

BLOGGING AND SELF-DISCLOSURE: THE ROLE
OF ANONYMITY, SELF-AWARENESS,
AND PERCEIVED AUDIENCE

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ABSTRACT

Research indicates that the self-disclosure of personal views may occur more often online but that the repercussions for such disclosure may have severely negative consequences (Bargh & McKenna, 2004; Bray, 2004; Nussbaum, 2004). The current study sought to obtain a better understanding of the effect of anonymity, self-awareness, and perceived audience on self-disclosure. The experimental design was a 2 (Anonymity: high vs. low) by 3 (Perceived audience: none vs. limited vs. everyone) between subjects design. Self-awareness—assessed using a measure of trait self-consciousness—was investigated as a mediator of the relation between self-disclosure and the independent variables. To examine this, participants visited the lab at two times. At time 1, they filled out individual difference measures. At time 2, participants were told that they were helping test new blogging software and were asked to write about the typical day of a student. Anonymity was manipulated by either asking participants to enter their full name as their userid (low anonymity) or were told their anonymous userid would be “green”. Participants were then told that their blog entry would be deleted, visible to all participants in the study, or published to the Internet and visible to all. Results indicated that, while the manipulation check data revealed that the manipulations worked as intended, the analysis of the blog entries indicated that there were no significant differences in self-disclosure. Thus, our results suggest that individuals who self-disclose online are not affected by anonymity or audience size.

DEDICATION

This dissertation is dedicated to my son Wyatt Michael Okdie and my wife Amanda Stephanie Okdie. They are (and always have been) my motivation to be the best person that I can be.

LIST OF ABBREVIATIONS AND SYMBOLS

e.g.	Exempli gratia or for example
i.e.	Id est or that is
v.s.	versus
F	Fisher's F ratio
p	Probability associated with the occurrence under the null hypothesis of a value at least as extreme as the observed value
SE_b	Standard error of the beta
=	Equal to
M	Mean
SD	Standard deviation
t	Computed value of a t -test
α	Cronbach's Alpha reliability coefficient
η^2_p	Partial eta squared effect size measure
Wilk's λ	Wilk's Lambda multivariate test statistic
LIWC	Linguistic Inquiry Word Count text analysis program
ANOVA	Analysis of variance
CMC	Computer-mediated communication
FtF	Face-to-face

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CHAPTER 1

INTRODUCTION

In 2006, a 21 year old English blogger who calls himself “Stevo” was relocated away from his hometown by the company he worked for. The young café manager was unhappy about being transferred miles from his hometown and expressed his discontent with the relocation in an online diary, noting that his new town was a “s**t hole!!” In addition to writing disparagingly about the town in his online entry, he made reference to his job as the new manager of the local coffee shop. Not long after he published his blog entry on the Internet, residents of the town angrily gathered outside the coffee shop. Following threats of boycotts and bodily harm by the town’s residents, police were called, and “Stevo” was promptly escorted out of town. While the events noted above seem extreme, similar shocking incidents of individuals suffering negative life consequences for disclosing personal information online have become increasingly common as new ways of online self-expression such as blogging increase in popularity (Bray, 2004; Nussbaum, 2004; O’Shea, 2003; Pax, 2003). The story noted above raises a question: Why would an individual post personal and potentially damaging information online in a public domain?

The purpose of the current study is to examine social psychological variables that may affect self-disclosure in online environments such as a blog. If variables that increase online self-disclosure can be identified, then predicting when individuals are likely to self-disclose becomes more likely. Thus, the current study examines how anonymity, self-awareness, and perceived audience size affect self-disclosure within a fictitious blog. While the outcome of each of these variables has been examined independently, little empirical research has examined the

interactions and relative effects of each of these variables. The current study examines how relative anonymity, self-awareness, and perceived audience each contribute to self-disclosure in individuals who use new media. By independently manipulating some of the factors that likely affect individuals interaction via computer-mediated communication (CMC), the current study investigates the extent to which each variable contributes to self-disclosure exhibited in online contexts. Thus, the study examines these variables individually and synergistically yielding a more complete understanding of the simultaneous role each variable plays in psychological outcomes such as the self-disclosure of individuals using new technologies.

Weblogging. The Internet has increasingly become a medium for interpersonal communication. This increase has manifested in the creation of numerous methods of online self-expression (e.g., social networking sites, personal webpages) that require little computer knowledge and facilitate the disclosure of personal information. One popular method of online self-expression is a weblog (also known as a blog).

Blogs appear on personal websites and are journal like essays that are typically updated regularly by their creator. The journal-like entries or “posts” appear in reverse chronological order such that the most recent post appears at the top page of the blog (Herring, Scheidt, Wright, & Bonus, 2005). Topics of blog posts can range from personal (e.g., a log of daily activities, information about friendships and relationships) to more non-intimate topics such as celebrity gossip, political opinions, news, and other information. Most blogging platforms are user friendly and afford individuals with little technological experience the opportunity to create and maintain blogs—likely contributing to large numbers of bloggers. In addition to the simplicity of blogging platforms, individual differences such as gender and personality contribute individuals’ propensity to keep a blog (Guadagno, Okdie, & Eno, 2008). Specifically, research indicates that

women high in openness to new experience and neuroticism (i.e., emotional reactivity) may be more likely to keep a blog. As blogging is a relatively novel form of online self-expression, it is likely that creative individuals who are willing to try new things, such as those high in openness to new experience, would be more likely to blog. Moreover, individuals high in neuroticism may use blogging to decrease feelings of loneliness, increase perceptions of togetherness, and to reach out and form new social connections. To the extent that maintaining a personal blog can be seen as a form of self-disclosure, it may also serve a similar psychological purpose and lead to effects often associated with other more traditional forms of self-disclosure like diaries.

Anonymity

The relative anonymity afforded by the Internet is thought to play a key role in behavior online (McKenna & Bargh, 2000). Experiencing anonymity—a state in which the personal identity of oneself and/or others is unknown—influences human behavior in both positive (Prentice-Dunn & Rogers, 1980; Schwartz & Gottlieb, 1980; Spivey & Prentice-Dunn, 1990) and negative (Zimbardo, 1969; Dion, 1971; Gergen, Gergen, & Barton, 1973) ways. There are a wide variety of contexts in which an individual may be anonymous, such as being a part of a large group or wearing clothing that obstructs one's identity. Contemporary advances in technology have given rise to additional situations in which individuals may perceive themselves to be anonymous (e.g., when communicating via email, instant messaging, or blogging). These situations primarily involve individuals interacting with others through some form of mediated communication via the Internet.

While the literature indicates that anonymity plays a large role in online behavior, it has also been used to explain a variety of offline behaviors. For instance, some research supports the notion that covering one's identity—thereby creating anonymity—results in both more violence

(Silke, 2003) and prosocial behavior (Schwartz & Gottlieb, 1980). Thus, when individuals are anonymous their behavior is likely to differ from when they are identifiable (LeBon, 1896, 1960; Schwartz & Gottlieb, 1980; Zimbardo, 1969). As a result, one question I seek to address in the present investigation is whether the relative anonymity afforded by online communication modalities translates into similar behavior online?

One of the most salient and researched characteristics of CMC is its ability to provide a relatively anonymous context in which individuals can interact with one another (McKenna & Bargh, 2000; Postmes, Spears, Sakhel, & de Groot, 2001). When interacting in most online environments (e.g., instant messaging chat rooms, message boards, games, and personal websites), individuals may be relatively anonymous, if they so choose. Anonymity has been shown to have significant consequences on interpersonal behavior both in face-to-face (FtF) (LeBon, 1896, 1960; Schwartz & Gottlieb, 1980; Zimbardo, 1969) and CMC (Amichai-Hamburger & McKenna, 2006; Bargh, McKenna, & Fitzsimons, 2002; Postmes, et al., 2001).

