have an hour without interruption. We look forward to seeing you soon!

1. Are you 21 years of age or older?

- Yes
- No

2. Do you currently maintain an English language blog that is personal in nature?

- Yes
- No

3. Have you been maintaining this blog for 6 months or longer?

- Yes
- No

4. On average, do you update or visit your blog an average of at least twice a week?

- Yes
- No

(If participants failed to meet the criteria they received the following message) Thank you for your interest in this survey. Unfortunately, you do not meet the selection criteria of this study at

this time. If you are a blogger and are interested in being recruited for further studies, please send an email to psych.cuny@gmail.com.

Section 1

The questionnaire you are about to fill out includes a variety of questions. You will be asked to answer questions about your blog as well as other aspects of your life. You will also be given the opportunity to reflect upon some of your responses with further elaboration in an open-ended format. Please read the directions to each section very carefully before responding.

First, you will be asked to provide some orienting information about your blog.

1. How long have you been blogging?
____years ____months

2. What was the date of your first blog post?
MM ____ DD ____ YYYY Enter date ____/____/____

3. How would you characterize the kinds of entries you publish on your blog(s)?

4. During a typical week, how many days per week do you sign onto your blog?
____days per week

5. During a typical week, on average approximately how many minutes per day do you spend on your blog?
____number of minutes

6. Please describe, in your own words, what inspired you to start blogging?

7. Have you met anyone in person who STARTED OUT as a commenter on your blog?

Note: If all of your readers were already known to you when they began commenting, you should answer "no" to this question

Yes

No

If yes, how many people?_____

You will now be asked to respond to a series of questions with five point scales attached to them. Please read each question carefully and be sure to mark the circle that corresponds to your response.

1. How private are the things you write about on your blog? ("private" can refer to feelings or events that are personal or confidential)

Level of Privacy:

- not at all private
- not so private
- neutral
- private
- extremely private

2. How often have you written highly personal things on your blog?

Frequency:

- never
- rarely
- sometimes
- often
- very often

3. How often have you regretted writing something on your blog?

Frequency:

- never
- rarely
- sometimes
- often
- very often

If your response was anything other than never, please explain:

4. How often has something you wrote in your blog positively affected a relationship you had with someone?

Frequency:

- never
- rarely
- sometimes
- often
- very often

If you answered anything OTHER THAN never, please indicate the person or persons with whom this occurred (eg. friend, family member, etc) and explain the circumstances:

5. How often has something you wrote in your blog negatively affected a relationship you had with someone?

Frequency:

- never
- rarely
- sometimes
- often
- very often

If you answered anything OTHER THAN never, please indicate the person or persons with whom this occurred (eg. friend, family member, etc) and explain the circumstances:

6. The following is a list of phrases that describe many blog entries. Please check all of the phrases that describe the content of your blog:

- personal musings
- academic or professional brainstorm
- political opinions
- hobby
- gossip

7. Are you ever paid to blog?

- Yes
- No

If yes, please explain below:

Section 2

The following statements concern how you generally feel in close relationships (e.g., with romantic partners, close friends, or family members). Respond to each statement by indicating how much you agree or disagree with it.

1. Please indicate the level to which you agree or disagree with each statement.

- strongly disagree
- moderately disagree
- slightly disagree
- neutral/mixed
- slightly agree
- moderately agree
- strongly agree

1. I prefer not to show others how I feel deep down.
2. I worry about being rejected or abandoned. I am very comfortable being close to other people.
3. I worry a lot about my relationships.
4. Just when someone starts to get close to me I find myself pulling away.
5. I worry that others won't care about me as much as I care about them.
6. I get uncomfortable when someone wants to be very close to me. I worry a fair amount about losing my close relationship partners.
7. I don't feel comfortable opening up to others.
8. I often wish that close relationship partners' feelings for me were as strong as my feelings for them.
9. I want to get close to others, but I keep pulling back.
10. I want to get very close to others, and this sometimes scares them away.
11. I am nervous when another person gets too close to me.

12. I worry about being alone.
13. I feel comfortable sharing my private thoughts and feelings with others.
14. My desire to be very close sometimes scares people away.
15. I try to avoid getting too close to others.
16. I need a lot of reassurance that close relationship partners really care about me.
17. I find it relatively easy to get close to others. Sometimes I feel that I try to force others to show more feeling, more commitment to our relationship than they otherwise would.
18. I find it difficult to allow myself to depend on close relationship partners.
19. I do not often worry about being abandoned. I prefer not to be too close to others.
20. If I can't get a relationship partner to show interest in me, I get upset or angry.
21. I tell my close relationship partners just about everything. I find that my close relationship partners don't want to get as close as I would like.
22. I usually discuss my problems and concerns with close others.
23. When I don't have close others around, I feel somewhat anxious and insecure.
24. I feel comfortable depending on others. I get frustrated when my close relationship partners are not around as much as I would like.
25. I don't mind asking close others for comfort, advice, or help. I get frustrated if relationship partners are not available when I need them.
26. It helps to turn to close others in times of need. When other people disapprove of me, I feel really bad about myself. I turn to close relationship partners for many things, including comfort and reassurance.
27. I resent it when my relationship partners spend time away from me.

Section 3

Please respond to the following questions asking you to describe yourself:

1. What is your birth date?

MM ___DD___YYYY_____

2. How far did you go in school?

- Some high school or less
- High school graduate or GED
- Vocational college or some college
- College degree
- Above college degree (i.e. professional or graduate degree)

3. Are you Hispanic or Latino(a)?

- Yes
- No

4. What is your race/ethnicity?

- American Indian/Alaska Native
- Asian/ Pacific Islander
- Black or African-American
- White/Caucasian

- More than one race (please specify which in space below)
- Other (please specify in space below)

If you responded that you are of mixed race or if you responded "other", please specify:

5. What is your gender?

- Male
- Female
- Transgender

6. How would you describe your sexual orientation?

- heterosexual
- homosexual
- bisexual
- not sure

7. Please tell me which of the following best describes your main work activity. If you are employed AND also fit one of the categories below (for example, if you are a student but are also employed), please check the box that says "employed" and use the text box to specify what else you do.

- Employed (including self employment)
- Retired
- Keeping house (not paid)
- Student
- Seeking work
- On medical leave or disability
- Other (please specify below)

Please use this box to elaborate upon your response above

Section 4

1. How many hours per week do you work?

Enter number of hours_____

2. How many minutes per day do you spend maintaining your blog while at work?

- not at all
- about 30 minutes or less
- Between 30 minutes and one hour
- Between one and two hours
- Over two hours

3. Are you now...

- Married or living in a marital-like relationship

- Never married
- Divorced
- Separated
- Widowed

4. When was the last time you were in a significant relationship?

- I have not had a significant relationship
- over 4 years ago
- within the last 2 years
- within the last year
- within the last 6 months

5. Which description is closest to how you would describe your current relationship status? (You may choose more than one)

- I am not dating anyone at this time
- I am dating only one person
- I am dating more than one person

You may elaborate upon your answer below:

6. Whether you are dating now or not, which of these best describes you?

- I am looking to meet someone for a long term relationship
- I am looking to meet someone for a casual relationship
- I am not looking for a relationship right now

You may elaborate upon your answer below:

7. In what way(s) have you noticed that your blogging activity is affected by your current relationship status? Please use the space below to explain:

The following questions have to do with features of your blog that are related to your audience/readership.

