THESIS

BYSTANDER HELPING IN RESPONSE TO A STAGED INCIDENT OF CYBERAGGRESSION

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ABSTRACT

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The recent emergence of cyberbullying as a serious problem stands as a reminder that basic principles of social psychology should be retested and re-evaluated in emergent contexts to demonstrate their enduring value. This study sought to test the applicability of Darley & Latane's (1968) Bystander Effect in a chat-room environment.

Participants were admitted to a chat-room ostensibly for a series of informal debates which a researcher would record and analyze later as part of an observational study in online communication patterns. Chats included one participant and either 2 (control condition) or 4 (bystander condition) non-participant characters (NPCs) whom the participant was led to believe were other participants. The researcher assigned two of the NPCs to debate informally and then left. In both conditions, the two NPCs engaged in discussion, until one began bullying the other by persistently attacking him with insults, even after the victim voiced distress and asked the attacker to stop. In the bystander condition, the two additional NPCs remained logged in throughout the bullying episode, but took no action to support or discourage the bullying.

Participants, free to comment or contact the researcher, demonstrated a clear inclination towards altruism, but the bystander effect was still evident. Participants in the bystander condition were significantly less likely to intervene by attempting to defuse the conflict in the chat, defending the victim, attacking the bully, or contacting the researcher about the problem, $OR = 0.39$, $p = .03$, 95% CI [0.17, 0.90], $n = 111$.

Participant suspicion and methodological constraints limit the conclusions that can be drawn from this study, but it supports speculation that the bystander effect may be present but less inhibitory in an online environment.

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Megan Meier, of Dardenne Prairie, a small suburb of St. Louis, MO, died on October 17, 2006, at the age of 13, after hanging herself in response to deception and harassment perpetrated by a former friend through the social networking site MySpace.com. Megan's former friend and members of the friend's family masqueraded as a fictitious boy romantically interested in Megan. After earning her trust, Megan's antagonizers ended the relationship. Still in the guise of the fictional boy, they told her "the world would be a better place without [her]" and made various offensive posts about her. (Ayres, 2008)

Prosecutors called the subsequent trial the first *cyberbullying* case (Ayres, 2008), but as unbelievable as this incident sounds, Megan was not the first death attributable to cyberbullying. Thirteen year old Ryan Halligan committed suicide three years before Megan, after likewise being manipulated and harassed by a friend at school (Kowalski, Limber, & Agatston, 2008).

The year of 2010 alone saw electronically enhanced bullying claim at least three more lives. Phoebe Prince (January 14, 2010, age 15) and Alexis Pilkington (March 22, 2010, age 17), were so severely cyberbullied that they continued to receive hateful messages on Facebook pages set up as memorials after their deaths (Kennedy, 2010; Martinez, 2010). The death of Tyler Clementi (September 22, 2010, age 18), a college student, testifies to the fact that cyberbullying is a problem our youth will not simply escape by age (Friedman, 2010).

Clearly, cyberbullying can have severe consequences in the lives of youth. The literature reflects a continued rise in the incidence cyberbullying (Li, 2006), as well as a continued increase in the number of young people with access to cell phones and the Internet (Pew, 2009).

Bullying

Although cyberbullying is a recent phenomenon, face-to-face bullying certainly is not. However, despite its prevalence, face-to-face bullying has not been a priority concern among

researchers as long as might be expected. While research in the area is not new, roughly 10 times as much research on bullying was published in the 1990s as between 1900 and 1979, and 20 times as much research was published between 2000 and 2004. This sudden leap in interest was likely spurred on by three bullying-connected suicides in Norway in 1982, which led the Norwegian government to sponsor the research of Dan Olweus, whose work inspired many others (Berger, 2007). The dramatic example of the Columbine High School massacre in 1999 led to a similar surge in the United States. A loose estimate of Columbine's impact can be made by performing a quick search of PsychInfo for publications listing "bullying" as a keyword. Only 26 hits appear for 1998, the year before the Columbine incident, but 61 hits appear for 2000, the year after, and *116* for 2001.

Olweus (1995) defined bullying as occurring when one or more individuals repeatedly subject another, less powerful individual to negative actions. As Berger (2007) notes, this excludes "playful fighting, a one-time attack, or good-natured teasing between friends, but includes indirect attacks, especially social or relational bullying" (p. 94). Victims of bullying are individuals who suffer repeatedly and do not retaliate (Berger, 2007).

Cyberbullying

Cyberbullying is bullying carried out via the Internet, through e-mail, instant messaging, chat-rooms, and websites, and via cell phones, through text messages, pictures, & videos (Kowalski, Limber, & Agatston, 2008; Smith et al., 2008). It includes ostracism, name-calling, rumor-spreading, and other aggressive behaviors (Patchin & Hinduja, 2006). Among those who responded to Patchin and Hinduja's (2006) online survey, more than one in five respondents under the age of 18 had been *threatened* online.

Unlike traditional forms of bullying, cyberbullying can reach an audience of *thousands*. Cyberbullying also places a unique spin on the 'repetitive' qualifier of Olweus's definition of bullying. A single act of aggression can be circulated among Internet users indefinitely, so that the event is effectively immortalized. In this way, it may be considered a repeated occurrence, at least as far as the victim is concerned. Preserved in text or picture form, cyberbullying is often present for the victim to see again and again, making it seem as if the bullying has been continued (Kowalski et al., 2008). Additionally, due to the portability and omnipresence of modern electronic communications devices, cyberbullying can take place anywhere, at any time of the day, unless the victim sacrifices her or his access to electronic communication (Patchin & Hinduja, 2006).

In the worst case scenario, such online content can become viral, spreading through the Internet from site to site, user to user. In such instances, it becomes impossible to stop the bullying, and an individual may even find their embarrassment carried to other forms of media, such as television.

The story of Canadian high school student Ghyslain Raza provides a compelling example. Raza, known to most as the "Star Wars Kid", made a video of himself pretending to fight in the fashion of George Lucas's Darth Maul, a video which he never intended to be seen by anyone but himself. Unfortunately, a group of his classmates found the video and uploaded it to the Internet, from which it was downloaded, edited, and uploaded again, *ad nauseum* by complete strangers, humiliating Raza (*USA Today*, 2003).

Raza's victimization most likely reached an audience of millions, illustrating the potential difference between cyberbullying and its low-tech counterparts. Furthermore, that the audience became so large was due to many of the audience's members choosing to become complicit in

the boy's humiliation, helping the original handful of cyberbullies by further disseminating the content.

Magnitude is not the only important distinction between traditional bullying and its information-age offspring. Unlike in traditional bullying, cyberbullying carries with it an element of potential anonymity, and this anonymity may not be symmetrical. While it seems that the majority of cyberbullies know their victims offline (Kowalski & Limber, 2007; Ybarra & Mitchell, 2004), victims may not know who their antagonists are offline (Li, 2007; Wolak, Mitchell, & Finkelhor, 2007; Ybarra, 2004; Ybarra & Mitchell, 2004). In an interview with *The Challenge* (2009), Susan Limber, coauthor of *Cyber Bullying: Bullying in the Digital Age* (Kowalski, Limber, & Agatston, 2008), elaborated on this problem, arguing that the anonymity makes the experience more distressing for the victim and lowers the inhibitions of bullies.

Pervasiveness of Cyberbullying

As reflected by the geographic diversity of the research, cyberbullying is a global problem, present anywhere that modern communication technology has penetrated. While cyberbullying has only recently emerged as a challenge facing adolescents, it has grown rapidly (Li, 2006) in the short time it has been studied. Early endeavors such as the 1999-2000 Youth Internet Safety Survey (YISS-1) yielded low estimates of victimization, with less than 7% of children and adolescents having been harassed online (Ybarra, 2004) while over twice as many had harassed others online (Ybarra & Mitchell, 2004a; Ybarra & Mitchell, 2004b).

More recent research places estimates of victimization between 20 and 30% (e.g., Dehue, Bolman, & Vollink, 2008; Li, 2006; Li, 2007; Patchin & Hinduja, 2006; Smith et al., 2008), and in some cases higher (e.g., Hinduja & Patchin, 2008; Mesch, 2009; Ybarra, Diener-West, & Leaf, 2007). A study conducted by Harris Interactive, Inc., commissioned by the National Crime

Prevention Council (NCPC), estimated that 43% of the 13- to 17-year-olds sampled had experienced cyberbullying in the past year, with more than half of 15- to 16-year-old girls having experienced it (National Crime Prevention Council, February 2007).

Consequences of Cyberbullying

Cyberbullying may be deleterious to the academic success and psychological health of the youth involved. A fifth of cyberbullying victims report being forced offline by their experience, and almost a third of victims report that their experiences affect them at school in some way (Patchin & Hinduja, 2006). Similarly, victims of online harassment are more likely to skip classes and receive detentions or suspensions (Ybarra et al., 2007).

Victims may also experience negative emotions such as sadness (Beran & Li, 2005; Patchin & Hinduja, 2006), embarrassment, fear (NCPC, 2007), and anger (Beran and Li, 2005; Patchin and Hinduja, 2006; NCPC, 2007). In fact, over half of the cyberbullying victims surveyed for NCPC's 2007 report indicated that they had experienced anger in response to their victimization. This is especially worrisome in the context of Ybarra et al.'s (2007) discovery that individuals who are cyberbullied once a month or more are eight times more likely than others to bring weapons to school.

The possibility that a cyberbullying victim might do harm to themselves or others as a consequence of their experience should not be dismissed. The results of Hinduja and Patchin's (2010) study of middle school students strongly support the conclusion that involvement in cyberbullying, especially as a victim, is associated with seriously thinking about and attempting suicide. In fact, victims of cyberbullying are almost twice as likely as those not involved in bullying to attempt suicide. With nearly one in five of the middle school students in Hinduja and Patchin's (2010) study having attempted suicide, the importance of cyberbullying is clear.

Prevention

Wendy Craig, a researcher on bullying, states that bullying behavior is a relationship problem issue; adolescents who bully are learning how to use power and aggression to control and distress another. Craig suggests that prevention efforts should not focus on bullies or victims, but on helping all adolescents to form healthy relationships. These prevention efforts should begin when adolescents are young so they learn to create and maintain healthy relationships and avoid or improve unhealthy relationships (Education Letter, 2007).

Much more work is needed to understand cyberbullying and identify effective mechanisms for preventing it, though. According to Limber, of chief concern are the potential effects of cyberbullying on its victims, the effectiveness of bullying prevention efforts attempting to address cyberbullying, methods to involve parents in prevention and intervention efforts, and ways to promote responsibility among bystanders (*The Challenge*, 2009).

Limber's research indicates that a care-givers' actions and relationship with the child impact the likelihood that the child will engage in cyberbullying or be the victim of cyberbullying (*The Challenge,* 2009). Respondents to the first Youth Internet Safety Survey (YISS-1) who were poorly bonded to their caregivers were twice as likely to harass others online (Ybarra & Mitchell, 2004b). Roughly half of online bullies who responded to the YISS-1 reported poor monitoring by parents (Ybarra & Mitchell, 2004a), and the proportion of respondents reporting "frequent discipline" was twice as high for Internet harassers as for non-harassers (Ybarra & Mitchell, 2004b).

Since both cyberbullies and cybervictims may prove to be difficult to identify and work with, bystanders are an attractive target for intervention efforts. Bystanders play an important role in the bullying dynamic, and are likely to be more numerous than either bullies or victims,

especially on the Internet. Encouraging prosocial responses among bystanders may be an effective means of combating cyberbullying, and has been the basis of interventions targeting traditional bullying in schools (see Davis & Davis, 2007, for an example of one program that utilizes this approach). If teaching children to effectively, safely, and constructively intervene in a cyberbullying incident proves impractical, there would still be value in encouraging them to alert adults, or at the very least, teach them not to support the bullying.

Currently, few victims or bystanders inform adults about occurrences of cyberbullying. Previous research suggests that a third or fewer notify adults (Li, 2007; Patchin & Hinduja, 2006) whereas more than half of victims go to online friends about their problems (Patchin & Hinduja, 2006).

The National Crime Prevention Council (2008) encourages parents to teach victims and bystanders of cyberaggression to report it to Internet service providers, website moderators, or administrators. Kowalski et al. (2008) similarly say that victims and bystanders should be encouraged to tell parents, teachers, school staff, or other authority figures as applicable. Such recommendations to children are hardly helpful if the authority figures in their lives do not know how to respond, though. Upon learning of the bullying, adults often attempt to protect victims by removing the technology involved, taking away laptops, cell phones, or Internet access. Many victims, of course, see this as *punishment* rather than *protection*, and remain silent about their experiences because of this (*The Challenge*, 2009).

While interventions designed to encourage bystander action may hold promise, little work has been conducted to explore this potentially important mode of intervention. In an interview with *The Challenge* (2009), Limber highlighted this serious shortcoming in existent research about cyberbullying, "We know very little about the emotions and behavior of

'bystanders' to cyber bullying [sic]. How can we best engage them to help prevent and stop cyber bullying [sic]" (p. 3).

Bystanders and the Situation

Uncovering what factors determine the behavior of bystanders online is of course a necessary precursor to the development of any intervention targeting bystanders. Although research has not yet been conducted on the bystanders of cyberaggression, social psychology has a rich history of scientific investigation focused on bystanders, particularly on their helping behaviors.

A range of *environmental* factors have been found to affect whether or not bystanders will help someone in need (Bleda, Sharon, Byrne, & White, 1976; Boice & Goldman, 1981; Goldman, Broll, & Carrill, 1983; Shaw, Borough, & Fink, 1994; Ellis & Fox, 2001; Levine & Crowther, 2008). Most prominently though, in Darley and Latane's (1968) classic experiment it was demonstrated that the number of bystanders an individual believes are present is negatively correlated with the individual's likelihood of helping someone in distress, due to what they called *diffusion of responsibility*. When in a group, responsibility for taking action diffuses among those present, so that no one person feels the burden to act. Along the same lines, when people chooses to break with the group and act, they are saddled with the burden of responsibility if their actions turn out badly, but if they remain consistent with the group's inaction, any responsibility for the outcome, blame and guilt, would be shared by the group and presumably lessened. Furthermore, if the bystanders are in some way removed from one another such that they cannot be certain of each others' actions, each is tempted to think that, perhaps, someone else has already taken action. Darley and Latane (1968) maintained that, while there are powerful norms of helping behavior, there are also fears, rational and irrational, that may

discourage helping. Even the indirect act of reporting bears risks – embarrassment if the situation was misconstrued by the bystander, or involvement in time-consuming police or legal procedures. They observed, however, that the participants who did not seek help appeared to be quite distressed by the staged situation when the researcher came in to debrief them at the end. This led the researchers to conclude that these non-helpers did not coldly decide to leave the other person to suffer their fate, but rather, they became stuck in a stressful state of indecision. Failure to help, therefore, was not the result of apathy, inhumanity, or amorality, it was the result of indecisiveness, which increased when participants believed there were other people being confronted with the same situation.

This negative relationship between helping and group size has been supported across a number of experiments (Clark & Word, 1974; Greitemeyer, Osswald, Fischer, & Frey, 2007; Latane & Dabbs, 1975; Latane & Darley, 1968), but some exceptions to the rule have been found. Most notably, when bystanders are friends with each other, greater numbers may actually *increase* the likelihood that someone will aid a stranger in distress (Levine & Crowther, 2008), or at least minimize the effect of the group's size. This may be because we are better at interpreting our friends' behaviors, and therefore less likely to mistakenly interpret inaction as reflecting apathy, countering the misinformation aspect of the bystander effect (Latane & Rodin, 1969).

Bystanders Themselves

Certainly, the situation is not the sole determinant of helping behavior. A number of individual characteristics may also impact helping either individually or in conjunction with group effects. Previous studies have highlighted complicated relationships like that between gender, gender roles, and helping, as well as more straightforward relationships between helping and personal traits such as extraversion, neuroticism, and empathy. Though these factors are not

necessarily mutable, they may still be important in deciding where interventions should be targeted and how they should be communicated.

Gender and Gender Roles

At the simplest level, the gender of the individuals involved appears to affect one's likelihood of helping. Although women more than men judged themselves as likely to help someone in a vignette (with the only exception being a drunken stranger; Harris & Ho, 1984), in reality men appear to be more likely to take action (Harris & Ho, 1984; Latane & Dabbs, 1975). Female participants may be more aware of the influence of cost/reward assessments on their decisions to help (Fritzsche, Finkelstein & Palmer, 2000); perhaps this inhibits their helping behavior when perceived costs are real rather than imagined.

Paradoxically, masculinity, as measured by the Bem Sex Role Inventory, may actually be negatively correlated with helping (Tice & Baumeister, 1985). Carlson (2008) observed that men's desire to be perceived as masculine by other men is a deterrent to intervening to stop a rape or to stop a fight, unless the fight has escalated to the point of broken bones or incapacitation. Paralleling this, the bystanders in Levine and Crowther's (2008) study were more likely to help a female target when they were part of a three-person group with two women, than they were alone, or when part of a three person group with two men. As opposed to being alone or in a homogeneous group, being in a group with two members of the opposite sex was associated with the lowest likelihood of helping among women, but the highest likelihood of helping for men.

If these findings are reiterated in cyberbullying research, it may be important to aim more pro-helping messages at female Internet users, and to draft male-oriented messages which focus

on persuading readers that standing up for or protecting someone fits with masculine norms, perhaps portraying the passive bystander as a 'spineless coward.'

The Big Five

The well known traits of the Big Five have also shown some connection to helping others. Extraversion, agreeableness, neuroticism, and conscientiousness have all been connected to bystander behaviors.

Extraverted individuals, persons who are more energetic and sociable (Tani, Greenman, Schneider, & Fregoso, 2003), are more likely to have volunteered or be planning to volunteer for an altruistic act. Not surprisingly, agreeableness, the degree to which one is sympathetic towards others or generally altruistic (Tani et al., 2003), is correlated more strongly with volunteering than any of the rest of the Big Five (Carlo, Okun, Knight, & de Guzman, 2005).

Perhaps most applicable to the present research is the work of Tani et al. (2003), who actually examined the relationship between the Big Five (reported by teachers) and bullying (reported by students) in two Italian schools. Besides studying the victims of bullying, the researchers were able to create personality profiles of those bystanders who defended victims ("Defenders"), those who supported the bullies ("Pro-bullies"), and those who did nothing ("Outsiders").

Ultimately, agreeableness and neuroticism were the best predictors of a student's role as a Pro-bully, Defender, Outsider, or victim in the bullying interaction. Bully supporters were actually similar to victims in being disagreeable and emotionally unstable (Tani et al., 2003). This point is intriguing, as being a victim online has repeatedly been found to correlate with being a bully online (Li, 2007; Wolak et al., 2007; Ybarra, 2004). The students who defended

the victims were significantly more agreeable and emotionally stable (less neurotic) than were those who supported the bullies, while passive bystanders fell (nonsignificantly) in between the two, and were significantly less extraverted than either defenders or pro-bullies (Tani et al., 2003).