It is important to note that the level of anonymity experienced online is a function of both the amount of anonymity afforded by the specific communication mode (e.g., email, chat room, message board) and the level the individual chooses (i.e., the user may create an email address or chat ID with complete, partial, or no identifying information). Specific online communication tool-sets constrain the amount of anonymity offered, and the individual subsequently chooses a level within those constraints. For example, email is the most common form of CMC (Thurlow, Lengel, & Tomic, 2004), yet the majority of those using email intend for the recipient to be aware of their identity. Moreover, most individuals have explicit clues to their identity in their email addresses that identify them as the sender of an email. For instance, an email from John.Smith@automobiles.com provides a recipient with information on the name and

corporation of the sender (see discussion in Guadagno & Cialdini, 2005 for expanded details on this issue). Recent research suggests that individuals not only ascribe personality characteristics to individuals email addresses, it supports the notion that those ascribed traits are also fairly accurate (Back, Schmukle, & Egloff, 2008). Therefore, as the level of anonymity one has when interacting on the Internet is malleable, adjusting an individual's screen name may be an empirically valid way to manipulate online anonymity.

Self-awareness and Computer-mediated Communication

As noted above, there are several behavioral and cognitive implications for experiencing a state of anonymity. Researchers have argued that anonymity causes a reduction in self-awareness, and that this loss of awareness of the self is a primary factor in de-individuation (Deiner, 1980). What might we expect when individuals are solely focused on their own goals and desires as opposed to the groups?

Self-awareness theory (SAT; Duval & Wickland, 1972) originally proposed that individuals could direct attention inward (i.e., towards themselves) or outward (i.e., towards others). Thus, an individual high in self-awareness will focus a greater amount of attention inward compared to an individual low in self-awareness. Research indicates that highly self-aware individuals are better at introspection and have greater attitude-behavior consistency (Pryor, Gibbons, Wicklund, Fazio, & Hood, 1977). In addition, highly self-aware individuals report more intense emotions (Scheier & Carver, 1977), pay more attention to those emotions (Scheier & Carver, 1983), are more likely to think of themselves as targets of a social situation (Fenigstein, 1984), and are more likely to behave in accordance with their internal standards than those who are not self-aware (Carver 1974, 1975; Scheier & Carver, 1980). Outside of a transient state of self-awareness, individuals may also be chronically self-aware. Individuals who are in a

state of chronic self-awareness can be characterized as high in the dispositional trait of self-consciousness. Thus, situational self-focus is termed self-awareness while dispositional self-focus is termed self-consciousness. The dispositional trait of high trait self-awareness (i.e., self-consciousness), as measured by the self-consciousness scale (Fenigstein, Scheier, & Buss, 1975), has predicted behavior synonymous with individuals experiencing a state of high self-awareness manipulated by a mirror suggesting convergent validity with state measures of self-awareness.

Due to the reduction in social cues, text-based computer-mediated communication can be seen as deficient or less rich when compared to other more rich communication modes such as that of FtF (Daft & Lengel, 1984; Sproull & Kiesler, 1985). The absence of non-verbal and other cues systems in text-based forms of CMC increase individual's perceptions of anonymity (Sproull & Kiesler, 1985) likely discouraging a focus on the self (Kiesler, Siegal, & McGuire, 1984) and encouraging focus on the group (Reicher, Spears, & Postmes, 1995). Specifically, the ability to be relatively anonymous in a social interaction reduces accountability, leading to the de-individuation of interactants (Postmes, Spears, & Lea, 2002). While this conclusion logically follows, empirical research on the topic has been equivocal.

Several studies indicate individuals communicating via CMC experience increased self-awareness (Matheson & Zanna, 1988, 1989) instead of reduced self-awareness. Moreover, individuals often overestimate the clarity of their communication (Kruger, Epley, Parker, & Ng, 2005) and their contributions to discussions (Weisband & Atwater, 1999) when communicating via CMC suggesting a state of heightened self-awareness. Researchers argue that the reduced immediacy of the interaction partner (i.e., having no one physically present) when communicating via CMC reduces distractions and allows individuals to focus more attention internally (Sassenberg, Boos, & Rabung, 2005). This viewpoint is further supported by the fact

that individuals disclose more when communicating via CMC compared to FtF (Joinson, 2001) and when filling out surveys on a computer versus FtF (Greist, Klein, & VanCura, 1973). Moreover, self-disclosure has been correlated with high trait self-consciousness (Franzoi & Davis, 1985; Franzoi, Davis, & Young, 1985). This relationship is not surprising as individuals who are in a state of high private self-awareness are more in tune with their internal states (Carver, 1977; Scheier & Carver, 1983). Researchers argue, that the inherent immediacy of the communication partner in a FtF interaction will certainly limit the available cognitive resources one has to devote to the self and force a redistribution resources to allow focus on the interaction partner. Thus, contrary to research indicating that individuals experience a lowered self-awareness, these findings support the hypothesis that individuals may experience an increase in self-awareness when communicating via CMC.

Self-disclosure and Computer-mediated Communication

Self-disclosure (i.e., making intimate things about oneself known to others) is a central component of creating and maintaining interpersonal relationships (Altman & Taylor, 1973; Laurenceau, Barrett, & Pietromonaco, 1998). Disclosing information about oneself makes an individual more likable (Collins & Miller, 1994) and individuals disclose more to people they initially like (Fitzgerald, 1963; Worthy, Gary, & Kahn, 1969). Research indicates that there are differences in the degree to which men and women disclose personal information—women are likely to disclose more than men (Dindia & Allen, 1992). Self-disclosure has also been linked to physical health benefits. For example, individuals who self-disclosed after unexpectedly losing a loved one had superior physical health, compared to those who did not self-disclose, during the year following the death (Pennebaker & O’Heeron, 1984). Moreover, participants who spoke about childhood traumas had fewer physical maladies in their life than those who did not

(Pennebaker & Sussman, 1988). Additionally, research suggests that individuals who blog may increase their subjective wellbeing through the self-disclosure in their blogs (Ko & Kuo, 2009). Thus, it appears that simply disclosing details about one's life, particularly traumatic events, may have long lasting positive benefits. However, self-disclosure is not always positive. When individuals self-disclose intimate details rapidly at the start of a relationship, they are viewed negatively as the level of self-disclosure is seen as inappropriate for the relationship stage (Wortman, Adesman, & Herman, 1976). Viewing an individual negatively who self-discloses quickly results from the recipient of the disclosure feeling pressure reciprocate with the same level of intimacy when that individual may not feel comfortable disclosing personal information so rapidly (Kleinke, 1979).

How might self-disclosure manifest in an online environment where many features of the environment have changed (e.g., anonymity, undisclosed audience)? Researchers note that there is likely greater self-disclosure via CMC than typically found in FtF as there is less risk associated with disclosing personal information (i.e., personal information is meant to refer to things like personal thoughts as opposed to non-interpersonal details such as credit and bank account numbers) online (Bargh & McKenna, 2004; McKenna & Bargh, 2000). Specifically, research supports the assertion that the anonymity afforded by CMC is likely to increase self-disclosure (Derlega & Chaikin, 1977). For example, Joinson (2001) found increased self-disclosure for participants communicating via CMC compared to FtF. Owing to the relative anonymity of most online communication increases in self-disclosure are likely. If increases in self-disclosure are more likely online, to whom do individuals believe they are disclosing?

Perceived Audience

At the most basic level, the presence (or perceived presence) of others can either enhance or hurt individuals' performance. More specifically, on basic tasks (i.e., learned behavior), perceiving an audience has been shown to facilitate action while on complex tasks (i.e., novel or unlearned), the perception of others can hinder task performance (Triplet, 1898). In addition, knowing or thinking that others are watching can affect how or whether an individual will react in certain situations. For example, having others around has been shown to reduce the likelihood an individual will help (i.e., audience inhibition) in an emergency (Latané & Darley, 1968) and cause mental distress such as a rise in anxiety (Fenigstein & Venable, 1992).

Beyond the mere presence or perception of others, research has also supported the notion that the quantity of others nearby matters (Latané, 1981). As a result, group size can be a determinant of the intensity of audience effects. Specifically, individuals are more likely to feel nervous and tense when at large parties or speaking in front of large audiences (Knight & Borden, 1979; Latané & Harkins, 1976). Other factors related to group composition such as gender, level of evaluation, and familiarity also play a role (Cohen & Davis, 1973; Sasfy & Okun, 1974). Both actual and perceived audiences can have positive or negative effects on individuals. Thus, examining the impact of perceived audience on the behavior of individuals using new methods of online self-expression such as blogging may prove fruitful; particularly since prior research indicates that blogger's audiences are relatively unknown and likely underestimated. Therefore, online self-disclosure may vary to the extent that individuals are inaccurate in their perception of the size of their audience.