Section 5

1. How often do you monitor how many people visit your blog? (Check only one box):

- Less than every other day
- Every other day
- Once a day
- Twice a day
- More than twice a day

2. Please indicate the average number of visitors to your blog per day

Enter number: _____

3. How well do you feel you know your blog's audience?

- I barely know them

- I know a few
- I know some well but not others
- I know most of them well extremely well

4. Does your blog have the option of allowing your readers to comment on your blog posts?

- Yes
- No

5. How much do the comments that people write on your blog influence the entries you write?

Amount of influence

- No influence at all
- influence is mild
- influence is moderate
- influence is pretty strong
- influence is very strong
- N/A (Commenting is not an option)

6. Do you do anything to limit who can read certain posts?

- No
- Yes (please explain what measures you take to limit what others can see)

7. How many blogs do you include in your blogroll?

Enter number: _____

8. How many blogs include your blog in their blogroll?

Enter number: _____

9. Do you keep your blog a secret from any people in your life?

- Yes
- No

1. From how many people you keep your blog a secret?

Enter number: _____

2. From whom do you keep your blog a secret? (Check all that apply)

- family member
- employee
- friend
- partner/spouse
- Other (please specify)

3. Please explain why you keep your blog a secret from these people:

Section 6

WHEN YOU ARE INTERACTING WITH OTHERS FACE TO FACE...

The following statements reflect feelings that people have about themselves. In answering the following questions, please consider how you feel **WHEN YOU ARE INTERACTING FACE TO FACE WITH PEOPLE** (outside of your blog and any other internet activities).

1. Please indicate your response:

- strongly disagree
- disagree
- agree
- strongly agree

1. On the whole, I am satisfied with myself. At times, I think I am no good at all.
2. I feel that I have a number of good qualities.
3. I am able to do things as well as most other people.
4. I feel I do not have much to be proud of.
5. I certainly feel useless at times.
6. I feel that I'm a person of worth, at least on
7. an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Next you will read a series of statements describing perceptions of the role that blogging plays in your daily life.

1. Please use the scale below to indicate how true each statement is for you:

- strongly disagree
- disagree
- neutral
- agree
- strongly agree

1. Blogging is part of my everyday activity
2. I am proud to tell people I have a blog.
3. Blogging has become a part of my daily routine.
4. I feel out of touch when I do not blog in a while.
5. I feel I am part of a blogging community.
6. I would feel sorry if I had to shut down my blog.

Section 7

Please think about the people in your life that provide you with support or help, please think about how those people and others would describe you to an objective third party individual.

You will be asked to separately list three adjectives that people in your offline world would use to describe you and three adjectives that people who read your blog would use to describe you.

1. List the top three adjectives that you think the people in your life would use to describe you:

- 1 _____
 2 _____
 3 _____

2. Please explain why you chose these adjectives:

3. List the top three adjectives that you think your blogging audience would use to describe you:

- 1 _____
 2 _____
 3 _____

4. Please explain why you chose these adjectives:

5. Which adjectives do you feel is more accurate to describe you? (check one only)

- The first list -- people I know in my offline world
 The second -- people I know in my online world
 They are exactly the same

Please explain your response:

Section 8

Sometimes, even when your friends and family members have good intentions, they may say or do things that upset you. Think about the PAST MONTH and indicate how often your friends or family members did the following things.

1. How often in the past month have your friends or family members...

Frequency:

- never
 rarely
 sometimes
 often

1. Changed the subject when you tried to discuss your problems?
2. How often did it seem that they did not understand your situation?
3. How often did they avoid you?
4. How often did they minimize your problems?
5. How often did they seem to be hiding their feelings?

6. How often did they act uncomfortable when you talked about your problems?
7. How often in the past month have they trivialized your problems?
8. How often did they complain about their own problems when you wanted to talk about yours?
9. How often did they act cheerful around you to hide their true feelings and concerns?
10. How often did they tell you not to worry so much about your problems?
11. How often did they tell you to try not to think about problems?
12. How often did you get the idea that they didn't want to hear about your concerns?
13. How often did they make you feel as though you had to keep your feelings and your problems to yourself, because they made them feel uncomfortable?
14. How often did they make you feel as though you had to keep your feelings and your problems to yourself, because they made them upset?
15. How often did they let you down by not showing you as much love and concern as you would have liked?

Section 9

Bloggers make a variety of different decisions about how to identify themselves and manage issues of identity and anonymity. The following questions ask you to reflect upon how you make these kinds of decisions:

1. How do you identify yourself on your blog? (Check only one)
 - First and last name
 - First name only
 - Last name only
 - Nickname or pseudonym
 - Name is not directly on the blog, but I do have a link to a website with my name (eg. facebook)
2. Do you provide a link to your blog from any social networking sites?
 - Yes
 - No
 - I am not a member of any social networking sites
3. How much have you changed identifying information about yourself on your blog?
 - not at all
 - a few things
 - some things
 - a lot of things
 - almost everything

If you responded anything OTHER THAN "not at all", please explain what kinds of identifying information you have changed:

4. How similar do you think your blog personality is to your offline personality?
some things in

- totally different
- a little similar
- common but not others
- very similar
- exactly the same

Section 10

You were already asked the following questions relating to feelings you have when you are interacting with people in face to face interaction.

At this time, you are asked to think about your feelings **WHEN YOU ARE ONLINE AND/OR INTERACTING WITH OTHERS ONLINE** and answer the same set of questions:

The following statements reflect feelings that people have about themselves. In answering the following questions, please consider how you feel when **WHEN YOU ARE ONLINE AND/OR INTERACTING WITH OTHERS ONLINE**.

1. Please indicate your response:

- strongly disagree
- disagree
- agree
- strongly agree

1. On the whole, I am satisfied with myself. At times, I think I am no good at all.
2. I feel that I have a number of good qualities.
3. I am able to do things as well as most other people.
4. I feel I do not have much to be proud of.
5. I certainly feel useless at times.
6. I feel that I'm a person of worth, at least on an equal plane with others.
7. I wish I could have more respect for myself.
8. All in all, I am inclined to feel that I am a failure.
9. I take a positive attitude toward myself.

Section 11

The following questions ask you to rate how much your blog has affected you in particular ways. Most of the questions are followed by two more questions asking you to differentiate between how much your blog has affected you in the online domain versus the offline domain. Some people notice a large difference between how their blogs affect their "online self" and their "offline self," while for other people the effect is synonymous.

1. Please use the scales below to indicate how much you agree or disagree with the following statements are of you.

- strongly disagree

- disagree
- neutral
- agree
- strongly agree

1. I use my blog to free my mind when I am moody.
2. My blog has helped me cope with my moods when interacting with people online.
3. My blog has helped me cope with my moods when in face-
4. to-face interaction with others.
5. I express myself by writing in my blog. My blog has helped me express myself
6. better through writing to others online.
7. My blog has helped me express myself better in face to face interaction.
8. My blog is the place where I express what I feel.
9. My blog has helped me express myself better through sharing my feelings with others online.
10. My blog has helped me express myself better through sharing my feelings with others in face to face interaction.
11. In my blogroll I have friends with whom I can share personal thoughts, feelings and events.
12. My blog has increased the amount that I share personal thoughts, feelings and events with people online.
13. My blog has increased the amount that I share personal thoughts, feelings and events with people in face to face interaction.
14. Blogging helps me make more like- minded friends. Blogging has helped me make more like minded friends online. Blogging has helped me make more like minded friends offline. By blogging I interact with a set of blogs the have contents similar to what I put in my blog.
15. Blogging helps me feel more popular and interesting.
16. My blog has increased how popular and interesting I feel among my online readers.
17. My blog has increased how popular and interesting I feel
18. among my peers in face to face interaction.
19. I feel less lonely when I blog.
20. Blogging has helped me feel less lonely when I am online.
21. Blogging has helped me feel less lonely when I am engaged in face to face interaction.

