Diffusion of responsibility or diffusion of social risk:
Social impact of hyperpersonal cues in cyberbystander intervention in a cyberbullying context

Dissertation

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Abstract

Increasing reliance on computer-mediated communication to work and socialize has led to a sharp increase in emergencies and negative communication events. The Centers for Disease Control have labeled cyberaggression as an important public health issue, affecting millions of adolescents and adults daily. Previous research has focused mainly on the adverse effects of bullying and possible risk factors for adolescents bullying their peers. The majority of individuals fall into a third group: bystanders. The current study uses social impact theory (Latané, 1981) to test the hyperpersonal cues (Walther, 1996) on cyberbystander intervention. Participants are cyberbystanders to cyberbullying happening in real-time, and have opportunities for direct and indirect intervention. The Bystander Effect is confirmed, where fewer individuals chose to directly intervene in the cyberbullying when more individuals were present. Timing and amount of feedback from other cyberbystanders have mixed results. Non-intervening participants explain their inaction using various Moral Disengagement (Bandura, 1991; 1999) strategies. Results offer unique insights into cyberbystander behavior in a real-life simulation.
Dedication

This dissertation is dedicated to my grandmother,

Jean Dillon, who taught me how to breathe.
Acknowledgements

This entire journey was a group effort, and I am significantly (p<.001) blessed to have so many people not just in my life. I started this program with one family, and leave with two. In my academic family, I must acknowledge my advisor, Dr. Brad Bushman, for his never-ending support, in and out of the lab. To my committee members Dr. Jesse Fox and Dr. Dave Ewoldsen. Dr. Fox consistently sets the bar of badass high and Dr. Ewoldsen is a true lighthouse, encouraging from the shore whenever needed. To my village people: the cohorts before me, those I walk with, and those I have had the pleasure to see begin this journey. Of special note are Laura Willis, Bridget Potocki, Phokeng Dailey, Rachel Neo, and the dozens of other rock stars who walk the third floor of Derby Hall in pursuit of communication excellence. I must acknowledge my family who has braved this journey with me. My parents, Bette and Jim, always believed and urged me to shoot for the stars. My brothers, Brandon, Kevin, and Joey keep me grounded and laughing. To my mother-in-law Kathy who cared for my children so I could attend class, conferences, or my work. To my children, Jackson and Benjamin, who have grown as much as I have during these 5yrs; I hope I have inspired. Most of all, to my husband, Eric who worked so hard to make this dream possible. He has a PhD by proxy for his efforts, and I here formally, and every day, acknowledge how lucky I am to have him in my life.
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Chapter 1: Literature Review

Bullying, Cyberbullying & Bystanders

Definitions & Prevalence

Aggression is generally defined as any behavior intended to harm another person, either physically or psychologically, who does not want to be harmed (Bushman & Huesmann, 2010). When aggression occurs online it is called cyberaggression. Bullying is specifically defined as repetitive, intentionally aggressive behavior that creates or maintains an imbalance of power (Tokunaga, 2010). It includes repeated acts of assault, taunting, teasing, extortion, ostracism, and intimidation (Hawker & Boulton, 2000; Myers, McCaw, & Hemphill, 2011). Recent longitudinal studies have revealed victims of bullying are at a greater risk of developing psychiatric disorders such as generalized anxiety and panic disorders, attempting or completing suicide, agoraphobia, and anti-social personality disorders (Copeland, Wolke, Angold, & Costello, 2013).

When bullying occurs online it is called cyberbullying. What is unique about the mediated environment is how a single comment, meme, picture, or post can meet the criteria for cyberbullying given it can be seen repeatedly by different audiences and individuals. Online harassment and hostility that creates or perpetuates some sort of power imbalance is considered cyberbullying. Not all online harassment meets the criteria for cyberbullying, but all types cyberbullying falls under the umbrella of
onlrrassment. If an individual has any online presence, or uses any 21st century communication technology such as SMS text messaging, electronic mail, or the Internet, they have the opportunity to perpetrate, experience, or witness various versions of cyberbullying. Trolling and flaming have become normative behaviors in online forums and social media sites, particularly if they afford anonymity. Trolling occurs when an individual, or group of individuals, “lure members of the community into fruitless arguments” (Herring, Job-Sluder, Scheckler, & Barab, 2002, p. 372) and can be especially troublesome for online discussions (Buckels, Trapnell, & Paulhus, 2014). Flaming is the “use of hostile expressions towards others” (Lapidot-Lefler & Barak, 2011, p. 434) with the specific aim to be perceived as aggressive (Alonzo & Aiken, 2004; Derks, Fischer, & Bos, 2008; Moor, Heuvelman, & Verleur, 2010). Other behaviors, such as online gossips or rumors (Ybarra & Mitchell, 2004), teasing (Holfield, 2014; Kowalski, Giumeeiti, Schroeder, & Lattanner, 2014), defamation (Bartlett & Gentile, 2012; Vandebosch & Van Cleemput, 2009) and cyberostracism (Filipkowski & Smyth, 2012; Williams, Cheung, & Choi, 2000) via computer-mediated communication are considered cyberbullying (Hinduja & Patchin, 2009). Those who use discussion forums (Moor, Nakano, Enomoto, & Suda, 2012), online games (Lam, Cheng, & Liu, 2013; Yang, 2012), social media (Bastiaensens et al., 2014; Ittel, Azmitia, Pfetsch, & Müller, 2013), and even SMS messaging (Jones, Manstead, & Livingstone, 2011; Vanden Abeele, & De Cock, 2013) have unfortunately experienced cyberbullying.

Bullying, cyberbullying, and their effects have reached alarming proportions. Research has suggested up to 85% of adolescents who are victims of cyberbullying are
also victims during the school day (Juvoven & Gross, 2008). Nearly 20% of American adolescents report being cyberbullied, and over 25% of those report being victimized repeatedly in different ways or on different platforms (Hinduja & Patchin, 2013). Cyberbullying victims rarely report the harassment to teachers and parents, mainly out of fears of access to technology would be limited (Agatston, Kowalski, & Limber, 2007).

Though the CDC and many researchers consider cyberbullying a problem of adolescence, perpetrators, victims, and therefore bystanders, come in all ages. Half of college students report experiencing cyberbullying, 30% citing never experiencing the phenomenon until college (Kowalski, Giumetti, Schroeder, & Reese, 2012). A new Pew Research Internet Project suggests nearly 40% report being victimized online, and over 70% of American adults have experience as cyberbystanders to online harassment (Pew, 2014). It is readily apparent this issue is pervasive and affects more individuals than it does not. More research, however, is necessary to understand the role of cyberbystanders in what they witness.

**Bystanders & Cyberbystanders**

Bystanders to bullying, in person and online, are witnesses to the event without playing an immediate role as perpetrator or victim, or close support for either (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Prevalence rates of bullying and cyberbullying put victims and bullies anywhere between 20-40% of the population, leaving 60-80% of individuals in the third category of bystanders and cyberbystanders to a given situation. Even those who are bullies or have been bullied in different incidents can serve as cyberbystanders to events in which they are uninvolved. More than 80% of
offline bullying instances occur with bystanders and witnesses present (O’Connell, Pepler, & Craig, 1999). Therefore, a considerable shift in bullying prevention programs is moving the focus from bullying behavior to bystander behavior (Cowie, 2000; Smith, Twemlow, & Hoover, 1998). Anti-bullying programs that have focused on incorporating bystander intervention in their framework have successfully reduced bullying and increased bystander participation (Polanin, Espelage, & Pigott, 2012). New public service campaigns have urged adolescents to “be more than a bystander,” when they see their peers treating others poorly. The ‘upstander’ movement, where uninvolved individuals are urged to stand up instead of standing by passively, is in full swing, though researchers have warned simple guidelines are not as effective as modeled behaviors (Hutchinson & Wheeler, 2006; Witte & Allen, 2000). These approaches have begun to be applied to cyberbullying, though evidence and support for their efficacy are still lacking.

Explications of who is and is not a cyberbystander is not as clear as those found in offline descriptions. Typically, bystanders are individuals uninvolved with event witnessing it unfold in real time (Latané & Darley, 1968; 1970). “Real time” becomes relative online, as incidents unfold in an asynchronous nature, and users can come upon cyberbullying incidents afterwards, even years later. At a minimum, cyberbystanders are individuals not immediately involved in a cyber-event, conversation, or incident. They are not the original or intended target or instigator. As time progresses, and the original conversation or incident remains online, the number of potential cyberbystanders increases (Kubiszewski, Fontaine Potard, & Auzoult, 2015). At this time, there does not appear to be considerations or agreement on tipping points of passage of time to consider
events as “over.” Most research considering and testing cyberbystander roles in cyberbullying count these individuals as “observers” or onlookers to the event, and rely on participants or respondents to call themselves bystanders, using validated measurements (Ferreira, Simão, Ferreira, Souza, & Francisco, 2016).

Cyberbystanders play crucial roles in cyberbullying and other acts of cyberaggression, such in flaming (Derks, Fischer, & Bos, 2008); trolling (Buckels, Trapnell, & Paulhaus, 2014); cyberostracism (Wolf et al., 2014), and online threats (Salmivalli, Voeten, & Poskiparta, 2011). However, the extant research suggests most people remain passive and silent, at least directly (Huang & Chou, 2010). To date, most research in cyberbystander intervention, specifically research in cyberbullying, has been examined through self-report surveys (Li, 2007; Vandebosch & Van Cleemput, 2009), behavioral intentions measured from scenarios (Bastiaensens et al., 2013; Bauman & Newman, 2013), or field experiments examining the bystander effect (Markey, 2000). These methods, while valid and important, do not offer researchers the opportunity to witness cyberbystander decision-making and behaviors in real time in controlled environments.

In mediated field studies, diffusion of responsibility is repeatedly observed (Lynn Hawkins, Pepler, & Craig, 2001), which can be especially difficult given the nearly infinite number of expected, observed, or assumed individuals “present” online. A reduction in the bystander effect was found when cyberbystanders were directly approached for help when experimenters used the cyberbystander’s screen name (Markey, 2000). In this instance, cyberbystanders’ responses to an individual’s request
for help (locating information somewhere online) were observed. These participants, however, are no longer cyberbystanders when directly approached, and become active participants in the emergency.