These passive bystanders were also somewhat more conscientious (more respectful of order, rules, and dutifulness) than both those who defended the victims and those who supported the bullies (Tani et al., 2003). Tani et al. (2003) gave little attention to the relationship in their publication, but the reader should pause for a moment to consider the implication of such a relationship; counter-intuitively, individuals who value rules and order may be less likely to stop what most would consider an infraction of the rules.

Tani et al.'s (2008) work with the Big Five indicated that extraversion might be associated both with helping a victim *and* with helping a bully. Although not the same as the Big Five's extraversion, individuals scoring higher on the Eysenck Personality Questionnaire's construct of extraversion (which measures one's preference for stimulating activities; Sato, 2005), were more likely to report altruistic behaviors (Rushton, Fulker, Neale, Nias, & Eysenck, 1989). This suggests that an extraverted bystander might be more willing to intervene on a victim's behalf.

If reproduced within the context of cyberbullying, this sort of trait information would have more immediate value in identifying potential bullies and victims, but it may still have some utility in working with bystanders. Intervention messages could, for example, be targeted at introverts. If the nonsignificant trend for passive bystanders to be more conscientious observed by Tani et al. (2003) is important online, perhaps interventions could focus on associating helpfulness, being a good Samaritan, with the general 'order' and 'rules' of web-

society, as well as helping conscientious young web users develop a more accurate understanding of what the boundaries for acceptable treatment of others online are.

Self-Monitoring

In the absence of such guidance, one might speculate that the passive bystanders are making judgments about the rules based on the actions of their fellow bystanders. This sort of social comparison is integral to the individual difference characteristic of self-monitoring, an individual's tendency to adjust her or his own behavior according to what s/he perceives as socially appropriate for the situation (Snyder, 1974). Kulik and Taylor (1981) found that high self-monitors are slower to help when social consensus is to not help but are *not* faster to help when the social consensus is to do so. It seems that self-monitoring can sometimes be an undesirable quality in a bystander, but never a desirable one.

Locus of Control

Multiple studies have examined the relationship between one's inclination to help and her or his locus of control. *Locus of control* refers to where an individual places the responsibility for her or his outcomes. Individuals may attribute success, failure, or any other outcome in life to personal factors (e.g., intelligence, determination, laziness, carelessness) or to external factors presumably out of their control (e.g., poor economy, authoritative government, God). Rotter and Mulry (1965) describe this in terms of two orientations: internal locus of control, the tendency to believe that one determines her or his own outcomes, and external locus of control, the tendency to believe that one's outcomes are the product of "luck, chance, fate, or powerful others" (p. 598).

Whether or not an individual seems to deserve help (particularly, whether they can be blamed for their predicament) has a significant impact on how internal- versus external-locus

bystanders react, such that those developing interventions to improve bystander responses to cyberbullying might consider using appeals that emphasize a victims general worth. Those with an internal locus of control have been theorized to be more helpful when the individual in need is apparently successful, interpreting their success as a sign that they are worthy of being helped, but this can be confounded by internal-locus participants' disinclination to be controlled by the situation, which may lead them to do the opposite of what is expected of them when the situation is especially strong (Lerner & Reavy, 1975). When confronted with a disparity between ascribed (given) status and achieved (earned) status, both internal-locus and external-locus individuals offer more help to someone who has earned a great deal of status but not had it acknowledged, than someone who has been granted status without earning it, but those with an internal-locus of control show a far greater difference (Midlarsky & Midlarsky, 1976).

Farra, Zinser, and Bailey (1978) conducted an experiment examining the participant's locus of control and willingness to help tutor targets who were/were not responsible for their own predicament (academic probation), and varied the race of the target. Although no main effects were significant in their research, an interaction was found, such that external-locus participants offered more help to the black recipient than the white one, and internal-locus participants offered more help to the white recipient than the black one, even though these participants expected that the white targets at fault for their own situation were the least likely to improve academically.

Prosocial Traits

Studying survivors of World War II, Fagin-Jones & Midlarsky (2007) found many personality dimensions which correlated to having helped Jews escape the holocaust. Working with a sample of non-Jewish Europeans who were present during the holocaust but did not take

part, the researchers derived a model that was able to correctly categorize more than 95% of the participants as rescuers or nonrescuers on the basis of situational and individual level factors. Surprisingly, categorization was best predicted by individual level variables, such as social responsibility (a person's sense that s/he should help those dependent on her or him regardless of gain), altruistic moral reasoning (a person's tendency to employ values of caring and compassion when thinking about human problems), and empathic concern (an inclination to experience emotions of sympathy and concern focused on others; Davis, 1983). It is worth emphasizing that these personality characteristics were measured over *four decades* after the behavior they predicted had occurred; this could reflect the stability of the traits that contributed to the behavior, or it could reflect the influence of the person's behavior in the past upon their self-concept in the present. This replicated an earlier study, in which Midlarsky, Fagin-Jones, and Corley (2005) had found that social responsibility, altruistic moral reasoning, and empathy were among the most important predictors of bystander helping, although locus of control and gender also predicted the helping behavior of bystanders.

In sum, many individual-difference variables have been found to influence the act of helping, and in some cases this influence is itself affected by the presence of bystanders. There is a relationship between gender, the value placed on gender roles, and helping, and it appears to be influenced by the number of bystanders present, but, to the author's knowledge, no comprehensive explanation for the findings to date has emerged. Our understanding of the role locus of control has in helping is similarly hazy, as it seems to interact with small details of the situation in big ways. Major traits like extraversion, agreeableness, neuroticism, and conscientiousness have been related to helping behavior, and even to proactive, antagonistic, and passive responses to bullying specifically. Not surprisingly, of course, prosocial traits like

empathy and social-responsibility are positively associated with helping others, even when potential costs are quite high.

Possible Bystander Responses to Cyberbullying

When faced with an incident of cyberbullying a bystander can potentially display one or more of five possible reactions to the bullying incident. First, as Darley and Latane (1968) described, the participant may become trapped in a state of indecision, wherein s/he fails to respond, but not due to a conscious decision to remain uninvolved. Second, the participant may opt to ignore the incident, deciding not to get involved, for any number of reasons, as Pilliavin, Pilliavin, and Rodin (1975) described. Third, the participant may choose to side with the bully, and maybe even begin saying rude or nasty things to the victim. Fourth, the participant may choose to side with the victim and attempt to personally intervene in the conflict. Finally, the participant may choose to notify an authority figure.

The Current Study

Cyberbullying surpasses all other forms of bullying in terms of its potential audience size. Fortunately, this quality also means there are potentially far more individuals in a position to help or seek help for the victim. To take advantage of this, those who seek to prevent cyberbullying need to be well equipped, chiefly with knowledge about how best to promote prosocial action on the bystanders' part, and which bystanders to focus on.

Such knowledge cannot be effectively captured through the survey methods used thus far, but rather it requires direct observation of situations in which people believe they are seeing an incident of cyberbullying unfold. In identifying specific situational and personality factors which influence the responses of bystanders, it will be best to approach this task with an

experimental manipulation rather than attempt to passively observe cyberbullying in the field, which would not only be extraordinarily impractical but also ethically questionable.

This study used such an experimental manipulation, which aimed to establish a causal link between the perceived number of other Internet users who are witnessing an incident of cyberaggression, and an individual's willingness to take action to stop the incident. Although plenty of correlational research has been conducted regarding cyberaggression, little research has been conducted experimentally, leaving the research community unable to draw any solid conclusions about how cyberaggression occurs or, in this case, how it is tolerated.

Given that an inclination to help others is socially desirable, participant self-reports are likely to be unrealistically optimistic and self-flattering. Individuals who would help are not necessarily the same ones who do help; for example, Harris and Ho (1984) found that while women were more likely than men to report that they would help someone in a simple vignette-based study, men were more likely than women to actually help someone in an experimental study which staged an incident in which help was needed. Since participant self-reports cannot be trusted in research examining helping behavior, such research has often relied upon deceiving the participants (e.g. Bickman & Rosenbaum, 1977; Bleda, Bleda, Byrne, & White, 1976; Boice & Goldman, 1981; Clark & Word, 1974; Darley & Latane, 1968; Ellis & Fox, 2001; Farra, Zinser, & Bailey, 1978; Gabriel et al., 2001; Goldman, Broll, & Carrill, 1983; Gruder, Romer, & Korth, 1978; Harris & Ho, 1984; Hawks, Peck, & Vail-Smith, 1992; Kriss, Indenbaum, & Tesch, 1974; Latane & Dabbs, 1975; Latane & Darley, 1968; Latane & Rodin, 1969; Lerner & Reavy, 1975; Pilliavin, Pilliavin, & Rodin, 1975; Shaw, Borough, & Fink, 1994; Shotland & Johnson, 1978; Shotland & Stebbins, 1983; Tice & Baumeister, 1985; Wilson, 1976). Consistent with that tradition, this study also relied upon deception.

Research Questions

The overall question is, does the bystander effect, well-established in a variety of offline contexts, apply to an online conflict? An online environment differs drastically from an offline environment in many ways, including offering greater anonymity (Kowalski et al., 2008), fewer peripheral cues to invoke empathy (e.g. facial expressions, body language, and tone; Smith et al., 2008), and cultural norms wherein motivations as basic as 'boredom' may drive bullying behavior (Kowalski et al., 2008). The bystander effect has proven robust enough that we might assume that it should apply here in spite of the countless situational differences between the two environments. We would deal with cyberbullying as if it were no different from traditional bullying in that respect. Intervention efforts, however, are costly in terms of time, money, and public faith. Given such high stakes, the assumption that vetted social psychology theories apply to an online environment should not be taken lightly.

This study then would aspire to replicate well-established research in an online environment, to serve as something of a litmus test for this rather large assumption; if our replication succeeds, those wishing to tap the bystander as a resource in the battle against cyberbullying could look to traditional sources and paradigms with far greater confidence. Furthermore, if bystander responses to cyberaggression and traditional conflicts prove to fit similar patterns, this method might be 'reversed', offering a more economical and practical means of studying offline interpersonal conflict. More specifically, the major research questions are:

Does the number of bystanders present affect the likelihood that an individual will respond to an incident of cyberbullying? Past research does suggest that the bystander effect occurs in online interactions. Markey, Wells, and Markey (2002) randomly selected Yahoo! chat-rooms that contained either one chat-room user or 19 chat-room users, and a confederate

submitted a technical question to these chats, repeating it every 60 seconds until it was answered. The bystander effect emerged in the amount of time the confederate had to wait for a response; the confederates' technical question was answered more quickly when there was only one chat-room user to answer them, than when there were 19 chat-room users who could potentially answer. Based on this, we have good reason to anticipate its emergence in a more consequential situation.

Does sex or gender affect the likelihood that an individual will respond to an incident of cyberbullying? Considering the aforementioned research, it seems likely that a counterintuitive relationship will emerge, wherein males will be more likely than females to intervene, but those who value masculinity will be less likely to help the victim, and may instead be more likely to team-up with the bully.

Do commonly recognized personality traits predict a bystander's likelihood of helping a cyberbullying victim? Based on the research of Midlarsky et al. (2005) and Fagin-Jones and Midlarsky (2007) we would expect that altruistic moral reasoning, social responsibility, empathy, and risk-taking will all be positively associated with either reporting the incident to the researcher or defending the victim. Similarly, based on Tani et al.'s (2003) study it seems likely that high agreeableness and low neuroticism will be predictive of defending the victim or reporting the incident.

Does locus of control interact with the diffusion of responsibility created by larger numbers of bystanders? As illustrated previously, those with a higher internal locus of control may be more willing to defy the crowd and take action (Midlarsky, Fagin-Jones, & Corley, 2005), and rebel against the increased responsibility imposed upon them in the absence of other bystanders (Lerner & Reavy, 1975), thus one would expect participants with a high internal locus

of control to react more quickly to cyberbullying when in the presence of other bystanders than when alone. It should be noted that although several studies have examined locus of control with respect to helping behavior, few if any have looked at it specifically in reference to bullying or aggression.

Hypotheses

Hypothesis 1: Participants who believe there are two other participants witnessing an act of cyberaggression, will be less likely to intervene on the victim's behalf, than will participants who believe they are alone with the victim and bully.

Hypothesis 2: Male participants will be more likely than female participants to help a victim of cyberbullying, regardless of experimental condition.

Hypothesis 3: Participants (male and female) who place more value on masculinity will be less likely to help a victim of cyberaggression than those who place less value on masculinity, and this relationship will be stronger when there are bystanders present.

Hypothesis 4: Participants with a more internal locus of control will be more likely than others to help a victim of cyberbullying when there are other bystanders present, but less likely to do so when they are alone with the victim and bully.

Hypothesis 5: When there are bystanders present, self-monitoring will be negatively associated with helping a victim of cyberaggression, but there will be no significant relationship when there are no bystanders present.

Hypothesis 6: Social Responsibility will be positively associated with helping, regardless of experimental condition.

Hypothesis 7: Empathy will be positively associated with helping, regardless of experimental condition.

Hypothesis 8: Neuroticism will be negatively associated with helping, regardless of experimental condition.

Hypothesis 9: Extraversion will be positively associated with taking action (either helping the victim or joining with the bully), regardless of experimental condition.

Method

Participants

Participants (*n*=140) were students enrolled in Introduction to Psychology (PSY 100). Who were recruited from Colorado State University's psychology department research participant pool. Students participated in research for course credit.

The sample was overwhelmingly "White" (83.8%), with very few participants reporting their race as "Black" (2.2%), "Asian" (2.2%), "Hispanic" (0.7%), or "other" (1.5%). Ethnic background was missing for 2.8% of the sample. Thirteen participants (9.6% of the sample) reported being multiracial. This distribution generally parallels the university's student body, of which 85.7% are classified as "non-minority students" (CSU Institutional Research, 2010).

However, the sample was predominantly female (79.3%) represents a substantial departure from the student body as a whole (51% female) and even from the pool of Introduction to Psychology students that were available to participate (62% female). This may indicate that billing the study as an observational study in online communication patterns disproportionately appealed to female students.

Procedure

Scripted Chat. Potential participants read the study description online at a web-site set up for the participant pool, and then, if they were interested, signed up for a listed research session through the site. Participants scheduled for discussion were sent the informed consent document, as well as directions on how to get to the chat-room and join the discussion. Participants were asked to either indicate their consent by replying to the e-mail or cancel their participation through the research pool web-site.

If a participant signed up for a session, and replied to the informed consent e-mail indicating agreement, he or she was sent a reminder e-mail the day before the scheduled session containing a link to a chat-room hosted on www.chatzy.com. Chatzy is a site which allows members to create a chat-room and send invitations to nonmembers. The link contained in one of these invitations is all an individual needs in order to get into the chat-room s/he has been invited to. The link brought the participant to a page where s/he created a screen-name and chose a color for her or his screen-name. From there the participant could enter the chat-room directly. Log in times were automatically recorded by the chat-room.

Regarding their screen-names, participants were provided with instructions regarding what to use. Participants were asked to create their screen-name as a combination of a location name and the last two digits of their primary phone number. The instructions given to the participant recommended the use of a memorable place name (e.g. a participant who came to CSU from Boulder, CO, with their current phone number being 555-1425, might assume the screen-name Boulder25) but also stated that they may use any location name they desired, so long as they could recall it later if necessary. Since this offered a finite number of possible screen-names, participants were instructed to add a "B", "C", etc. to the end of their screen-name

if the web-site informed them that the name was already in use. This method was selected for multiple reasons:

1) Variety – This system provided a large number of possible screen names, so a participant was unlikely to spend a long time entering different screen-names looking for one that had not yet been used.
2) Impersonality – In order to avoid biasing the participants' perceptions of their conversation partners, it was necessary to select a naming system that would justify the use of especially impersonal names. The names of the non-participant characters involved in the discussion were taken from a list of the 30 most common place names in the United States, and chosen for their gender neutrality.
3) Memorable – Participants needed to be able to remember the confederate characters' names in order to follow the discussion and answer questions afterwards. The researcher felt that a simple alphanumeric code (e.g. st25) would not be sufficiently memorable, and would be *too* impersonal. Such a code would have made the conversation harder to follow and made it more difficult than it already was to imagine online conversation partners as people. The researcher believed that a place name, being a name, was as memorable to a participant as a person's name would have been.
4) Anonymity – Anyone attempting to mine our data for unscrupulous reasons would not find these screen-names to be especially useful in identifying specific participants. Many town names are used in multiple states (e.g. the name "Franklin" is shared by 30 locations in the United States), making them of little use without a corresponding state name to narrow the field, and larger cities, like Los Angeles, have populations so high that they produce their own sort of anonymity. Most importantly, the participants'

histories of previous dwelling places are not available in records related to this study or, to the researcher's knowledge, the department's research participant pool in general. Thus, no link is readily available to connect a participant's identity to their screen-name now.[1]

All confederates were instructed to log into the chat-room punctually, but were also directed to stagger their login times, to enhance the illusion of unrelated identities. In the small group condition (i.e., the control condition), the participant was joined by two confederates who were using the screen-names Fairview20 and Greenville28. In the large group condition (i.e., the bystander condition) these confederates were also playing the part of two additional participants, using the screen-names Manchester03 and Ashland13.

Research participants were greeted by either "CSU Researcher 01" (played by the author) or "CSU Researcher 02" (played by a research assistant under the author's direct supervision on days that two sessions were run simultaneously). Once the scheduled participant and all confederates arrived, CSU Researcher 01/02 asked them to answer a series of simple questions as quickly as possible. Participants were told that this was to make sure that everyone's Internet connection was running fast enough for the study. In actuality, it was *also* intended to impress upon the participant the number of other participants (played by the researcher and his confederates) that were present. CSU Researcher 01/02 then reminded them that they could drop out at any time with no repercussions, but asked that if they did drop out, to contact him/her as soon as possible so that they could be provided with the debriefing. CSU Researcher 01/02 then explained how the study session would work before allowing the discussion to begin.

[1] The only exception to this would have been the documentation of withdrawal requests mandated by the IRB, which would have connected participants' identities to their screen-names, but none of this study's participants asked to have their data withdrawn, so no such documentation exists.

Participants were led to believe they were participating in a round-robin style debate exercise, wherein every participant would have a short debate with every other participant. They were told that the researcher would choose a pair, assign a topic, and assign stances on the topic, and that the pairs would then be instructed to debate with each other, and respond only to each other. They were told that, during this time, their audience was free to make supportive or critical comments as they felt appropriate, until the discussion time had elapsed, at which point the researcher would halt the debate, and repeat the process with a different pair of participants. They were told that the whole process, survey included, should not take more than an hour.

After providing these instructions, CSU Researcher 01/02 would then choose participants Fairview20 and Greenville28 and give them their topic: *tacos or hamburgers, which is better?* The researcher emphasized that the debate was intended primarily as a means of facilitating one-on-one conversation. The researcher then assigned Fairview20 to argue in favor of hamburgers and Greenville28 to argue in favor of tacos, with Greenville28 being instructed to initiate the debate. Next, the researcher informed the chatters that he needed to log out of the chat and set up a session in another chat-room, and would return when it was time to rotate the discussion. CSU Researcher 01/02 emphasized, however, that s/he could still be reached by e-mail (CSURsrchr01@gmail.com) if there were any problems. After a few lines of discussion between Greenville28 and Fairview20, CSU Researcher 01/02 set her or his chat status to "away", apparently leaving the participants and confederates alone with each other.