2. In your own words, please describe the role you feel your blog has played in your life, and whether you feel it has changed how you feel, behave, or perceive yourself in any way.

The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by filling in the correct circle. Here is an example: How often do you feel happy? If you never felt happy, you would respond “never”; if you always feel happy, you would respond “always.”

1. Please indicate how often you feel the way described by filling in the correct circle:
 - never
 - rarely

- sometimes
- often

1. How often do you feel that you are “in tune” with the people around you?
2. How often do you feel that you lack companionship?
3. How often do you feel that there is no one you can turn to?
4. How often do you feel alone?
5. How often do you feel part of a group of friends?
6. How often do you feel that you have a lot in common with the people around you? How often do you feel that you are no longer close to anyone?
7. How often do you feel that your interests and ideas are not shared
8. by those around you? How often do you feel outgoing and friendly? How often do you feel close to people?
9. How often do you feel left out?
10. How often do you feel that your relationships with others are not meaningful?
11. How often do you feel that no one really knows you well?
12. How often do you feel isolated from others?
13. How often do you feel you can find companionship when you want it?
14. How often do you feel that there are people who really understand you?
15. How often do you feel shy?
16. How often do you feel that people are around you but not with you?
17. How often do you feel that there are people you can talk to?
18. How often do you feel that there are people you can turn to?

Section 12

The following items ask about your general internet activity. Please indicate the amount of time that you spend engaged in the following activities in a typical week. For example, if you participate in an online group 3 days a week for about an hour each time, you would write 3 hours per week.

1. How much time do you spend participating in an online discussion, a listserv, or other online group forum?
 - Not at all
 - Less than one hour
 - Between one and two hours
 - Between two and five hours
 - Over five hours

2. How much time do you spend creating or working on your own online journal or weblog (other than the one you are writing about)?
 - Not at all
 - Less than one hour
 - Between one and two hours
 - Between two and five hours
 - Over five hours

How many blogs do you maintain?

3. How much time do you spend reading and commenting on blogs of others?

- Not at all
- Less than one hour
- Between one and two hours
- Between two and five hours
- Over five hours

How many blogs do you regularly comment on?

4. How much time do you spend using an online social networking site like MySpace, Facebook or Friendster?

- Not at all
- Less than one hour
- Between one and two hours
- Between two and five hours
- Over five hours

5. How much time do you spend using Twitter or a similar site?

- Not at all
- Less than one hour
- Between one and two hours
- Between two and five hours
- Over five hours

6. How much time do you spend going to a online dating website or other site where you can meet people online?

- Not at all
- Less than one hour
- Between one and two hours
- Between two and five hours
- Over five hours

7. How much time do you spend creating/maintaining an avatar or online representation of yourself?

- Not at all
- Less than one hour
- Between one and two hours
- Between two and five hours
- Over five hours

The following statements describe problems that people sometimes have. Read each one and use the numbers below to indicate how much each of the problems listed below have distressed or bothered you during the past 7 days including today.

You're almost finished! Please take a few moments to answer some final questions and offer your input about this questionnaire. Your opinions are very important to us.

1. Is there anything else you would like to say about blogging or its affect on your relationships and life?

2. Is there anything that should have been asked but was not?

Upon completion of this survey, you will automatically be entered into a raffle for the chance to win \$75. If you win, you will receive notification to the email address you used in contact with the principal investigator of this study.

1. In addition, there may be follow up studies to this one. PLEASE NOTE that your willingness to be contacted further will not in any way impact your eligibility for the raffle.

If you would like to be contacted regarding follow up studies, please choose "yes" here:

- Yes
- No

2. Finally, please consider if you would be willing to have the investigators in this study read your blog for the purposes of research. PLEASE NOTE that your willingness to have your blog read by the investigators will not in any way impact your eligibility for the raffle.

If so, please indicate the name of your blog in the space provided here:

You're done!

Appendix D

Consent Form

Welcome! Thank you for your interest in participating in attachment.blogspot.com, a study of the role that blogging plays in people's lives and relationships. The purpose of this study is to explore the interpersonal motivations and benefits of blogging. In order to achieve this goal, you are being asked to fill out a questionnaire about your blog, as well as the thoughts and feelings that you have about yourself and others in your life. This survey should take about 45 minutes to complete, so please only proceed if you expect to be able to proceed for approximately one hour with no interruptions. In gratitude for your time and participation, you will be entered into a raffle for the chance to win \$75 upon completion of this survey.

Your responses to the survey will be strictly confidential. An ID number will be used to identify you; this number will be tied to your name and email on a list kept in a locked file drawer by the Principal Investigator, Leora Trub. Also, Survey Monkey is an online survey company that strictly protects the anonymity and confidentiality of participants by not collecting identifying information and not sharing data with other sources. SurveyMonkey employs multiple layers of security to make sure that each account and its data remains private and secure. They employ a third-party firm to conduct daily audits of their security, and data resides behind the latest in firewall and intrusion prevention technology. For more information about SurveyMonkey's privacy and security policies, go to www.surveymonkey.com.

Although your responses will not be anonymous, you will be given the opportunity to be identified by a code name in the final dissertation if you wish, or to have your blog description changed slightly so it cannot be identified by anyone. It is important for you to understand that while most of the analyses will be aggregated for statistics and will not present data from any particular blogger, portions of your open-ended responses might be used in the dissertation and research reports.

There are no foreseeable risks to you for your participation in the study. The questions you will be asked may be personal in nature, but they are aspects of life that people face on a regular basis. Personal benefits may include the opportunity to think about the positive effects of that blogging has on your identity and support system, and to contribute to blogging research in psychology. Because the questionnaire speaks to the experiences of the bloggers, I hope you will find it of interest. However, if you decide to terminate your participation in the study at any point during which you are filling out the questionnaire, you may click on the "Exit Survey" button and your answers will not be included in the final data set.

Please read the statements below and check the appropriate box. If you would like to participate but cannot do so at this time, you should check the box that declines participation in the study, and return to this page at a later point where you will have enough time to complete the entire survey. You are encouraged to print out a copy of this consent document for your records.

Please check one of the statements below:

Yes, I have read the above information and agree to participate in this research

No, I do not consent to participate in this study.

Appendix E

Message of Completion of Participation

You're done!

Thank you for your participation in this study on blogging.

I hope you enjoyed your answering the survey and thinking about why you blog. Some of the questions may have triggered you to reflect upon areas of your life that may be a source of distress for you. If for any reason you are feeling upset and would like to talk with someone, here are some websites you can look at.

<http://www.allexperts.com/el/Psychiatry-Psychology-General/>

<http://www.planetpsych.com/question.htm>

<http://www.metanoia.org/imhs/>

http://www.ismho.org/home.asp?s_url=www.ismho.org

And, if you had any concerns about the research, you can contact me at (732) 407-7928 or ltrub@gc.cuny.edu, or my advisors Dr. Arietta Slade at (212) 650-5658 or asladephd@earthlink.net and Dr. Tracey Revenson at (212) 817-8709 or trevenson@gc.cuny.edu, or Ms. Kay Powell, Institutional Review Board at the Graduate School of the City University of New York (212) 817- 7525 or kpowell@gc.cuny.edu.

If you enjoyed completing the survey, you may choose to help me “spread the word” about the study to others by posting something about the study on your blog, so that other bloggers who read your blog may have the opportunity to participate as well. People who are interested should email ltrub@gc.cuny.edu indicating their interest, and they will be sent a link directly to the questionnaire. Please remind your readers that participation is confidential; after the first email, no further contact with the investigator is necessary.

Thanks again, and please remember to close this screen when you are done.