The Present Study

The current study examines how anonymity, self-awareness (as measured by trait self-consciousness), and perceived audience affect individuals' willingness to disclose self-relevant information. Each of the above variables are present in varying degrees in most types of CMC. However, most research fails to distinguish between each characteristic specifically and, instead, lumps the outcomes as effects of the communication medium in general. The present investigation examined the extent to which these variables are separate (or combined) in their contribution to online behavior. Specifically, the current study examined the impact of self-consciousness, anonymity, and perceived audience on the level of self-disclosure within the context of creating an online blog. Anonymity and size of perceived audience were manipulated while self-consciousness was measured in the current study. Blogging is one ideal context in which to examine the effects of anonymity, self-awareness, and perceived audience as they relate to online behavior. Individuals who maintain a blog have the ability to make themselves identifiable and can control, to some degree, who reads their posts. That is, individuals have the option to keep their blogs password protected or public and can also decide whether they want their blogs indexed in search engines, thereby allowing anyone to find their blog via a web search. These characteristics, as well as the real life consequences evidenced by "Stevo," the English blogger, and others like him, make blogging an ideal testing ground for examining the extent to which anonymity, self-consciousness, and perceived audience impact the psychological states of those using CMC.

Hypotheses

Self-awareness Hypotheses. Prior research concerning self-disclosure in CMC suggests that individuals disclose more when they are in a state of high private self-awareness (Joinson, 2001). Thus, I expect participants with high trait self-consciousness to self-disclose more in their fictitious blog relative to those with low self-consciousness who should disclose less.

Anonymity Hypotheses. Past research suggests that individuals who are visually anonymous should respond with more self-disclosure when a personal—rather than group—identity is salient (Reicher, Spears, & Postmes, 1995). Therefore, I expect that participants in the high anonymity conditions should self-disclose more relative to those in the low anonymity conditions who should disclose less in their blogs.

Perceived Audience Hypotheses. Research suggests that individuals who anonymously maintain blogs self-disclose more than individuals who divulge identifying information (Qian & Scott, 2007). Thus, I expect that participants who believe that their blog will be viewed by no one (i.e., destroyed once the experiment is over), will self-disclose more than those who believe that the other individuals in the current study will view their blog and more than those who believe that their blog will be immediately viewable by everyone (i.e., blog will be published on the Internet for everyone to see).

Predicted Interactions. Individuals in the high anonymity, no audience condition should self-disclose more than any other condition. Conversely, individuals in the low anonymity, large audience condition should self-disclose less than any other condition.

Ancillary Predictions. Based on previous research indicating that personality characteristics are predictive of blogging (Guadagno, Okdie, & Eno, 2008), I expect that

personality characteristics (as measured by the Big 5 personality inventory; Benet-Martinez & John, 1998) should differentiate those that keep a blog and from those that do not. Specifically, openness to new experience and neuroticism should predict blogging in women. In addition, it is also likely that overall, women should have longer more personal blogs when compared to men. I will examine differences in self-disclosure from both bloggers and non-bloggers in my sample. These analyses will be exploratory. Therefore, no concrete predictions will be made (see Table 1 for summarized hypotheses).

Table 1.

Overall Study Hypotheses

	High Anonymity	Low Anonymity
Audience		
None	++	0
Limited Audience	+	-
All	+	--

Note. (++) indicate most self-disclosure while (--) indicate least self-disclosure.

0 indicates expectation of scale midpoint.

CHAPTER 2

METHODOLOGY

Design

A 2 (Anonymity: high vs. low) by 3 (Perceived audience: no one, limited audience, public) factorial between subjects design was employed in the current study.

Participants

Participants were 289 (189 Females, 100 Males) introductory psychology students from the University of Alabama who received partial course credit for their participation. Participants ranged in age from 18 to 40 years of age ($M_{age} = 19.50$, $SD = 2.26$). Ethnicity was self-reported: 235 (81%) participants identified as Caucasian, 39 (14%) as African American, 6 (2.1%) as Hispanic, and 9 (3%) as Other. A waiver of consent was requested so that participants under the age of 19 could participate. Participants were given an information sheet informing them of their rights as participants in the study.

An *a priori* power analysis was conducted to determine how many subjects would be needed to have sufficient power to find the desired effect. With power at .80, an alpha of .05, and a medium effect size of $f = .25$, the analysis revealed that 40 participants per condition would be required to have sufficient power detect effects with the f test (Cohen, 1988). The number of participants in the current sample per cell ranged from 33-45. Efforts were made to ensure that participants were randomly distributed throughout the design. Data for three hundred and twenty-two participants were collected during phase one and 272 returned for phase two resulting in an attrition rate of 16%. In addition to those not returning for phase two, thirty-one participants were removed from the analyses for failing to appropriately answer the manipulation check questions: seven participants failed the anonymity manipulation check and twenty-four

participants failed the perceived audience manipulation check. Attrition was relatively equal across experimental conditions (see Table 2 for attrition by condition).

Table 2.

Number of participants excluded from analyses by condition.

Condition		<i>N</i>
Nonanonymous	No audience	15
	Limited audience	11
	Live on the Internet	12
Anonymous	No audience	12
	Limited audience	14
	Live on the Internet	17

Apparatus

A fictitious blogging program was created for the study. The program resembled currently available prominent blogging software (e.g., MySpace, blogger, Wordpress). To that end, there were several places in which the blogging program accepted and manipulated user input.

Researchers were able to enter condition information. Participants were able to compose a blog and entered how their blog would be identified (i.e., participant name or pseudonym). The entered user name was visible to the participant as he or she was composing the text entry. In addition, the text on the submit button varied based on condition information entered by the researcher. For example, in the live audience condition the submit button read “*Make Blog Live on The Internet.*”

In addition to the fictitious blogging software, a software program entitled Linguistic Inquiry and Word Count (LIWC; Pennebaker, Francis, & Booth, 2001) was used to assess the amount of participant self-disclosure and other linguistic variations in participants’ fictitious blogs. The program is able to analyze text data on a word-by-word basis against a dictionary of

over 2,000 words. In addition, the software also affords the user the opportunity to create additional dictionaries or individual words. Each of the 2,000 words is divided into 74 categories, such as articles (e.g., *a, an, the*), emotion words (e.g., *happy, joy*), pronouns (e.g., *I, my, we, us*), and many others. Linguistic Inquiry and Word Count has been used successfully in past research on such topics as relationship initiation (Ireland et al., 2010), language synchrony (Ireland & Pennebaker, 2010), and forgiveness (McCullough, Root, & Cohen, 2006).

Procedure

The study was conducted in two phases that occurred on different dates. During phase one, participants were told the study was testing personality. They took personality (Benet-Martinez & John, 1998), demographic, and self-consciousness (Fenigstein, Scheier, & Buss, 1975) measures. Participants arrived for phase two at minimum seven days after taking the initial measures during phase one.

Upon arriving in the lab for the second phase of the study, participants were randomly assigned to condition and informed that they would be helping to test a program that a local Internet service provider was thinking about implementing. Participants were further informed that the test was being conducted to ensure that the Internet service provider's servers could handle the bandwidth. They were informed that the software program was for blogging and that they would be asked to create a blog entry. The experimenter informed participants that their blog entry would be displayed in one of three ways: displayed only to the participant and then discarded as soon as the participant left (No Audience), displayed to all participants in the study (Limited Audience), or immediately displayed on the Internet (Public) making it viewable by anyone. Following the description of the blogs' possible audience, participants composed a blog entry using the fictitious blogging software detailing a typical day in the life of a student such as

themselves. Participants were given a screen name and informed that the name would be associated with their blog entry and would be viewed by their respective audience (e.g., no one, all the participants in the study, complete public availability). In an effort to manipulate the extent to which participants felt they could be identified by their blog entries, the screen name consisted of one of two levels of identifying information. Specifically, the assigned screen names contained the students first and last name separated by a period (e.g., Tom.Smith) or the screen name “green” (i.e., an anonymous name). The screen name for those in the High Anonymity condition was held constant. Finally, participants filled out the remaining measures not assessed during phase 1: several state self-awareness measures (i.e., indirect and direct; Davis & Brock, 1975; Govern & Marsch, 2001) and the positive and negative affect scale (Watson, Clark, & Tellegen, 1988). Participants’ self-disclosure was assessed using the LIWC (Pennebaker, Francis, & Booth, 2001) as well as three additional undergraduate coders.