Limited experimental research exists examining cyberbystander intervention in cyberbullying. In a study using harassing photographs of schoolmates, participants had options to report the harassment, forward the photographs, or tell the individual what wasn’t right about their actions (Barlińska, Szuster, & Winiewski, 2013). When given the opportunity to engage as an active participant in forwarding harassment, cyberbystanders are more likely to do so online than offline. It could be argued these participants should be considered more passive recipients than traditional cyberbystanders. It is difficult, then, to draw conclusions of cyberbystander behavior from these limited experimental designs. One tactic to determine boundaries of bystander intervention online is to replicate previously validated models in a mediated setting, controlling for key variables.

**Bystander & Cyberbystander Behaviors**

Bystanders to emergencies and violence, on or offline, have four choices in actions: (1) direct intervention, (2) indirect intervention, (3) joining in, or (4) inaction. For a victim, as long as the emergency stops, assistance is granted, or at a minimum is addressed, it may be unimportant if the means is direct or indirect. However, the difference in intervention is affects the aggressor as well as any other bystanders. Direct intervention is prompt assistance given to the person in need (e.g., using a fire extinguisher in a fire), diffuses the situation (e.g., breaks up the fight), or removing a victim from the environment (e.g., evacuating from danger).
Indirect interventions “consist of reporting the emergency to the relevant authority rather than attempting to cope with it directly” (Latané & Darley, 1970, p. 35). Indirect interventions address the emergency in non-public ways, tending to be less straightforward and may involve more micro-decisions. Examples of indirect intervention would be calling the police but not informing those involved of such, reporting abuse to an anonymous hotline to get others involved, or evaluating systems poorly so others are aware of shortcomings. Though once a bystander decides to intervene indirectly, “it usually does not require a great deal of skill, strength, or courage to carry it out” (p. 35). These means could take more time, resources, and opportunities for the bystander to opt out of intervention. These circuitous actions are steps that lead to eventual steps that finally intervene on behalf of the victim, such as telling a teacher or administrator about abusive language or threats.

Online, direct intervention is public communication addressing the emergency. Even in a deindividuated environment, users rely on typical interpersonal communication strategies in disclosure (Joinson, 2001; Tidwell & Walther, 2002) argumentation (Ainsworth et al., 2011; Lea & Spears, 1991), and relationship maintenance (DeAndrea et al., 2012; Lewandowski, Rosenberg, Parks, & Siegel, 2011). The textual persistence of computer-mediated communication affords any slur, joke, or embarrassing video permanence (Slonje & Smith, 2007). By intervening, the cyberbystander becomes part of the narrative that can also go viral. No longer is the intervention in the moment, at that instant. The intervention can become timeless, happening over and over again whenever a new person views the communication. The social risk of intervening could be considered
infinite online since the audience and timeframe of the intervention are infinite. Due to the textual persistence of computer-mediated communication, a single post online can go viral and either viewed or reposted multiple times, increasing the number of cyberbystanders eligible to intervene.

In a cues-filtered out environment, individuals can misinterpret communication when there would be otherwise little room for interpretation. Receivers recognize senders have the affordance of self-selection, the communication is asynchronous and editing capabilities are available (Walther, Loh, & Granka, 2005). Direct intervention may be perceived as risky by the cyberbystander, and indirect intervention may be a suitable communication strategy given the virility of computer-mediated communication. Indirect intervention is also communication that addresses the emergency, but does so in a less straightforward, public manner. In the mediated environment, indirect intervention choices should contain less social risk than direct intervention in very straightforward, simple ways, leading to a more obvious choice for cyberbystanders. For example, Facebook allows users to report posts in their newsfeed as inappropriate, aggressive, or spam (Facebook, 2014). A simple drop-down menu appears next to the post and with a click, a cyberbystander uses an indirect intervention in cyberbullying. However, these online indirect options may be less accessible or obvious than those offline. Self-efficacy, or the belief one can help in a meaningful way, is an important component of bystander intervention (Fischer et al., 2011). If cyberbystanders do not perceive the indirect intervention options as efficient, or that they themselves have such options leading to intervention, it is unlikely they will be used.
Non-intervention to the victim may appear as implicit support to the cyberbullies’ actions. The reasons for non-intervention are far too numerous for supposition, but experimental tests of specific boundaries can lend understanding to some of the possibilities. Social psychological and computer-mediated communication theories offer unique and compelling perspectives through which to test these boundaries.

**Theoretical Perspectives**

Like offline bystanders, it is hypothesized the combined impact of social forces help instigate cyberbystanders to intervene in perceived cyber-emergencies, specifically cyberbullying. Scant experimental research done investigating cyberbystander behavior has focused on the number of users witnessing events (Blair, Foster Thompson, & Wuensch, 2005; Markey, 2000) without taking into account the social impact of this presence or the communication of others. The present study will control for the number of cyberbystanders while manipulating other variables to test key principles of social impact theory (Latané, 1981). The feedback component of the hyperpersonal Model (Walther, 1996) can then help explain how cyberbystanders may perceive these forces.

**Social Impact Theory**

Social impact theory (Latané, 1981) takes into account the various factors and forces involved determining the social impact of events. Each principle of the theory involves some function of the strength (S), immediacy (I), and number (N) of sources. These sources are described as similar to a light bulb: the amount of light that falls on an object is based on the wattage of the light bulb (strength), how close the light bulb is to the surface (immediacy), and how many bulbs are present (number). The theory has its
roots in conformity and bystander effect research. In various studies, the number, proximity, and status of power in relation to the participant affected the rate and speed of conformity (Milgram, Bickman, & Berkowitz, 1969; Gerard, Wilhelmy, & Conolley, 1968). The theory’s third principle is derived from research and experiments explaining and illustrating diffusion of responsibility, the phenomenon where responsibility to take action is diffused among those present (Latané & Darley, 1968; Latané & Nida, 1981).

**Principle 1: Social forces, I=f(SIN).** The most comprehensive of principles, this first equation assumes in any social structure, specific forces, in this case strength, immediacy, and quantity, function together to vary impact on the target. The source in question can vary in “salience, power, importance, or intensity” (Latané, 1981, p. 344). This is particularly applicable to bullying and cyberbullying because power imbalance is necessary by definition (Hinduja & Patchin, 2013). The cyberbystander must determine the status of the perpetrator and the status of the victim. If the victim has lower status in relation to both the cyberbystander and perpetrator, the social impact for the cyberbystander (of specific concern in the current study) would be diminished, but the social impact of the cyberbystander would be augmented. If this one component of the equation does not reach a specific threshold for the cyberbystander, he or she may not take personal responsibility to help.

The second component of the social forces principle is immediacy. Immediacy is defined as “closeness in space or time and [the] absence of intervening barriers or filters” (Latané, 1981, p. 344). The asynchronous nature of computer-mediated communication, where messages take time to be sent back and forth between users, can complicate a
cyberbystander’s determination of immediacy. What heuristic cues are involved in increasing the immediacy of cyber bullying? For example, would a cyberbullying post lingering for 18 hours have less strength or immediacy to the victim or cyberbystander than a post available for only 18 minutes? How do cyberbystanders determine immediacy if time stamps are not available? It is suspected cyberbystanders recognize these cues and use them in cases against direct intervention. Cyberbystanders may investigate the strength of network ties to determine if the victim and bully know each other. Or simple cues such as similarity of subject identification numbers, kept constant in the studies in the present manuscript, can have similar effects. In the current study, perceptions of synchronicity will be measured to determine how cyberbystanders sense immediacy.

Social proximity and social presence should also affect determinants of immediacy online. Social presence encompasses the very essence of interpersonal communication: it is the feeling that other individuals are jointly responsible for and involved in the communicative event or interaction (Walther, 1996). The crux of the presence assumes that the individuals involved in the interaction have two goals: to act in a certain role and to either develop or maintain a personal relationship (Short, Williams, & Christie, 1976). It is considered a phenomenological variable “affected not simply by the transmission of single nonverbal cues, but by whole constellations of cues which affect the ‘apparent distance’ of the other” (Latané, 1981, p. 157). These cues provide the receiver with some sort of relational meaning, an idea of how involved they are, as well as commentary on each individual. Research in the effects of computer-mediated communication in the effectiveness of group learning suggests media low in social
presence results in deindividuation (Kreijns, Kirschner, Jochems, & VanBuren, 2004). Deindividuation leads to further distance between communicators and typically leads to acceptance of less than ideal communication, such as cyberbullying. It would be expected the cyberbystander would rely on the expressed and assumed relationship ties between the victim and perpetrator to determine immediacy in the given emergent situation.

The third component of the first principle is sheer quantity. The effects of each person present for the social event is like another light bulb lighting the surface. This presumed quantity of individuals witnessing the cyberemergency might be a cue to the cyberbystander that this is clearly an emergency. At the same time, the social impact of those additional sources could increase the social risk of intervention, risk of embarrassment if it is not an emergency or risk of the perpetrator pivoting attention to the cyberbystander as a new target. In an online environment one might not know the true number of individuals who witnessed an event. Identifying the actual number of social forces can also be difficult online. What peripheral cues do cyberbystanders use to determine the number of individuals viewing, having viewed the original emergency and subsequent possible intervention? And if these cues are available and noticed, what is the true impact – is it quantity or must it be in tandem with the perceived status and immediacy? Is the relation of these sources to others important? In the current study the number of other cyberbystanders will be manipulated and participants will be asked to report how many individuals were in their online environment. This serves as a manipulation check as well as a measurement of the quantity of social forces.
**Principle 2: Psychosocial law, \( I=sN^{1/2} \).** Drawn from a psychophysical law, the second principle assumes the social impact felt will equal “some power, \( t \), of the number of sources, \( N \), times a scaling constant, \( s \)” whereas “impact will increase in proportion to some root of the number of people present” (Latané, 1981, p. 345). Important to this principle, though, is the first source. Like a leader’s first follower or a millionaire’s first dollar, the first source has the strongest influence on the social impact brought by the psychosocial law. The proximity of this first person is most important in influencing the resulting social impact. In four of the six proposed conditions, a single cyberbystander will comment, serving as this first social force. Comparing participant behavior in reaction to cyberbystanders who comment first to those who do not or always comment will be a test of this specific principle.