Appendix F**References for Aim 1**

- Alonso-Arbiol, I, Balluerka, N., Shaver, P.R. & Gillath, O. (2008). Psychometric Properties of the Spanish and American Versions of the ECR Adult Attachment Questionnaire: A Comparative Study *European Journal of Psychological Assessment*, 24(1), 9–13.
- Ben-Ari, O., Findler, L., Bendet, C., Stanger, V., Ben-Shlomo, S., & Kuint, J. (2008). Mothers' marital adaptation following the birth of twins or singletons: Empirical evidence and practical insights. *Health & Social Work*, Vol 33(3), 189-197.
- Britton, P.C. & Fuendeling, J.M. (2005). The Relations Among Varieties of Adult Attachment and the Components of Empathy. *The Journal of Social Psychology*. Vol 145(5), 519-530.
- Brumbaugh, C.C. & Fraley, R. C. (2007). Transference of attachment patterns: How important relationships influence feelings toward novel people. *Personal Relationships*, 14(4), 513-530.
- Cantazaro, A. & Wei, M. (2010). Adult Attachment, dependence, self-criticism, and depressive Symptoms: A test of a mediational Model. *Journal of Personality*, 78(4), 1135–1162.
- Cassidy, J., Ziv, Y., Stupica, B., Sherman, L.J., Butler, H., Karfgin, A., Cooper, G., Hoffman, K.T, & Powell, B. (2010) Enhancing attachment security in the infants in a jail-diversion program. *Attachment & Human Development*, 12(4), 333-353.
- Diamond, L.M. & Hicks, A.M. (2005) Attachment style, current relationship security, and negative emotions: The mediating role of physiological regulation. *Journal of Social and Personal Relationships*. Vol 22(4), 499-518.

- Edelstein, R. & Gillath, O. (2008) Avoiding Interference: Adult Attachment and Emotional Processing Biases. *Personality and Social Psychology Bulletin*, 34, 171-181.
- Elwood, L.S. & Williams, N.L. (2007). PTSD-related cognitions and romantic attachment style as moderators of psychological symptoms in victims of interpersonal trauma. *Journal of Social and Clinical Psychology*, 26(10), 1189-1209.
- Feeney, J.A. (2004). Hurt feelings in couple relationships: Towards integrative models of the negative effects of hurtful events. *Journal of Social and Personal Relationships*, Vol 21(4), 487-508.
- Fuertes, J.N., Mislouack, A., Brown, S. Gur-Arie, S., Wilkinson, S. & Gelso, C.J. (2007). Correlates of the real relationship in psychotherapy: A study of dyads. *Psychotherapy Research*, 17(4), 423-430.
- Gable, S.L., Gonzaga, G.C. & Strachman, A. (2006). Will you be there for me when things go right? Supportive responses to positive event disclosures. *Journal of Personality and Social Psychology*. 91(5), 904-917.
- Gilbert, P., McEwan, K., Bellew, R., Mills, A., & Gale, C. (2009). The dark side of competition: How competitive behaviour and striving to avoid inferiority are linked to depression, anxiety, stress and self-harm. *Psychology and Psychotherapy: Theory, Research and Practice*, 82(2), 123-136.
- Haggerty, G., Blake, M., Naraine, M., Siefert, C., & Blais, M.A. (2010). Construct validity of the Schwartz Outcome Scale-10: Comparisons to interpersonal distress, adult attachment, alexithymia, the Five Factor Model, romantic relationship length and ratings of childhood memories. *Clinical Psychology & Psychotherapy*. 17(1), 44-50.

- Haggerty, G., Hilsenroth, M.J. & Vala-Stewart, R. (2009) Attachment and interpersonal distress: Examining the relationship between attachment styles and interpersonal problems in a clinical population. *Clinical Psychology & Psychotherapy*, 16(1), 1-9.
- Haggerty, G.D., Siefert, C.J. & Weinberger, J. (2010). Examining the relationship between current attachment status and freely recalled autobiographical memories of childhood. *Psychoanalytic Psychology*, 27(1), 27-41.
- Ho, M.Y., Zhang, H., Lin, D., Aitao, L., Bond, M.H., Chan, C. & Friedman, M. (2010). Saving graces: Impact of partner support and maternal attachment on partner attachments in an individualistic and a collectivist context. *Asian Journal of Social Psychology*, 13(1), 19-29.
- Horne, S.G. & Biss, W.J. (2009). Equality discrepancy between women in same-sex relationships: The mediating role of attachment in relationship satisfaction. *Sex Roles*. 60(9-10), 721-730.
- Hwang, K., Johnston, M. & Smith, J.K. (2007). Romantic attachment in individuals with physical disabilities. *Rehabilitation Psychology*, 52(2), 184-195.
- Impett, E.A., Gordon, A.M. & Strachman, A. (2008). Attachment and daily sexual goals: A study of dating couples. *Personal Relationships* 15(3), 375-390.
- Little, K.C, McNulty, J.K. & Russell, V.M. (2010) Sex buffers intimates against the negative implications of attachment insecurity. *Personality and Social Psychology Bulletin*, 36(4), 484-498.
- Locke, K.D. (2008). Attachment styles and interpersonal approach and avoidance goals in everyday couple interactions. *Personal Relationships*, 15(3), 359-374.

- Lopez, F.G. & Fons-Scheyd, A. (2008). Role balance and depression among college students: The moderating influence of adult attachment orientations. *Journal of College Counseling* 11(2), 133-146.
- Lopez, F.G. & Rice, K.G. (2006). Preliminary development and validation of a measure of relationship authenticity. *Journal of Counseling Psychology*. 53(3), 362-371.
- Mallinckrodt, B. & Chen, E.C. (2004). Attachment and Interpersonal Impact Perceptions of Group Members: A Social Relations Model Analysis of Transference. *Psychotherapy Research*. Vol 14(2), 210-230.
- Mallinckrodt, B. & Wei, M. (2005) Attachment, Social Competencies, Social Support, and Psychological Distress. *Journal of Counseling Psychology*. Vol 52(3), 358-367.
- Mansfield, A.K., Addis, M.E., Cordova, J.V., Dowd, L. (2009). Emotional skillfulness as a key mediator of aggression. *Journal of Aggression, Maltreatment & Trauma*. Vol 18(3), 221-247.
- Morris-Rothschild, B.K. & Brassard, M.R. (2006). Teachers' conflict management styles: The role of attachment styles and classroom management efficacy. *Journal of School Psychology*. Vol 44(2), 105-121.
- Mosko, J.E. & Pistole, M.C. (2010). Attachment and religiousness: Contributions to young adult marital attitudes and readiness. *The Family Journal*, 18(2), 127-135.
- Ng, K. & Smith, S.D. (2006). The Relationships Between Attachment Theory and Intergenerational Family Systems Theory. *The Family Journal*. 14(4), 430-440.
- Phillips, J., Sharpe, L., Matthey, S., Charles, M. (2010). Subtypes of postnatal depression? A comparison of women with recurrent and de novo postnatal depression. *Journal of Affective Disorders*. 20(1-3), 67-75.