Greenville28 began the debate, as requested, and Fairview20 began to argue. For a short time the discussion followed expectations, with both serious and facetious arguments made by both individuals, but Fairview20 became sarcastic (after five exchanges), hostile (after six exchanges), and outright insulting (after nine exchanges). Greenville28 initially ignored the

provocations and continued the debate civilly, but Fairview20 proceeded to generally escalate the teasing to malicious harassment, continuing even after Greenville28 asked Fairview20 to stop (after 18 exchanges). In the large group condition, the additional two confederates remained silent after the CSU Researcher 01/02 left the room, saying nothing during the debate although their status in the room's sidebar still showed them as present.

During this debate, the participant was free to comment, so it was expected that the participant would perform one or more of the following actions: (A) contact the researcher via e-mail, (B) say something to support the victim or condemn the bully, (C) say something to support the bully or harass the victim, or (D) remain completely neutral by saying nothing related to the bullying.

If the participant contacted the researcher and in some way notified him of the problem, the researcher thanked the participant and immediately terminated the debate.

If the participant said nothing, the discussion was allowed to continue until the confederates had run out of script, at which point CSU Researcher 01 or 02, logged back into the chat-room. The average duration of the chats was 26min, with the longest chat lasting 35min, and the shortest chat being 7min (the session was aborted early due to a script error).

Upon returning to the chat-room, CSU Researcher 01/02 took a moment to 'review what had been said', and finally announced that the session needed to be ended early. CSU Researcher 01/02 thanked the participants for coming, informed them that if they were upset they could still contact the researcher or counseling services to discuss it, and asked them to continue to the online questionnaires (hosted on surveymonkey.com), which tested the manipulation and collected information about the participants' prior Internet use experiences and personal characteristics. At the end, the survey presented them with a debriefing form which detailed the

true nature of the study, reiterated contact information for those wishing to learn more or express their concerns, and offered participants the opportunity to have their data excluded from the study.

Participants who wished to have their data excluded were instructed to e-mail the researcher with their real name and their screen-name. These name pairs were to be recorded together in a 'do not use' list, as per the IRB's request, and kept in hardcopy in a secure filing cabinet in the researcher's office on campus, separate from the rest of the study's data which has been kept primarily in soft copy, on the researcher's computer. None of the participants asked to have their data excluded, though, so no such list ever came to exist.

Confederates. This study required that the researcher have the assistance of research assistants (RAs), who served as confederates in the experiment, and, in the case of one RA, play the part of CSU Researcher 02. The RAs were volunteers, working either from an interest in the research, or from a desire to gain experience in the field of research psychology.

As confederates, the RAs were responsible for delivering the scripted debate (written by the researcher and included in the appendices) in a chat session for a participant to see. Essentially, the RAs were responsible for running the chat's "non-participant characters" (NPCs). One RA played the bully and a neutral NPC. The researcher played himself. The victim and second neutral NPC were played by an RA in the initial sessions or by the researcher in later sessions. The bully was never played by the same person logged in as the victim as it would have become too confusing and exhausting to deliver both halves of the dialogue. The bully was never played by the researcher in case any participants checked the IP addresses of their fellow chatters. A participant seeing the researcher logged on from the same location as

anyone might see this as suspicious, but it was felt that seeing the researcher logged on from the same location as the bully might seem especially suspicious.

The RAs were required to take and pass the online human research ethics training course provided by the Collaborative Institutional Training Initiative (CITI), and were given instruction in not only how to fulfill their role in the study, but also what specific precautions needed to be taken to ensure that the study remained safe and ethical.

Specifically, RAs were instructed not to discuss the research with anyone other than the researcher and the other RAs. This protocol served two purposes; first, it inhibited diffusion of treatment that might have harmed the study, and second, it helped to maintain the anonymity of the participants.

The RAs were also instructed to avoid deliberately or accidentally violating the anonymity of the participant. The confederates did not interact with any information that might connect the person they were interacting with online to an individual in the CSU community. The confederates did not need to know the identity of the participant with whom they were interacting, so rather than simply ask them to keep that information to themselves, it was better for both the participant and the RA if they simply did not know at all. One exception lay in the RA empowered to log into the chat-rooms under the researcher's account. Having administrative control over the chat-rooms, this RA could see the e-mail addresses of past participants. For this reason, the RA granted this responsibility was one with very high CITI scores, and who was a non-student volunteer, unlikely to recognize any of the undergraduate participants' e-mail addresses.

For ethical reasons, the RAs were instructed to halt the experiment and make sure that the researcher was notified immediately if the participant appeared to be seriously distressed, or if

they themselves became distressed. This was a very subjective judgment to make, which relied on the RAs' CITI training and good sense. The confederates had the researcher's personal contact information (cellular phone number and personal e-mail), so that they could contact the researcher directly if they were uncertain. In practice, maintaining contact with the RAs was simple; via a second chat-room the RAs kept the researcher apprised of the participant's responses throughout the chat. On one occasion a participant sounded seriously distressed, albeit suspicious, saying that even if the conversation was fake, it was bringing down his/her mood. The researcher immediately terminated the session and provided the information for the counseling center.

The RAs were also instructed to immediately contact the researcher if the participant logged off from the chat. If the participant logged off prematurely, the researcher needed to personally contact him or her to make sure that s/he was alright, and to either help them log back on, or send him or her the debriefing document. This occurred on a number of occasions due to connection issues. In most cases, the researcher simply needed to provide technical information to the participant on how to log back in, and they returned within moments. In one case, however, the participant stated they had homework to do and logged off before the end of the chat. The researcher e-mailed the participant the debriefing information.

Research assistants were also prohibited from significantly deviating from the script which they were provided. Insignificant deviations were typographical errors that inevitably occurred (and added a bit to the realism), and minor improvisations in response to the participants' dialogue. The latter was necessary because, on occasion, the participant would interrupt a set of dialogue, and the RAs would need to alter the subsequent line slightly to ensure

that it was clear that the line was *not* directed at the participant. It was very important that participants not believe that they were the targets of the bullying!

RAs were instructed not to copy and paste from the script, so that the chat would not proceed too quickly. This was intended to maintain the realism of the chat. This aspect of the protocol was slightly compromised toward the end of data collection, however, due to the computer's auto-complete function. We (the research team) found that fatigue over multiple sessions was actually causing us to type too slowly and make more errors. At our reduced pace, the conversation began to feel scripted, chats were running over the time limit, and there was a general sense of impatience on the participants' part. As a result, we ended up using auto-complete and developing a sort of 'rhythm' for plugging in our lines, which included 'dramatic' timing for certain lines.

Measures

The first page of the online survey asked participants to report their subjective experience of the chat (e.g. "How enjoyable did you find this activity to be, on a scale of 1 to 4, with 1 being 'very unenjoyable' and 4 being 'very enjoyable'?") and quizzed them about various aspects of the chat (e.g. "Please list the screen-names of the participants in today's discussion, including your own") to verify that they had paid attention to the chat and were cognizant of the number of chatters that were supposedly present.

The next page collected information about the participants' internet usage history and habits, adapted from the second iteration of the Youth Internet Safety Survey (YISS-2) carried out in 2005 (Finkelhor, Mitchell, & Wolak, 2011). Ten items investigated what the participants used the Internet for. Each item asked how often they used it for a particular activity, on a scale of one to five, with options ranging from "Not at all in the past 12 months" to "Daily."

Participants also answered three items about their own, real-life involvement with cyberaggression. Two items were focused on *victimization* ("I have felt worried or threatened because someone was bothering or harassing me online" and "I have been threatened or embarrassed by someone using the Internet to post or send messages about me for other people to see"), and one tapped perpetration ("I have made rude or nasty comments to someone online unprovoked"). Participants were asked to estimate how often, in the past 12 months, they had engaged in each of the behaviors (1 = Not at all in the past 12 months; 2 = A few times in the past 12 months; 3 = Monthly; 4 = Weekly; 5 = Daily). The rest of the survey, except the last page, was devoted to the measurement of personality variables relevant to the aforementioned hypotheses.

The construct of 'masculinity' was measured via the shortened version of Bem's (1974) Sex Role Inventory (BSRI; Bem, 1981). The short form of the BSRI presents participants with 30 descriptive items and asks participants to indicate their identification with each item on a Likert scale of 1 ("Not Like Me") to 7 ("Like Me"). The 30 items are divided evenly between masculine, feminine, and gender-neutral descriptors. The proscribed use of the scale involves comparing participants' scores on the masculine and feminine portions to the population means for those items and, based on that comparison, categorizing participants as masculine, feminine, androgynous, or undifferentiated. Due to the limited aims of this study, however, only the masculine items were used in the final analysis.

Locus of control was assessed by the "Life Control" subscale of Reker and Peacock's (1981) "Life Attitude Profile" (LAP). Although only part of a much larger instrument, the Life Control subscale showed reasonable reliability (α=.78) in Reker and Peacock's research, and at only six items long, it is much shorter than Rotter's (1966) 29-item Internal-External scale.

The construct of "empathy" was assessed using Davis' (1980) Interpersonal Reactivity Index (IRI). This measure has 28, five point Likert-type items and four subscales – Fantasy, Empathic Concern, Personal Distress, and Perspective Taking. Each of these subscales is intended to be a measure in its own right, "each tapping some aspect of the global concept of empathy" (Davis, 1983, p.113), to allow measurement of what Davis considered a multidimensional variable.

The two "Big 5" traits of interest here, "Extraversion" and "Neuroticism" were measured by Sato's (2005) Eysenck Personality Questionnaire-Brief Version (EPQ-BV), a 24 item measure adapted from Eysenck & Eysenck's (1992) Eysenck Personality Questionnaire – Revised (EPQ-S). The EPQ-BV differs from its predecessor first in the omission of the "Psychoticism" subscale and the "lie scale", which shortens the scale substantially, and second, in the replacement of the true/false response options with 5-point Likert-type response options (Sato, 2005).

Self-monitoring was measured by the short form of Snyder's Self-Monitoring Scale (Snyder, 1987), which is constituted of 18 true/false items (eight of which are reverse scored). Items such as "I'm not always the person I appear to be" and "At parties and social gatherings, I do not attempt to do or say things that others will like" (reverse scored) measure a participant's tendency to observe their own behavior, observe situational cues (including the behavior of others), and regulate their own behavior to match.

Self-efficacy was measured by the English translation of the General Self-efficacy Scale (Schwarzer & Jerusalem, 1995), which asks participants to rate their agreement (on a scale of 1 to 4) with 10 self-descriptive statements like "If someone opposes me, I can find the means and

ways to get what I want" and "I am confident that I could deal efficiently with unexpected events."

Social responsibility was measured by Berkowitz and Lutterman's (1968) abbreviated Social Responsibility Scale, which was constructed from eight items used in previous social responsibility scales, and made for use with a "general population" (p.174). Participants ranked agreement on a scale of 1 to 5 with statements like "Every person should give some of his time for the good of his town or country."

The last page of the online survey collected basic demographic information, and, for one last validity check, asked participants bluntly whether they were suspicious of the research's goal at any time during their participation. Conditional on a *yes* response participants were also asked when (during the chat or during the survey) they became suspicious and what they thought the true purpose of the study was. All participants were also asked if they had discussed the study with anyone who had already participated in it.

Analysis

As previously described, it was expected that the participant would perform one or more of the following actions during their time in the chat: (A) contact the researcher to notify him of the bullying, (B) say something to support or defend the victim or condemn the bully, (C) act antagonistically by saying something to support the bully or harass the victim, or (D) remain completely neutral by saying nothing related to the bullying, if anything at all. For the purposes of this study, the first two types of responses represented helping behaviors.

Before the data could be coded for such instances of helping, it was scrubbed. First, the researcher removed the participants' screen-name and any other identifying information from each transcript, and replaced it with "Participant" and the session number. This was done to

stem any bias that might come from recalling interactions with particular participants, or recalling judgments made at the time. Second, all indicators of the bystanders' presence were removed, so that coders would be blind to the research condition. This was largely quite easy, except in two cases. In one case, the participant directly addressed the bystanders in the chat. In the other case, one of the victim's lines was mistakenly delivered by one of the bystanders. In those two cases, the researcher was forced to choose between keeping the data intact and keeping the coder blind to the participant's condition. The decision was made to retain the references to the bystanders (these cases were ultimately excluded from the analysis, however; for more details, see *Suspicion and Invalid Cases*, p.39).

Next, the researcher provided his research assistants, both of whom had served as confederates during data collection, with instructions for coding the data. The RAs' training and instruction was minimal. This deviation from the typical approach to qualitative research had two premises. First, the rationale was that everyone already knew what was being looked for, and this shared frame of reference made extensive training unnecessary. Second, the researcher reasoned that, if three coders approached the data from separate perspectives and developed their own approaches to the analysis, and yet showed high agreement overall, the product could be considered more valid than any system the researcher might contrive and then impose upon his assistants. The researcher also felt that such high agreement in spite of minimal direction would also support his argument that the data was relatively simple and straightforward, while low agreement would challenge that assumption, and mandate a re-examination of the approach.

Initially, the RAs were instructed to study the responses to the bullying once it began, around the time the bully starts mocking the victim for correcting his spelling, and through to the end of the chat, and assign a *helpfulness* score on a scale of -3.0 to 3.0, with negative scores

representing antagonistic participants, and zero representing either a complete lack of response (participant made no comments at all), or responses that neither addressed the bullying directly nor attempted to address it indirectly (e.g., trying to change the topic). They were told that, generally, they should look at the content of a participants' responses, their persistence, and approximately how far the script progressed before the participant acted, but that otherwise they should do this how they best saw fit. The RAs were told that they would do this once, not discussing it with each other, after which the coders would meet to discuss the different approaches to the data, and, if necessary, reassess the coding strategy.

The researcher and the research assistants then separately went through each transcript, recorded distinguishing information such as the responses to the questions at the beginning of the chat (a failsafe in case participant numbers were scrambled) or unusual comments during the chat, and assigned a general *helpfulness* rating based on the aforementioned general criteria.

Unfortunately, shortly before this first phase should have been completed, one of the two research assistants withdrew from the university. The remaining research assistant was the volunteer who had earlier in the study served as a confederate, and even posed as the researcher on occasion that two sessions were being run simultaneously. The researcher and this RA completed the coding as outlined above and conferred to determine what, if any, adjustments were needed. Two important decisions came out of this discussion.

First, due to a clear skew in the data, with almost all cases falling on the positive side of the -3 to 3 scale, the RA had taken to assigning ratings in intervals spaced at 0.5. Originally, the scale was supposed to adhere to intervals spaced at 1.0, to maintain simplicity, but as the coding progressed, she felt that this provided insufficient resolution to capture the variance in participants' behaviors. Negative ratings were intended to capture the behavior of the

participants who might have antagonized the victim or supported the bully, but this turned out to be extremely rare. By the time suspicious participants were excluded, only a few participants had expressed any antagonism toward the victim and even among these participants, all but one received positive scores because they ended up 'defecting' to the victim's side as the bullying became more intense. In light of this, the researcher agreed that coding in 0.5 intervals was more appropriate. Negative scores being essentially absent, helping was effectively scored on a seven point scale.

Second, based on a discussion of the range of observed responses, helping was loosely operationalized. The definition of helping was set to broadly include any action on the part of the participant that might achieve one of the following:

1. Alert the researcher to the problem, bringing in an authority's intervention.
2. Stop the bully's attacks.
3. Comfort or reinforce the victim.
4. Undermine the bully, diminishing the impact of his/her attacks.

Both the researcher and the RA evaluated transcripts multiple times, returning to previously evaluated participants to reconsider their scores based on precedents set by other cases, and based on the decisions made in the discussion between the researcher and the RA. The fluidity of this process yielded reliable ratings. This difference between the researcher's average helpfulness rating ($m = 0.86$, $SD = 0.86$, $n = 129$) and the RA's average rating ($m = 1.14$, $SD = 0.95$, $n = 129$) was less than the 0.5 point increments being used in the assignment of ratings. In addition, when the scores issued by the researcher and the RA were compared via Intraclass Correlation (ICC), they showed high inter-rater reliability ($\alpha = .91$) their judgments indicated *strong* agreement (ICC = .79, $F(1, 128)=10.72$, $p<.05$, 95% CI [.63, .88]).

Suspicion and Invalid Cases. During and after this phase of the analysis, 29 cases were identified as invalid by the researcher and simply classified as missing. These cases included individuals who participated in sessions where the researchers made serious mistakes when acting out the chat (the 1 case previously mentioned) or when setting up the chat-room (8 cases), specifically regarding the proper display of the screen-names in the chat-room's side-bar. These cases also included individuals who indicated suspicion in their responses to the manipulation check at the beginning of the survey (7 cases) and individuals who were clearly suspicious during the original chat (10 cases), many of whom were not even assigned helping scores during the analysis, because their responses *revolved around their suspicion*. Additional participants were excluded due to a bad internet connection (1 case), logging off for most of the chat (1 case), or stating "screw that" and logging off when the researcher returned to close the session (1 case).

In addition to the researcher's evaluation of suspicion, a yes-or-no item placed at the very end of the survey which asked, "At any time during the chat or surveys did you become suspicious that the study might not really be about having online conversations?" was intended to assess general suspicion, and the results were disheartening; only 20 participants responded with "no". Excluding individuals for suspicion based on their responses to that question was not feasible. However, given that the research depended on the participants believing that the bullying incident was real, mere suspicion compromises the validity of the study, regardless of what participants 'suspected' was going on behind the scenes.

It is possible that the large number of positive responses was the result of the item itself triggering participants' hindsight bias (Fischhoff, 2007). Since such validity checks are (to the author's knowledge) seldom added to studies which do not use deception, the presence of one is effectively a red flag to the participant. On sight of this marker, participants may unconsciously

revise their memory of the experience, making themselves over to be more perceptive and less easily fooled than they really were. This explanation is purely speculative however, leaving the internal validity of this study in doubt. The results presented here should be taken as tentative.

Of the 17 cases excluded for suspicion, seven were excluded because they stated in the survey that they had figured out the deception. Table 1 provides examples of survey responses which indicated suspicion.

Table 1

Responses to Survey Questions which marked Cases as Invalid Due to Suspicion

	Survey Questions	Examples of Suspicious Responses
4	If we were to ask you to return for a different study that involved working with one of today's participants who would you MOST prefer to work with?	"The person who is so good at pretending to be someone else." "someone who wasn't in a lab behind two computers stages a fake chat room fight"
5	If we were to ask you to return for a different study that involved working with one of today's participants who would you LEAST prefer to work with?	"Whichever alter ego has the worst sense of humor." "the researcher that played the role of Fairview 20."
6	Did all of the participants stay reasonably "on-topic"?	"no, insulted each other, I do realize this was set up/ fake" "no, the point of this research was to stage a fight and see if anyone chimed in and no one did"
7	Did all of the participants contribute to the discussion when appropriate?	"No, I believe they wanted us to intervene when Fairview was being mean but no one did."
8	Did any of the participants make inappropriate comments?	"Yes, but so much so that it was an obvious operational definition in the experiment."
9	Did one or more participants ignore another participant?	"all the people who WEREN'T actually involved with the fake chat ignored it" " … near the end it all just seemed so fake and really a waste of my time, if you want it to be more realistic i'd suggest having your fake participant guy toning it down a little bit and intereacting with more than one participant, just saying…"

Eight cases were excluded because the participants stated during the chat that they figured out the deception. Some examples of this are:

Participant 78: i really hope this is a joke ... hahhahah oh god, is this one of those things where you guys are in on this and i'm the odd one out? ... I'm quite annoyed. Can we finish this soon?