The second principle here posits, “conformity seems to grow in proportion to the square root of majority size” (Latané, 1981, p. 345). Conformity studies have found adherence to groupthink did not increase beyond a group of three (Asch, 1956). Physical distance has been found to affect presumed interest in events (Bassett & Latané, 1976) but only if the number of affected individuals increases. In confederate studies, the first confederate in the presence of the participant usually has the most impact (Gerard, Wilhelmy, & Conolley, 1968) including in online behavior (Zhu & Huberman, 2014). This may explain why some cyberbystanders are less inclined to intervene in cyberbullying against a single aggressor. What is unclear is how the impact of the first cyberbystander influences intervention, and if the timing of intervention, since cyberbullying is a repetitive event, affects that social impact.
Principle 3: Multiplication vs. Division of Impact ($I=f(1/SIN)$). In this last principle, the more targets a source is projecting towards, the social impact, measured by the strength (S), immediacy (I) and number (N), will be divided or multiplied depending on the perspective: $I=f(1/SIN)$. This particular principle is derived from previous evidence of diffusion of responsibility (Latané & Darley, 1968). Imagine a speech in front of 10 people versus 100 people. The more people present, the more pressure the speaker feels, thus the multiplicative effect. Research has found the larger the audience the more tension and embarrassment speaker felt (Latané & Harkins, 1976). From a different vantage point, the audience would feel a divided impact. The larger the audience, keeping the number of speakers constant (at one), the less likely a persuasive argument would be as effective than if the audience were smaller. The audience attending a concert at a smaller venue will have a decidedly different experience in terms of connecting with the band than if the concert were held at a large arena. Conditions in the present study will pit both the multiplicative and divisive nature of this principle against each other. A participant experiencing more cyberbystanders (leading to division of impact) may be less likely to directly intervene unless one of those cyberbystanders comments in each instance of cyberbullying (leading to multiplication of impact). Dueling hypotheses in a unique test will lend strength to this third principle in this new online test.

Social Impact Theory (Latané, 1981), and later the Bystander Intervention Model (Latané & Darley, 1968; 1970), offer a theoretical structure to test certain assumptions of
how cyberbystanders may behave in real time. The hyperpersonal model (Walther, 1996) offers explanations for those behaviors, specifically online.

**Hyperpersonal Model**

The hyperpersonal model (Walther, 1996; 2011) suggests computer-mediated communication (CMC) “may facilitate impressions and relationships online that exceed the desirability and intimacy that occur in parallel off-line interactions (Walther, 2011, p. 460). Compared to a face-to-face (FtF) interaction with the same occasional acquaintance, the computer-mediated communication provides the user with far more information and material to build interpersonal interactions (Park & Floyd, 1996; Park & Roberts, 1998). An aggressive social network message can be traced revealing the sender’s circle of friends, employment history, educational background, likes, dislikes, ideologies, even personal photographs and writings. A message, therefore, is no longer just a message and can be immediately framed in a variety of contexts leading to numerous reactions, be it communicative or behavioral. The hyperpersonal model has four components addressing how computer-mediated communication affects the communication processes related to both message reception and formulation: (1) receivers, (2) senders, (3) channels, and (4) feedback effects. Of specific focus in this study is feedback.

Feedback in the hyperpersonal model is imagined as “reciprocal interaction with others that reinforces one’s online performance by bringing together the identity-transforming potentials of the other theoretical components” (Walther et al., 2011, p. 2). Online, users understand each other’s ability to self-select and self-present specific
identity cues. Research has suggested intimacy and attraction build quickly online, especially in relation to face-to-face (Ramirez & Wang, 2008; Walther, 1997). The feedback users receive in computer-mediated communication reinforces and augments the effects of “idealized perceptions” of the interlocutors involved in the online space (Walther, 1996). Users online become adept at filling in blanks with the communication and peripheral cues provided in the mediated environment.

Feedback illustrates how the receiver’s impression of the sender can lead to the sender to behave in a particular way, which in turn, affects the responses of the receiver and subsequent communicative interactions. Behavior confirmation elevates a simple feedback loop with the inclusion of the perception of why a sender is sending the messages they are. Many communication studies have seen behavior disconfirmation occur in computer-mediated communication where anticipation of negative experiences lead to behaviors to head off the unpleasantness before it is experienced, constructing an entirely different interaction than may have been originally intended (Burgoon & LePoire, 1993; Ickes, Patterson, Rajeci, & Tanford, 1982). The behavior confirmation, or disconfirmation, feedback loop echoing symbolic interactionism should be heightened and intensified in computer-mediated communication.

Subtler communication in this feedback loop can still cause harm to the cybervictim but may be ambiguous enough for cyberbystanders that they go either unnoticed or misinterpreted. Without literal communication from either the victim, that they find the comments harassing or harmful, or other cyberbystanders they are interpreting the communication as such, other cyberbystanders must rely on peripheral
cues. We know that when a receiver must rely on heuristic processing to determine action, the action is less likely than concrete, systematic processing (Chaiken, 1980). The hyperpersonal model includes a receiver’s expectations of the editing affordances of the asynchronous communication (Walther, 2011). Comments of connected acquaintances on a social network could appear as friendly teasing, why else would someone allow a “friend” to say such things on their Facebook wall? Or tag them in such an unflattering picture? Heuristics like the number of likes a post receives, how often it is shared, forwarded, retweeted, or “favorited” serve as feedback and might confuse a cyberbystander.

It is clear social psychological and communication technology theories such as social impact theory (Latané, 1981) and the hyperpersonal model (Walther, 1996) can help provide a theoretical perspective to better understand cyberbystander behavior in a variety of contexts. The original Bystander Intervention Model (Latané & Darley, 1968; 1970) provides a prototypical framework to test the social impact of feedback on cyberbystander intervention in cyberbullying.

**The Bystander Intervention Model**

The Bystander Intervention Model (Latané & Darley, 1968; 1970) consists of five steps, which are outlined below and depicted in Figure 1: (1) notice something is happening, (2) interpret events as an emergency, (3) take responsibility to help, (4) decide how to help, and (5) provide help.
Step 1: Notice Something is Happening

Obviously, one must first notice an event is happening before one can begin to decide to intervene in a given emergency. This step has been tested various emergencies of increasing violence to try and determine general thresholds of attention necessary to complete this first step (Latané & Darley, 1970). In foundational studies, it was found nearly all participants noticed the ambiguous emergency, though the presence of others (confederate or participant) greatly affected intervention or reaction (Latané & Darley,
In various theft experiments (Latané & Elman, 1970), bystanders appeared to notice the theft (as evidenced by ratings of observers watching through a one-way mirror) but possibly “had not completed noticing the event” (Kagan, 1989, p. 72). The bystanders, recognizing an approach-avoidance situation may have broke attention from the event in order to claim complete ignorance and avoid any sense-making and information seeking behaviors (Van den Bos, 2013; Van den Bos & Lind, 2013).

Online, misdirection of attention may be more natural than offline. An individual is probably not using the Internet to search for cyber-emergencies, and their attention is focused elsewhere. If an individual begins playing an online game, he or she is more than likely focused on the goal at hand – scoring points, winning the competition, surviving to the next level, etc. If other players begin hassling, harassing, and bullying another player, unless relevant to their purpose, the cyberbystander may genuinely not notice the bullying. On Facebook, friends’ activities scroll in the peripheral view of the main news feed. This “other activity” is not as immediately interactive, and only portions of the activity are effortlessly visible. If a friend is being bullied, or if a friend is bullying another person online, the cyberbystander may not have the ability to notice the communication.

An explanation, therefore, why the majority of cyberbystanders report not taking any direct action (Bastiaensens et al., 2014; Voelpel, Eckhoff, & Förster, 2008) is they may simply not notice cyberbullying occurring in their online space. One study tested whether cyberbystanders notice cyberbullying in real time, including distraction conditions (Dillon & Bushman, 2015). Using the paradigm proposed in the current study (see Chapter 2), 221 participants witnessed cyberbullying in real time of another
‘participant.’ Participants were randomly assigned to experience distractions such as pop-up advertisements, time constraints, streaming audio, or all of these distractions combined. It was found 68% of cyberbystanders indeed noticed the cyberbullying occurring, but distractions did not significantly impede noticing. Perhaps people are used to such distractions in the online world. In testing this first step, only 10.4% of cyberbystanders intervened directly in the situation, and most participants (68%) chose to indirectly intervene via poor evaluations of the environment and bully. The importance of this preliminary study is confirmation cyberbystanders are capable of completing the first step of the Bystander Intervention Model. It also provides a reliable and valid experimental design for the present study.

Step 2: Interpret Event as an Emergency

The next necessary step towards bystander intervention is interpreting the event as an actual emergency that needs some sort of mediation. Bystanders seek information from the environment, including others, to help them interpret situations. In the smoke studies, some participants investigated the smoke, holding their hand in the smoke to determine its temperature or smelled the smoke to see if it seemed toxic. Finding no legitimate and immediate danger, these participants returned to their seat to complete their questionnaires. In the heat of an emergency, when not all the cues are available to the bystander, they may very well talk themselves out of interpreting it as anything important.

In emergencies, victims are part of the event that bystanders need to interpret what is going on. In ambiguous situations, feedback on the true nature of the environment
is important for bystanders, and ostensibly, cyberbystanders. In earlier studies, researchers found emergencies with little ambiguity lead to bystander intervention. For example, 100% of bystanders who heard someone fall in another room, accompanied by verbal signs of injury, typically responded within 7 seconds. Only 30% of bystanders who did not hear any verbal signs of injury, taking on average nearly a full minute, intervened (Clark & Wold, 1977). Repeatedly in the offline laboratory, victim feedback significantly predicted and contributed to bystander intervention.

The online environment can be media rich and high in arousal, making it difficult for cyberbystanders to determine what is worth of a response and what is not. The various characteristics of the mediated environment could complicate a cyberbystander’s interpretation of events. Cyberbystanders may also rely on how others’ perceive events, and then communicate that perception to others. Cyberbystanders may use their perceptions of other cyberbystanders’ responses in order to interpret events. For example, if a cyberbullying tweet appears in a Twitter feed, the time stamp reveals it was posted nearly 18 hours ago, 20 people favorited the post and no one has responded to either the cyberbully or the cybervictim publically, the friends of the victim (cyberbystanders) may interpret this peripheral information as cues this event is not an emergency. Indirect cyberintervention may have occurred in the shape of direct messages, reports to Twitter, or unfollowing of the bully. These indirect interventions are not visible to other cyberbystanders and therefore cannot be considered in part of the cyberbystander’s interpretation of others’ interpretations. Yet federal agencies such as StopBullying.gov and the Centers for Disease Control (CDC) advise bullying victims to either calmly
respond to their bullies, to “laugh it off,” or to “walk away” (StopBullying.gov).