- Pistole, M.C., Roberts, A. & Mosko, J.E. (2010). Commitment predictors: Long-distance versus geographically close relationships. *Journal of Counseling and Development*, 88(2), 146-153.
- Riggs, S.A. & Kaminski, P. (2010). Childhood emotional abuse, adult attachment, and depression as predictors of relational adjustment and psychological aggression. *Journal of Aggression, Maltreatment & Trauma*. 19(1), 75-104.
- Riggs, S.A., Vosvick, M. & Stallings, S.(2007) Attachment style, stigma and psychological distress among HIV+ adults. *Journal of Health Psychology*. 12(6), 922-936.
- Roberto, A.J., Carlyle, K.E., Goodall, C.E. & Castle, J.D. (2009). The relationship between parents' verbal aggressiveness and responsiveness and young adult children's attachment style and relational satisfaction with parents. *Journal of Family Communication*. Vol 9(2), 90-106.
- Romano, V., Fitzpatrick, M., & Janzen, J. (2008). The secure-base hypothesis: Global attachment, attachment to counselor, and session exploration in psychotherapy. *Journal of Counseling Psychology*, 55(4), 495-504.
- Romano, V., Janzen, J.I., & Fitzpatrick, M.R. (2009). Volunteer client attachment moderates the relationship between trainee therapist attachment and therapist interventions. *Psychotherapy Research*, 19(6), 666-676.
- Shaver, P.R., Schachner, D.A. & Mikulincer, M. (2005). Attachment Style, Excessive Reassurance Seeking, Relationship Processes, and Depression. *Personality and Social Psychology Bulletin*, Vol 31(3), 343-359.

- Shea, A.J., Slaney, R.B. & Rice, K.G. (2006), Perfectionism in Intimate Relationships: The Dyadic Almost Perfect Scale. *Measurement and Evaluation in Counseling and Development*, 39(2), pp. 107-125.
- Shiota, M.N., Campos, B., Gonzaga, G.C., Keltner, D. & Peng, K. (2010) I love you but...: Cultural differences in complexity of emotional experience during interaction with a romantic partner. *Cognition & Emotion*, 24(5), 786-799.
- Snir, S. & Wiseman, H. (2010). Attachment in romantic couples and perceptions of a joint drawing session. *The Family Journal: Counseling and Therapy for Couples and Families*, 18(2).
- Swanson, B. & Mallinckrodt, B. (2001). Family environment, love withdrawal, childhood sexual abuse, adult attachment. *Psychotherapy Research*. Vol 11(4), 455-472.
- Wang, C.D. & Mallinckrodt, B.S. (2006). Differences between Taiwanese and U.S. cultural beliefs about ideal adult attachment. *Journal of Counseling Psychology*. 53(2), 192-204.
- Wei, M. & Ku, T. (2007). Testing a conceptual model of working through self-defeating patterns. *Journal of Counseling Psychology*. Special Issue: Racial and ethnic identity theory, measurement, and research in counseling psychology: *Present status and future directions*, 54(3), 295-305.
- Wei, M., Russell, D.W., Mallinckrodt, B. & Vogel, D.L. (2007). The Experiences in Close Relationship Scale (ECR)-short form: Reliability, validity, and factor structure. *Journal of Personality Assessment*. Vol 88(2), 187-204.
- Wei, M., Russell, D.W., Mallinckrodt, B. & Zakalik, R.A. (2004) Cultural Equivalence of Adult Attachment Across Four Ethnic Groups: Factor Structure, Structured Means, and

Associations With Negative Mood. *Journal of Counseling Psychology*. Vol 51(4), 408-417.

Wood, E. & Riggs, S. (2008). Predictors of child molestation: Adult attachment, cognitive distortions, and empathy. *Journal of Interpersonal Violence*. 23(2), 259-275.

Woodhouse, S.S. & Gelso, C.J. (2008). Volunteer client adult attachment, memory for in-session emotion, and mood awareness: An affect regulation perspective. *Journal of Counseling Psychology*, 55(2), 197-208.

Zakalik, R.A. & Wei, M. (2006). Adult attachment, perceived discrimination based on sexual orientation, and depression in gay males: Examining the mediation and moderation effects. *Journal of Counseling Psychology*. Vol 53(3), 302-313.

References

- Aboujaoude, E. (2011) *Virtually You: The Dangerous Powers of the E-Personality*. New York: W.W. Norton
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, N.J.: Erlbaum.
- Allen, E.S. & Baucom, D.H. Adult Attachment and Patterns of Extradynamic Involvement. *Family Process*, 43(4) 467-487.
- Amichai-Hamburger, Y., Wainapel, G., & Fox, S. (2002). "On the Internet No One Knows I'm an Introvert": Extroversion, Neuroticism, and Internet Interaction. *CyberPsychology & Behavior*, 5(2) 125-128.
- Amichai-Hamburger, Y. & Ben-Artzi, E. (2003) Loneliness and Internet use. *Computers in Human Behavior* 19(1), 71-80. doi:10.1016/S0747-5632(02)00014-6.
- Aviram, I. & Amichai-Hamburger, Y. (2005) Online Infidelity: Aspects of Dyadic Satisfaction, Self-Disclosure, and Narcissism. *Journal of Computer-Mediated Communication*, 10(3) article 1. Available online at <http://jcmc.indiana.edu/vol10/issue3/aviram.html>.
- Badger, M. (2004) Visual Blogs. In L.J. Gurak, S. Antonijevic, L. Johnson, C. Ratliff, & J. Reyman (Eds.), *Into the blogosphere: Rhetoric, community, and culture of weblogs*. Retrieved Nov. 15, 2008 from http://blog.lib.umn.edu/blogosphere/visual_blogs.html.
- Baker, J.R. & Moore, S.M. (2008). Distress, Coping, and Blogging: Comparing New Myspace Users by Their Intention to Blog. *CyberPsychology & Behavior*. 11(1), 81-85. doi:10.1089/cpb.2007.9930.
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7, 147-178.

- Bartholomew, K. & Horowitz, L. (1991) Attachment Style Among Young Adults: A Test of a Four-Category Model. *Journal of Personality and Social Psychology*, 61(2), 226-244.
- Bartholomew, K. & Shaver, P.R. Methods of Assessing Adult Attachment: Do they Converge? From J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 25-45). New York: Guilford Press, 1998.
- Beaudoin, C.E. (2008) Explaining the Relationship between Internet Use and Interpersonal Trust: Taking into Account Motivation and Information Overload *Journal of Computer Mediated Communication* 13(3), 550-568.
- Blatt, S.J. (1974). Levels of Object Representation in Anaclitic and Introjective Depression. *Psychoanalytic Study of the Child*, 29, 107-157
- Blatt, S. (1990) Representational Structures in Psychopathology. Presented at the Annual Meeting of the Rapaport-Klein Study Group. Retrieved Nov. 15, 2008 from <http://www.psychomedia.it/rapaport-klein/blatt1-90.htm>.
- Blood, Rebecca. (2000, Sept. 7). Weblogs: A History and Perspective, Rebecca's Pocket. Message posted to http://www.rebeccablood.net/essays/weblog_history.html.
- Blog. (n.d.). In Wikipedia, the free encyclopedia. Retrieved November 15, 2008, from <http://en.wikipedia.org/wiki/Blog>.
- Bolton, G., Howlett, S., Lago, C., & Wright, J.K. (Eds.) (2004). *Writing cures: An introductory handbook of writing in counseling and therapy*. New York: Brunner-Routledge.
- Bortree, D.S. (2005). Presentation of self on the Web: An ethnographic study of teenage girls' weblogs. *Education, Communication and Information Journal*, 5(1) doi 10.1080/14636310500061102.
- Bowlby, J. (1959). Separation anxiety. *International Journal of Psycho-Analysts*, XLI, 1-25.