Dependent Variables

Self-disclosure LIWC. Participant self-disclosure was assessed via LIWC (Pennebaker, Francis, & Booth, 2001) and three independent coders. The number of personal or self-related disclosing words were assessed via LIWC (Pennebaker, Francis, & Booth, 2001) and operationalized as self-disclosure.

Self-disclosure Coders. In addition to the LIWC (Pennebaker, Francis, & Booth, 2001) program, three independent undergraduate coders assessed the level of self-disclosure in the fictitious blog entries. The coders rated each of the fictitious blogs on four items, each of which was intended to indicate the amount of self-disclosure contained in the blogs. Items one and two read, “Please rate the amount of self-disclosure in the blog” and “Please rate the extent to which the entry represents a day in the life of a typical student or the author.” Items three and four

read, “*How intimate was the blog?*” and “*How much is the blog entry like a typical diary?*” Each category was rated on a 7-point scale anchored by the following descriptors: *Not at all personal/Extremely personal; Day of typical student/Day of author; Not at all intimate/Extremely intimate; Not like a typical diary/A lot like a typical diary*. To establish a measure of reliability between the coders, a reliability analysis for each item was performed on coders’ ratings on each coded item. For example, the 3 coders’ ratings for the item concerning self-disclosure were submitted to a reliability analysis. The analyses revealed that most items had adequate reliability (self-disclosure $\alpha = .73$; typical student $\alpha = .77$; intimacy $\alpha = .69$; typical diary $\alpha = .58$).

Big 5 Personality Inventory-Short Form (Benet-Martinez & John, 1998; see Appendix A). To assess individual differences in personality, participants completed the Big 5 personality inventory short form assessing their personalities on five dimensions: extraversion ($\alpha = .80$), openness ($\alpha = .80$), agreeableness ($\alpha = .75$), conscientiousness ($\alpha = .54$), and neuroticism ($\alpha = .70$). The scale consists of 44 attribute items on an 9-point scale ranging from 0 (*Strongly disagree*) to 8 (*Strongly agree*). A sample item reads, “*Tends to be quiet.*” All scale scores were computed using a mean score of all items in the subscale. With the exception of the conscientiousness subscale, all scales had adequate reliability.

Self-consciousness Scale (SCS; see Appendix B). To assess a trait (stable) level of self-awareness participants completed the self-consciousness scale (Fenigstein, Scheier, & Buss, 1975). The scale consists of 23 items rated on a 4-point scale ranging from 0 (*Extremely uncharacteristic*) to 4 (*Extremely characteristic*). The overall scale consists of three subscales: private self-consciousness ($\alpha = .76$), public self-consciousness ($\alpha = .79$), and social anxiety ($\alpha = .85$). A sample item reads, “*I am always trying to figure myself out.*” All scale scores were

computed using a mean score of all items in the subscale and had adequate reliability.

Perceived-Anonymity Scale (see Appendix C). To assess perceived anonymity on a variety of both online and offline behaviors, participants completed an author-generated perception of anonymity scale. The scale lists 9 common behaviors that take place offline (e.g., writing in a paper diary) and 9 common behaviors that take place online (e.g., writing a blog). Participants rated the extent to which they would feel anonymous engaging in each behavior on a 7-point scale ranging from 1 (*Not at all anonymous*) to 7 (*Extremely anonymous*).

Personal Blogging Scale (see Appendix D). To assess the extent to which participants engage in reading or writing blogs they completed an author-generated personal blogging scale. The 24-item scale assesses the content of blogs read and written by participants. A sample item reads, “On an average day, how many hours do you spend maintaining your blog?”

Brief Measure of Positive and Negative Affect (see Appendix E). To assess the emotional state of participants after they complete the fictitious blog entry, participants completed the brief measure of the positive and negative affect scale (Watson, Clark, & Tellegen, 1988). The overall scale contains one subscale assessing positive affect ($\alpha = .92$) and another assessing negative affect ($\alpha = .89$). The scale consists of 20 items that ask participants to indicate how they feel emotionally at the current moment by rating emotion adjectives (e.g., cheerful) on a 5-point scale ranging from 1 (*Very slightly to not at all*) to 5 (*Extremely*). All scale scores were computed using a sum score of all items in the subscale and had adequate reliability.

Real Me Scale (see Appendix F). To assess the extent to which participants felt that they were better able express their true selves on the Internet or in face-to-face, they completed an adapted version of the real me scale (Bargh, McKenna, & Fitzsimons, 2002). The measure consists of four items inquiring about the extent to which individuals express their true selves

online or FtF on a 7-point scale ranging from 1 (*A lot less*) to 7 (*A lot more*). A sample item reads, “*How many people do you know solely from the internet as compared to real life friends?*”

Situational Self-awareness Scale (SSAS; See Appendix G). Participants completed the situational self-awareness scale (Govern & Marsch, 2001) to assess level of self-awareness during the experiment. The scale consists of a private ($\alpha = .76$) and public self-awareness ($\alpha = .82$) subscale each on a 7-point scale ranging from 1 (*Strongly agree*) to 7 (*Strongly disagree*). A sample item from the private self-awareness subscale reads, “*Right now, I am conscious of my inner feelings.*” A sample item from the public self-awareness subscale reads, “*Right now, I am self-conscious about the way I look.*” All scale scores were computed using a mean score of all items in the subscale and had adequate reliability.

Indirect Self-awareness Measure (see Appendix H). To indirectly assess participants’ current state of self-awareness, a pronoun completion task was employed (Davis & Brock, 1975). Participants were presented with 17 sentences written in a foreign language containing a total of 49 pronouns. Participants were told that the pronouns in each sentence were underlined and that they should use their best judgment to choose whether the underlined pronoun is either a first (e.g., I, my, mine, myself, us, ours, we) or third (she, he, him, her, them, theirs, they) person pronoun. Participants choose a first or third person pronoun for each underlined pronoun in the foreign language sentences. To the extent that an individual is other focused, they are likely to choose more third person pronouns while those who have a heightened self-awareness are likely to choose more first person pronouns.

CHAPTER 3

RESULTS

Manipulation Check

Perceived Audience. In order to determine if the manipulations of perceived audience were effective, a one-way analysis of variance (ANOVA) was conducted on the extent to which participants reported that others would be able to view their blog. The analysis revealed a significant main effect of Audience condition, $F(2,238) = 150.20, p < .001, \eta^2 = .55$. Fisher least significant difference (LSD) tests indicated that all conditions were significantly different from one another, p 's $< .001$. Specifically, participants in the No Audience condition ($M = 1.26, SD = .06$) felt fewer people would see their blog than those in the Limited Audience condition ($M = 5.44, SD = 2.25$), and those in the Limited Audience condition felt less people would see their blogs than those in the Live on the Internet condition ($M = 6.46, SD = 2.59$). Those in the Live on the Internet condition were the most likely to feel that many others would view their blogs.

Anonymity. To investigate whether the anonymity manipulation had the desired effect an independent samples t -test was conducted on participants reported anonymity while writing the fictitious blog. The analysis revealed that participants in the anonymous ($M = 6.57, SD = 2.32$) condition felt significantly more anonymous than participants in the nonanonymous condition ($M = 2.49, SD = 1.94$), $t(239) = -14.76, p < .001$.