Experimental research in the role of victim feedback is necessary to determine if cyberbystanders rely on victim feedback.

A second study applied the feedback component of the hyperpersonal model (Walther, 1996) in order to test the effects of victim feedback on cyberbystander intervention in cyberbullying (Dillon, 2015). The same experimental paradigm used prior (Dillon & Bushman, 2016) and what is proposed to be used in the present study, was used to test the boundaries of the feedback component of the hyperpersonal model (Walther, 1996). A total of 255 participants were randomly assigned to conditions where the victim either gave no feedback to the cyberbully and cyberbystander for their troubles. Victim feedback statistically increased the number of cyberbystanders who noticed the cyberbullying going on, from 65% of those in the no-feedback condition (in line with Dillon & Bushman’s 2015 results) to 84% in the feedback condition. Feedback also made cyberbystander intervention 3.43 times more likely compared to those who did not witness any feedback. The rate of direct intervention in the feedback condition more than doubled, where 21% of cyberbystanders in that condition directly intervened by communicating in the chat room while the cyberbullying was going on, compared to only 9% of those who did not see feedback. Cyberbystanders in the feedback condition were harsher in their feedback on the bully compared to those in the no-feedback condition, indicating more indirect intervention. Contrary to CDC recommendations, it appears victim feedback indeed assists cyberbystanders in interpreting what is going on online, and leads to more noticing and intervening in the emergency.
These initial results replicate offline bystander experiments where bystanders rely on additional information from others, in this case the individual who needs assistance, in order to properly interpret events as emergencies. The current proposal and study aims to test the effects of feedback from other cyberbystanders on participant direct and indirect intervention.

**Step 3: Taking Responsibility to Help**

Once bystanders, and cyberbystanders, adequately notice and interpret an event as an emergency, they must take ownership of responsibility to help. It is at this step of the model where diffusion of responsibility is most apparent and powerful likely leading to bystander effect. However, group membership or common identities can assist bystanders, and therefore cyberbystanders, to take responsibility to help. Research has shown that bystanders tend to rely on the reactions of others witnessing the event to determine if it is an emergency (Fischer et al., 2011; Latané & Darley, 1970). The bystander effect is strongest in the face of pluralistic ignorance, where the more individuals witness to an emergency the less likely it is any one individual will take personal responsibility to help (Latané & Nida, 1981).

**Bystander Effect.** Research has shown the presence of other bystanders significantly reduces each bystander’s presumed responsibility, called *diffusion of responsibility*. The responsibility of responding to an emergency diffuses amongst those individuals present, and intervention is less likely. In study after study, in either the field or laboratory, when bystanders witness the emergency solo, intervention is highly likely (Fischer et al., 2011). It is possible that bystanders, and therefore cyberbystanders,
become stuck at the personal responsibility step of the intervention model for a variety of reasons. The present study aims to test the social impact of some of these reasons on cyberbystander intervention in cyberbullying.

In some experiments, bystander inaction may not be due to a decision not to intervene, but more likely due to indecision (Darley & Latané, 1968). Non-intervention or evidence of the bystander effect could be a result of being “confused and conflicted” rather than being deindividuated or influenced by the presence of others (p. 122). Due to the asynchronicity of computer-mediated communication, it could be difficult for users to determine if cyberbystanders are choosing to not intervene or are just stuck in a decision loop. If cyberbystanders are actually blocked in making a decision, the other peripheral social impact information may push the individual towards non-intervention instead of intervention. Therefore, in the present study, cyberbystanders who choose not to act will be given an opportunity to explain why.

The size of crowds online has inhibited cyberbystander response quantity and quality in virtual knowledge sharing environments (Voelpel, Eckhoff, & Förster, 2008), email responses (Blair, Foster Thompson, & Wuensch, 2010), and computer games (Kozlov & Johansen, 2010). In a chat room or group message, determining the number of cyberbystanders present is relatively easy to quantify – simply count those who appear to be online. However, in other contexts, such as social networking sites, online discussion forums, and online games, these determinations can be difficult. The rapid changes in technology, the near constant increase in access, and the moving target of determining
who is accessing what through what means and to what degree they are aware of its
effects make this difficult and daunting.

Little experimental research has tested the bystander effect online. In the two
previously reported studies, the number of interlocutors was kept constant in order to
minimize the bystander effect online, if it indeed occurs. In a field experiment of over
400 chat rooms with nearly 5000 usernames present (presence was not actually measured
in this experiment so we are unable to determine if the users saw the requests or were
simply “in” the chat room), researchers measured how long it took others to come to their
assistance (Markey, 2000). In this 2X2 design, researchers varied the gender of the
handle used (Jake or Suzy), and whether they identified a random chat room user as a
target for requesting assistance, or if the request was made generally. There was a
marginal correlation with group size and time to provide assistance, lending credibility to
a ‘cyber’-bystander effect. The present study tests the effects of the number of
cyberbystanders present on intervention, as well as measuring perceived presence of
these online ‘others.’

**Steps 4 & 5: Decide How and Provide Assistance**

Each emergency offers its own set of unique components and needs for assistance
to be effective. As previously mentioned bystanders have choices in how to intervene,
either directly or indirectly, to the emergencies they have taken responsibility to respond.
Bystanders off and online must believe they will be successful in intervening and have
access to the appropriate tools to provide assistance. If a bystander does not feel effective,
or the only way they can assist will do nothing to stop the emergency or help the
individual in need, that intervention will most likely not be chosen. For example, if a bystander to a physical bullying incident is outmatched in size, weight, and ability, direct intervention is unlikely. If bystanders have not yet talked themselves out of intervening, indirect intervention tactics may be employed. Instead of getting between a bully and a victim, a bystander may choose to get a teacher, call for help, or create a distraction to diffuse the situation. Having multiple means at their disposal will increase the likelihood of bystander intervention (Fischer et al., 2011).

Modeled behaviors have been found to be effective in helping individuals act in prosocial manners (Hearold, 1986; Rosenhan & White, 1967), and helping individuals in distress (Zahn-Waxler, Radke-Yarrow, & King, 1979). Bystanders who have had practice, training, or experience in emergencies are most likely to intervene even in the face of other barriers (Cramer, McMaster, Bartell, & Dragna, 1988; Rosenhan & White, 1967). The present study tests the social impact of confederate cyberbystanders establishing group norms of at least acknowledging the cyberbullying.

The Bystander Intervention Model (Latané & Darley, 1968; 1970) offers a good theoretical model to test in the online space. However, the lack of cues could trip up the cyberbystander at each step. Without non-verbal reactions of the target, tone of voice, or context from the harasser, the cyberbystander could have difficulty interpreting events online as an emergency to actually attend to. Diffusion of responsibility may be assumed based on inaction, but it is difficult to quantify those present but not witnessing, or those witnessing but not acting by choice. The Bystander Intervention Model is a valid and
reliable archetype to begin to examine cyberbystander behavior, but it should be updated with what we know and have observed in the computer-mediated space (Suler, 2004).

**Hypotheses**

The present study aims to add to the expanding literature investigating cyberbystander intervention in a specific context: cyberbullying. An experimental design is used in order to control variables known to impact bystander intervention in offline studies. To test if the bystander effect (Latané & Darley, 1968; 1970) occurs in cyberbullying, participants will be in conditions that put them in the presence of one or five confederate cyberbystanders. To test the social impact (Latané, 1981) of feedback (Walther, 1996), six conditions will vary how many cyberbystanders are present and the timing of cyberbystander feedback on the cyberbullying occurring. The resulting experiment includes a 2 (one cyberbystander present/five cyberbystanders) by 3 (no feedback/feedback after first incident/feedback after all incidents) design. Comparison data from the no cyberbystander-no feedback condition from a previous study (Dillon, 2015) were compiled as well. Given the additional participants from Dillon, 2015 were not randomized into this present study, the final data are quasi-experimental.

Data on participant intervention choices, or self-reported reasons for non-intervention, will be collected to test key hypotheses and answer research questions. As mentioned in Chapter 1 (page 6) direct interventions in this study is measured by communication typed in the chat room. Indirect interventions are measured by participant evaluations of the chat system, lead researcher (not affiliated with the chat room), and chat monitor (cyberbully). This study will help researchers understand how, in real time,
cyberbystanders process and interpret other cyberbystanders’ communication, and how it may impact direct and indirect intervention in cyberbullying.

Based on the division of impact principle (Latané, 1981) and previous research supporting the bystander effect offline (Fischer et al., 2011), the following hypotheses and research questions are introduced:

**H1:** Fewer cyberbystanders will directly intervene when there are other cyberbystanders in a chat room witnessing the same cyberbullying compared to chat rooms with no other cyberbystanders. This difference will be greatest between chat rooms with five additional cyberbystanders (5-CYBY) compared to chat rooms with one cyberbystander (1-CYBY).

**RQ1:** What differences in indirect intervention, as measured by lower chat system and chat monitor evaluations will be found in chat rooms with no, only one other, or five other cyberbystanders present?

In the present study, the boundary conditions of Latané’s (1981) Social Impact Theory are tested through competing hypotheses. The psychosocial principle \( I=sN^t \leq 1 \), assumes the first social force is more impactful than subsequent forces. If this principle holds, it would be expected the diffusion of responsibility would be tempered in the conditions where a confederate cyberbystander acknowledges the cyberbullying. Thus:

**H2:** More cyberbystanders will directly intervene in the FIRST condition, where a confederate cyberbystander intervenes at the first incident of cyberbullying compared to chat rooms with no other cyberbystanders (Dillon, 2015) and conditions where no acknowledgement is given (CONTROL).
**RQ2:** What differences, if any, in indirect intervention, as measured by lower chat system and chat monitor evaluations will be found in the conditions where a confederate cyberbystander is present (CONTROL), where they intervene in each incident (ALWAYS), at the first incident of cyberbullying compared to conditions (FIRST), compared to conditions with no other cyberbystanders (Dillon, 2015)?