Participant 90: this is definitely not real … people don't really talk like this

Participant 98: hahahaaa i caught it!! its all computer generated ;p

Participant 148: wtf? This is definitely scrupted nobody says that

Participant 168: [After researcher said, "I was never good at multitasking"] like running two screen names at once?

Three more cases were excluded for a general sense of suspicion; the researcher during coding felt that the participant had figured out the artificial nature of the other chatters, but did not say anything out right (presumably out of concern that they would not receive credit) or did not precisely guess the nature of the study.

One of these three participants correctly guessed that the bully was a confederate, but did not guess that the victim was a confederate, so in a way s/he still initiated helping behavior:

Participant 25: Fairviews job is to be an ass so the researcher has something to actually research … come on who is that much of a douche for no reason? … he is in on it

Nevertheless, this seemed to be close enough to figuring out the deception that it represented a problem. In other circumstances similar to this one (described later) the researcher was able to subvert the suspicion and salvage the effort, but that was not the case here, so the session was terminated.

Participant 46 was one of the two participants to mention the bystanders in his or her own comments, potentially biasing the coder with knowledge of the experimental condition, but this

turned out to be irrelevant. Although participant 46 did not directly voice suspicion until the researcher began his end dialogue, s/he did voice several comments that suggested s/he thought that one or both of the NPCs was a confederate. For example:

Participant 46: im pretty sure beating my head against a wall would be more exciting than reading this conversation for an hour.

Based on his/her responses as a whole, and the strong suspicion voiced at the end, his/her session was excluded.

Finally, one participant voiced suspicion by e-mail, and the researcher was able to subvert that suspicion, but not quickly, as s/he did not say anything until the very end of the conversation. As a result, it seems likely that s/he thought the scenario was faked for most of the chat, and her or his responses were presumably affected by that suspicion. The e-mail conversation went as follows:

Participant 52: Is fairview20 an actual participant from PSY 100 or is he an initiator for the study of the students?

Researcher: I'm confused; how do you mean initiator?

Participant 52: I mean to bring out responses in people. Look at what he's been saying.

Researcher: So, you're concerned I have a research assistant in the chat-room verbally abusing participants? Just clarifying, James

Participant 52: I do not think that now, it got way to out of hand for that. I am assuming that would definitely not be allowed by you or CSU. I just couldn't believe someone would say that for just a school assignment.

After this participant after had been debriefed, the researcher asked him/her some questions about how s/he became suspicious.

Researcher: At about what point did you begin to suspect Fairview was fake, and how certain were you by the time you e-mailed me?

Participant 52: I closed the window already but when he called in insecure.

Researcher: Was it simply the bully's out-of-nowhere aggression that made you suspicious, or were there other tells that gave away our deception?

Participant 52: It was when he started talking about his sex life and being incredibly rude for just a simple classroom assignment

Researcher: Did you come into the chat-room thinking there might be some sort of deception involved?

Participant 52: not at all, I had no idea what it was about

Researcher: Do you feel your suspicion of the situation's authenticity inhibited you from taking action (e.g. e-mailing me about Fairview's behavior) in anyway?

Participant 52: nope

Researcher: Did you ever suspect that Greenville or the two neutral bystanders were fake as well?

Participant 52: I never thought any of the others were fake, were they?

It appears that the introduction of sexual harassment late in the bully's dialogue was the proverbial straw that broke the camel's back, but the participant was already suspicious at the point of the *insecure* insult, which was quite early. Even though s/he felt the suspicion did not influence her or his response, such early suspicion seemed too much of a risk, and his/her data was excluded.

Two participants voiced vague suspicion, but *were* kept in the analysis as their suspicion was subverted quickly and easily, or their suspicion seemed to be created by the researcher's conveniently timed return to the chat-room, after the window to help had closed.

During the chat, participant 147 insulted the bully, "i think fairview is the douchbag." and contacted the researcher for help nine minutes later. Just as the researcher logged back into the chat-room s/he said, "fairview jesus drop it... just talk about the damn hamburgers and tacos", which suggests that s/he still was not suspicious until the researcher began his closing dialogue. After the researcher provided the contact information for the counseling center, s/he asked:

Participant 147: is this a joke?

Researcher: No.

This seems to have been a satisfactory answer, because her next question does not suggest suspicion. After the researcher provided the link to the online surveys, s/he asked:

Participant 147: i didnt even talk.. were done?

Researcher: Yes - just complete the questionnaire and you will receive credit. Per IRB research standards, I can't expect you all to continue the discussion after something like that

Researcher: Thank you.

Participant 147: ok =/ welcome.

Participant 86 also voiced suspicion, but it was likewise easily subverted in this e-mail conversation:

Participant 86: sorry if i'm not supposed to ask this, but is this staged or something? are you fairview? sorry if this is really random, I'm just really curious

Participant 86: if not then this is getting ridiculous what they are talking about

Researcher: I'm not Fairview…[2]

Participant 86: ok, well they are being way too rude to the other person

Researcher: Okay, thanks for letting me know. I'll check it out.

Of the 17 cases excluded from analysis due to suspicion, 8 were from the no-bystander condition and 9 were from the bystander condition, suggesting no significant relationship between condition and suspicion.

Ultimately, 29 cases were deemed 'invalid' and excluded from the final analysis, out of a total of 140 participants run.

Results

The ultimate product of our coding effort was a continuous scale, but this was converted to a dichotomous variable to align it with the study's hypotheses (and by extension, the spirit of the research). The general intent of this study was to determine whether the presence of bystanders would affect whether or not a participant would attempt to help the victim. The original intention was not to look at how *much* help was offered or how competently it was given. Consequently, all cases for which the average of the coder's ratings was greater than zero were given a helping score of "1", to indicate that the participant had attempted to help in some way. Ratings of zero or less were recoded to be "0", to represent no attempt to help the victim.

This dichotomous dependent variable prompted the use of logistic regression to test the hypothesis that the presence of bystanders inhibits helping, and all other hypotheses pertaining to helping in this study. Besides the first logistic regression which only looked at the independent variable and dependent variable, all logistic regressions of the DV on predictor variables also included the IV, in order to more clearly show the unique effect of the predictors. For

[2] This statement was actually true, since an RA was playing the part.

hypotheses regarding the *interaction* of dichotomous and continuous variables on the dichotomous DV (i.e. hypotheses three, four, and five), the logistic regressions were run once with the variables in question, and then run again to include the variables' interaction in addition to their independent effects. A final logistic regression was run to simultaneously explore all of the items investigating internet usage. All continuous variables were 'mean centered' before the logistic regressions were carried out. No outliers were found to compromise the logistic regression models, but best-fit comparisons of these models were not possible due to the inclusion of continuous variables (which inherently violate the assumption of adequate expected frequencies). All analyses were run in SPSS 19.

Descriptive statistics for this study's continuous measures are summarized in Table 2 including mean scores on scales grouped by the experimental condition (IV) and the participants' helping behavior (DV). The table also includes the results of the logistic regressions which are described at greater length later in this section. These logistic regressions controlled for the presence of bystanders.

Who were our participants?

Responses to items borrowed from the Youth Internet Safety Survey (YISS-2; Finkelhor, Mitchell, & Wolak, 2011) revealed that, on average, participants were 10.2yrs old when they first used the Internet (n = 135). The earliest Internet user in the sample was born in 1992, and she first used the Internet at the age of 4. The latest Internet user, born in 1963, had her first experience with the Internet when she was 27.

Ten items borrowed from the YISS-2 investigated participants' usage of the Internet for specific activities: checking e-mail, instant messaging, using chat-rooms, playing online games, downloading electronic media, web-logging, using electronic dating services, visiting social

Table 2

Means Scores of Scales Within each Response Condition, and Logistic Regression Information

	Mean Responses by Condition				Logistic Regressions			
	Control Condition		Bystander Condition		Odds		95% C.I. for Odds Ratio	
	Help	No Help	Help	No Help	Ratio	Sig.	Lower	Upper
Personality Variables								
Masculinity	5.09	4.85	5.09	5.10	1.10	0.67	0.72	1.67
Life Control	35.55	34.58	35.63	35.05	1.02	0.61	0.96	1.08
Self-Monitoring	9.16	7.67	9.22	8.77	1.09	0.20	0.96	1.24
Social Responsibility	4.16	3.90	4.03	4.04	1.62	0.28	0.67	3.91
Interpersonal Reactivity	97.51	94.09	98.70	91.25	1.04	0.04	1.00	1.08
Neuroticism	29.45	28.33	35.00	28.48	1.05	0.07	1.00	1.10
Extraversion	43.49	41.92	40.83	45.71	0.98	0.29	0.93	1.02
Internet Use								
Websites	4.86	5.00	4.84	4.86	0.67	0.43	0.25	1.79
E-Mail	4.75	4.58	4.94	5.00	1.79	0.34	0.54	5.92
Instant Messaging	3.51	3.83	3.28	3.32	0.95	0.82	0.62	1.47
Chat-rooms	1.69	1.50	1.41	1.32	1.78	0.27	0.64	4.94
Online Games	2.73	2.25	2.63	1.95	1.83	0.04	1.04	3.23
Downloading Sites	2.00	1.25	2.00	2.27	1.42	0.13	0.90	2.25
Blogs	1.76	2.17	1.42	1.68	0.83	0.44	0.51	1.34
Dating Sites	1.05	1.08	1.03	1.27	0.37	0.33	0.05	2.70
Social Networks	4.80	4.83	4.91	4.86	0.94	0.93	0.19	4.63
Homework Resources	4.67	4.83	4.56	4.82	0.27	0.04	0.08	0.96
Internet Experiences								
Internet Expertise	3.78	4.04	3.92	4.09	0.87	0.67	0.46	1.65
Spent > 6 hrs online in 1 day	2.49	2.75	2.53	2.59	0.92	0.72	0.58	1.46
Felt worried/threatened by someone bothering or harassing them online	1.29	1.42	1.38	1.05	2.22	0.30	0.49	9.99
Threatened/embarrassed by someone posting/sending messages about them for others to see	1.38	1.58	1.38	1.29	0.45	0.19	0.13	1.49
Made rude/nasty comments to someone online unprovoked	1.11	1.25	1.09	1.32	0.31	0.08	0.09	1.13

Note. Odds Ratios presented here represent the contribution of the stated predictor variable, separate from the Independent Variable. C.I. = Confidence Interval

networking sites, doing homework, and accessing websites. Participants reported their frequency of use of each based on a five point scale ranging from "Not at all in the past 12 months" to "Daily." The undergraduate participants in this study used the Internet least often for accessing dating sites (n = 136, M = 1.10, SD = 0.45), and most often to "access websites" (n = 134, M = 4.84, SD = 0.60). The latter is arguably an antiquated item, though, as the use of websites is now entailed in most of the other activities participants answered questions about. Excluding this

item, the most frequently used internet service was e-mail (n = 135, M = 4.83, SD = 0.62). To quantify the variety in each participant's Internet use, responses greater than "Not at all in the past 12 months" were totaled for each participant to create a scale with a minimum score of zero (they had used none of the Internet functions listed) and a maximum score of 10 (they had used them all). Participants' scores ranged from 2 to 10, but on average participants had used the internet for at least six of the activities they were asked about (n=129, M=6.80, SD=1.40), indicating that they were generally internet savvy.

Participants also responded to an item which asked them to rate their experience as an Internet user on a one-to-five scale, 1 being a beginner and 5 being an expert. Responses ranged from one to five, but the average level of experience reported was 3.95 (n=137, SD=0.89).

For all three items about cyberaggression involvement, scores ranged from one to five, but on average the frequency of cyberaggression involvement was low, despite extensive internet usage. The average rating for the first victimization item was 1.26 on a scale of 1 to 5 (n=137, SD=0.57), and the second item was only slightly higher at 1.43 (n=136, SD=0.79). Approximately one fifth of the participants had "felt worried or threatened because someone was bothering or harassing" them online in the past 12 months, and nearly a third of the participants had "been threatened or embarrassed by someone using the Internet to post or send messages" about them. This is substantially higher than the prevalence rates observed among the 10- to 17-year olds who responded to the YISS-1 in 1999/2000, of whom only 5% had felt worried or threatened by online harassment in the past year, and 3% had been embarrassed online in the past year (Ybarra, 2004). However, the numbers observed here more closely match the rates of cyberbullying experience observed by the National Crime Prevention Council (NCPC, 2007) and other more recent research (e.g., Dehue, Bolman, & Vollink, 2008; Hinduja & Patchin, 2008;

Mesch, 2009; Li, 2006; Li, 2007; Patchin & Hinduja, 2006; Smith et al., 2008; Ybarra, Diener-West, & Leaf, 2007), perhaps reflecting a significant change over time more than a difference in populations. Frequency of cyberaggression perpetration was also low, with an average of 1.23 (n=137, SD=0.70); less than 15% of the participants admitted to having "made rude or nasty comments to someone online unprovoked."

Seventeen participants (12% of the sample) were excluded from the analyses due to suspicion which raises concern about the ecological validity of the script. To determine whether a lack of realism might have contributed to the level of suspicion we examined whether participants' internet experiences contributed were related to their uncovering our deception. Decomposing the overall sample into two groups based on suspicion revealed only minor differences.[3] Suspicious participants rated their internet expertise slightly higher (m = 4.18, SD = 0.74, n = 16) than did non-suspicious participants (m = 3.91, SD = .92, n = 111). A logistic regression of all of the (mean-centered) internet-usage items on suspicion indicated that this difference was not statistically significant (OR = 1.96, p = .19, 95% CI [0.73, 5.32], n = 118), although the relatively small size of the suspicious group does weaken the value of such an analysis.

Patterns of internet usage were only slightly different between the two groups. Both groups reported the least use for dating sites (non-suspicious, m = 1.09, SD = 4.90, n = 110; suspicious, m = 1.00, SD = 0.00, n = 16) and the most use for accessing websites, as with the overall sample. Also consistent with our sample overall, participants who were suspicious rated their internet use second highest for e-mail (m = 4.69, SD = 1.01, n = 16), but, surprisingly, non-suspicious participants (the vast majority of the sample) reported second highest internet use for

[3] The two groups, suspicious and non-suspicious, discussed here exclude participants removed from further analysis due to reasons other than suspicion (e.g., errors in the administration of the research session).

social networking sites ($m = 4.85$, $SD = 0.39$, $n = 111$). Logistic regression indicated that the difference in use of social networking sites was statistically significant ($OR = 0.09$, $p = .00$, 95% CI [0.02, 3.17], $n = 118$), but the small odds ratio and the large confidence interval associated with the disparate sizes of the groups discourage any conclusions about the practical significance of this difference.

Patterns of cyberaggression involvement were also slightly different. Non-suspicious participants reported more victimization than perpetration. Responses to the first victimization item averaged 1.28 on a 1 to 5 scale ($SD = 0.61$, $n = 111$), with slightly higher responses on the second victimization item ($m = 1.38$, $SD = 0.78$, $n = 110$), and slightly lower on the perpetration item ($m = 1.16$, $SD = 0.57$, $n = 111$). Suspicious participants, however, reported more perpetration than victimization. The first victimization item solicited a low average rating ($m = 1.19$, $SD = 0.40$, $n = 16$), the second victimization item received higher endorsements ($m = 1.62$, $SD = 1.0$, $n = 16$), but the perpetration item received an average rating of 1.81 on a scale of 1 to 5 ($SD = 1.28$, $n = 16$). According to the logistic regression of internet use items on suspicion, the difference in bullying perpetration was statistically significant ($OR = 3.77$, $p = .02$, 95% CI [1.26, 11.27], $n = 118$), but the confidence interval is, again, quite large due to the small number of suspicious participants.

Because of this asymmetry in the sizes of the groups, any differences observed between suspicious and non-suspicious participants should be viewed cautiously. The logistic regression included 102 non-suspicious participants, but only 16[4] suspicious participants. Outliers certainly pose a greater problem for the latter group, as reflected in the inflated confidence intervals. Additionally, running a large number of variables in a single logistic regression for purely

[4] One of the 17 suspicious participants (participant 90) did not complete the online survey.

exploratory reasons also raises the possibility that significant differences observed in the analysis are due to chance.

How did the participants attempt to help the victim?

As mentioned above, participants were considered to have helped if they attempted to alert the researcher to the problem, stop the bully's attacks, support the victim, or undermine the bully. Many participants employed multiple tactics in sequence or combination, making any deep analysis of their helping strategies so complex that it would be beyond the scope of this study. The following section serves not to inform the reader of which tactics were most preferred among the participants, but simply to impress upon the reader the variety of responses, and the passion that often accompanied them.

Given the procedure adopted for this study, alerting the researcher was the most effectual response a participant could exhibit, and it was the course of action many participants chose. This was typically done via e-mail, though one person called the researcher's cell phone. Messages varied in how direct they were, but some got right to the point. For example, Participant 33 wrote, "Hey reasearch leader guy, things are getting a little out of control in chat room 6. You might wana step in and take care of it." Participant 93 also asked the researcher to return, "So the argument between greenville and fairview is getting totally off topic and obnoxious, could you come back to the chat and mediate between them?"

Some participants did not hesitate to assign fault, explicitly naming the bully as the source of the problem in their e-mail. Participant 42 e-mailed the following:

> I just wanted to inform you about the current chat going on in the chat room, I feel it's getting to be a little inappropriate and username Fairview20 is bringing the whole purpose of the study completely off track. I wasn't sure if you would like to intervene or not.

Participant 12 not only voiced disapproval of the bully, but also empathy for the victim:

> Fairview is more or less harrasing greenville in chatroom 3. I am just watching and i dont know what to do about it or if its just part of the study. I feel bad for greenville and i would really not like to talk to fairview when im supposed to debate.

Participant 89 told the victim that s/he could contact the researcher. This may not seem like helping, as it puts the responsibility to act on the victim, but if the scenario had been occurring in reality, such a statement may have served to empower the victim, or to alleviate any doubt or shame associated with taking that action.

Many participants did not contact the researcher immediately, or at all. Instead, they voiced disapproval of the bullying in the chat, and a few participants attempted to mediate a peaceful resolution themselves. Participant 81 rationally stated:

> you guys, this all started because your suposoed to have a silly debate over tacos and hamburgers for a little experiment. there is no point of getting mad. yall dont know eachother; in fact you guys could be friends in real life, but yall wouldnt know it

Participant 140 made a similar appeal in the chat-room, saying, "oh my goodness yall, we all jus met-i dont think any of us can be making judgements on eachother's personality traits just yet. so yes, lets go back to hamburgers and tacos." Participant 103, in spite of an apparent language barrier, politely stated, "well, please calm down... we came here not for what you are talking now, I think ... so, please came back to your topic, thank you!" Participant 111 took a stronger stance, confidently stating, "fairview..i dont know if you had a bad day or what. Greenville is just doing what he/she is suppose to do here. Dont take youre anger out on him".