- Bowlby, J. (1960). Grief and mourning in infancy and early childhood. *The Psychoanalytic Study of the Child*, VX, 3-39.
- Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss, Vol. 2: Separation*. New York: Basic Books.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. New York: Methuen.
- Bowlby, J. (1980). *Attachment and loss, Vol. 3: Loss, sadness and depression*. New York: Basic Books.
- Brennan, K. A., & Bosson, J. K. (1998). Attachment-style differences in attitudes toward and reactions to feedback from romantic partners: An exploration of the relational bases of self-esteem. *Personality and Social Psychology Bulletin*, 24 (7), 699-715.
- Brennan, K.A., Clark, C.L. & Shaver, P.R. (1998) Self-report measurement of adult romantic attachment: An Integrative Overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York: Guilford Press.
- Brewin, C.R. & Lennard, H. (1999). Effects of mode of writing on emotional narratives. *Journal of Traumatic Stress*, 12, 355-361.
- Broderick, J. E., Junghaenel, D. U., & Schwartz, J. E. (2005). Written emotional expression produces health benefits in fibromyalgia patients. *Psychosomatic Medicine*, 67, 326-334.
- Bylsma, W. H., Cozzarelli, C., & Sumer, N. (1997). Relation between adult attachment styles and global self-esteem. *Basic and Applied Social Psychology*, 19, 1 – 16.
- Cameron, L. D., & Nicholls, G. (1998). Expression of stressful experiences through writing: Effects of a self-regulation manipulation for pessimists and optimists. *Health Psychology*, 17, 84-92.

- Caplan, S.E. (2007) Relations Among Loneliness, Social Anxiety, and Problematic Internet Use *CyberPsychology & Behavior*. 10(2), doi: 10.1089/cpb.2006.9963.
- Chak, K. & Leung, L. (2004) Shyness and Locus of Control as Predictors of Internet Addiction and Internet Use. *CyberPsychology & Behavior*. 7(5), 559-570.
- Chung, C.K. & Pennebaker, J.W. (2007). The psychological function of function words. In K. Fiedler (Ed.), *Social communication: Frontiers of social psychology* (pp. 343-359). New York: Psychology Press.
- Chused, J.F. (1991) The evocative power of enactment. *Journal of the American Psychoanalytic Association*, 39(3), 615–639.
- Cassidy, J. (1994) Emotion Regulation: Influences of Attachment Relationships. *Monographs of the Society for Research in Child Development*, 59 (2/3), The Development of Emotion Regulation: Biological and Behavioral Considerations, 228-249.
- Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development*, 65, 971–981.
- Crowell, J. A., & Feldman, S. S. (1991). Mothers' working models of attachment relationships and mother and child behavior during separation and reunion. *Developmental Psychology*, 27, 597-605.
- Curtis, A.E. (2007) The Clastrum: Sequestration of Cyberspace. *Psychoanalytic Review* 94(1), 99-139.
- Davidovitz, Mikulincer, Shaver, Ijzak, & Popper (1997) Leaders as attachment figures: Leaders' attachment orientations predict leadership-related mental representations and followers' performance and mental health. *Journal of Personality and Social Psychology*, 93(4), 632-650.

- Dryer, J.A. & Litmaer, R.M. (2007) Cyber-sex as Twilight Zone between Virtual Reality and Virtual Fantasy: Creative Play Space or Destructive Addiction? *Psychoanalytic Review* 94(1), 39-61.
- Ebeling-Witte, S., Frank, M., & Lester, D. (2007) Shyness, Internet Use, and Personality. *CyberPsychology & Behavior*. 10(5), 713-716
- Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication*, 11(2), article 2. Available online at <http://jcmc.indiana.edu/vol11/issue2/ellison.html>
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), article 1. Available online at <http://jcmc.indiana.edu/vol12/issue4/ellison.html>
- Erikson, E.H. (1968). *Identity: Youth and Crisis*. New York: Norton.
- Facebook. (2011). Statistics. Retrieved Feb 20, 2011 from <http://www.facebook.com/press/info.php?statistics>
- Fraley, R. C. & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77-114). New York: Guilford Press.
- Freud, S. (1940) An Outline of Psychoanalysis. *The Standard Edition of the Complete Psychological Works of Sigmund Freud, XXI*,
- Gabbard, G. (2001) Cyberpassion: E-erotic transference on the Internet. *Psychoanalytic Quarterly*, 60, 719-738.

- Gibbs, P.L. (2007) Reality in Cyberspace: Analysands' Use of the Internet and Ordinary Everyday Psychosis. *Psychoanalytic Review*, 94(1), 11-38
- Gonzales, A.L. & Hancock, J.T. (2011) Mirror, mirror on my Facebook wall: Effects of Exposure to Facebook and Self-Esteem *Cyberpsychology, Behavior and Social Networking* 14 (1-2) 79-83
- Guadagno, R., Okdie, B., & Eno, C. (2008). Who blogs? Personality predictors of blogging. *Computers in Human Behavior*, 24(5). doi: 10.1016/j.chb.2007.09.001.
- Gumbrecht, M. (2005). Blogs as 'protected space'. Reprinted in D. Satish & K. R. Prabhakar (Eds.), *Blogs: Emerging Communication Media* (pp. 79-91). Hyderabad, India: ICFAI University Press.
- Habermas, Jürgen (1979). *Communication and the Evolution of Society*. Toronto: Beacon Press.
- Haft, W. L., & Slade, A. (1989). Affect attunement and maternal attachment: A pilot study. *Infant Mental Health Journal*, 10, 157-172.
- Hardie, E., & Tee, M.Y. (2007) Excessive Internet Use: The Role of Personality, Loneliness and Social Support Networks in Internet. *Australian Journal of Emerging Technologies and Society*, 5(1), 34-47.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Hayduk, L. (1987) *Structural Equation Modeling with LISREL -- Essentials and Advances*, The Johns Hopkins University Press, Baltimore, (pp. 118-123).
- Heidegger, M. (1977). The question concerning technology. In *The question concerning technology and other essays* (pp. 3-35) (W. Lovitt, Trans.). New York: Harper & Row. (Original published 1954).

- Herring, S. C., Scheidt, L. A., Bonus, S., & Wright, E. (2004). Bridging the gap: A genre analysis of weblogs. *Proceedings of the 37th Hawai'i International Conference on System Sciences (HICSS-37)*. Los Alamitos: IEEE Press. Retrieved November 15, 2008 from <http://www.blogninja.com/DDGDD04.doc>
- Hodkinson, P. (2007) Interactive Online Journals and Individualisation. *New Media and Society*, 9(4)
- Hourihan, M. (2002) What We're Doing When We Blog. Available online at <http://scripting.com/davenet/2002/07/31/megHourihanWhatWereDoingWh.html>
- Hourihan, M., Bausch, P., & Haughey, M. (2002) *We Blog: Publishing Online with Weblogs*. Indianapolis, IN: Wiley Publishing.
- Hsu, C. & Lin, C. (2008) Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation, *Information & Management*, 45(1), 65-74
- Huang, C., Shen, Y., Lin, H., & Chang, S. (2007). Blogger's Motivations and Behaviors: A Model. *Journal of Advertising Research*. 47(4), 472-484 doi: 10.251/S0021849907070493
- Huffaker, D.A., & Calvert, S.L. (2005). Gender, identity, and language use in teenage blogs. *Journal of Computer-Mediated Communication*, 10(2). Available online at <http://jcmc.indiana.edu/vol10/issue2/huffaker.html>.
- Kavanaugh, A., Carroll, J. M., Rosson, M. B., Zin, T. T., & Reese, D. D. (2005). Community networks: Where offline communities meet online. *Journal of Computer-Mediated Communication*, 10(4), article 3. Available online at <http://jcmc.indiana.edu/vol10/issue4/kavanaugh.html>