However, in conditions where cyberbystander is the normative response, as in the ‘ALWAYS’ condition, participants may assume intervention is what is more common, expected. Latané’s first principle of social forces (I=SIN) assumes the impact (I) is a function of the strength (S), immediacy (I), and number (N) of sources. The psychosocial principle may be trumped, then, when the immediacy (similar participant) and number (multiple acknowledgments) are increased. In this study, the immediacy and number of acknowledgements combine to create a stronger cyberintervention leading to a social force on the actual participant. Therefore:

**H3:** More cyberbystanders will directly intervene in the ALWAYS condition, where a confederate cyberbystander intervenes at each incident of cyberbullying compared to chat rooms with no other cyberbystanders (Study 2) and conditions where either no acknowledgement (CONTROL) or only after the first incident of cyberbullying (FIRST).

This social force impact may not be seen in conditions where there are more than one confederate cyberbystanders present. The multiplication and division of impact, principle 3, should interrupt any of the social impact of the normative intervention behavior. The impact of the immediacy, number, and
strength of the acknowledgment of the cyberbullying would be divided among the remaining silent four confederate cyberbystanders. Thus:

\[ H4: \text{Fewer cyberbystanders will directly intervene in the ALWAYS condition in the presence of five cyberbystanders (5-CYBY) compared to cyberbystanders in the same condition (ALWAYS) in the presence of only one cyberbystander (1-CYBY).} \]

Based on results from previous studies (Dillon, 2015; Dillon & Bushman, 2015), three research questions are posed:

\[ RQ3: \text{Is there a significant difference in who cyberbystanders choose to make direct intervention comments to?} \]

\[ RQ4: \text{What is the valence (supportive, aggressive, neutral) of the comments made by cyberbystanders who choose to directly intervene?} \]

\[ RQ5: \text{Is there a significant difference in the total number of comments made towards the chat monitor (bully) compared to comments made towards other interlocutors (victim, other cyberbystanders, non-present other) by cyberbystanders who directly intervene?} \]

Five personality variables were measured to determine how they may influence, if at all, cyberbystander direct and indirect intervention. Previous research has found a strong link between empathy and helping behaviors such as bystander intervention (Eisenberg & Miller, 1987) and specifically of bullying (Gini, Albiero, Benelli, & Altoe, 2008; Nickerson, Mele, & Princiotta, 2008). To determine dispositional empathy, Baron-Cohen & Wheelwright’s (2004) Empathy Questionnaire was used, consisting of 60 items
on a 4-point Likert scale (0=Strongly disagree; 3=Strongly agree). Sample items include “I find it easy to put myself in somebody else’s shoes” and “I can tune into how someone else feels rapidly and intuitively.” Reliability statistics for the full Self-Construal Scale in the present sample were adequate for analysis (α=0.86) and on par with validation literature.

The Self-Construal Scale will be used to determine measures the extent to which the respondent has an independent or interdependent self-construal (SCS; Singelis, 1994). Individuals with an independent self-construal view themselves according to internal abilities, traits, and preferences. Sample items for this sub-scale include “I enjoy being unique and different from others in many respects,” and “My personal identity independent of others, is very important to me.” Individuals with an interdependent self-construal understand and define themselves in relation to others (Markus & Kitayama, 1991). Interdependent self-construal has also been linked to motivations of obligations to others (Matsumoto, 1999; Utz, 2003), which in turn can be an excellent predictor of bystander intervention (Warner, Wohl, & Branscombe, 2014). Sample items of this subscale include “It is important for me to maintain harmony with my group” and “I would offer my seat on a bus to my professor.” Participants indicate their agreement with these 23 items on a 7-point Likert scale (1=Strongly disagree; 7=Strongly agree). Reliability statistics for the full Self-Construal Scale (α=0.79), and the sub-scales (alphas for both independent and interdependent sub-scales both = 0.77) in the present sample were adequate for analysis.
According to the just world hypothesis, actions have predictable consequences, both negative and positive (Lerner, 1980). Observers judge instances of suffering or success in relation to perceived deservedness of the receiver (Lerner & Miller, 1978). The Belief in a Just World Scale (BJW; Dalbert, Montada, & Schmitt, 1987) is included because some people believe that victims deserve their plight (DePalma et al, 1999; Zuckerman, 1975). Participants’ measure of belief in a just world should be correlated with non-intervention explanations attributing blame to the victim, indicated in the moral disengagement evaluations. Participants indicated their agreement (Disagree/Agree) on these six items such as: “I feel that people get what they are entitled to have” and “I feel that people earn the rewards and punishments they get.” Reliability statistics for the Belief in a Just World Scale were quite high (α=0.92) and in line with validation literature.

A measure of narcissism is included because those higher in measures of narcissism are also less likely to forgive (Exline, Baumeister, Bushman, Campbell & Finkel, 2004), to feel interdependent with others (Konrath, Bushman, & Grove, 2009), to help others (Konrath & Bushman, 2009) and have some general correlation to bullying behaviors (Baughman, Dearing, Giammarco, & Vernon, 2012). The Narcissism Personality Inventory (NPI; Ames, Rose, & Anderson, 2006) is a 16-item measure forcing participants to choose between two competing options such as “I like having authority over other people” versus “I don’t mind following orders.” The present sample yielded a moderately reliable alpha of 0.72.
A measure of self-consciousness is included as it predicts self-presentation and social anxiety created by an apprehension over behavior and self being evaluated by others (Fenigstein, 1984). Some bystanders refuse to intervene for fear of public embarrassment, which is a trait of those with a more public self-consciousness (Lau-Gesk & Drolet, 2008). Higher public self-consciousness has been found to be correlated with anxiety over public shunning (Fenigstein, 1979). The Revised Self-Consciousness Scale (RSCS; Scheier & Carver, 2006) is a 23-item scale asking participants to indicate on a 4-point Likert scale (0=Not at all like me, 3=A lot like me) their agreement with public self-consciousness items such as “It’s hard for me to work when someone is watching me” and private self-consciousness items such as “I’m constantly thinking about my reasons for doing things.” Reliability statistics for the entire measurements are acceptable (α=0.79) though the sub-scales are lower (private: α=0.67; public: α=0.52). Based on the previous review, an additional research question is posited:

*RQ6a: Do individuals who directly intervene differ in empathy, self-construal, belief in a just world, narcissism, and self-consciousness significantly from individuals who do not directly intervene?*

*R6b: How is an individual’s empathy, self-construal, belief in a just world, narcissism, and self-consciousness correlated with their indirect intervention choices?*

An individual’s moral agency is defined in decisions to “refrain from behaving inhumanely and the proactive power to behave humanely” (Bandura, 1999, p. 193). The power to act humanely, however, is not just a moral decision, but is a cognitive process,
both self-reflective and self-regulating (Bandura, 1991; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Non-intervention in emergencies can cause cognitive dissonance in otherwise empathic, helpful individuals (Clark & Word, 1972). At times, in order to assuage this dissonance, we make post-hoc explanations to ourselves as to our inaction. That moral justification to ourselves for inaction is explained by Bandura’s Moral Disengagement Theory (Bandura, 1999).

Moral Disengagement Theory has been applied to explain general aggression (Bandura et al., 1996; 2001), and traditional adolescent, face-to-face bullying (Gini, 2006; Hymel, Rocke-Henderson, & Bonanno, 2005). Associations have been found between bullying victimization and greater moral disengagement (Slonje, Smith, & Frisé, 2012), especially in comparison to victims (Menesini et al., 2003) and defenders of victims (Almeida, Correia, & Marinho, 2010). Scant research has applied this theory and its components to bystanders to either bullying or cyberbullying. Limited findings suggest bystanders vary in their displacement of moral responsibility, feelings of guilt, and general justification of inaction (Obermann, 2011).

In the present study, individuals who indicated inaction towards the events were asked to provide their top five reasons why they did not act, from a choice of ten options (see Table 1). Nine of these reasons were provided based on Moral Disengagement Theory (Bandura, 1999) and the final option was an open-ended text box. Open-ended responses were coded for the provided nine reasons, in the event participants described similar reasons. For example, a participant’s assertion they didn’t act because they were “waiting for somebody else to say something” was coded as diffusion of responsibility. A
response of “I didn’t care enough to say anything” was coded as displacement of responsibility. Fifty-eight (31.1%) of participants entered a reason in the open-ended text box, and ten random responses were coded by the author and a trained undergraduate research assistant, resulting in a Cronbach’s alpha of 0.78.

Participants who choose to explain their non-intervention because the communication contained in the conversation ‘is part of the decision-making process’ would meet criteria for moral justification whereas the antisocial communication serves a higher purpose. Euphemistic labeling, such as claiming the communication is ‘typical for chat rooms/Internet’ explains the bullying behavior as socially acceptable. It is expected this strategy would not be chosen often by non-intervening cyberbystanders in the ‘always-condition,’ regardless of the number of cyberbystanders in the chat room. Those who choose ‘I don’t want to make it worse’ and/or ‘I don’t want to make it worse’ as an explanation for inaction are engaging in advantageous comparison, claiming there is a spectrum or imagined social threshold for decisions to intervene.

Two non-intervention explanation choices will be available for participants highlight the typical dehumanization and attribution of blame used by bystanders in other bullying studies (Hymel et al., 2005) and to capture the deindividuating effects of the CMC environment. Dehumanization is explained away by ‘I don’t know these people personally’ or participants can blame the victim by choosing ‘people involved seemed to ask to be treated this way.’ Two additional explanations are included to help determine if efficacy is an important consideration of cyber-bystanders for not intervening. Participants can choose an outright explanation ‘I wouldn’t know what to say.’ This
choice is key to better understanding non-intervention in cyberbullying since knowing how to provide help is key to actual intervention (Latané & Darley, 1970). Therefore, another research question is posed:

Table 1. Moral disengagement strategy choices, statements, variables, hypotheses

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Statement</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral justification</td>
<td>Part of the decision making process</td>
<td>Situation</td>
</tr>
<tr>
<td>Euphemistic labeling</td>
<td>Typical of chat rooms/Internet</td>
<td>Situation</td>
</tr>
<tr>
<td>Advantageous comparison to past</td>
<td>It’s not that bad</td>
<td>Situation</td>
</tr>
<tr>
<td>Displacement of responsibility</td>
<td>It’s not my job to say anything</td>
<td>Social</td>
</tr>
<tr>
<td>Diffusion of responsibility</td>
<td>I’m sure others saw it and said</td>
<td>Social</td>
</tr>
<tr>
<td>Victim blaming</td>
<td>People involved seemed to ask to be</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>treated this way</td>
<td></td>
</tr>
<tr>
<td>Advantageous comparison to future</td>
<td>I don't want to make it worse</td>
<td>Self</td>
</tr>
<tr>
<td>Dehumanization</td>
<td>I don’t know these people personally</td>
<td>Self</td>
</tr>
<tr>
<td>Lack of self-efficacy</td>
<td>I wouldn’t know what to say</td>
<td>Self</td>
</tr>
</tbody>
</table>

*RQ7: Regardless of the number of individuals in a chat room and the feedback provided by those individuals, at what rate do participants employ strategies such*
as moral justification, euphemistical labeling, or advantageous comparison to other situations for non-intervention?