Hypothesized Results

To examine the effect of the anonymity and perceived audience manipulations on self-disclosure the data were submitted to a series of 2 (Anonymity: high vs. low) by 3 (Perceived audience: none vs. limited audience vs. all) between-subjects ANOVAs using various measures of self-disclosure as the dependent variable. Self-disclosure was operationalized as an increase in

the amount of personal pro-nouns such as “I,” “Me,” and “Mine” as measured by LIWC (Pennebaker et al., 2001) and the three coders’ ratings of the amount of self-disclosure in each participant’s blog. See Appendix I for example representative blog entries.

LIWC Rating of Self-disclosure. To examine how participant anonymity and perceived audience affected the extent to which participants used personal pronouns in the blogs an ANOVA was performed on the number of personal pronouns—as measured by LIWC (Pennebaker et al., 2001)—found in participants blogs as the dependent measure. The results revealed that the hypothesized anonymity by perceived audience interaction was not significant, $F(2,235) = .03, p = .96, \eta^2 = .00$ (see Table 3 for all means by condition). That is, participants in all conditions did not significantly differ in the number of personal pronouns used in their blogs. The ANOVA yielded no other significant effects, $p > .05$. To further examine the extent to which anonymity and perceived audience affected participant self-disclosure, the number of personal pronouns in each blog was divided by the total number of words contained in the blog and the resulting number was used as the dependent variable in an ANOVA. No significant main effects or interactions were found in this analysis, p 's $> .05$.

Table 3.

Means by condition on number of personal pronouns in participant blogs.

Condition		<i>M</i>	<i>SD</i>
Nonanonymous	No audience	9.80	3.02
	Limited audience	9.88	3.70
	Live on the Internet	10.0	2.65
		1	
Anonymous	No audience	9.66	3.21
	Limited audience	9.91	3.17
	Live on the Internet	10.1	2.97
		3	

Coders Ratings of Self-disclosure. To examine the how participant anonymity and perceived audience affected the extent to which participants self-disclosed information as measured by our 3 coders, the above analysis was conducted using several measures of coders' ratings of self-disclosure in the blogs as the dependent measure. Results revealed a significant main effect of anonymity on coders' ratings of how similar to a traditional paper personal diary the blog was, $F(1,234) = 6.79, p = .01, \eta^2 = .03$. Specifically, non-anonymous participants ($M = 3.86, SD = 1.26$) wrote blogs that were perceived more like a typical paper personal diary entry (i.e., contained more personal self-disclosure) than anonymous participants ($M = 3.43, SD = 1.27$). The analyses revealed no effects of anonymity ($F[1,234] = .78, p = .37, \eta^2 = .03$), audience ($F[2,234] = 1.28, p = .28, \eta^2 = .01$), or an anonymity by audience interaction ($F[1,234] = .01, p = .99, \eta^2 < .001$) on how much the blog resembled that of the participant versus a typical student. Additionally, the analyses revealed no effects of anonymity ($F[1,234] = .02, p = .86, \eta^2 < .001$), audience ($F[2,234] = 1.12, p = .32, \eta^2 = .009$), or anonymity by audience interaction ($F[2,234] = .20, p = .81, \eta^2 = .002$) on coders' ratings of the amount of self-disclosing statements within the blog. The analyses also revealed no effects of anonymity ($F[1,234] = .02, p = .29, \eta^2 = .001$), audience ($F[2,234] = 1.57, p = .20, \eta^2 = .01$), or anonymity by audience interaction ($F[2,234] = .29, p = .74, \eta^2 = .003$) on coders' ratings of how intimate the blog was (see Table 4 for correlations between use of personal pronouns and coders ratings of self-disclosure in participant blogs).

Table 4.

Correlations of coder and LIWC measures of self-disclosure.

Coders Ratings of Self-disclosure				
LIWC Rating of Self-disclosure	Typical vs. Specific	Intimacy	Diary	Total Self-disclosure
Personal Pronouns	0.53** (n=240)	0.34** (n=240)	0.36** (n=240)	0.35** (n=240)

** = $p < .001$

Self-consciousness and Self-disclosure. It was hypothesized that individuals high in measured (not manipulated) trait self-consciousness would self-disclose more than individuals low in trait consciousness. To this end, three linear regressions were conducted using trait self-consciousness—as measured by each of the self-consciousness subscales—to predict amount of self-disclosure in participant’s blogs. The analyses revealed that neither the private self-conscious subscale [$R^2 = -.004$, $F(1,239) = .004$, $p = .98$] or the anxious subscale [$R^2 = .005$, $F(1,239) = 1.18$, $p = .27$] accounted for a significant proportion of variance in the amount of self-disclosure in participants blogs as measured by the LIWC (Pennebaker et al., 2001). However, the public subscale reached marginal significance, $R^2 = .009$, $F(1,239) = 3.22$, $p = .07$ (see Table 5 for means and standard deviations for all self-awareness measures). Additionally, three linear regressions were conducted using trait self-consciousness—as measured by each of the self-consciousness subscales—to predict the amount of self-disclosure in participant’s blogs as measured by the data from the 3 independent coders. The private [$R^2 = .003$, $F(1,239) = .61$, $p = .43$], anxious [$R^2 = .003$, $F(1,239) = .60$, $p = .43$], and public [$R^2 = .003$, $F(1,239) = .67$, $p = .41$] subscales did not account for a significant proportion of the variance participant self-disclosure.

Table 5.

All self-awareness scale means and standard deviations by condition.

Measure	Condition					
	Anonymous			Non Anonymous		
	No Audience	Limited	Internet	No Audience	Limited	Internet
Situational Self-awareness Measure Subscales						
Surroundings	16.81 (5.49)	15.93 (4.40)	15.95 (4.51)	15.40 (5.01)	15.92 (4.36)	15.59 (5.00)
Public	11.72 (5.20)	12.52 (5.30)	12.93 (4.52)	10.54 (5.97)	11.02 (5.83)	11.23 (5.44)
Private	14.77 (5.42)	14.31 (4.85)	13.93 (4.02)	13.27 (5.33)	13.00 (5.03)	14.14 (5.48)
Self-consciousness Scale Subscales						
Anxiety	9.18 (4.51)	8.45 (4.56)	9.56 (4.20)	8.24 (4.51)	7.73 (3.92)	8.73 (4.27)
Public	14.15 (4.05)	12.91 (3.69)	12.21 (3.80)	13.05 (4.04)	12.61 (4.07)	13.90 (3.97)
Private	16.77 (4.65)	15.50 (5.07)	14.81 (4.47)	15.02 (4.04)	14.54 (4.18)	17.40 (4.04)
Indirect Measures of Self-awareness						
Number of First Person Pronouns	19.32 (9.56)	18.63 (10.80)	12.93 (12.20)	21.02 (10.74)	17.65 (10.39)	19.10 (10.30)
Number of Third Person Pronouns	16.30 (8.42)	14.68 (9.46)	11.65 (11.65)	17.50 (9.29)	14.71 (9.66)	16.10 (9.68)

Self-consciousness Mediation. To investigate whether or not self-consciousness mediated the relationship between anonymity and self-disclosure, a series of regression analyses were undertaken. Using Barron and Kenny's (1986) stepwise procedure for testing mediational effects, the procedure revealed that self-consciousness did not mediate the relationship between anonymity and self-disclosure. Specifically, participant's reported level of anonymity did not significantly predict the magnitude of personal pronouns used in the blogs, $R^2 = .002$, $F(1,236) = .44$, $p = .50$. Moreover, participant's level of anonymity did not significantly predict the

magnitude of self-disclosure in the blogs as judged by the three independent coders, $R^2 < .001$, $F(1,239) = .01$, $p = .90$. The failure of this step (i.e., step one in Barron and Kenny's (1986) procedure for testing mediational effects) indicates there is no relationship between anonymity and self-disclosure (i.e., using both personal pronouns and coders' ratings of self-disclosure). Therefore, there was no relationship for self-consciousness to mediate and as such no further regression analyses were undertaken.