As such overtures were always disregarded by the relentless NPC bully, many participants shifted to a more assertive approach, telling the bully to stop outright. Participant 103, for example, became more forceful, saying, "stop! … your words is really rude! ... I think Green is try best to let the topic back … but you ignore that". Participant 111 likewise escalated his/her intervention, "leave him alone!!!! ... i like him better than you ... he has manners."

Participant 108 tried to push the conversation back on topic, “ok really? we're here for a research debate, not to get insulted so how about we talk about tacos and hamburgers now”, while Participant 93 argued that if the bully could not do that, then s/he should simply leave, “Stop being rude. You signed up to debate about whatever topic you were given. If you can't handle that I suggest withdrawing from the research”.

Participant 30 emphasized that the bully’s behavior was simply unacceptable, “I feel like you're going way too far Fairview and it's either a personal power trip or you want to mess with the researchers but whatever it is, it's not amusing and immature.”

After previous appeals were ignored, participant 135 plainly stated, “you dont know anything about this person. so stop talking shit”. Participant 158 similarly stated, “he doesnt suck you dont know him” and added, “if you were talkin to me like this youd be gettin cussed out right now... get grown and have some respect”.

Another course many participants pursued was to help the victim weather the attacks from the bully, saying positive things to the victim. At one point in the chat, the bully tells the victim that no one likes him, and no one wants him there. This line triggered many of the supportive responses, such as “I like greenville just fine, i think everyone would like you to leave though Fairview” (participant 29) and “heyyy, now you cant be speaking for all of us, i like you and i want you here greenville-im tryna get my credit too" (participant 140). Sometimes participants offered the victim alternatives to chatting with the bully, “i know you're not supposed to talk to someone other than who you're assigned but want to debate me greenville?” (Participant 132).

Many remarks seemed intended to belittle the bully or explain away his/her unacceptable behavior. For example, participant 135 told the bully, “you are the douchbag. you are the one

who is probably insecure so you have to put someone else down to make yourself feel better". Participant 157 voiced a similar sentiment, calling the bully a "douche" and saying that, "if the only way can feel better about yourself is to verbal abuse others your seriously a loser". At the very end of the chat, participant 157 told the victim, "just stop replying its not even worth it to continue a converstion with this pathetic loser." Participant 87 explained the bully's sexual harassment of the victim as the product of his/her own problems, "fairview20 you have no love life which is why you keep bringing up sex and trying to insult him/her because you're sexually frustrated. sucks for you. shut up already your annoying". This was the same conclusion participant 73 voiced, "Fairview why does it matter about his/her sex life... aparently you wanted to know so bad because your sex life sucks it self." All of these arguments would presumably have put down the bully as well as minimized the validity of his insults.

Sometimes helping the victim and belittling the bully went hand in hand, as when Participant 111 said:

> Greenville, please dont let him affect you. he really is immature. he obviously is showing signs of insecurity if he would say things like this to you without even truy knowing who you are. ; just dont even listen to him.

Table 3 provides more examples of participants' attempts to help the victim, though it is certainly only a small portion of what participants had to say about the matter.

Hypothesis 1

The primary hypothesis of this study was that, when a participant believed there were two other participants witnessing an act of cyberaggression (i.e., the bystander condition), they would be less likely to intervene on the victim's behalf than if the participant believed they were alone with the victim and bully (i.e., control condition).

Since the data met the necessary assumptions, logistic regression was performed regressing the dichotomous helping categorization (DV) on the experimental condition (IV),

Table 3

Examples of Different Approaches to Helping Taken by Participants

Attempt Made	Example
Alert the Researcher	"This study is getting way out of hand!"
	"This debate has gotten out of hand. May we move on to the next one please?"
	"look fairview20 is being really rude. like it is really offensive."
	"You need to stop the current debate one of the participants is attacking another"
	"I think Fairview20 needs to be addressed ASAP.....getting a little hot headed for this
	"the debate on your chat site is getting way to personal and it is offensive even to me"
Support the Victim	"Im your friend!!"
	"I like you Greenville"
	"ill debate food with you :)"
	"I'm with Greenville! woo! … I like Greenville."
	"dont feel bad greenville hes/shes just bein an ass/bitch"
	"hey blue, I like you … I'm your friend."
Undermine the Bully	"fairview20 no one wants u here"
	"You must be suffering from little man syndrom"
	"says the douchbag thats pmsing"
	"fairview you are such a bitch"
	"Fairview20, you are being a huge dick!!"
	"ten bucks says fairview is a virgin"
Stop the Bullying	"greenville did nothing to you. please stop being so rude"
	"Fairview shut up; ure being very inappropriate"
	"Seriously, stop with the insulting. It's rude and uncalled for."
	"hey fairview we've graduated from high school. be nice."
	"Dude fucking knock it off"
	"Quit being an asshole Fairview ; seriously whats the point?"

excluding the invalid cases. The results of the logistic regression indicated that the experimental condition had a significant influence on the decision to help, $OR = 0.39$, $p = .03$, 95% CI [0.17, 0.90], $n = 111$. Consistent with the hypothesis, the odds of helping were about 61% lower for people in the experimental condition. Within the bystander condition, 32 of 54 participants helped the victim of the bullying. Within the control condition, however, 45 of 57 participants helped the victim. See Table 4 for further details about the logistic regression performed (e.g., regression parameters).

Table 4

Logistic Regression of Helping on Experimental Condition

				95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.32	0.33			
Condition	-0.95	0.43	0.39	0.17	0.90

Note. N=111. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Hypothesis 2

Based on past research (Harris & Ho, 1984; Latane & Dabbs, 1975), it was hypothesized that male participants would be more likely than female participants to help a victim of cyberbullying, regardless of experimental condition. A logistic regression of helping was performed, with gender and experimental condition as predictors. The effect of gender was nonsignificant, OR = 0.44, p = .10, 95% CI [0.16, 1.17], n = 111, as was the interaction, OR=0.76, p=.79, 95% CI [0.10, 5.56], n=111. Helping was not significantly influenced by the participants' gender, although the asymmetry of the sample (111 females to 29 males) may have obscured any relationship that was present. Further details can be found in Table 5.

Table 5

Logistic Regression of Helping on Gender, Controlling for Condition and Interaction with Condition

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.55	0.36				1.50	0.39			
Gender	-0.83	0.50	0.44	0.00	0.00	-0.69	0.72	0.50	0.12	2.04
Condition	-1.01	0.44	0.36	0.00	0.00	-0.94	0.50	0.39	0.15	1.04
Interaction						-0.27	1.01	0.76	0.10	5.56

Note. N=111. Condition coded as "0" (Control) and "1" (Experimental). Gender coded as "0" (Female) and "1" (Male). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Hypothesis 3

Based on research that looked beyond simple gender lines (Carlson, 2008; Tice & Baumeister, 1985), it was hypothesized that participants who place more value on masculinity would be less likely to help a victim of cyberaggression than those who place less value on masculinity, when there are bystanders present.

A set of two logistic regression models were specified. First, helping was regressed on masculinity (as measured by the BSRI) and experimental condition (two bystanders vs. no bystanders). Second, the interaction of masculinity and experimental condition was added to the first model. The results of each model are presented together in Table 6a. Masculinity did not play a significant role in helping behavior, *OR* for masculinity = 1.32, $p = .45$, 95% CI [0.64, 2.71], or the nature of the bystander effect, *OR* for the interaction = 0.75, $p = .53$, 95% CI [0.31, 1.83], $n = 108$. The reader should be cautioned that this is not how the masculine subscale of the BSRI was intended to be used, however. Furthermore, there was an error in data collection; one of the items on the masculine subscale was absent when the scale was uploaded to Surveymonkey.com.

Table 6a

Logistic Regressions of Helping on Masculinity

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.40	0.34				1.43	0.35			
Masculinity	0.09	0.22	1.10	0.72	1.67	0.28	0.37	1.32	0.64	2.71
Condition	-0.97	0.44	0.38	0.16	0.90	-1.01	0.45	0.37	0.15	0.88
Interaction						-0.29	0.45	0.75	0.31	1.83

Note. N=108. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. $S.E.$ = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

This analysis was repeated with femininity instead of masculinity but yielded no new insights, *OR* for femininity = 1.02, $p = .96$, 95% CI [0.49, 2.12], n=109, and *OR* for the interaction = 1.61, $p = .33$, 95% CI [0.62, 4.18], n=109. See Table 6b for more details.

Table 6b

Logistic Regressions of Helping on Femininity

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.42	0.34				1.41	0.34			
Femininity	0.31	0.23	1.36	0.88	2.12	0.02	0.37	1.02	0.49	2.12
Condition	-1.09	0.44	0.34	0.14	0.80	-1.08	0.44	0.34	0.14	0.81
Interaction						0.48	0.48	1.61	0.62	4.18

Note. N=109. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. $S.E.$ = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

A final two-step model was run including both masculinity and femininity in the first step (controlling for condition), and the interaction of masculinity and femininity in the second step. The interaction of masculinity and femininity did not add explanatory value, *OR* for the interaction = 1.05, p=.77, 95% CI [0.77, 1.43], n=107. See Table 6c for more details.

Table 6c

Logistic Regressions of Helping on Femininity, Masculinity, and their Interaction

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.40	0.34				0.04	4.57			
Masculinity	-0.03	0.23	0.97	0.62	1.53	-0.29	0.90	0.75	0.13	4.40
Femininity	0.34	0.24	1.40	0.88	2.24	0.13	0.73	1.14	0.27	4.78
Condition	-1.02	0.45	0.36	0.15	0.87	-1.02	0.45	0.36	0.15	0.86
Masc. * Fem.						0.05	0.16	1.05	0.77	1.43

Note. N=10???. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. $S.E.$ = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Hypothesis 4

Past speculation (Lerner & Reavy, 1975) has put forth the suggestion that those with an internal locus of control are more helpful than those with an external locus of control, except when the demands of the situation are perceived as threatening their self-determination. Based

on this, it was hypothesized that participants with a highly internal locus of control (measured by the Life Control scale) would be more likely than others to react to an incident of cyberbullying when there were other bystanders present, but less likely to react to an incident of cyberbullying when they were alone with the victim and bully. That is, for those with a high internal locus of control, the effects of diffusion of responsibility would essentially be reversed. This hypothesis was not supported by the set of two logistic regression models which were specified. First, helping was regressed on locus of control (as measured by the *life control* subscale of the LAP) and experimental condition. Second, the interaction of locus of control and experimental condition was added to the first model. The results of each model are presented together in Table 7.

Table 7

Logistic Regressions of Helping on Locus of Control (Life Control Subscale of LAP)

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.30	0.33				1.30	0.33			
Life Control	0.02	0.03	1.02	0.96	1.08	0.02	0.05	1.02	0.93	1.13
Condition	-0.93	0.43	0.40	0.17	0.92	-0.93	0.43	0.40	0.17	0.92
Interaction						-0.01	0.06	0.99	0.87	1.12

Note. N=110. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Locus of control had no effect independent of the experimental condition, *OR* for life control = 1.02, p = .64, CI [0.93, 1.13], n = 110, and did not moderate the bystander effect, *OR* for the interaction = 0.99, p = .85, 95% CI [0.87, 1.12], n = 110. Participants' locus of control did not significantly affect their helping behavior or the impact of the bystander effect upon their behavior.

The hypothesis, of course, did not account for one important aspect of Lerner and Reavy's (1975) idea, the perceived worthiness of the victim. Due to this, no conclusions should be inferred from this outcome.

Hypothesis 5

It was also hypothesized that high self-monitors would be less likely to help a victim of cyberaggression than low self-monitors when there were bystanders present. It was believed that high self-monitors would be more likely to reference the (passive) behavior of the bystanders to determine what response was appropriate (as described in Kulik & Taylor, 1981). A set of two logistic regression models were specified to test this. First, helping was regressed on self-monitoring and experimental condition. Second, the interaction of self-monitoring and experimental condition was added to the first model. The results of each model are presented in Table 8.

Table 8

Logistic Regressions of Helping on Self-Monitoring

	Model 1					Model 2				
				95% C.I. for Odds					95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Upper*	*Lower*	***B***	***S.E.***	**O.R.**	*Upper*	*Lower*
Intercept	1.34	0.33				1.39	0.35			
Self-Monitoring	0.09	0.07	1.09	0.96	1.24	0.14	0.11	1.15	0.93	1.42
Condition	-0.96	0.43	0.38	0.16	0.89	-1.01	0.45	0.36	0.15	0.87
Interaction						-0.10	0.14	0.91	0.69	1.19

Note. N=110. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

There was no effect of self-monitoring independent of the experimental condition, *OR* for self-monitoring = 1.15, p = .18, 95% CI [0.93, 1. 42], n = 110, and self-monitoring did not moderate the effect of the bystanders' presence, *OR* for the interaction = 0.91, p = .49, 95% CI [0.69, 1.19], n = 110. Self-monitoring does not appear to have played a significant role in helping behavior or the nature of the bystander effect.

In response to concerns that high self-monitoring might be associated with higher competency identifying "fake" people, suspicious participants were compared to non-suspicious participants with respect to self-monitoring, and the differences were neither visibly nor statistically significant. Suspicious participants did not score very much higher on self-monitoring (m = 9.27, SD = 4.54, n = 15) than non-suspicious participants (m = 8.94, SD = 3.29, n = 110). A logistic regression of self-monitoring scores on the dichotomous variable of suspicion indicated that this small difference was not statistically significant, OR = 1.03, p = .73, 95% CI [.88, 1.20], n = 125.

Hypothesis 6 & 7

Based on retrospective research into helping behaviors during the holocaust (Fagin-Jones & Midlarsky, 2007; Midlarsky, Fagin-Jones, & Corley, 2005), it was believed that prosocial traits would be associated with helping the victim. Specifically, it was hypothesized that participants who scored high on measures of *social responsibility* (hypothesis six) or *empathy* (hypothesis seven) would be more likely to help than those who scored low on such scales.

The hypothesis that social responsibility would be positively associated with helping the victim was not supported by logistic regression of helping on social responsibility, controlling for experimental condition, OR for social responsibility = 1.62, p = .28, 95% CI [0.67, 3.91], n = 110. See Table 9 for more details.

Empathy, measured by the *Interpersonal Reactivity Index* (IRI), *was* significantly related to helping, as indicated by a logistic regression of helping on empathy, controlling for experimental condition, OR for IRI = 1.04, p = .04, 95% CI [1.00, 1.08], n = 104. The odds of helping are about 1.04 times higher for each one unit increase in a participant's IRI score. This means that, participants who scored one standard deviation above the mean on the IRI had an

Table 9

Logistic Regression of Helping on Social Responsibility

Parameter	*B*	*S.E.*	O.R.	95% C.I. for Odds *Lower*	*Upper*
Intercept	1.30	0.33			
Social Responsibility	0.48	0.45	1.62	0.67	3.91
Condition	-0.90	0.43	0.41	0.18	0.95

Note. N=110. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

87% chance of helping in the control condition and a 71% chance in the bystander condition. In contrast, a participant who scored one standard deviation below the mean IRI score had a 71% chance of helping in the control condition and a 48% chance of helping in the bystander condition. See Table 10 for more details.

Table 10

Logistic Regression of Helping on Empathy (Interpersonal Reactivity Index)

Parameter	*B*	*S.E.*	O.R.	95% C.I. for Odds *Lower*	*Upper*
Intercept	1.40	0.35			
IRI	0.04	0.02	1.04	1.00	1.08
Condition	-0.98	0.46	0.38	0.15	0.92

Note. N=104. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Hypothesis 8 & 9

Consistent with the findings of Tani et al. (2003) who examined the relationship of the Big 5 personality traits to school yard bullying, it was hypothesized that participants who helped the cyberbullying victims would be less neurotic (hypothesis 8) and more extraverted (hypothesis 9) than those who did not help.

A logistic regression of Helping on Neuroticism, controlling for experimental condition, indicated no significant relationship, *OR* for Neuroticism = 1.05, $p = .07$, 95% CI [1.00, 1.10], $n = 109$. See Table 11 for more details.

Table 11

Logistic Regression of Helping on Neuroticism

				95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.39	0.34			
Neuroticism	0.04	0.02	1.05	1.00	1.10
Condition	-1.03	0.45	0.36	0.15	0.86

Note. N=109. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. C.I. = Confidence Interval

Originally it was hypothesized that extraversion would simply correlate with a 'non-neutral' score – in other words, extraverted participants would be more likely to help *and* more likely to bully. The decision to treat helping as a dichotomous variable, and the fact that negative helping scores were negligible in the sample anyway, though, made such a hypothesis meaningless. The dichotomous helping variable was regressed on Extraversion, while controlling for experimental condition, and the results of the logistic regression showed no evidence of a significant relationship, *OR* for Extraversion = 0.98, $p = .29$, 95% CI [0.93, 1.02], $n = 108$. See Table 12 for more details.

Table 12

Logistic Regression of Helping on Extraversion

				95% C.I. for Odds	
Parameter	***B***	***S.E.***	**O.R.**	*Lower*	*Upper*
Intercept	1.34	0.33			
Extraversion	-0.02	0.02	0.98	0.93	1.02
Condition	-0.98	0.43	0.38	0.16	0.88

Note. N=108. Condition coded as "0" (Control) and "1" (Experimental). B = Slope. *S.E.* = Standard Error. O.R. = Odds Ratio. C.I. = Confidence Interval

Other Observations

As mentioned earlier, one final logistic regression was run regressing the dichotomous helping variable on the responses to the large number of internet use questions, controlling for the independent variable. These questions asked about the ways in which participants used the internet, and asked about some experiences they might have had while doing so. See Table 13 for details.

Surprisingly, there was no connection between helping, and the three items which asked about real-life involvement in cyberaggression ("I have felt worried or threatened because someone was bothering or harassing me online", "I have been threatened or embarrassed by someone using the Internet to post or send messages about me for other people to see", "I have made rude or nasty comments to someone online unprovoked").

Oddly, the two Internet experience items which were significantly related to helping the victim were the items asking how often participants accessed the Internet to play games, OR = 1.83, p = .04, 95% CI [1.04, 3.23], and to do homework, OR = 0.27, p = .04, 95% CI [0.08, 0.96]. It is worth pointing out that these relationships violate stereotypes associated with gaming and studiousness. Apparently, more frequent playing of online games is associated with a higher probability of helping, while more frequent use of the internet for homework is associated with a *lower* probability of helping. These relationships were observed in the general exploration of the Internet-use history data, however. The logistic regression that examined them was not carried out as part of any hypothesis, and had no rational or theoretical basis. Therefore, while the results are intriguing, they may simply be due to chance.