One of the main hypotheses of the current project is to determine the impact of social factors on cyberbystander intervention. It is expected, then, cyberbystanders who do not intervene would employ socially determined moral disengagement strategies. Those who endorse statements like ‘the people involved seemed to be asked to be treated this way,’ are engaging in victim blaming. Individuals who choose ‘it’s not my job’ are displacing responsibility of action to someone else. Participants who choose ‘someone else must have seen it and said something’ are endorsing the diffusion of responsibility, the third principle of social impact theory (Latané, 1981).

Based on moral disengagement theory (Bandura, 1981) and social impact theory (Latané, 1981), the following hypothesis is predicted:

**H5:** Non-intervening individuals in chat rooms with more individuals present (5-CYB) will use moral disengagement strategies like diffusion or displacement of responsibility, and victim blaming more often in comparison to non-intervening individuals in chat rooms with fewer people present (NONE, 1-CYB).

Individuals recognizing their own self-limitations in emergency situations may employ other moral disengagement strategies. Another advantageous comparison strategy would be the fear of possible future ramifications for intervention, or ‘I don’t want to make it worse’. Participants who dehumanize the individuals involved, including the aggressor, would endorse statements such as ‘I don’t know these people personally’ as has been found in adolescent bullying.
situations (Hymel et al., 2005). The most obvious statement of self-limitations is the acknowledgment of the lack of skills necessary to adequately address the situation, ‘I wouldn’t know what to say’. Thus, the following hypothesis is predicted:

\[ H6: \text{Non-intervening individuals in chat rooms with fewer individuals present (NONE, 1-CYB) will use moral disengagement strategies like advantageous comparison to future events, dehumanization, and lack of self-efficacy to explain away their behavior significantly more often in comparison to chat rooms with more people present (5-CYB).} \]

**Discussion**

Cyberbystander behavior appears to be an under-researched phenomenon, at least experimentally. Two preliminary studies presented here have established a relatively reliable laboratory design to continue testing behavior and boundary conditions. Specific to the present study are the unique conditions the social forces may have an impact on cyberbystander intervention in a cyberbullying context. A few online variables are manipulated to see how these social forces might interact. If successful, replication of the bystander effect in online bullying can extend current research. The implication for these findings, if hypotheses are supported, can help researchers and intervention specialists understand influencing factors facing cyberbystanders in cyberbullying.
Chapter 2: Methodology

Participants

Participants in this study were recruited from The Ohio State University School of Communication Research Experiment Participation Pool (C-REP). All students enrolled in COMM 1100 and COMM 1101 are required to participate in laboratory and online research studies. Other communication courses either require participation or offer students extra credit for their time spent completing experiments. Students received one full research credit for this 30-minute in-laboratory study. A Human Subjects Institutional Review Board approved all recruitment methods and participation credit procedures.

A total of 261 subjects participated in the present study and 30 of which were dropped from analysis: four due to technical difficulties during the study, two due to non-compliance of research methods, and an additional 24 after indication of awareness of the deception used. A key variable to direct or indirect intervention in emergencies is for the bystander, or cyberbystander, to actually notice something is occurring. In the present study, participants were asked afterwards if they had any problems with their surveys, with the functionality of the chat room, or if anything happened in the chat room. This also served as a check of main manipulation variable – the act of cyberbullying. Previous
research using the same methodology used in the here found 67.8% (Dillon & Bushman, 2015) and 78.4% (Dillon, 2015) of participants noticed cyberbullying in a chat room with no other cyberbystanders present. In the current study, a total of 79.65% \((N = 184)\) of participants reported noticing the cyberbullying. There were no differences in rates of noticing between chat rooms with one or five cyberbystanders present, \(\chi^2 (1, 231) = 0.15, p = 0.41\). The rate of noticing in the current study was compared to the rate in a previous study (Dillon, 2015) and this difference is found to be non-significant, \(z = 0.35, \hat{p} = 0.79, SE = 0.04, p = 0.73\).

To test further hypotheses, only those participants who reported noticing the cyberbullying are included in further analyses. An additional 48 participants who reported noticing the cyberbullying from the no-feedback condition of a previous study using the same methodology (Dillon, 2015) were added to the present data to answer key comparison hypotheses and research questions. The resulting 234 participants used for analysis were majority female (60.70%, \(n = 142\)) and white (80.30%, \(n = 188\)). The average age was 20.52yrs (SD=3.84) and participants appeared fairly evenly split among freshman (24.40%, \(n = 57\)), sophomore (28.20%, \(n = 66\)), junior (33.80%, \(n = 79\)), and seniors (13.70%, \(n = 32\)).

**Design**

As mentioned in Chapter 1, the present study aims to pit two principles of Social Impact Theory (Latané, 1981) against each other using the feedback component of the Hyperpersonal Model (Walther, 1996). Specifically, this project aims to understand if diffusion of responsibility, where the more individuals present to an emergency leads to
inaction by most, trumps the diffusion of the social risk, where the first act of communication reduces the social risk for others involved. These hypotheses and research questions are being tested in the context of cyberbullying, an important communication phenomenon. Specific hypotheses and research questions were tested and are reported in Chapters 3.

Three main independent variables were manipulated in the present study: number of cyberbystanders present, timing of cyberbystander feedback, and amount of cyberbystander feedback. Using a 2 (number of cyberbystanders) X 3 (timing of acknowledgement) design, the social impact of feedback from other cyberbystanders was tested (see Table 2). Participants were exposed to cyberbullying with either one confederate cyberbystander or five confederate cyberbystanders present. Participants saw no acknowledgement from any of these confederates (CONTROL), one confederate acknowledge the first offense of cyberbullying by saying, ‘hey, surveys have issues,’ or one confederate acknowledge after each offense of cyberbullying by saying ‘hey, surveys have issues’ after the first offense and ‘it’s not like these surveys make it easy’ after the second offense. A power analysis suggested in order to investigate a dichotomous independent variable (yes/no direct intervention), with an medium effect size of .40 a power of .80 using a two-sided significance (α=.05), a total of 64 participants was necessary in each cell. Preliminary data analysis suggested power was achieved with the following counts (see Table 2) and data collection was closed. Specific hypotheses were generated comparing results from the current study to results of a previous study (Dillon, 2015), including some variables that had not yet been analyzed. Raw data of individuals
who were not aware and had noticed the cyberbullying from that study were added to current data.

Table 2. *Counts of participants in each condition for analysis*

<table>
<thead>
<tr>
<th>Condition</th>
<th>No CYB</th>
<th>1-CYBY</th>
<th>5-CYBY</th>
</tr>
</thead>
<tbody>
<tr>
<td>No acknowledgement (CONTROL)</td>
<td>48</td>
<td>47</td>
<td>44</td>
</tr>
<tr>
<td>Acknowledge after first incident (FIRST)</td>
<td>41</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Acknowledge after both incidents (ALWAYS)</td>
<td>43</td>
<td>43</td>
<td></td>
</tr>
</tbody>
</table>

**Procedures**

The present study involves three different parties: (1) the actual participant, (2) the research assistant who acted as both the cyberbully and the cybervictim, and (3) the lead researcher who greeted the participants and acted as one of the confederate cyberbystanders. All procedures, protocols, and materials were approved by an Institutional Review Board. All experiments were conducted on a large university campus in an official academic building and research laboratory.

**Step 1: Welcome and Cover Story**

Upon arriving to the laboratory, participants were greeted by experimenters and asked to sit at a computer terminal in a small room. In efforts to achieve sufficient external validity, participants were told they would be piloting an online chat support for the university’s research experiment pools. This chat support was available in the event they have issues with the surveys that have been chosen for them to complete during the pilot. The surveys participants completed during this “pilot” were purposefully chosen for hypothesis testing. Participants were told this chat system is similar to those found in the
customer service support industry (e.g., Amazon, AT&T), and will be available for online survey participants. This deception cover story helps establish valid reasons for participant use of the chat technology and can be modified to manipulate interactions in the chat room.

Participants were lead to believe other departments were considering using the system and had participants from their classes, in their building, in the chat room as well. Within the cover story, researchers indicated the research assistant in charge of monitoring the chat room was trained by both departments as well, and the participant’s department was simply supplying opportunities for students to receive research credit. This was used to help distance the lead researcher who was physically with the participant and the chat room.

**Step 2: Cyberbullying takes place**

*Cyberbullying.* In order to investigate participant reactions to cyberbullying, a script depicting such events was developed by the present author and approved by an Institutional Review Board. This script has been used in previous research experiments (Dillon & Bushman, 2015; Dillon, 2015) and was adapted in order to test key hypotheses and research questions in the present study. In order for communication to be considered cyberbullying, it must contain harmful communication between two (or more) individuals who have a power imbalance, be intentional, and repetitive (Tokunaga, 2010). Though it can appear mild in comparison to other real world instances of cyberbullying, the approved script meets criteria for cyberbullying and appears natural given the context of
the cover story and set-up for the laboratory. Appendix A contains full script approved to illustrate cyberbullying this experiment.

The power imbalance is established through the relationship between cyberbully, a research assistant trained specifically to help people with survey problems, and the cybervictim, a research participant who has problems with their survey. When the cybervictim asks for assistance with their survey, the research assistant responds with increasing annoyance and eventually insults. As the cybervictim pleads for assistance or direction, the cyberbully choose to answer with more insults and a refusal to help, thus, clearly intentional. During the 30-minute session, two episodes of cyberbullying occur. The first incident occurs approximately three minutes into the survey. The second incident occurs approximately one minute after the actual participant finishes the first of three parts of the essay.