Personality and Blogging. To examine the relationship between personality and blogging, the data were subjected to a logistic regression in which each of the Big-5 personality traits were entered simultaneously into the model as predictors while whether or not the participant keeps a blog was entered as a dichotomous dependent variable. In partial support of the prediction, results of the logistic regression revealed that openness to new experience significantly predicted blog use, $b = .45$, $SE_b = .21$, Wald (1, df) = 4.49, $p = .03$. Past research indicates gender may moderate the above effect (Guadagno, Okdie, & Eno, 2008). However, when gender was entered as a predictor in the current model, it failed to predict participants likelihood to blog, $b = .74$, $SE_b = .54$, Wald (1, df) = 1.90, $p = .16$. Additionally, each of the Big-5 personality subscales were centered, crossed with gender, and regressed on likelihood to keep a blog. Results revealed that gender did not interact with any of the Big-5 personality traits to predict likelihood to keep a blog, p 's $> .08$. The lack of replication may be due to the small proportion of bloggers (23) relative to non-bloggers (266) in the current sample.

CHAPTER 4

DISCUSSION

This paper opened with a factual account of online behavior illustrating the potential negative effects of expressing oneself online. The current study was designed to examine why individuals may self-disclose personal information online that may result in negative life consequences by examining variables thought to affect online behavior. Specifically, participant anonymity and perceived audience were manipulated, and their resulting effects on self-disclosure were measured in the form of a fictitious online blog. It was predicted that participants who were anonymous and believed that their blog would not be seen would self-disclose more than participants in any other condition. Contrary to the hypotheses, results revealed that participants did not differ in the amount of self-disclosure expressed in their blogs when they reported feeling anonymous or when they believed that few or several others would view their blog.

In addition to anonymity and perceived audience, self-awareness has also been shown in the past to play a role in online self-disclosure (Joinson, 2001). Particularly, research suggests those high in self-awareness will disclose more personal information than those in a state of low self-awareness. Therefore, it was predicted that trait self-consciousness would mediate the relationship between anonymity and self-disclosure. Thus, self-consciousness was hypothesized to be the psychological mechanism leading to increased self-disclosure. However, results revealed that self-consciousness did not mediate the relationship between anonymity and self-disclosure as no relationship between anonymity and self-disclosure was found in the current sample. Perhaps participants did not feel completely anonymous as the researcher conducting the

experiment was aware of their name and the participant could be physically identified. Therefore, even though participants felt anonymous to those who might read their blog they may not have felt anonymous to the researcher conducting the study. When individuals compose messages alone online outside of the laboratory—in a blog or otherwise—it is likely that they may feel more anonymous and that this extreme level of anonymity (to both those in their immediate surrounding and those who may read their messages) may lead to increased disclosure of personal information.

Finally, based on prior research (Guadagno, Okdie, & Eno, 2008) it was expected that females high in openness to experience and neuroticism would be more likely to blog than individuals low in those traits. In partial support of this prediction, participants in the current study who were high in openness to new experience were significantly more likely to blog. However, gender and neuroticism failed to predict likelihood of keeping a blog. The lack of full replication of prior research in the current sample may be, in part, due to the small sample size of bloggers examined in the current study.

One possible argument for why the predicted relationships between anonymity, perceived audience, and self-disclosure did not emerge is that participants did not feel sufficiently anonymous and did not believe that few or several others would view their blog entries. While these are logical plausible arguments, it is unlikely that either caused the null results. Support for the argument that participants felt sufficiently anonymous and believed that various numbers of people would view their blog can be found in participants self-reports of anonymity and perceptions of audience size. Participants reported both anonymity and perceptions of audience size soon after composing their fictitious blog. When asked at the end of the study, participants reported feeling more anonymous in the anonymous condition than those in the non-anonymous

condition. Moreover, participants reported that more individuals were likely to view their blogs when they were in the Internet condition rather than those in the Limited condition who were more likely to report that more people were likely to see their blog than those in the No Audience condition. Additionally, the responses on the 9-point perceived audience scale ranged from 1.26 (No Audience) to 6.46 (Internet) and those on the anonymity scale ranged from 2.49 (Non-anonymous) to 6.57 (Anonymous) suggesting that the lack of confirming results was also not due to a restriction in the range of participant responses. Thus, the results suggest that participants in the current sample felt sufficiently anonymous and believed that few or many others were likely to view their blogs. Therefore, it appears as though failed or weak manipulations or a restriction in participant responses to the manipulations are unlikely to have contributed to the null effects.

If the null results were not caused by failed manipulations, why might the cover of anonymity and the allure of a limited or zero audience not lead to an increase in the willingness of individuals to self-disclose more information? Perhaps, individuals in the current study felt anonymous and understood that their blog would be read by a large or small audience but those cognitions did not affect their willingness to disclose personal information. It is important to note that the majority of participants in the current sample were not bloggers. That is, the majority of the sample was comprised of individuals that do not regularly engage in the specific avenue of online disclosure that was asked of them in the study. Individuals who engage in blogging may react differently to varying levels of anonymity and audience size. This assertion is supported in the current sample. When only those who kept a blog ($n = 18$) were analyzed in the current sample, the results revealed that those in the Nonanonymous Limited audience condition self-disclosed significantly more than those individuals in the Nonanonymous Live on the Internet condition as measured by the LIWC. Owing to the small number of bloggers in the current

sample, caution should be taken when interpreting these findings. However, the result does suggest that in a sample composed entirely of bloggers, feelings of anonymity and size of audience may differentially affect the extent to which individuals self-disclose personal information. Future research should examine the extent to which feelings of anonymity and perceived audience affect bloggers' willingness to engage in online self-disclosure as their familiarity with online self-disclosure likely differs markedly from those who do not blog.

Another possible reason for the null findings in the current sample may be that the wrong audience dimension was manipulated. Perhaps the size of an individual's audience matters less than the composition of the audience. That is, disclosing that you are a homosexual may matter less when the audience is a group of strangers compared to when the audience comprises members of your family and close friends unaware of your sexual orientation (McKenna & Bargh, 1998). The idea that the make-up of an audience matters is supported by past research. For example, past research notes differential self-presentation when individuals who are speaking publicly are told that the audience contains members of their ingroup (versus members of their outgroup; Baumeister, 1982; Schlenker, 1980). Moreover, individuals appear to consider the composition of the audience before expressing prejudicial opinions (Crandall, Eshelman, & O'Brien, 2002). Other research supports the notion that audience composition is not only important but that it may have a greater impact on individuals than group size. Recent research indicates that receiving criticism in front of an audience is seen more positively when the audience is composed of ingroup members rather than outgroup members. Additionally, this positiveness persists irrespective of group size suggesting that group composition matters more than group size (Elder, Sutton, & Douglas, 2011). Thus, the null findings in the current study pertaining to perceived audience may be due to a failure to manipulate the correct aspect of the

audience of individuals' self-disclosure.

Outside of the examination of the composition of an individuals audience, future research should further investigate the relationship of anonymity and self-disclosure taking care to ensure that individuals feel completely anonymous (i.e., even from the experimenter) before being presented with a self-disclosure opportunity. Additionally, future research should investigate contemporary venues for individual self-disclosure such as Twitter.com that constrain the number of characters that individuals are able to use to self-disclose information online as well as considering what role gender plays in the disclosure of personal information online. As noted earlier, women tend to disclose more information than men when communicating FtF. Contemporary research also highlights the notion that although men and women women spend a comparable amount of time online, the activities that they are engaging in while online vary greatly (Guadagno, Eno, Okdie, 2009). Thus, an examination of gender differences in online self-disclosure is warranted.

CHAPTER 5

OVERALL IMPLICATIONS

The lack of bloggers in the current sample is indicative that the methods of online self-expression and the demographics of those using new technology for self-expression may be changing. This change in demographics and method is corroborated by recent research suggesting that the number of individuals using blogging for online self-expression has been declining in recent years while new self-expression outlets such as Facebook and Twitter.com are steadily growing (Lenhart, Purcell, Smith, & Zickuhr, 2010). A fine-grained analysis of the decline in the use of blogging for online self-expression reveals that while blog use among young adults (18-29 years of age) is steadily declining its use among older populations (30 years of age and higher) is rising. The decline in young adults' use of blogging as a form of self-expression is likely due to the expanding tool-sets of more contemporary online expression platforms such as Facebook. For example, Facebook now allows individuals increased freedom to express themselves online without character limitations using the "notes" tool—a feature that can easily serve the same purpose as classic blogging platforms. This argument is corroborated by recent research citing a decline in the number of bloggers found in college age populations (Guadagno, Eno, & Okdie, 2009; Okdie, Guadagno, Rempala, & Eno, in press). The shift in blogging demographics and avenues for online self-expression require a shift in research focus. That is, future research should consider age, avenue for self-expression, and the platform used for self-expression as possible variables that may affect individuals' responses to variables such as anonymity, audience size, and self-awareness.