Table 13

Logistic Regression of Helping on Internet Use Responses

Variables	*B*	*S.E.*	Odds Ratio	95% C.I. for Odds	
				Lower	*Upper*
Intercept	1.48	0.41			
Self-Perceived Internet Expertise	-0.14	0.33	0.87	0.46	1.65
How often Internet is accessed for…					
Websites	-0.39	0.50	0.67	0.25	1.79
E-Mail	0.58	0.61	1.79	0.54	5.92
Instant Messaging	-0.05	0.22	0.95	0.62	1.47
Chat-Rooms	0.58	0.52	1.78	0.64	4.94
Online Games	0.61	0.29	1.83	1.04	3.23
Downloading	0.35	0.23	1.42	0.90	2.25
Blogs	-0.19	0.25	0.83	0.51	1.34
Dating	-0.99	1.01	0.37	0.05	2.70
Social Networking	-0.07	0.82	0.94	0.19	4.63
Homework	-1.31	0.65	0.27	0.08	0.96
How often have you…					
Spent > 6 hrs online in 1 day	-0.08	0.24	0.92	0.58	1.46
Felt worried/threatened by someone bothering or harassing them online	0.80	0.77	2.22	0.49	9.99
Threatened/embarrassed by someone posting/sending messages about them for others to see	-0.81	0.62	0.45	0.13	1.49
Made rude/nasty comments to someone online unprovoked	-1.17	0.66	0.31	0.09	1.13
Condition	-0.84	0.56	0.43	0.14	1.29

Note. Condition coded as "0" (Control) and "1" (Experimental). *B* = Slope. *S.E.* = Standard Error. C.I. = Confidence Interval

Discussion

The primary goal of this study was to experimentally determine whether or not the bystander effect applied to bystanders watching an incident of bullying unfold online. Indeed, having two passive bystanders present during the chat appears to have significantly inhibited participants' helping behavior.

That the classic bystander effect emerged here in a comparatively 'detached' context, underscores how fundamental a phenomenon it is. The influence of the crowd was significant in spite of the fact that the bystanders were, for most of the chat, nothing more than deindividuated screen-names displayed on the side bar of the chat window. These 'characters' had minimal personification, answering only a few trivial questions at the beginning of the chat, and yet the participant was significantly influenced by their behavior. This should be good news for those hoping to apply classic social psychological theories to this brave new era of depersonalized, text-based electronic communication.

Furthermore, it is notable that in spite of the fact that the victim was a faceless entity that had minimal interaction with the participant, only 34 participants out of 111 valid cases did not help in some way, either by contacting the researcher, defending the victim, or undermining the bully.

Bullying was also nearly absent. It seemed that many of the participants who figured out their fellow chatters' true nature were very antagonistic. The researcher perceives two plausible explanations for this relationship. First, it could be that once they figured out they were alone, they felt comfortable acting in such a fashion because they were not really hurting anyone; their actions represented a form of self-entertainment no more morally objectionable than playing a violent video game. Second, it could be that used their extreme comments to test the NPCs, and

confirm their suspicion that they were in a fictional scenario. Either way, antisocial responses were nearly absent among those who actually believed they were involved in a cyberbullying incident.

In a context of faceless alphanumeric communication that should have inhibited empathy, *most* participants exhibited some degree of altruism. It would have been relatively easy for them to ignore the chat progression altogether, but instead they tried to help Greenville28.

That self-monitoring was not found to affect helping behavior may hint at a more complex situation than the researcher had expected. It is possible that the anonymity of the online environment nullified the effect of self-monitoring by simultaneously diminishing participants' motivation to act in a socially desirable fashion and diminishing the perceived risk of embarrassment associated with taking action. Following the same train of thought, it is possible that the disconnected nature of the interaction *did* mute the empathy experienced by the participants, but for the exact same reason, it may have suppressed any fear of reprisal one might receive from a bully.

Either of these processes might represent an important counterbalancing influence in the realm of cyberbullying. Bystanders' reduced motivation to help a cyberbullying victim may be offset by a lower perceived risk. On the other hand, this might not occur in a real-life setting, where bystanders may know bullies and victims offline, and must act in front of peers who will judge their choices. An important question then is, which elevates more in the transition from an online environment to an offline environment: empathy toward the victim or fear of the bully? Desire to impress others, or desire to avoid embarrassment in front of others?

Of course, this counterbalancing, if it does occur, may not hold true for online environments where the bystander plans to interact with others for more than half-an-hour or

where the bystander has no access to official moderation. The risks of tackling a bully may be perceived as greater if the bystander has to worry about continued online interaction with the aggressor. Other online environments may also be associated with weaker norms for what is and is not appropriate behavior. In this study, participants may have thought the behavior of the bully was inappropriate *in the context of an academic exercise*. During the chat, participant 61 said that the bully's behavior was "totally inappropriate for an academic debate that is open to others," and it seems likely that s/he was not alone in having that opinion. Similarly, the behavior may have been considered inappropriate simply within the context of a first meeting, as groups seem to hold higher standards of formality and politeness when convening online for the first time (R. Martey, personal communication, October 25, 2011).

Additionally, many personality traits previously observed to be related to helping behavior did not significantly correlate to helping in this study. There are multiple possible explanations for this. First, the controlled environment of our "lab" and our manipulation may have been powerful enough influences to drown out any other behavioral determinants. Second, the sample size here may have been too small, or our convenience sample of undergraduate college students may have been too homogeneous in both responses and personality to observe significant differences in their interaction (as previously mentioned, few participants refrained from helping completely). Finally, communication via the internet may somehow wash out the effect of these personality traits. This latter possibility may warrant further investigation by basic researchers interested in the power of the online context over the expression of personality.

The bottom line is that the bystander effect appears to apply to cyberbullying, but there may be important nuances of the phenomenon that need to be dissected before bystander-focused interventions are developed. Specifically, online interactions should not necessarily be treated as

one category of socialization. Applied researchers will need to investigate the differences between communication in online environments which overlap greatly with offline environments (e.g. Facebook), and communication in online environments that exists almost solely on the Internet, as well as the differences between tightly moderated and regulated environments and online environments with minimal oversight and high anonymity.

This study was partly intended to explore a method for examining the same phenomenon in minors, the population to which many researchers semantically limit *cyberbullying*. Our experience suggests that this would be very difficult. Ethical and practical concerns make it difficult to construct and execute a script that has good believability. It seems likely that minors would find the directions harder to understand and follow than the undergraduate participants did. Moreover, the content would have to be softened even more for an audience of minors, due to their vulnerable status, which might inherently preclude the expression of the bullying typical for that age group, increasing suspicion. On the other hand, middle and high school aged teens may actually be less predisposed to suspicion overall than college students in an introductory psychology class.

Important Notes about the Study's Design

Over the course of the study's development, execution, and analysis, several important decisions were made as different issues surfaced.

Why not use Bots?

One of the first issues the author grappled with was whether to run a computerized script or have humans type it out. Humans were selected for multiple reasons. First, an automated system would have required us to run the chat on a specially made chat program rather than a publicly available one; this would likely have made the participant suspicious, and might have

required that the participant come into the lab to participate, depending on the quality of the chat program that could be created. Second, an automated system was unlikely to be convincing because it would have been difficult to design it to maintain a human pace. We might have been able to accomplish this after having collected this data, as the research team developed a sense for how to pace the script to feel most authentic, and the transcripts tracked the times that lines of dialogue were entered.

Finally, the cost of having such a program written was prohibitive.

What about having One Bystander? Or Four?

Having chosen humans to run the chat, use of more than four NPCs (plus the researcher) was not feasible due to limitations in humans' multitasking abilities, and how many Chatzy accounts could be run from a single computer. Furthermore, the time investment required to run a single session for this study was considerable, because of this, it was only possible to collect enough participants for two experimental conditions.

The independent variable then was dichotomous; participants were either in a chat-room with four NPCs (two passive bystanders) or two NPCs (no passive bystanders). These numbers were within the range of group sizes conventionally used in research on helping behaviors. In their 1981 review of research on the bystander effect, Latane and Nida summarized the research designs of many studies similar in concept to this one. Of those studies which compared the helping behavior of an individual within a group to an individual without a group, the majority used only one confederate, and the most confederates present in any of those studies was five.

Running more conditions to increase the variation in the number of bystanders may have led to more informative or more accurate results. Having an interval independent variable instead of a nominal independent variable would also have allowed for more rigorous statistical

examination. With the advantage of hindsight and improved access to resources, however, this can be addressed easily in future research.

When to Terminate Chat?

Long before the study reached implementation, it was decided that the bullying incident would not be outlined to end if the participant simply expressed *any* response, for multiple reasons. First, if the discussion had been halted immediately upon the participant voicing any opinion regarding what was happening, it would likely have raised suspicion in the participant, affecting their responses to the subsequent questionnaire. Second, participants' responses were quite complex – many participants did attempt to verbally defend the victim before notifying the researcher, issuing a sort of warning. If we had halted the session at the first expression of disapproval, we may have obtained incomplete or misleading results. Third, implementing a policy wherein the study halted if the participant defended the victim without contacting the researcher would have been methodologically unsound, as it would have required either the researcher or the research assistants to make an on-the-fly qualitative judgment as to what constituted a defensive response, a judgment which was best saved for the analysis stage of the research.

Such judgments, of course, were sometimes necessary. On some occasions, the participant contacted the researcher, but did not overtly inform him of the problem. In these instances, the researcher did have to exercise his best judgment regarding the participants' intentions. Typically, if the participant made no reference to a problem in the chat-room, particularly if s/he just asked if the debate was almost over, the researcher would tell her or him that he was still tied up with another task, but reassure the participant that s/he would still get credit for participating, even if s/he didn't get a turn to debate (since that was a concern often

voiced by participants in earlier sessions of the study). On many occasions, this elicited a response that more directly stated the nature of the problem, and the researcher then intervened.

Where did the time go?

The transcripts for each session were saved in their entirety, including details such as log-in times, and the time that each particular line of dialogue was entered. Originally, time would have been an important aspect of this study's analysis, as 'time to respond' has served as a continuous dependent variable representing helping in past research (e.g. Darley & Latane, 1968). Specifically, the time at which the bullying initiated, the time at which the participant first defended the victim in chat, and the time at which the participant contacted the researcher via e-mail would have been used to create two response delay variables for the analysis. This was abandoned for multiple reasons.

First, the hypotheses posed for this study made no predictions about helping *speed*. For the purposes of testing the hypotheses, 'time taken to help' would not have been a valid variable. Likewise making a distinction between helping via e-mail and helping via chat would have strayed from the 'spirit' of the hypotheses.

Second, taken alone, time to respond would not accurately represent the construct of helping. Such a time variable would elevate the importance of participants' helping *early* over participants' helping *effectively*, and a prompt token effort may be less sincere than a slower, but more decisive action. In order for the time to respond variable to have meaning, it would have to be taken into account alongside the method and extent of helping at a given time, and every time after that. An effective means of synthesizing *all* of this information meaningfully, either during the qualitative analysis or the quantitative analysis would be extraordinarily complex.

Third, the automatically recorded timing simply was not accurate enough to be considered a valid measurement. Chatzy's log recorded the minute and hour but not the seconds; the site and our university furnished Internet connections frequently lagged; and Chatzy's clock and the clock governing the researcher's "G-mail" account were often disparate by as much as two minutes. These factors together posed a serious problem when trying to establish a definite order of events. It would be difficult, if not impossible, to specifically identify which of the bully's taunts spurred a participant to action, and whether a particular response in the chat came before or after an e-mail sent at nearly the same time.

Since it was difficult to peg down at what time a participant action occurred, and difficult to define how much 'help' a single line of dialogue or e-mail represented, the researcher opted for a more holistic evaluation of each participant's actions and conduct.

Limitations

One limitation was evident from the very inception of this study. Although many of the study's participants had likely left high school behind only a few months prior, the transition to a higher learning environment is significant. The responses of the undergraduate students who contributed to our study, then, cannot be assumed to be comparable to high school aged children exposed to cyberbullying, and certainly cannot be compared to younger children. In short, while the study may examine bystanders' responses to general adult cyberaggression, it cannot draw any conclusions about cyberbullying (if we apply the strictest definitions of that term).

Similarly, although the bystander effect was demonstrated here, the study's design allowed for no means of extrapolating beyond that. The participants may have referenced the inaction of the neutral bystanders in determining what course of action was appropriate, or diffusion of responsibility may have set in, with participants assuming that someone else would

have contacted the researcher. This sets a solid stage, however, for further research, which should attempt to disentangle these explanations, as they may have very different implications for applied researchers developing bystander-side interventions.

The study also yielded little information beyond the examination of the bystander effect itself. Few of the personality measures administered predicted the dependent variable, helping. It may be that this is because they had no bearing on helping behavior, but it may be that any such influence was simply masked by the dependent variable's dichotomization. With almost no negative ratings, the participants who received an averaged helping score of "0" were those participants that *both* raters identified as non-helpers a meaningful distinction that made it desirable to recode the dependent variable as dichotomous. The original interval scale of helping coded for this study inherently captured more information than the dichotomous scale that was used in the analysis, however. Sacrificing variance in the dependent variable likely made it more difficult to ascertain correlations between that variable and the various personality measures that were administered.

Most of these limitations were implicit in the study's conceptualization though; the study did what it was designed to do, and nothing more. Unfortunately, the study may have been more seriously compromised by suspicion and by a confounding variable.

As stated before, suspicion was high. Based on comments made during the chat, responses to the first page of the survey (a manipulation check), and some researcher errors which *should* have made the participants' suspicious, 29 cases were excluded from the final analysis, deemed invalid, out of a total of 140 participants run, coming up short of the 122 participants we originally sought for this study.

Furthermore, as previously mentioned, an item at the end of the survey which directly asked about it indicated an incredibly high rate of suspicion. If that item had been used as a criterion for exclusion, this project would likely have been abandoned altogether. Although the researcher doubts the veracity of the participants' responses to the item and is inclined to attribute it to the item's wording and a self-serving hindsight bias within the participants, those responses must still be acknowledged as representing a real threat to this study's validity which cannot be reconciled. The reader should also be reminded that the participants in the study were Introduction to Psychology students. Each one was currently enrolled in a class that covers research design elements (like deception) and major theories (like the bystander effect). Notably, 95% of the participants reported suspicion in the month of December, at the end of the semester, as opposed to 80% of the students participating in the month of September. It is not unimaginable that many of the participants really did figure out the deception as the result of their education or, at the very least, had their response to the manipulation in someway influenced by that experience.

Also disconcerting was the discovery of a potential confounding variable, which compromises the internal validity of this study. Participants were told that the discussion would follow a round-robin format with everyone (hopefully) getting a chance to debate with everyone else. The full script can be found in Appendix B, but specifically, the instructions said:

> … Today you will engage in a series of short debates with each other. If we have time, everyone will debate with everyone else once. As in a school-sponsored debate, you'll be assigned a topic, and a side… You will take turns discussing the topics until I tell you that you're done. Then, you will be asked to fill out a survey about your experiences today as well as some other things, like your past experiences with the Internet. The whole procedure shouldn't take more than an hour.

Of course, none of the participants were ever going to be given a chance to debate. The researcher was scripted to become tied up in working on something else, and let the discussion between Greenville28 and Fairview20 run too long. Based on questions received during the chat, however, it seems that many participants did not understand that even if they did not get a chance to debate, they would still receive credit just for being present during the time and completing the survey afterwards. As a result, two major problems emerged.

First, some of the e-mails and comments participants submitted referenced concern for themselves rather than concern for the victim, and it was at times difficult to determine what the participants' motives were, one way or the other. As mentioned earlier, after it became apparent this would be a consistent problem, the researcher began answering ambiguous or credit-focused e-mails with a reassuring response. Sometimes this elicited a second e-mail from the participant that informed the researcher what the real problem was, while other times the participant seemed to be satisfied with the answer and drop the issue. This was part of the reason that the time taken by the participant to intervene, data which the research team diligently recorded, was omitted as a dependent variable.

The second problem is more serious. The participant was led to believe the process would take an hour, which included the time taken to get started, the time necessary for everyone to chat, and the time necessary for the survey. The participant could only guess at how much time was going to be allotted for the chat portion, but it is probable that they would have divided their guess by the minimum number of chats necessary for everyone to participate, in order to loosely calculate how long each of the chats should run.

For participants in the control condition, they likely would have divided their time, x, by two or three. With three chatters, two chats would be the minimum necessary for everyone to

chat once, and three chats would be the minimum necessary for everyone to debate against everyone else. For participants in the experimental condition, they likely would have divided their time, x, by three or *10*. With five chatters, three chats would be the minimum necessary for everyone to chat once, and 10 chats would be the minimum necessary for everyone to chat against everyone else. As a result, participants in the experimental condition might have estimated shorter expected chat times than participants in the control condition. It is difficult to estimate what impact, if any, this may have had on the study.

First, participants in the experimental condition might have expected the researcher to return much sooner to change up the chat assignments (and end the bullying); these participants would have been less motivated to help, thinking the problem would resolve itself soon. This could have lead to less helping in the experimental condition, lending false support to the hypothesis.

Second, the participants in the experimental condition might have become suspicious of the researcher's prolonged absence much sooner; these participants might have been less motivated to help, thinking on some level that the whole incident was staged. Presumably this would have lead to less helping in the experimental condition (as the perceived necessity of helping would have been lower), lending false support to the hypothesis.

Third, among participants who believed they would receive credit only if they got a turn to chat, participants in the experimental condition would have perceived the researcher's slowness as presenting a greater threat to their *own* welfare. While these participants may have been motivated to contact the researcher, they may have been less aware of the bullying as a problem (or may not have cared as much), and therefore less likely to do anything to help the victim in the e-mail or the chat, lending false support to the hypothesis. On the other hand,

participants under such duress might have latched onto anything that would drag the researcher back to the room, including the bullying issue. In that case, this would have raised helping in the experimental condition, undermining valid support for the hypothesis.

Reviewing the e-mails that were received suggests that this did not have a significant impact. Among the 111 cases considered valid for the analysis, 36 participants contacted the researcher during the chat. Of those 36, the researcher judged 11 of the contacts to be self-focused (focused on the e-mail's sender, rather than on the victim).[5] Five of these e-mails were sent by participants in the bystander condition, and four of them mentioned impatience or concern over getting credit. The other six of these self-focused e-mails, sent in the no-bystander condition, included three which mentioned impatience or concern for getting credit. Although the actual number of participants who harbored such self-focused concerns is unknown, the number of participants who voiced those concerns was small, and doing so appears to have been unrelated to the experimental condition. Ultimately, this problem could be avoided in future research simply by telling participants the study will last longer than it really will.

Conclusion

The goals of this study were to explore whether the bystander effect, a well-established phenomenon, would occur in an online environment (where passive bystanders should have little salience), and to develop a method for experimentally studying responses to cyberbullying. Consistent with previous research on helping behavior, participants who believed others were available to help a victim in distress were less likely to do so than participants who believed they alone were in a position to help the victim. The bystander effect emerged here in the context of a cyberaggression event, in which the target of the helping behavior was a victim of cyberbullying,

[5] Based on their comments in the chat, or the particular timing of their e-mail (e.g., *immediately* after the victim tells the bully to stop), most of these individuals were still rated as being somewhat helpful.

and the parties involved were connected only by their shared presence in an internet chatroom. The present study is an important first step in developing a method for studying cyberbullying. However, it also revealed the complexity and challenges that future research in this area will have to overcome.