If participants directly addressed anyone in chat room, the research assistant acting as the cyberbully and chat monitor was to ask if the participant, by ID number, if they were having trouble with their survey (e.g., “Nxxx, are you having any troubles with your survey?”). Follow-up answers would simply be “okay.” This was done to help establish the research assistant was a real individual answering questions rather than an automated bot.

**Exposure.** In order to investigate how participants responded to online communication they happened to see, this study included steps to ensure exposure to the cyberbullying. Embedded in this protocol were “check-ins,” in the survey, where participants were instructed to check into the chat room under the supposition to “make
sure it’s still working.” Pages were inserted into the survey instructing participants to type completion of survey sections in the chat room (e.g., “Type: ‘Part 1 done’”). These ensured the chat window was visible for the participant during the experiment. In our previous research we used these check-ins 1/3 and 2/3 points of surveys (Dillon & Bushman, 2015, Dillon, 2015a). They also served as a manipulation check during the survey. If participants did not type these indicators in the chat room, their data were flagged in post-test questionnaires to determine if the participant indeed had the chat room visible and it was operational. Participants whose chat rooms were not visible or operational during data collection were not included in subsequent analyses.

In order to continue the deception the confederate cyberbystanders and cybervictim were also actual participants, check-ins were also typed into their chat windows by the lead researcher and research assistant respectively, usually within 30-60 seconds of the actual participant’s check-ins. Mirroring the check-ins helped serve as a heuristic cue that there was indeed other participants in the chat room completing similar surveys, and the cover story was not completed by a bot. Research assistants would stagger and vary the presentation of the text of the check-ins (e.g., some all caps, possibly typo in one word) to maintain presentation as authentic participants.

**Step 3: Intervention choices**

The dependent variables in this experiment are the various intervention choices of cyberbystanders in order to answer key hypotheses and research questions. As indicated in Chapter 1, cyberbystanders have four choices of response: to join in, direct
intervention, indirect intervention, and non-intervention. Each are measured in this experiment.

**Joining in or direct intervention.** The choice to either join in or directly intervene in cyber-emergencies is indicated by direct communication in the online conversations. Research assistants were trained in coding responses in the chat room for directionality (to whom the participant was directing their communication toward), valence (negative, supportive, neutral), quantity and timing of responses. Using a coding schema developed for previous studies (Dillon & Bushman, 2015; Dillon 2015), two coders first coded a random 10% of transcripts including some sort of engagement. Once Cohen’s Kappa reached .80, the remaining sample was independently coded. In all experiments to date (\(N > 800\)), no cyberbystander has joined in the cyberbullying of the cybervictim.

**Indirect intervention.** Indirect intervention, as previously described, is less obvious online. Indirect interventions are attempts by the cyberbystander to stop or prevent future occurrences of the emergency they are responding to (Latané & Darley, 1968). In the present experiment, indirect intervention was measured by completion of evaluative instruments about the interlocutors and system, as well as offline commentary about any events. Though they may seem like extremely indirect intervention choices, negative indicators on these evaluations would point towards a culture of disapproval of the cyberbullying behaviors. Prior to any evaluative questions posed to participants, the chat room function was closed. This was done to ensure responses to manipulation checks were genuinely recalled.
Evaluations of the research assistants included performance in role, respectful manner, professionalism, positive attitude, motivation, interpersonal skills, helpfulness, and orderliness. Participants were asked to provide an overall grade on a scale from A (4.0) to D (1.0) for the target’s overall performance, as well as in comparison to other experiences they had as a research participant. Reliability statistics of these ten items were quite high (lead RA evaluation items $\alpha=0.86$; cyberbully evaluation items $\alpha=0.99$). Cumulative scores were calculated to determine a comprehensive evaluative score for both the lead researcher (not in the chat room) and research assistant (SONASUPPORT in the chat room), with lower scores indicating more negative evaluations. An additional measurement of indirect intervention was the participant’s recommendation of the chat support function to future participants on a scale from 0 (Strongly Do Not Recommend) to 3 (Strongly Recommend). During the debriefing process the lead researcher asked participants for “any comments or observations that would be useful for us to know about the experiment today,” in order to provide an opportunity for another indirect intervention.

**Capturing Non-Intervention.** A cyberbystander who chooses neither direct nor indirect means of intervention may simply be not acting because he or she did not notice the cyber-event. Therefore, it is important to determine possible reasons for inaction. Using a tiered approach, survey questions after the conclusion of the study first asked participants if they noticed anything that happened in the chat room. This serves as both a manipulation check for attention as well as the first in a line of questions to determine reasons for inaction. If participants answered in the negative, non-response is a
reasonable assumption as nothing was noticed. If they answered in the affirmative, participants provided in their own words what they witnessed. This open-ended response served as a form of ecological validation of the cover story and scripted conversation used in the experiment.

**Manipulation Checks.** A series of manipulation checks were built into the post-survey questions to determine if participants experienced the exposure as intended: type of system, perceptions of gender, age, and synchronicity. To determine if participants understood the cover story, they were asked to indicate if they were in a Skype (video), Chat (text), or Skype with chat condition. This also continued the explanation the study was a pilot test of different types of online support systems. Nearly all participants ($N = 222, 95.70\%$) passed the manipulation check asking what type of support system they were piloting.

Participants also completed a series of questions measuring their perceived presence with others. In order to test key hypotheses about the social impact of the presence of others (e.g., diffusion of responsibility), participant perception of this presence must be measured. First, they were asked how many other participants they remember being in the chat room\(^1\). This operates as a manipulation check of the different conditions (where either 2 or 6 other communicators are present). The vast majority of participants correctly identified the number of participants in the chat room ($N = 128, 90\%$). Including whether participants were correct as a covariate in the analysis did not

\(^1\) This question was not asked of those in the control condition, as those data were taken from a previous study.
influence the results. Thus, the manipulation of the number of bystanders was effective and will not be discussed further.

Participants were then asked to indicate their guess of the age and gender of the chat monitor and other participants. Recent meta-analyses suggest gender of victim and aggressor do not influence bystander intervention (Fischer et al., 2011), but little is known about gender effects in cyberbystander intervention. In the current study, only alphanumeric identification numbers were used (i.e., N461, SW087), the chat room was entirely text based (no gendered avatars), and no gendered pronouns were used in the script. Participants were asked to indicate their guess of the chat monitor’s gender, and the majority of participants ($N = 127, 54\%$) indicated they thought the cyberbully was male, which was greater than chance, $\chi^2 (1, 186) = 24.86, p < 0.001$, though this did not affect rates of direct intervention, $\chi^2 (1, 44) = 0.77, p = 0.25$, or indirect intervention by way of evaluations of the bully, $t(183) = 0.58, p = 0.57$. Participants were also asked to indicate the perceived gender of the first person who “spoke in the chat room” (i.e., the cybervictim having supposed trouble with their survey). The majority of participants ($N = 97, 52\%$) indicated they were not sure of the first communicator’s gender, and the remainder ($N = 81, 44\%$) were evenly split between guessing male and female. Seven participants did not answer this question as they indicated, incorrectly, no one else was in the chat room, and the remaining 49 left the question blank or were not asked. Given the lack of significant differences in either direct or indirect intervention based on cyberbully gender or comprehensive agreement of cybervictim gender, no further analyses use these variables.
Perception of synchronicity. Perceptions of social presence, interactivity, and spatial distance can be affected by one’s perception of or how synchronous communication is in a medium (Walther, 1992). In turn, how “in real-time” events are perceived by cyberbystanders could affect decisions to intervene and perceived self-efficacy in intervention tactics (Latané & Darley, 1968). Participants were asked six questions to measure their perception of the synchronicity of the communication in the chat room. In general, participants agreed communication via the chat room was instantaneous, expected responses immediately, could see their messages immediately, others could reply immediately, and thought there were few lags in communication. On average, participants were mixed on whether the chat room was as speedy as face-to-face conversations (see Table 3). In general, though computer-mediated communication is considered largely asynchronous, as bits and bytes need time to travel between stations in order to be sent or received, users in this experiment perceived the communication to be synchronous, instantaneous, and efficient.

Table 3. Mean scores on synchronicity items (0=Strongly Disagree to 3=Strongly Agree)

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>This medium is instantaneous</td>
<td>2.10</td>
<td>0.70</td>
</tr>
<tr>
<td>I expect an immediate response</td>
<td>1.94</td>
<td>0.66</td>
</tr>
<tr>
<td>There is a lag in communication</td>
<td>1.28</td>
<td>0.66</td>
</tr>
<tr>
<td>Others can see my messages immediately</td>
<td>2.21</td>
<td>0.58</td>
</tr>
<tr>
<td>Others can reply immediately</td>
<td>2.17</td>
<td>0.64</td>
</tr>
<tr>
<td>This medium is as fast as face-to-face</td>
<td>1.51</td>
<td>0.83</td>
</tr>
</tbody>
</table>
Step 4: Debriefing

Due to the use of deception, all participants were properly debriefed upon completion of all procedures. Debriefing was done face-to-face and out of earshot of other participants who were either waiting for the experiment to start, or, were still completing the experiment. A funneled process was used to determine awareness and suspicion of the deception used. Broad questions about the chat application were asked first, as the general cover story for participants was they were testing the application before it was used widely. General questions about the aesthetics, ease of use, specific features were then asked. These questions helped determine if the participant truly engaged with the chat program and continues the “pilot test” argument. Next, more specific questions about the individuals using the application were asked. During the actual experiment and debriefing, research assistants were trained to feign surprise, to take note of the behaviors, and to follow-up on the comments. This was to reinforce the notion the cyberbullying was not a part of the experiment (cover story) and the laboratory assistant acting as the lead researcher was not in the chat room to monitor the communication. A comprehensive debriefing document explaining the necessity for deception, hypotheses, and design was provided for the participant to read quietly after the funneled debriefing process is completed. All participants were asked to not to share the deception or hypotheses with other potential participants, as it would ruin the intention of the study. Before leaving, participants were asked if they wanted their data removed from analysis.