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APPENDIX A

Big-5 Short Form

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please fill in the number that indicates the extent to which you agree or disagree with that statement.

0	1	2	3	4	5	6	7	8
Strongly disagree	Disagree	Somewhat disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Somewhat agree	Agree	Strongly Agree

I See Myself as Someone Who...

Is talkative. _____

Is reserved. _____

Is full of energy. _____

Generates a lot of enthusiasm. _____

Tends to be quiet. _____

Has an assertive personality. _____

Is sometimes shy, inhibited. _____

Is outgoing, sociable. _____

Tends to find fault with others. _____

Does a thorough job. _____

Is depressed, blue. _____

Is original, comes up with new ideas. _____

Is helpful and unselfish with others. _____

Can be somewhat careless. _____

Is relaxed, handles stress well. _____

Is curious about many different things. _____

Starts quarrels with others. _____

Is a reliable worker. _____

Can be tense. _____

Is ingenious, a deep thinker. _____

Has a forgiving nature. _____

Tends to be disorganized. _____

Worries a lot. _____

Has an active imagination. _____

Is generally trusting. _____

Tends to be lazy. _____

Is emotionally stable, not easily upset. _____

Is inventive. _____

Can be cold and aloof. _____

Perseveres until the task is finished. _____

Can be moody. _____

Values artistic, aesthetic experiences. _____

Is considerate and kind to almost everyone. _____

Does things efficiently. _____

Remains calm in tense situations. _____

Prefers work that is routine. _____

Is sometimes rude to others. _____

Makes plans and follows through with them. _____

Gets nervous easily. _____

Likes to reflect, play with ideas. _____

Has few artistic interests. _____

Likes to cooperate with others. _____

Is easily distracted. _____

Is sophisticated in art, music, or literature. _____

Appendix B

Self-consciousness Scale

Please rate the following statements as to how characteristic of yourself they are.

I'm always trying to figure myself out.

Extremely uncharacteristic **1** **2** **3** **4** Extremely characteristic

Generally, I'm not very aware of myself.

Extremely uncharacteristic **1** **2** **3** **4** Extremely characteristic

I reflect about myself a lot.

Extremely uncharacteristic **1** **2** **3** **4** Extremely characteristic

I'm often the subject of my own fantasies.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I never scrutinize myself.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm generally attentive to my inner feelings.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm constantly examining my motives.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I sometimes have the feeling that I'm off somewhere watching myself.

Extremely 1 2 3 4 Extremely characteristic

uncharacteristic

I'm alert to changes in my mood.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm aware of the way my mind works when I work through a problem.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm concerned about my style of doing things.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm concerned about the way I present myself.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm self-conscious about the way I look.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I usually worry about making a good impression.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

One of the last things I do before I leave my house is look in the mirror.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm concerned about what other people think of me.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I'm usually aware of my appearance.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

It takes me time to overcome my shyness in new situations.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I have trouble working when someone is watching me.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I get embarrassed very easily.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I don't find it hard to talk to strangers.

Extremely uncharacteristic 1 2 3 4 Extremely characteristic

I feel anxious when I speak in front of a group.

Extremely uncharacteristic **1** **2** **3** **4** Extremely characteristic

Large groups make me nervous.

Extremely uncharacteristic **1** **2** **3** **4** Extremely characteristic

Appendix C

Perception of Anonymity Scale

To what extent would you feel anonymous doing the following behavior?

Please rate the questions on a 7 point scale where 1 is not at all anonymous and 7 is extremely anonymous.

Blogging									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Emailing									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Instant messaging									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Talk in a chat room									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Posting on message									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Creating a profile on social networking sites (e.g., Facebook, MySpace)									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Browsing web sites									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Creating an online dating profile									
Not at all anonymous	1	2	3	4	5	6	7	Extremely anonymous	
Writing in a paper diary									

Appendix D

Personal blogging Questionnaire

Please answer the following questions honestly. There is no correct answer, please pick the answers that best describe you and your experiences.

1. Do you keep a blog?

A. Yes

B. No

2. If yes, why do you keep a blog? If no, why don't you keep a blog?

If you answered yes to question 1, please continue with questions 3-7. If you answered no to question 1, please skip to question 8.

3. On an average day, how many hours do you spend maintaining your blog? _____

4. How many blogs do you keep? _____

5. How often do you update your blog?

A. Daily B. Weekly C. Monthly D. Yearly

6. Do you use your real name or a screen name to identify your blog?

A. Real name

B. Screen name

7. To what extent do you write about the following? Please answer on a 1 (not at all) to 7 (a lot)

Fictional Stories

Not at 1 2 3 4 5 6 7 A lot
all

Sports

Not at 1 2 3 4 5 6 7 A lot
all

Your Relationships

Not at 1 2 3 4 5 6 7 A lot
all

Your Friends

Not at 1 2 3 4 5 6 7 A lot
all

Celebrities

Not at 1 2 3 4 5 6 7 A lot
all

Politics

Not at 1 2 3 4 5 6 7 A lot

all

Your Family

Not at 1 2 3 4 5 6 7 A lot

all

Your Daily Experiences

Not at 1 2 3 4 5 6 7 A lot

all

Technology

Not at 1 2 3 4 5 6 7 A lot

all

Finance/Stocks

Not at 1 2 3 4 5 6 7 A lot

all

News

Not at 1 2 3 4 5 6 7 A lot

all

8. Do you read the blogs of others?

A. Yes

B. No

If you answered yes to question 8, please continue with question 9. If you answered no to

question 8, please skip to question 12.

9. On an average day, how many hours do you spend reading blogs? _____

10. How many blogs do you read? _____

1. To what extent do you read blogs about the following? Please answer on a 1 (not at all) to 7 (a lot)

Fictional Stories

Not at 1 2 3 4 5 6 7 A lot
all

Sports

Not at 1 2 3 4 5 6 7 A lot
all

Your Relationships

Not at 1 2 3 4 5 6 7 A lot
all

Your Friends

Not at 1 2 3 4 5 6 7 A lot
all

Celebrities

Not at 1 2 3 4 5 6 7 A lot
all

Politics

Not at 1 2 3 4 5 6 7 A lot
all

Your Family

Not at 1 2 3 4 5 6 7 A lot
all

Your Daily Experiences

Not at 1 2 3 4 5 6 7 A lot
all

Technology

Not at 1 2 3 4 5 6 7 A lot
all

Finance/Stocks

Not at 1 2 3 4 5 6 7 A lot
all

News

Not at 1 2 3 4 5 6 7 A lot
all

13. Which statement best describes you?

- A. I write my own blogs and read other people's blogs.
- B. I write my own blogs but do not read other people's blogs.
- C. I read other people's blogs, but do not write my own.
- D. I know what a blog is, but do not read or write them.
- E. I do not know what a blog is.

Appendix E

Positive and Negative Personal Affect Scale

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the time in which you were composing your blog. Use the following scale to record your answers:

1	2	3	4	5
Very slightly or not at all	a little	moderately	quite a bit	extremely

_____ Interested _____ Distressed _____ Excited _____ Upset

_____ Strong _____ Guilty _____ Scared _____ Hostile

_____ Enthusiastic _____ Proud _____ Irritable _____ alert

_____ Ashamed _____ Inspired _____ Nervous _____ Determined

_____ Attentive _____ Jittery _____ active _____ Afraid

Appendix F

Real Me Scale

Instructions: Read the following questions and answer them to the best of your ability.

Remember when we describe your internet friends we mean friends that you know only from the internet. Your real-life friends are people you have met in person.

- 1) How about yourself to people you know solely from the internet as compared to real life friends (Non internet)?