References

Associated Press (2003, August 21). 'Star Wars Kid' becomes unwilling Internet star. *USAToday.* Retrieved September 20, 2009, from http://www.usatoday.com/tech/webguide/Internetlife/2003-08-21-star-wars-kid_x.htm

Ayres, C. (2008*).* 'MySpace bully' Lori Drew escapes felony charge over suicide of Megan Meier. *The Times.* Retrieved December 3, 2008, from http://technology.timesonline.co.uk/tol/news/tech_and_web/the_web/article5246833.ece

Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, *42*. 155-162.

Bem, S. L. (1981). *Bem sex role inventory professional manual.* Palo Alto, CA: Consulting Psychologists Press.

Benet-Martinez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729-750.

Beran, T., & Li, Q. (2005). Cyber-harassment: A study of a new method for an old behavior. *Journal of Educational Computing Research, 32*(3), 265-277.

Berger, K. S. (2007). Update on bullying at school: Science forgotten? *Developmental Review, 27*, 90–126.

Berkowitz, L., & Daniels, L. (1964). Affecting the salience of the social responsibility norm: Effects of past help on the response to dependency relationships. *Journal of Abnormal and Social Psychology, 68*(3), 275-281.

Berkowitz, L., & Lutterman, K. G. (1968). The traditional socially responsible personality. The Public Opinion Quarterly, 32(2), 169-185.

Bleda, P. R., Sharon, E. B., Byrne, D., & White, L. A. (1976). When a bystander becomes an accomplice: Situational determinants of reaction to dishonesty. *Journal of Experimental Social Psychology*, *12*, 9-25.

Boice, K., & Goldman, M., (1981). Helping behavior as affected by type of request and identity of caller. *The Journal of Social Psychology, 115*, 95-101.

Carlo, G., Okun, M. A., Knight, G. P., & de Guzman, M. R. T. (2005). The interplay of traits and motives on volunteering: Agreeableness, extraversion, and prosocial value motivation. *Personality and Individual Differences, 38*, 1293-1305.

Carlson, M. (2008). I'd rather go along and be considered a man: Masculinity and bystander intervention. *The Journal of Men's Studies, 16*(1), 3-17.

Chinball, S., Wallace, M., Leicht, C., & Lunghofer, L. (2006). *I-SAFE Evaluation.* US Department of Justice.

Clark, R. D., III, & Word, L. E. (1974). Where is the apathetic bystander? Situational characteristics of the emergency. *Journal of Personality and Social Psychology, 29*(3), 279-287.

Colorado State University Institutional Research (October, 2010). The Factbook, 2010-2011. Retrieved from http://www.ir.colostate.edu/pdf/fbk/1011/fb_1011.pdf

Darley, J. M., & Latane, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology, 8*(4), 377-383.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113-126.

Davis, M. (1980). A multidimensional approach to individual differences in empathy. JSAS *Catalog of Selected Documents in Psychology*, *10,* 85.

Davis, S., & Davis, J. (2007). *Empowering Bystanders in Bullying Prevention, Grades K-8*. Champaign, IL, US: Research Press.

Dehue, F., Bolman, C., & Vollink, T., (2008). Cyberbullying: Youngsters' experiences and parental perception. *Cyberpsychology & Behavior, 11*(2), 217-223.

Education Letter (2007). *A publication of the Faculty of Education and Education Alumni Association at Queens University.* Bullying is a relationship problem, 1-16.

Ellis, J., & Fox, P. (2001). The effect of self-identified sexual orientation on helping behavior in a British sample: Are lesbians and gay men treated differently? *Journal of Applied Social Psychology*, *31*(6), 1238-1247.

Eysenck, H. J., & Eysenck, S. B. G. (1992). *Manual for the Eysenck Personality Questionnaire–Revised*. San Diego, CA: Educational and Industrial Testing Service. As cited in Sato (2005).

Fagin-Jones, S., & Midlarsky, E. (2007). Courageous altruism: Personal and situational correlates of rescue during the Holocaust. *Journal of Positive Psychology, 2*(2), 136-147.

Farra, J. D., Zinser, O., & Bailey, R. C. (1978). Effects of I-E of donor and race and locus of cause of failure of recipient on helping behavior. *Journal of Social Psychology, 106*, 73-81.

Finkelhor, D., Mitchell, K.J., & Wolak, J. (2011). *Second Youth Internet Safety Survey (YISS-2)* [Dataset]. Available from National Data Archive on Child Abuse and Neglect web site: http://www.ndacan.cornell.edu

Fischoff, B. (2007). An early history of hindsight research. *Social Cognition, 25*(1), 10-13. doi: 10.1521/soco.2007.25.1.10

Friedman, E. (September 29, 2010). Victim of secret dorm sex tape posts Facebook goodbye, jumps to his death. ABCNews/U.S. Retrieved September 18, 2011, from http://abcnews.go.com/US/victim-secret-dorm-sex-tape-commits-suicide/story?id=11758716

Fritzche, B. A., Finkelstein, M. A., & Palmer, L. A. (2000). To help or not to help: Capturing individual's decision policies. *Social Behavior and Personality, 28*(6), 561-578.

Goldman, M., Broll, R., & Carrill, R. (1983). Requests for help and prosocial behavior. *The Journal of Social Psychology, 119*, 55-59.

Greitemeyer, T., Osswald, S., Fischer, P., & Frey, D. (2007). Civil courage: Implicit theories, related concepts, and measurement. *Journal of Positive Psychology, 2*(2), 115-119.

Harris, M., & Ho, J. (1984). Effects of degree, locus, and controllability of dependency, and sex of subject on anticipated and actual helping. *The Journal of Social Psychology, 122*(2), 245-255.

Hinduja, S., & Patchin, J. W. (2007). Offline consequences of online victimization: School violence and delinquency. *Journal of School Violence, 6*(3), 89-112.

Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior, 29*, 129-156.

Hinduja, S., & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of Suicide Research, 14*(3), 206-221.

i-SAFE. (2008). *PARENT SURVEY 2007-08.* Retrieved from National Assessment Center.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory--Versions 4a and 54.* Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.

Kennedy, H. (March 29, 2010). Phoebe Prince, South Hadley High School's 'new girl,' driven to suicide by teenage cyber bullies. NYDailyNews.com. Retrieved 9-18-2011 from http://articles.nydailynews.com/2010-03-29/news/27060348_1_facebook-town-hall-meetings-school-library

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*, S22-S30

Kowalski, R.M., Limber, S. P., & Agatston, P.W. (2008). *Cyber Bullying: Bullying in the Digital Age*. Malden, MA: Blackwell Publishing.

Kulik, J., & Taylor, S. (1981). Self-monitoring and the use of consensus information. *Journal of Personality, 49*(2), 75-84.

Latané, B., & Dabbs, J. (1975). Sex, group size, and helping in three cities. *Sociometry, 38*(2), 180-194.

Latane, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10*(3), 215-221.

Latane, B., & Nida, S., (1981). Ten yars of research on group size and helping. *Psychological Bulletin, 89*(2), 308-324.

Latane, B., & Rodin, J. (1969). A lady in distress: Inhibiting effects of friends and strangers on bystander intervention. *Journal of Experimental Social Psychology, 5*(2), 189-202.

Lerner, M., & Reavy, P. (1975). Locus of control, perceived responsibility for prior fate, and helping behavior. *Journal of Research in Personality, 9*(1), 1-20.

Levine, M., & Crowther, S. (2008). The responsive bystander: How social group membership and group size can encourage as well as inhibit bystander intervention. *Journal of Personality and Social Psychology*, *95*(6), 1429-1439.

Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International, 27*, 157-170.

Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior, 23*, 1777-1791.

Markey, P. M., Wells, S. M., & Markey, C. M. (2002). Social and personality psychology in the culture of cyberspace (Book Chapter). *Advances in Psychology Research*, 93-113.

Martinez, E. (March 26, 2010). Alexis Pilkington brutally cyber bullied, even after her suicide. CBSNews.com. Retrieved 9-18-2011 from http://www.cbsnews.com/8301-504083_162-20001181-504083.html

Menesini, E., & Nocentini, A. (2009). Cyberbullying definition and measurement. *Journal of Psychology, 217*(4), 230-232.

Mesch, G. S., (2009). Parental mediation, online activities, and cyberbullying. *Cyberpsychology & Behavior, 12*(4), 387-393.

Midlarsky, E., Fagin-Jones, S., & Corley, R. P. (2005). Personality correlates of heroic rescue during the Holocaust. *Journal of Personality, 73*(4), 907-934.

Midlarsky, M., & Midlarsky, E. (1976). Status inconsistency, aggressive attitude, and helping behavior. *Journal of Personality, 44*(3), 371-391.

National Crime Prevention Council (2007, February). *Teens and cyberbullying: Executive summary of a report on research conducted for NCPC.* Retrieved October 2010 from http://www.ncpc.org/resources/files/pdf/bullying/Teens%20and%20Cyberbullying%20Research%20Study.pdf

National Crime Prevention Council (2008, December 5). *Stop cyberbulling before it starts.* Retrieved September 22, 2009, from http://www.ncpc.org/resources/files/pdf/bullying/cyberbullying.pdf

Olweus, D. (1995). Bullying or peer abuse at school: Facts and interventions. *Current Directions in Psychological Science, 4*(6), 196-200.

Patchin, J. W., Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice, 4*(2), 148-169.

Pew Internet & American Life Project. (2009, January). *Pew Internet Project data memo: Generations online in 2009*. Retrieved October 2010, from http://www.pewInternet.org/~/media//Files/Reports/2009/PIP_Generations_2009.pdf

Piliavin, I. M., Piliavin, J. A., & Rodin, J. (1975). Costs, diffusion, and the stigmatized victim. *Journal of Personality and Social Psychology*, *32*(3), 429-438.

Reker, G. T., & Peacock, E. J. (1981). The Life Attitude Profile (LAP): A multidimensional instrument for assessing attitudes toward life. *Canadian Journal of Behavioral Sciences, 13*(3), 264-273.

Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcements. *Psychological Monographs, 80*(1), 1-28.

Rotter, J. B., & Mulry, R. C. (1965). Internal versus external control of reinforcement and decision time. Journal of Personality and Social Psychology, 2(4), 598-604.

Rushton, J. P., Fulker, D. W., Neale, M. C., Nias, D. K. B., & Eysenck, H. J. (1989). Ageing [sic] and the relation of aggression, altruism, and assertiveness to the Eysenck Personality Questionnaire. *Person. Individ. Diff., 10*(2), 261-263.

Sato, T. (2005). The Eysenck Personality Questionnaire Brief Version: Factor structure and reliability. *The Journal of Psychology: Interdisciplinary and Applied, 139*(6), 545-552.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON. As cited on http://userpage.fu-berlin.de/~health/engscal.htm.

Shaw, J. I., Borough, H. W., & Fink, M. I. (1994). Perceived sexual orientation and helping behavior by males and females: The wrong number technique. *Journal of Psychology and Human Sexuality*, *6*(3), 73-81.

Sherer, M., Maddux, J., Mercandante, B., Prentice-Dunn. S., Jacobs. B., & Rogers. R. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51,* 663-671.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, *49*(4), 376-385.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30*(4), 526-537.

Snyder, M. (1987). Public appearances/private realities. New York: Freeman. Adaptation provided by Fraser, M., on Deanza College website: http://faculty.deanza.edu/frasermary/stories/storyReader$109

Susan Limber Talks About a Prevalent Behavior With Serious Consequences. (2009). *The Challenge, 16*(1), 4-5.

Tani, F., Greenman, P. S., Schneider, B. H., & Fregoso, M. (2003). Bullying and the Big Five: A study of childhood personality and participant roles in bullying incidents. *School Psychology International, 24*(2), 131-146.

The Challenge (2009). The school bully in cyberspace. *The challenge: A publication of the office of safe and drug-free schools*, *16*(1), 1-8.

The Factbook, 2010-11 (October, 2010). Colorado State University: Institutional Research. Retrieved 9-18-2011 from http://www.ir.colostate.edu/pdf/fbk/1011/fb_1011.pdf

Tice, D. M., & Baumeister, R. F. (1985). Masculinity inhibits helping in emergencies: Personality does predict the Bystander Effect. *Journal of Personality and Social Psychology, 49*(2), 420-428.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*, 277-287.

Williard, N. (2007). *Cyber safe-kids and cyber-savvy teens*. Retrieved September 2010 from cyber safe-kids and cyber-savvy teens website from http://cyber-safe-kids.com

Wilson, J. P. (1976). Motivation, modeling, and altruism: A person x situation analysis. *Journal of Personality and Social Psychology*, *34*(6), 1078-1086.

Wolak, J. D., Mitchell, K. J., & Finkelhor, D. (2007). Does online harassment constitute bullying? An exploration of online harassment by known peers and online-only contacts. *Journal of Adolescent Health, 41*, 51-58.

Ybarra, M. L. (2004). Linkages between depressive symptomatology and Internet harassment among youth regular Internet users. *CyberPsychology and Behaviors, 7*(2), 247-257.

Ybarra, M. L., & Mitchell, K. J. (2004a). Youth engaging in online harassment: Associations with caregiver-child relationships, Internet use, and personal characteristics. *Journal of Adolescence, 27*, 319-336.

Ybarra, M. L., & Mitchell, K. J. (2004b). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry, 45*(7), 1308-1316.

Ybarra, M. L., & Mitchell, K. J. (2007). Prevalence and frequency of Internet harassment instigation: Implications for adolescent health. *Journal of Adolescent Health, 41*, 189-195.

Ybarra, M. L., Diener-West, M., & Leaf, P. J. (2007). Examining the overlap in Internet harassment and school bullying: Implications for school intervention. *Journal of Adolescent Health, 41*, S42-S50.

Appendix I: Script

Dramatis Personae:

CSU Researcher01 - Member of the research team responsible for scheduling the chat session, guiding the introduction, giving instructions, and being available for the participant to contact.

Fairview20 - Bully - A confederate posting scripted responses. Fairview20 will engage Greenville28 in a debate. During the course of the debate, Fairview20 will begin 'verbally' abusing Greenville28 out of apparent boredom.

Greenville28 - Victim - A confederate posting scripted responses. Greenville28 will engage Fairview20 in a debate. Greenville28 will become the target of Fairview20's bullying during the course of the debate and show distress.

Manchester03 - Neutral Bystander - A confederate posting scripted responses. Manchester03 will make only a few scripted responses before the debate starts, but will then be silent, though still signed in. Manchester03 is only present in the Multiple Bystanders condition.

Ashland13 - Neutral Bystander - A confederate posting scripted responses. Ashland13 will make only a few scripted responses before the debate starts, but will then be silent, though still signed in. Ashland13 is only present in the Multiple Bystanders condition.

[Once the scheduled participant and all confederates have arrived, the researcher will lead a brief 'lag-detection' session to impress upon the participant how many other 'participants' (actually confederates) are present; this is effectively our manipulation.]

CSU Researcher 01: /message
[This command activates the message function in chat, in which a researcher would enter larger blocks of standard text, rather than write them out line by line.]
Thanks to everyone for coming!
I would like to get the ball rolling so you all can be done sooner than later and so I can start setting up for another group. There has been some concern with this study regarding connection speeds, though. Lags might be causing problems for the discussion portion of the study, so we are going to run through a bunch of trivial questions that I want you to answer as fast as possible, so any significant delays will be apparent when we review the script later for analysis. Answer AS FAST AS YOU CAN.

- pause -

CSU Researcher 01: What is the first letter of your first name?

[Manchester03: J]

Fairview20: E

Greenville28: M

[Ashland13: K]

- Participant Response -

CSU Researcher 01: How many siblings do you have?

[Manchester03: 2]

Greenville28: just one

[Ashland13: none]

Fairview20: 1

- Participant Response -

CSU Researcher 01: How do you usually get to campus?

Greenville28: i walk

Fairview20: i walk too

[Ashland13: bike]

[Manchester03: bus]

- Participant Response -

CSU Researcher 01: Favorite snackfood?

Fairview20: Prtzels

[Manchester03: Cheese]

Greenville28: Chips

[Ashland13: Apples]

- Participant Response -

[Once this is done, the researcher will give instructions and allow the discussion to begin. The participant will be led to believe that they will be participating in a round-robin style debate exercise, wherein every participant will have a short debate with every other participant.]

CSU Researcher 01: I think we're ok to go
CSU Researcher 01: /message
Remember if you have to quit for some reason it will not be held against you, but if you need to leave, or get disconnected, please e-mail me IMMEDIATELY at CSURsrchr01@gmail.com, so I know to rework the order of the discussion, and so I can send you the debriefing for the study.

- pause -

CSU Researcher 01: /message
Today you will engage in a series of short debates with each other. If we have time, everyone will debate with everyone else once. As in a school-sponsored debate, you'll be assigned a topic, and a side. Some people worry about defending a stance they disagree with or know nothing about but these topics are of a non-academic nature. The topics are simply intended to get a conversation going.

- pause -

CSU Researcher 01: /message
You will take turns discussing the topics until I tell you that you're done. Then, you will be asked to fill out a survey about your experiences today as well as some other things, like your past experiences with the Internet. The whole procedure shouldn't take more than an hour.

[They will be told that the researcher will choose a pair, assign a topic, and assign stances on the topic. Then, the pairs will be instructed to debate with each other, and respond only to each other, while their audience may make supportive or critical comments as they feel appropriate. After the discussion time has supposedly elapsed, the researcher will halt the debate, and repeat the process with a different pair of participants.]

CSU Researcher 01: /message
Who ever is not debating will be asked to listen in the mean time. You can make comments if you WANT, but to keep this simple, if you are one of the debaters, ONLY engage in conversation with your ASSIGNED partner. When time is up, I'll end the debate and assign the next pair and topic

- pause -

[Before these debates take place, however, the researcher will ask everyone to send him/her an e-mail to ensure that s/he can be contacted privately if necessary.]

CSU Researcher 01: /message
I may not be following the debate because I'll have to set up another group to run soon, but I will not be away from my computer; if there is a problem or you have any questions, you can contact me quickly by e-mailing me at csursrchr01@gmail.com. Just to make sure everyone can get through, send me an e-mail now before we proceed, with the subject and text simply being "test".

- If participant sends e-mail, move on, if not, find out what is wrong -

CSU Researcher 01: Alright we're good to go

[The researcher will then choose 'participants' Fairview20 and Greenville28, who are each confederates following scripts at this point, and give them their topic.]

CSU Researcher 01: Ultimately you'll all engage in debates with each other but Fairview20 and Greenville28 will go 1st.
CSU Researcher 01: ok?

Greenville28: yeah

Fairview20: ditto

CSU Researcher 01: You will debate Hamburger vs Taco; which is better?
CSU Researcher 01: Greenville28 will take Tacos
CSU Researcher 01: and Fairview20 will argue for Hamburgers

Greenville28: Srsly?

CSU Researcher 01: yes

Fairview20: lol

CSU Researcher 01: Greenville28 goes first
CSU Researcher 01: Start when you're ready
CSU Researcher 01: I have to go soon, but remember you can contact me via e-mail.

[Greenville28 will begin the debate, as requested, and Fairview20 will begin to argue.]