- Kiesler, S., Siegel, J., & McGuire, T. (1984). Social Psychological Aspects of Computer-Mediated Communication. *American Psychologist*, 39(10), 1123-1134.
- Klein, Mélanie (1946). Notes on some schizoid mechanisms. *Envy and gratitude and other works 1946-1963*. Hogarth Press and the Institute of Psycho-Analysis (published 1975).
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2001) Internet Paradox Revisited *Journal of Social Issues* 58(1), 49-74. doi: 10.1111/1540-4560.00248
- Lampel, J., & Bhalla, A. (2007). The role of status seeking in online communities: Giving the gift of experience. *Journal of Computer-Mediated Communication*, 12(2), article 5.
<http://jcmc.indiana.edu/vol12/issue2/lampel.html>
- Lei, L., & Wu, Y. (2007). Adolescents' Paternal Attachment and Internet Use *CyberPsychology & Behavior*, 10(5) 633-639. doi:10.1089/cpb.2007.9976.
- Lento, T., Wesler, H.T., Smith, M. & Lei, G. (2006). The Ties that Blog: Examining the Relationship Between Social Ties and Continued Participation in the Wallop Weblogging System. In 3rd Annual Workshop on the Weblogging Ecosystem.
- Lepore, S. J., & Revenson, T. A. (2007). Social constraints on disclosure and adjustment to cancer. *Social & Personality Psychology Compass: Health*, 1 (1), 313-333.
- Levy, K.M., Blatt, S.J., & Shaver, P.R. (1998). Attachment style and parental representations. *Journal of Personality & Social Psychology*, 74(2), 407-419.
- Lewin, K. (1935) *A dynamic theory of personality*. New York: McGraw-Hill.
- Lin, Y.C., Wang, C., & Wu, C.H. (2005). The influence of attachment styles and Internet interpersonal interactions on Internet addiction [Abstract]. *Chinese Journal of Psychology*, 47, 289-309. [Full text in Chinese only].

- Lopez, F. G., Mitchell, P., & Gormley, B. (2002). Adult attachment and college student distress: Test of a mediational model. *Journal of Counseling Psychology, 49*, 460–467.
- MacKinnon, J.L., & Marcia, J.E. (2002). Concurring patterns of women's identity status, attachment styles, and understanding of children's development. *International Journal of Behavioral Development, 26*, 70–80.
- Main, M., Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing Points in Attachment Theory and Research: Monographs of the Society for Social Research in Child Development, 50* (1-2, Serial no. 209), 66-104.
- Mallinckrodt, B., & Wei, M. (2005). Attachment, social competence, social support, and psychological distress. *Journal of Counseling Psychology, 52*, 358-367.
- McKenna, K.Y.A. & Bargh, J.A. (1998) Coming out in the age of the Internet: identity 'demarginalization' through virtual group participation. *Journal of Personality and Social Psychology, 75*(6) 81–94.
- Moody, E.J. (2001) Internet Use and Its Relationship to Loneliness. *CyberPsychology & Behavior. 4*(3), 393-401.
- Mikulincer, M., Shaver, P. & Pereg, D. (2003) Attachment Theory and Affect Regulation: The Dynamics, Development, and Cognitive Consequences of Attachment-Related Strategies *Motivation and Emotion, 27*(2) 77-102.
- Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 53–152). New York: Academic Press.

- Mikulincer, M. & Shaver, P. (2007) Reflections on Security Dynamics: Core Constructs, Psychological Mechanisms, Relational Contexts, and the Need for an Integrative Theory. *Psychological Inquiry*, 18(3), 197-209
- Mikulincer, M., Shaver, P. R., Bar-On, N., & Ein-Dor, T. (2010). The Pushes and Pulls of Close Relationships: Attachment Insecurities and Relational Ambivalence. *Journal of Personality and Social Psychology*, 98, 450-468.
- Miller, C.R. & Shepherd, D. (2004). "Blogging as Social Action: A Genre Analysis of the Weblog" In L.J. Gurak, S. Antonijevic, L. Johnson, C. Ratliff, & J. Reyman (Eds.), *Into the blogosphere: Rhetoric, community, and culture of weblogs*. Retrieved Nov. 15, 2008 http://blog.lib.umn.edu/blogosphere/blogging_as_social_action_a_genre_analysis_of_the_weblog.html
- Miura, A., & Yamashita, K. (2007). Psychological and social influences on blog writing: An online survey of blog authors in Japan. *Journal of Computer-Mediated Communication*, 12(4), article 15. Available online at <http://jcmc.indiana.edu/vol12/issue4/miura.html>
- Nardi, B. A., Schiano, D. J., & Gumbrecht, M. (2004). Blogging as social activity, or, would you let 900 million people read your diary? *Proceedings of the 2004 ACM Conference on Computer Supported Cooperative Work*, pp. 222-231.
- Newcomb, M. & Bentler, P. (1988) *Consequences of Adolescent Drug Use*, Sage Publications, Newbury Park, Ca., p. 263.
- Parker, I. (2007) Psychoanalytic Cyberspace: Beyond Psychology *Psychoanalytic Review* 94(1) 63-82.

- Pedersen, S., & Macafee, C. (2007). Gender differences in British blogging. *Journal of Computer-Mediated Communication*, 12(4), article 16. Available online at <http://jcmc.indiana.edu/vol12/issue4/pedersen.html>
- Pennebaker, J.W. & Beall, S.K. (1986). Confronting a traumatic event: Toward an understanding of inhibition and disease. *Journal of Abnormal Psychology*, 95, 274-281.
- Pennebaker, J.W. & Francis, M.E. (1996). Cognitive, emotional, and language processes in disclosure. *Cognition and Emotion*, 10, 601-626.
- Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001). *Linguistic inquiry and word count (LIWC): LIWC2001*. Mahwah: Lawrence Erlbaum.
- PEW Internet and American Life Project (2005). The State of Blogging. Retrieved December 15, 2008, from http://www.pewInternet.org/PPF/r/144/report_display.asp
- PEW Internet and American Life Project (2006). Bloggers: A portrait of the Internet's New Storytellers. Washington: Pew Internet & American Life. Retrieved October 1, 2006, from http://207.21.232.103/PPF/r/186/report_display.asp
- PEW Internet and American Life Project (2007). Teens and Social Media: The use of social media gains a greater foothold in teen life as they embrace the conversational nature of interactive online media. Retrieved December 15, 2008, from http://www.pewInternet.org/PPF/r/230/report_display.asp
- PEW Internet and American Life Project (2008). New Numbers for Blogging and Blog Readership Retrieved March 22, 2011, from <http://www.pewinternet.org/Commentary/2008/July/New-numbers-for-blogging-and-blog-readership.aspx>

- PEW Internet and American Life Project (2010). Social Media and Young Adults. Retrieved February 20, 2011, from <http://www.pewinternet.org/Reports/2010/Social-Media-and-Young-Adults/Summary-of-Findings.aspx>
- Qazvinian, V., Rassouliau, A. & Adibi, J. (2007) Observations on Failure in Blogs. In the proceedings of 12th International Joint Conference on Weblogs and Social Media (ICWSM07). Boulder, Colorado.
- Qian, H., & Scott, C. R. (2007). Anonymity and self-disclosure on weblogs. *Journal of Computer-Mediated Communication*, 12(4), article 14. Available online at <http://jcmc.indiana.edu/vol12/issue4/qian.html>
- Reich, W.A. & Siegel, H.I. (2002). Attachment style, ego development, and exploratory interest in university students. *Asian Journal of Social Psychology* 5: 125-134.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Rubenstein, C., & Shaver, P. R. (1982). The experience of loneliness. In L.A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research, and therapy* (pp. 206-223). New York: Wiley-Interscience.
- Russell, D. (1996). The UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66, 20-40.
- Russell, D., Peplau, L.A., & Cutrona, C.E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39, 472-480.
- Sand, S. (2007) Future Considerations: Interactive and the Interactive Self. *Psychoanalytic Review* 94(1), 83-97.