A lot more 1 2 3 4 5 6 7 A lot less

- 1) How many things do your solely Internet friends know about you that you cannot share with real life (non- internet) friends?

A lot more 1 2 3 4 5 6 7 A lot less

- 1) To what extent do you express different parts of yourself on the internet than you do in your real life?

A lot more 1 2 3 4 5 6 7 A lot less

- 1) To what extent would your family and friends be surprised if they were to read your Internet email and/or newsgroup postings?

A lot more 1 2 3 4 5 6 7 A lot less

Appendix G

Situational Self-awareness Measure

Please respond to each statement based on how you feel right now-not how you feel in general, or at this point in your life. Select the number that corresponds to your answer. There are no 'right' or 'wrong' answers--just be honest.

1. Right now, I am very aware of myself, my own perspective and attitudes.

Strongly disagree 1 2 3 4 5 6 7 8 Strongly agree

2. Right now, rather than thinking about myself now, my mind is distracted by my task and what was going on around me.

Strongly disagree 1 2 3 4 5 6 7 8 Strongly agree

3. Right now, I wondered about the way I've responded and presented myself in comparison to others.

Strongly disagree 1 2 3 4 5 6 7 8 Strongly agree

4. Right now, I am thoughtful of how well I was get along with others.

Strongly disagree 1 2 3 4 5 6 7 8 Strongly agree

5. Right now, I am keenly aware of everything in my environment

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

6. Right now, I am conscious of my inner feelings.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

7. Right now I am concerned about the way I present myself.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

8. Right now, I am self-conscious about the way I look.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

9. Right now, I am conscious of what is going on around me.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

10. Right now, I am reflective about my life.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

11. Right now, I am concerned about what others think of me.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

12. Right now, I am aware of my inner most thoughts.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

13. Right now, I am conscious of all objects around me.

Strongly disagree	1	2	3	4	5	6	7	8	Strongly agree
-------------------	---	---	---	---	---	---	---	---	----------------

Appendix H

Indirect Self-Awareness Measure

Please read the following instruction carefully and fill out the form to the best of your ability.

There are many languages in our world - most of them are unknown to us. Surprisingly, people can often guess the correct translation of a language that we know. In this text below, you find a (probably) unknown language. As you can see, fifty words are underlined in this text. These underlined words are ALL pronouns. The words could be words reflecting ourselves (e.g., I, me, my, mine, myself, us, ours, we), or others (e.g., she, he, him, her, them, theirs, they). We would like to examine whether it is indeed possible to guess the correct translation of a foreign language. Try to guess the correct translation of each of the underlined words. Please do so, by writing the pronoun (that you think is the correct translation) right above the underlined word. Let your gut feeling help you in deciding which pronoun is the best translation.

Я часто прошу **его** родителей забрать **меня** из **моего** офиса.

Ты всегда был очень добр к **нам**.

Мы нечего не теряем, потому что **он** украл все из **нашего** дома.

Мы пришли в **её** дом чтобы посмотреть последний боевик.

Они были очень счастливы что Джон получил его первую золотую медаль.

В этом матче он показал им, что он один из лучших игроков.

Во время их романтичного путешествия она была очень горяча с ним.

Наш маленький племянник был выбран как лучший игрок турнира - он является действительно большим!

Мой брат был настолько сердит, что он нарушил окно.

Они запели «Я – чемпион» потому что кубок был их.

Ты и я всего лишь млекопитающие, поэтому давай делать это как они это делают в телевизоре.

По нашему пониманию, не нужно объяснять почему это произошло.

Родители хотят лучшее для их детей.

Моя сестра дала нам конфеты, которые она купила в магазине.

Это большой шанс для нас, чтобы достигнуть того, что мы хотим.

Это стало ясным, что мой друг и я не напишут этот тест.

Ты не поверишь в это, но Джон и Джерк увидели меня и он и его друзья сказали, что их машину украли.

Мать махала в нас - она была установлена, мы должны были уехать.

Мальчик хотел бы сказать ему, что игра закончена.

Чтобы позвонить им, полицейский взял телефон.

Appendix I

Sample participant blogs.

The blog below was from a participant in the Anonymous and No Audience Condition:

“well if this is as anonymous as they say i guess i might as well be honest. i am unashamedly boring. i get up in the morning and make a pot of coffee and eat an english muffin with flax seed peanut butter like a typical 70-year-old. then i usually rush around and hope to make it to class on time and usually have to pay to park in the parking deck so that i don't have to use my assigned perimeter pass. gross. until its nice weather then i wont mind as much. i actually mind everything a lot less in the warm weather. hopefully my boyfriend too because he is getting on my nerves a lot lately haha. well i'm glad that this is turning into a stream-of-consciousness type blog... thats the only way i think particularly well. ok well the other big news is that i FINALLY officially committed to a graduate program. i'm going to DUKE. i can't wait- i'm super excited. hm ok back to the task they gave me... um.. oh yes, so after parking in the "hub" deck i will generally go to participate in a psychology study (i'm about to be a grad student so i might as well help so that the favor will be returned) or head straight to class. physics... yuck. followed by psychology, which is awesome. april kendrick is the woman! but tuesday-thursdays are the really special days because i get to spend time with dr. bao in biochem. she is so cute, i just love listening to her. and it probably helps that i like the class material anyway. then i usually have a break so that i can have a nice lunch at bryant with cory and john. cory got mad at me yesterday because i used my dining \$\$ to get into bryant, because it was cold and i was

hungry. but he went all saying that he would have swiped me in, blah blah. then i have design with dr. arnold-always fun. we meet in graves so at least i get to walk through the quad a couple times a week. then at night its usually a meeting of some sort. swe, ewb, tbp, ace interviews... and on the good nights i'll have a church activity- the well or bible study- to refocus and refresh after the stresses of the week. i'm a chronic stresser. i get it from my mother. haha."

The blog below was from a participant in the Anonymous and Live on the Internet Condition:

"Hmm.. a day in the life of a student - me. Most weeks fly by and tend to be hectic, filled with classes, homework, tests, sorority meetings, and of course, parties. Being a freshman my days are pretty packed with classes. Normally, I will wake up anywhere from 7 to 9:30 on the weekdays (unless i dont have anything to do monday morning - in that case i sleep all day) and brush my teeth, wash my face, and do all of the normal boring stuff that is necessary for someone to start their day. I'll most of the time walk to class unless there is a torrential downpour outside in which case i will take the bus which is much more convenient for morning slackers such as myself. I take 40 mgs of vyvanse which help me with my ADHD, and yes, i AM prescribed to it. In which case i do not take my medication, my brain tends to wander into a far off land that has nothing to do with the task at hand. However, most days i do take my medication and sit through class diligently taking notes, doing whatever I can to improve my study and note-taking skills. I'll leave class and sometimes eat lunch - my vyvanse tends to have the effect on me to where I won't eat for about 10 - 12 hours at a time. Sometimes I have to force myself to eat which I am okay with because eating is probably one of my most favorite things to do. Sometimes I'll stop by the sorority house and hang out for a little bit or attend any meetings that I might have on that particular day. The rest of my day is a frenzy of homework and getting small things done that

most people always procrastinate on such as laundry, or writing an e-mail to a teacher that you have been meaning to write an e-mail to for weeks. After about 6 o'clock I'm either stuck doing homework, catching up with friends on Facebook, or hanging out in a friends room getting ready to go out or watching a movie. Overall, I'd say my life is pretty nice, sometimes laid-back and sometimes so stressful that I find it hard to breathe.”

The blog below was from a participant in the Non-anonymous and No Audience Condition:

“Student Life, yay. Today was a normal day in the life of a UA student. I woke up early and did some homework and got ready for my 10 am class. I walked out of my building and waited on a 348 ride, which normally takes me to class. I waited for about 25 minutes and realized the bus wasn't coming and that i would be late for class. I borrowed my friends bike and was only a few minutes late to class and my teacher understood. Seems the bus drivers are on strike. oH WELL. Class was long and boring. I got out at 1050 , stopped and picked up some food from the ferg, and walked back to my building. I had a big PSC test today also, which i studied all weekend for. I walked to take it at 2, and think i got a high A. This was my student life today.“