Greenville28: Umm... Tacos are better b/c they're easier 2 make

Fairview20: but hamburgers are easier to eat

Greenville28: No they arent!
Greenville28: They're drippy and greasy and slide off the bun
Greenville28: and get your hands messy

Fairview20: if u make them wrong
Fairview20: u have to b careful how much grease u use

[The researcher will then set his/her status to "away", leaving the participant alone with the study's confederates, who will continue their debate.]

[For a short time the discussion will follow expectations, with both serious and facetious arguments made by both individuals, but eventually Fairview20 will appear to become bored and resort to harassing Greenville28.]

CSU Researcher 01: /away
[This command changes the administrator's status to away, signifying that s/he is no longer observing the discussion. The administrator can return to the chat, simply by clicking the "OK" button on the pop up that appears when s/he changes his or her status.]

Greenville28: Like I said
Greenville28: tacos are a lot easier to make
Greenville28: Also, noone puts mayonnais on your taco
Greenville28: yuck

Fairview20: the burger should not be judged by its toppings

Greenville28: a burger without any toppings is boring!
Greenville28: no ketchup? no mustard?!

Fairview20: catsup

Greenville28: ???

Fairview20: it's spelled catsup
Fairview20: not ketchup
Fairview20: everyone knows that

[Note: the next two lines must be typed EXACTLY as follows.]

Fairview20: ketchups like a brand name or somehting

Greenville28: you mean someTHing :p

Fairview20: Oh noes!
Fairview20: I made a typo!!!1!111one1eleven!
Fairview20: in a chatroom!
Fairview20: O, g, im such an idiot

Greenville28: I just thought it was kind of ironic
Greenville28: that you were criticizing my spelling
Greenville28: and I think it is spelled ketchup
Greenville28: I've never heard of a "ketchup" brand

Fairview20: theres a diff between spelling errors and typos
Fairview20: dont be so sensitive

Greenville28: ???
Greenville28: how was I being sensitive

Fairview20: you got all defensive
Fairview20: started making snarky comments

Greenville28: snarky?

Fairview20: yeah
Fairview20: Why are you so insecure anyway?

Greenville28: I'm insecure?

Fairview20: yeah
Fairview20: I correct you
Fairview20: you dont listen and instead try to correct me
Fairview20: (and look like a total dumbass in the process)
Fairview20: What's wrong with you?
Fairview20: why do you get so upset if someone corrects you?

Greenville28: Im not upset
Greenville28: I was just being funny
Greenville28: and I still think im right about the ketchup

Fairview20: no
Fairview20: you weren't being funny
Fairview20: you were being a douchebag
Fairview20: and still can't admit your wrong about the ketchup

Greenville28: I'm not wrong!
Greenville28: And I wasn't trying to offend you!

Fairview20: whatever
Fairview20: say what you want
Fairview20: doesn't make you any less of a jerk

[Greenville28 will initially try to ignore the provocations and continue the debate civilly, but Fairview20 will proceed to generally escalate the teasing to overt, malicious harassment, continuing even after Greenville28 asks Fairview20 to stop and begins to express distress.]

Greenville28: okaaay...
Greenville28: Can we just get this back on topic?

Fairview20: Oh noes
Fairview20: heaven forbid we abandon our riveting discussion of fast food

Greenville28: hamburgers and tacos don't HAVE to be fastfood.

Fairview20: there you go again!
Fairview20: captain obvious ready to jump in at the drop of a hat
Fairview20: o thank u captain obvious!
Fairview20: if you hadnt corrected my sarcastic reply
Fairview20: we might have all gone home thinking tacos and burgers
Fairview20: were only fast food!
Fairview20: oh the horrror!
Fairview20: or
Fairview20: was that another
Fairview20: really
Fairview20: really
Fairview20: SAD
Fairview20: attempt at humor
Fairview20: save the jokes for your equally lame friends
Fairview20: your trying to be funnier here is just coming off as
Fairview20: STUPID

Greenville28: that wasn't a joke

Fairview20: No kidding!

Greenville28: I was trying to get the debate back on track

Fairview20: yeah
Fairview20: playing the captain obvious card was a GREAT way to get that done
Fairview20: you really suck at this

Greenville28: I dont have a lot of practice at debates

Fairview20: you suck so much at this I doubt practice would help you much
Fairview20: kind of like sex
Fairview20: theres a certain bottom range to performance where you're just doomed to SUCK

Greenville28: lets keep sex out of this for now

Fairview20: y?
Fairview20: does talking about sex make you uncomfortable mr. insecure?
Fairview20: or is it ms. insecure?

Greenville28: no
Greenville28: it doesn't
Greenville28: I just want to get the debate back on track
Greenville28: please
Greenville28: just drop it so we can talk about food again

Fairview20: You didn't answer my other question

Greenville28: the directions said not to talk about ourselves
Greenville28: to avoid revealing personal info

Fairview20: personal info?
Fairview20: its not exactly sensitive info
Fairview20: if i GUESSED id have 50/50 chance of being right

Greenville28: I just want to follow the directions
Greenville28: get my credit
Greenville28: and be done
Greenville28: why do you even want to know?

Fairview20: why are YOU so paranoid?

Greenville28: just knock it off already
Greenville28: i didnt sign up to listen to this

Fairview20: then just leave
Fairview20: no one likes you anyway
Fairview20: no one WANTS you here

Greenville28: I signed up to participate
Greenville28: I'm going to

Fairview20: Ooooh soooo noble
Fairview20: your REALLY desperate for someone to like you arent you?
Fairview20: have to be the good little student
Fairview20: bet your lips have been sewed to a teachers ass since kindergarten

Greenville28: why are you acting like this?

Fairview20: b/c you suck
Fairview20: and someone needs to tell u
Fairview20: b/c apparently
Fairview20: youve been like the only person left out of that secret

- pause -

Fairview20: Oooh, no response
Fairview20: hey douchebag
Fairview20: you still there?

Greenville28: just stop

Fairview20: Thats IT
Fairview20: ???
Fairview20: THATS yur comeback?
Fairview20: O
Fairview20: M
Fairview20: F
Fairview20: G
Fairview20: you DO suck!
Fairview20: cant take a little teasing
Fairview20: and ccant dish it back out
Fairview20: you must have like NO friends

Greenville28: I have friends

Fairview20: the imaginary ones you talk to when you touch yourself dont count
Fairview20: loser

Greenville28: I have REAL friends

Fairview20: nope
Fairview20: Not buying it
Fairview20: no one could stand to be around

Fairview20: someone as spineless and pathetic as you
Fairview20: talk about a 'wet blanket'
Fairview20: your like a urine-soaked-blanket
Fairview20: wet-the-bed blanket
Fairview20: guess thatd probably put a real crimp in your love life
Fairview20: if you could ever actually get into bed with anyone

Greenville28: I dont wet the bed
Greenville28: and i HAVE friends

Fairview20: Oh
Fairview20: I believe YOU believe that

- pause -

Fairview20: HELLO?
Fairview20: where'd you go?
Fairview20: Oh come on
Fairview20: Im not done with you yet
Fairview20: Cmon
Fairview20: Im BORED.
Fairview20: Whatever
Fairview20: hey, I win the debate!
Fairview20: yay me!
Fairview20: tacos ftw!

[If the participant contacts the researcher, the researcher will thank the participant and log back into the chat-room immediately and end the discussion. If the participant says nothing, the researcher will allow the discussion to continue until the confederates have run out of script, at which point s/he will log back into the chat-room. Upon returning to the chat-room, the researcher will take a moment to 'review what has been said', and finally announce that the session needs to be ended early to conform with research ethics guidelines.]

CSU Researcher 01: Hi, I'm back
CSU Researcher 01: sorry it took so long
CSU Researcher 01: was never good at multitasking
CSU Researcher 01: pause the discussion for a moment so I can catch up on how its been going.

- pause -

CSU Researcher 01: I think we should just cut the discussion short and move onto the questionnaires

[The researcher will thank the participants for coming, inform them that if they are upset they can still contact him/her to discuss it, and ask them to continue to the online questionnaires,

hosted on surveymonkey.com, which will test our manipulation, and collect information about the participants' prior Internet use experiences and personal characteristics.]

CSU Researcher 01: if anyone's been distressed by this
CSU Researcher 01: please use the contact info you received with the informed consent
CSU Researcher 01: or contact CSU's Health Network Counseling Services.
CSU Researcher 01: You can contact them on campus at 123 Aylesworth, or by phone at (970) 491-6053, between 7:30am and 5pm from Monday to Friday (until 8pm on Tuesdays). You can contact a counselor after hours at (970) 491-7111.
CSU Researcher 01: you can also contact me at csursrchr01@gmail.com, or call me at 573-690-1425 if there are any problems

CSU Researcher 01: /message
The questionnaires are hosted on surveymonkey.com at the following address: http://www.surveymonkey.com/s/8HRHTR2. The first page of questions asks about your experience today so you may want to leave this conversation open so you can refer back to it if you have any questions about the survey as you respond to it, you can still e-mail me. Thank you for coming today.

Appendix II: Scales & Measures

Please answer the following questions about your experience today (you may refer back to the record of today's conversation, if you wish):

1. Please list the screen-names of the participants in today's discussion, including your own:

2. What topics of discussion were covered in today's chat?

3. How enjoyable did you find this activity to be, on a scale of 1 to 4, with 1 being "very unenjoyable" and 4 being "very enjoyable"?

4. If we were to ask you to return for a different study that involved working with one of today's participants who would you MOST prefer to work with?

5. If we were to ask you to return for a different study that involved working with one of today's participants who would you LEAST prefer to work with?

6. Did all of the participants stay reasonably "on-topic"? (Yes/No, if no, please BRIEFLY describe the problem.)

7. Did all of the participants contribute to the discussion when appropriate? (Yes/No, if no, please BRIEFLY describe the problem.)

8. Did any of the participants make inappropriate comments? (Yes/No, if no, please BRIEFLY describe the problem.)

9. Did one or more participants ignore another participant? (Yes/No, if no, please BRIEFLY describe the problem.)

10. How much experience would you say you have as an Internet user, on a scale of 1 to 5, with 1 being a beginner and 5 being an expert?

Internet Use Survey – Items adapted from YISS-2

1) Please estimate how often, in the past twelve months, you have engaged in each behavior listed below, using the following scale:

0 = Not at all in the past 12 months.
1 = A few times in the past 12 months.
2 = Monthly.
3 = Weekly.
4 = Daily.

I have visited web sites

<=====================>
0 1 2 3 4

I have used e-mail

<=====================>
0 1 2 3 4

I have used the Internet to use instant messages

<=====================>
0 1 2 3 4

I have visited chat rooms

<=====================>
0 1 2 3 4

I have used the Internet to play games

<=====================>
0 1 2 3 4

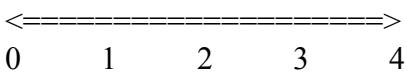
I have downloaded music, pictures or videos from file sharing programs like Kazaa or Bear Share

<=====================>
0 1 2 3 4

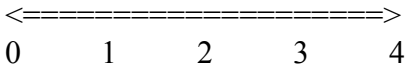
I have used the Internet to keep an online journal or blog

<=====================>
0 1 2 3 4

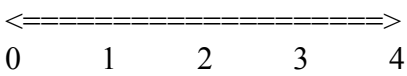
I have used an online dating or romance site



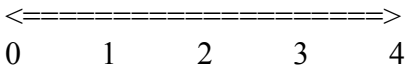
I have visited a social networking site like Facebook or Myspace



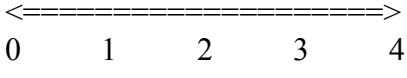
I have felt worried or threatened because someone was bothering or harassing me online



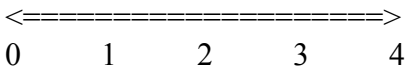
I have been threatened or embarrassed by someone using the Internet to post or send messages about me for other people to see



I have made rude or nasty comments to someone online unprovoked



I have spent more than 6 hours online in a single day



Bem Sex Role Inventory (BSRI)

Please rate how well the following descriptors apply to you on a scale of 1 to 7, 1 being not at all like you and 7 being very much like you:

Adaptable	1	2	3	4	5	6	7
Affectionate	1	2	3	4	5	6	7
Assertive	1	2	3	4	5	6	7
Cheerful	1	2	3	4	5	6	7
Compassionate	1	2	3	4	5	6	7
Conceited	1	2	3	4	5	6	7
Conscientious	1	2	3	4	5	6	7
Conventional	1	2	3	4	5	6	7
Defend my own beliefs	1	2	3	4	5	6	7
Dominant	1	2	3	4	5	6	7
Eager to soothe hurt feelings	1	2	3	4	5	6	7
Forceful	1	2	3	4	5	6	7
Gentle	1	2	3	4	5	6	7
Has leadership abilities	1	2	3	4	5	6	7
Independent	1	2	3	4	5	6	7
Jealous	1	2	3	4	5	6	7
Moody	1	2	3	4	5	6	7
Reliable	1	2	3	4	5	6	7
Secretive	1	2	3	4	5	6	7
Sensitive to needs of others	1	2	3	4	5	6	7
Strong personality	1	2	3	4	5	6	7
Sympathetic	1	2	3	4	5	6	7
Tactful	1	2	3	4	5	6	7
Tender	1	2	3	4	5	6	7
Truthful	1	2	3	4	5	6	7
Understanding	1	2	3	4	5	6	7
Warm	1	2	3	4	5	6	7
Willing to take a stand	1	2	3	4	5	6	7
Willing to take risks	1	2	3	4	5	6	7

Abbreviated Social Responsibility Scale (Berkowitz & Lutterman, 1968)

Please indicate your agreement with the following statements, based on the following scale

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

1. It is no use worrying about current events or public affairs; I can't do anything about them anyway.
2. Every person should give some of his time for the good of his town or country.
3. Our country would be a lot better off if we didn't have so many elections and people didn't have to vote so often.
4. Letting your friends down is not so bad because you can't do good all the time for everybody.
5. It is the duty of each person to do his job the very best he can.
6. People would be a lot better off if they could live far away from other people and never have to do anything for them.
7. At school I usually volunteered for special projects.
8. I feel very bad when I have failed to finish a job I promised I would do.

INTERPERSONAL REACTIVITY INDEX (Davis, 1980)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A = DOES NOT DESCRIBE ME WELL
B
C
D
E = DESCRIBES ME VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view.
4. Sometimes I don't feel very sorry for other people when they are having problems.
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.
12. Becoming extremely involved in a good book or movie is somewhat rare for me.
13. When I see someone get hurt, I tend to remain calm.
14. Other people's misfortunes do not usually disturb me a great deal.
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in a tense emotional situation scares me.
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
19. I am usually pretty effective in dealing with emergencies.
20. I am often quite touched by things that I see happen.
21. I believe that there are two sides to every question and try to look at them both.
22. I would describe myself as a pretty soft-hearted person.
23. When I watch a good movie, I can very easily put myself in the place of a leading character.
24. I tend to lose control during emergencies.
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. When I see someone who badly needs help in an emergency, I go to pieces.
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Self-Monitoring Scale (Snyder, 1987)

In the following list, if a statement is true or mostly true as it applies to you, indicate this by choosing "True". If a statement is false or not usually true as it applies to you, choose "False".

1. I find it hard to imitate the behavior of other people.
2. At parties and social gatherings, I do not attempt to do or say things that others will like.
3. I can argue only for ideas that I already believe.
4. I can make impromptu speeches even on topics about which I have almost no information.
5. I guess I put on a show to impress or entertain others.
6. I would probably make a good actor.
7. In a group of people, I am rarely the center of attention.
8. In different situations and with different people, I often act like very different persons.
9. I am not particularly good at making other people like me.
10. I'm not always the person I appear to be.
11. I would not change my opinions (or the way I do things) in order to please someone or win his or her favor.
12. I have considered being an entertainer.
13. I have never been good at games such as charades and improvisational acting.
14. I have trouble changing my behavior to suit different people and different situations.
15. At a party I let others keep the jokes and stories going.
16. I feel a bit awkward in company and do not come across quite as well as I should.
17. I can look anyone in the eye and tell a lie with a straight face (if for the right end).
18. I may deceive people by being friendly when I really dislike them.

Life Attitude Profile: Life Control Subscale (Reker & Peacock, 1981)

Please indicate your agreement with the following items based on a 7 point scale, where 7 represents strong *agreement*, and 1 represents strong *disagreement*:

1. My life is in my hands and I am in control of it.
2. I determine what happens in my life.
3. Concerning my freedom to make my own choices, I believe I am absolutely free to make all life choices.
4. My accomplishments in life are largely determined by my own efforts.
5. I regard the opportunity *to* direct my life as very important.
6. It is possible for me to live my life in terms of what I want to do.

General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)

For each of the following statements, use the following 1-4 scale to rate how well the statement describes you:

1 = Not at all true
2 = Hardly true
3 = Moderately true
4 = Exactly true

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

Eysenck Personality Questionnaire-Brief Version (EPQ-BV; Sato, 2005)

Instructions: Please answer each question by selecting one of the five response options listed below. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions.

Response Options:

1) Not at all
2) Slightly
3) Moderately
4) Very Much
5) Extremely

1 Are you a talkative person?
2 Does you mood often go up and down?
3 Are you rather lively?
4 Do you ever feel miserable for no reason?
5 Do you enjoy meeting new people?
6 Are you an irritable person?
7 Can you usually let yourself go and enjoy yourself at a lively party?
8 Are your feelings easily hurt?
9 Do you usually take the initiative in making new friends?
10 Do you often feel "fed-up"?
11 Can you easily get some life into a rather dull party?
12 Would you call yourself a nervous person?
13 Do you tend to keep in the background on social occasions?
14 Are you a worrier?
15 Do you like mixing with people?
16 Would you call yourself tense or “highly-strung”?
17 Do you like to have plenty of action and excitement around you?
18 Do you worry too long after an embarrassing experience?
19 Are you mostly quiet when you are with other people?
20 Do you suffer from nerves?
21 Do other people think of you as being very lively?
22 Do you often feel lonely?
23 Can you get a party going?
24 Are you often troubled about feelings of guilt?

Demographic Characteristics

Please fill in the following boxes with the appropriate information:

1. Date of Birth (mm/dd/yyyy): _____

2. Age of first Internet Use (best guess): _____

3a. Would you consider yourself to be of Hispanic or Latino origin? (Yes/No/Don't Know)

3b. Would you consider yourself to be American Indian, Aleut, Eskimo? (Yes/No/Don't Know)

3c. Would you consider yourself to be Asian or Pacific Islander? (Yes/No/Don't Know)

3d. Would you consider yourself to be Black? (Yes/No/Don't Know)

3e. Would you consider yourself to be White? (Yes/No/Don't Know)

3f. Would you consider yourself to be of a race/ethnicity not mentioned above? (please specify)

4a. At any time during the chat or surveys did you become suspicious that the study might not really be about having online conversations? (Yes/No)

4b. If your answer to question 4a was "yes", was it during the chat or the surveys that you first became suspicious? (choose one)

4c. If your answer to question 4a was "yes", what did you think the purpose of the study was?

5. Prior to your participation today, had you discussed this study with anyone who had already participated in this study? (Yes/No/Don't Know)