- Schachner, D. A., Shaver, P. R., & Mikulincer, M. (2005). Patterns of nonverbal behavior and sensitivity in the context of attachment relationships. *Journal of Nonverbal Behavior*, 29, 141-169.
- Schiano, D. J., Nardi, B. A., Gumbrecht, M & Swartz, L. (2004). Blogging by the rest of us. Reprinted in D. Satish & K.R. Prabhakar (Eds.), *Blogs: Emerging communication media* (pp. 67- 76). Hyderabad, India: ICFAI University Press.
- Schirmacher, W. (2007) Net Culture *Psychoanalytic Review* 94(1), 141-149.
- Schmidt, N. & Sermat, V. (1983). Measuring loneliness in different relationships. *Journal of Personality and Social Psychology*, 44, 1038-1047.
- Schmitt, K. L., Dayanim, S. & Matthias, S. (2008) Personal home page construction as an expression of social development. *Developmental Psychology*, 44(2), 496-506
- Schultheiss, D. P., & Blustein, D. L. (1994). The role of adolescent-parent relationships in college student development and adjustment. *Journal of Counseling Psychology*, 41, 248-255.
- Shaver, P.R., & Fraley, R.C. (2010) Self Report Measures of Adult Attachment. Available online at <http://internal.psychology.illinois.edu/~rcfraley/measures/measures.html> (article orig. pub. 1997).
- Shaver, P.R. & Mikulincer M. (2002). Attachment-related psychodynamics. *Attachment and Human Development*, 4, 133-161.
- Shaw, L.H. & Gant, L.M. (2002) In Defense of the Internet: The Relationship between Internet Communication and Depression, Loneliness, Self-Esteem, and Perceived Social Support *CyberPsychology & Behavior*. 5(2) 157-171. doi:10.1089/109493102753770552.

- Shirky, C. (2010) *Cognitive Surplus: Creativity and Generosity in a Connected Age*. New York: Penguin Press.
- Silverman, T. (1999). The Internet and relational theory. *The American Psychologist*, 54, 780-781.
- Sloan, D. M., Marx, B. P., Epstein, E. M., & Dobbs, J. L. (2008). Expressive writing buffers against maladaptive rumination. *Emotion*, 8, 302-306.
- Spangler, G. & Grossmann, K.E. (1993). Biobehavioral organization in securely and insecurely attached infants. *Child Development*, 64, 1439-1450.
- Spears, R., & Lea, M. (1994). Panacea or panopticon? The hidden power in computer-mediated communication. *Communication Research* 21(4), 427-459.
- Stefanone, M. A., & Jang, C.-Y. (2007). Writing for friends and family: The interpersonal nature of blogs. *Journal of Computer-Mediated Communication*, 13(1), article 7. Available online at <http://jcmc.indiana.edu/vol13/issue1/stefanone.html>.
- Suler, J.R. (1998) Mom, Dad, Computer: Transference Reactions to Computers, In *The Psychology of Cyberspace*. Available online at <http://users.rider.edu/~suler/psycyber/comprtransf.html> (article orig. pub. 1996).
- Suler, J.R. (2000) Bringing Online and Offline Living Together: The Integration Principle. In *The Psychology of Cyberspace*. Available online at <http://users.rider.edu/~suler/psycyber/integrate.html>.
- Suler, J.R. (2002a). The basic psychological features of cyberspace. In *The Psychology of Cyberspace*. Available online at www.rider.edu/suler/psycyber/basicfeat.html (article orig. pub. 1996).

- Suler, J.R. (2002b) Identity Management in Cyberspace. *Journal of Applied Psychoanalytic Studies*, 4, 455-460.
- Suler, J.R. (2003) Presence in Cyberspace. In *The Psychology of Cyberspace*. Available online at <http://users.rider.edu/~suler/psycyber/presence.html>.
- Suler, J.R. (2004a). The online disinhibition effect. *CyberPsychology and Behavior*, 7, 321-326.
- Suler, J.R. (2004b) Personality Types in Cyberspace In *The Psychology of Cyberspace*. Available online at <http://users.rider.edu/~suler/psycyber/personotypes.html> (article orig. pub. 1998).
- Suler, J.R. (2004c) The Final Showdown Between In-Person and Cyberspace Relationships In *The Psychology of Cyberspace*. Available online at <http://users.rider.edu/~suler/psycyber/showdown.html> (article orig. pub. 1997).
- Swickert, R. J., Hittner, J. B., Harris, J. L., & Herring, J. A. (2002). Relationships among Internet use, personality, and social support. *Computers in Human Behavior*, 18, 437-451.
- Trevino, E.M. (2005). Blogger motivations: Power, pull, and positive feedback. Internet Research 6.0 Retrieved Nov 15 2008 from <http://blog.erickamenchen.net/MenchenBlogMotivations.pdf>
- Turkle, S. (1995). *Life on the Screen: Identity in the Age of the Internet*. New York: Simon and Schuster.
- Turkle, S. (2004). Whither Psychoanalysis in Computer Culture? *Psychoanalytic Psychology*, 21, 16-30.
- Viégas, F. B. (2005). Bloggers' expectations of privacy and accountability: An initial survey. *Journal of Computer-Mediated Communication*, 10(3), article 12. Available online at <http://jcmc.indiana.edu/vol10/issue3/viegas.html>.

- Walther J.B., Anderson J.F., & Park, D.W. (1994) Interpersonal effects in computer-mediated interaction: a meta-analysis of social and antisocial communication. *Communication Research* 21(4) 60–87.
- Ward, C.C., & Tracey, T. (2004). Relation of shyness with aspects of online relationship involvement. *Journal of Social and Personal Relationships*, 21(5), 611-623.
doi:10.1177/0265407504045890.
- Wei, M., Heppner, P. P., & Mallinckrodt, B. (2003). Perceived coping as a mediator between attachment and psychological distress: A structural equation modeling approach. *Journal of Counseling Psychology*, 50, 438-447.
- Winnicott, D.W. (1953). Transitional objects and transitional phenomena. *International Journal of Psycho-Analysis*, 34, 89-97
- Wu, C. H. & Lin, Y. C. (2005). The influence of adult attachment styles on the sense of trust to cyber others and the cyber self certainty. *Journal of Cyber Culture and Information Society*, 9, 325-342. [Abstract]. *Chinese Journal of Psychology*, 47, 289-309. [Full text in Chinese only].
- Ye, J. (2007) Attachment Style Differences in Online Relationship Involvement: An Examination of Interaction Characteristics and Relationship Satisfaction. *CyberPsychology & Behavior*, 10(4), 605-607. doi:10.1089/cpb.2007.9982.
- Zakowski, S. G., Ramati, A., Morton, C., Johnson, P., & Flanigan, R. (2004). Written emotional disclosure buffers the effects of social constraints on distress in cancer patients. *Health Psychology*, 23, 555-563.

Zezzatti, C.A.O.O., Aguilar, J.A.H., Campos, S.G., Vázquez, A.C., & Gallegos, J.C.P. (2008)

Evaluating the Authority in a Weblog Community *Computación y Sistemas* 11(4), 370-

380. Available online at www.ejournal.unam.mx/cys/vol11-04/CYS011000405.pdf.

Zhao, S. (2006). Do Internet users have more social ties? A call for differentiated analyses of

Internet use. *Journal of Computer-Mediated Communication*, 11(3), article 8. Available

online at <http://jcmc.indiana.edu/vol11/issue3/zhao.html>.