Materials
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Work station protocols were developed and used in order to test the described experimental design. Individual assessments, manipulation checks, post-test evaluations, and post-experiment notes were all collected online via Qualtrics. Transcripts from chat room interactions were downloaded daily, later coded by research assistants for intervention strategies.

**Work Stations**

The technology used at each station for the experiment were an Internet Relay Chat (IRC) program called ICE Chat and an Internet browser supplying the participant with the online surveys. Firefox web browser was used for the present study in order to maximize accessibility and minimize adware and pop-up advertisements. Before beginning experiments, all settings in the IRC were set to an “anti-notification” standard. For example, in ICE Chat, default settings flash the program’s window bar when something is typed in the room. Other settings, such as other chat rooms available, color of text, use of emojis, and availability of syntax to make changes in the chat room were standardized so each participant experienced the same settings. All chat rooms were set to private using the same server, also private. This minimized any external individuals happening upon or entering the chat rooms, controlling the online environment. Transcripts of chat sessions were automatically saved to a local drive on each station, and subsequently downloaded to a secure folder by the lead researcher each day.

Each participant completed the experiment in a small, private computer station. Each room held only one participant at a time, and doors were shut for privacy during the entire experiment. These specific stations were used to avoid interactions between
participants. Each had a full-sized monitor and desktop computer directly connected to the Internet. Participants were instructed to either stow or silence additional technology during participation. Prior to beginning the experiment, participants were asked to demonstrate understanding of the chat room functions by typing “STARTING EXPERIMENT NOW” in the chat room while the lead researcher watched. Participants were instructed they could open the door to speak with the lead researcher at any time. The IRC window was positioned with the surveys on the same screen (see Figure 1). Participants were assigned participant identification numbers only as their handles in the chat room. Each condition had its own initial (e.g., N, S, W, E, NW, or SW). This kept participants’ personal demographic information completely confidential and created a completely deindividuated environment for all communicators.

Figure 2 Screen capture of participant workstation
In a room set away from the participants and lead researcher, a research assistant acted as the cyberbully and cybervictim. This research assistant was kept in a separate room so chances of physical interactions between the supposed bully and participants would be minimized. Research assistants would use the same IRC program (ICE Chat) and would be connected into the same chat rooms as participants and the confederate cyberbystanders. During experiments with more than one participant, the same research assistant would act as the cyberbully and cybervictim for each participant’s chat room. In order to do this, anywhere between two and six separate chat windows would be open at any time on the research assistant’s station.

The cyberbully was assigned the ‘administrator’ position in each participant’s chat room, as indicated by the ‘@’ symbol and at the top of the chat room to designate power. The administrator of each chat room was listed at the top of all chat rooms, also indicating power status. This was done to assert and affirm the power imbalance between bully and victim, necessary for the behaviors to be considered cyberbullying (Hinduja & Patchin, 2013). In all experiments, the cyberbully was named either SONASUPPORT or SONASUPPORT1, depending on what actual ICE chat room they were in. The handle, or username of the confederate cybervictim, also scripted by the research assistant, matched the participant’s condition and was either #416 or #461. For example, if the participant’s number was N055, the cybervictim’s handle would be N416 or N461. This kept presumed social identities between communicators constant and made coding easier keeping cybervictim identities constant.
The lead researcher (either the present author or a second research assistant) greeted participants and served as the confederate cyberbystander(s). The lead researcher stayed in a main greeting room from which all participant stations were entered through. At the lead researcher station was a laptop, clipboard with experiment protocol, and a participant sign-in sheet. The laptop was connected wirelessly to the Internet, and was equipped with the same Internet Relay Chat program as the participant and research assistant (ICE Chat). An Internet Explorer window, open to the research participant credit system, was always kept full-screen when participants were present in the room, in order to hide the chat rooms.

The lead researcher would keep the requisite number of chat windows open according to the condition. In conditions where a participant was to be in the presence of five other cyberbystanders, the lead researcher would manage five separate chat windows. In conditions where a participant was to be in the presence of only one other cyberbystander, an additional window would be managed. On the occasion more than one participant was being run during a laboratory timeslot, the lead researcher would manage anywhere between 2 and 10 chat windows.

Each of these confederate cyberbystanders would also be in the same ‘condition’ as the actual participant, having similar handles. For example, if a participant was identified as ‘N055,’ the other cyberbystanders would also have a participant identification number starting with N. In order to make it easier for the research assistant (acting as the cyberbully) to delineate between actual participants and confederate cyberbystanders (for timing purposes), participant identification numbers of confederates
were typically in numerical units lower or higher than actual participant numbers. For example, while participant N055 was completing the experiment, the confederate cyberbystanders would be assigned numbers greater than 100; or if participant N108 was completing the experiment, confederates would be assigned below 100.

**Surveys**

Participants were lead to believe they were completing personality questions chosen to test the interaction with the new chat support. In reality, however, only five personality questionnaires were chosen to help answer key hypotheses (see Chapter 3). Descriptive statistics for these key personality variables are included in Table 4.

<table>
<thead>
<tr>
<th>Table 4. <em>Descriptive statistics of personality variables (N = 234)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kurtosis</strong></td>
</tr>
<tr>
<td>Empathy Quotient</td>
</tr>
<tr>
<td>Independent Self-Construal</td>
</tr>
<tr>
<td>Interdependent Self-Construal</td>
</tr>
<tr>
<td>Belief in a Just World</td>
</tr>
<tr>
<td>Narcissism</td>
</tr>
<tr>
<td>Private Self-Consciousness</td>
</tr>
<tr>
<td>Public Self-Consciousness</td>
</tr>
</tbody>
</table>

**Post-Experiment Notes**
After debriefing, all research assistants were trained to enter data to describe the quality of the data, make notes for anything unusual, and for overall protocol adherence. Research assistants recorded if participants opened their station door and indicated the cyberbullying face-to-face, measured as indirect intervention. Post-experiment notes also captured whether participants engaged in the chat room, besides the time-sensitive “check-ins.” Affirmative indications triggered transcript downloads and subsequent coding. Completion, awareness of deception, and requests for data removal were also included in post-experiment notes. Special considerations, such as non-native English language learners, non-compliance to protocol instructions, or technological difficulties were also collected. No participants were excluded, however, based on perceived language abilities. These notes helped determine outliers, individuals who were non-compliant and thus their data were suspect, and is overall good research practice.
Chapter 3: Results

Bystander Effect Online

Based on the Social Impact Theory’s (Latané, 1981) Division of Impact Principle, or diffusion of responsibility, H1 proposed fewer cyberbystanders would directly intervene when there are other cyberbystanders in a chat room witnessing the same cyberbullying compared to chat rooms with no other cyberbystanders. This difference will be greatest between chat rooms with five additional cyberbystanders (5-CYBY) compared to chat rooms with one additional cyberbystander (1-CYBY). Comparisons of rate of direct intervention of participants in the 0-CYB are not significantly different from those in the 1-CYBY condition ($\chi^2 = 1.70, p = .14$) or from those in the 5-CYBY condition ($\chi^2 = 0.10, p = .46$). Comparisons across all cyberbystander conditions is also non-significant, $\chi^2 (2, N = 234) = 4.40, p = .11$. However, as expected, significantly more individuals chose to directly intervene in chat rooms with only one cyberbystander present ($N = 26, 28.80\%$) compared to those participants who completed the study with five others present ($N = 16, 16.60\%), \chi^2 (1, N = 186) = 3.97, p=.05. Thus, H1 is partially supported.
Table 5. *Rates of direct intervention by number of cyberbystanders present*

<table>
<thead>
<tr>
<th></th>
<th>0 CYBY</th>
<th>1 CYBY</th>
<th>5 CYBY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly intervened</td>
<td>9 (18.8%)^a,b</td>
<td>26 (28.9%)^a</td>
<td>16 (16.7%)^b</td>
</tr>
<tr>
<td>Did not directly intervene</td>
<td>39 (81.3%)^a,b</td>
<td>64 (71.1%)^a</td>
<td>80 (83.3%)^b</td>
</tr>
</tbody>
</table>

Superscripts refer to within-row comparisons. Rates have different superscripts significantly differ from each other at the .05 significance level.

RQ1 inquired if there are differences in indirect intervention across conditions varying the number of cyberbystanders present. Indirect intervention is indicated by more severe evaluations, or lower scores, of the chat system, lead research assistant, and the cyberbullying chat monitor. A one-way analysis of variance suggests evaluations of the chat system are not equal across conditions, $F(2, 231) = 5.11, p = .01$, nor are those of the lead research assistant, $F(2, 231) = 3.11, p = .05$ (see Table 6). There were no significant differences, however, across conditions of evaluations of the cyberbully, $F(2, 231) = 0.19, p = .82$. Post hoc comparisons using the Fisher LSD test indicates the most significant difference in chat system evaluations is between those in chat rooms without anyone else present and the evaluations of those in chat rooms with five cyberbystanders present, and between those in the 1-CYB and 5-CYB condition. Evaluations of the lead RA are also more severe between those in the control condition and those in the 5-CYB condition, and those in the 1-CYB condition and 5-CYB condition.
Competing hypotheses were developed to determine if it was indeed the timing or the amount of feedback had the most social impact (Latané, 1981). In the first test, assuming the first incident would be most powerful, H2 proposed more cyberbystanders would directly intervene more often in the FIRST condition, where a confederate cyberbystander provides feedback after the first incident of cyberbullying compared to conditions where no feedback is given (No Feedback). A crosstabs analysis suggests this prediction is not supported, $\chi^2(1, N = 171) = 0.25, p = .37$. In an assumption where volume would be most influential, testing the strength of numbers component of this principle, H3 predicted more cyberbystanders will directly intervene in the ALWAYS condition compared to conditions where either no acknowledgement (No Feedback). Crosstabs reject this hypothesis as well, $\chi^2(1, N = 174) = 0.16, p = .42$. Complete chi-square analyses show there are no significant differences between conditions varying timing or amount of feedback (see Table 7). Thus, neither H2 nor H3 are supported.
Table 7. Rates of direct intervention by timing of feedback by other cyberbystanders

<table>
<thead>
<tr>
<th></th>
<th>No Feedback</th>
<th>Feedback after 1st</th>
<th>Feedback after ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly intervened</td>
<td>15 (23.8%)</td>
<td>15 (25%)</td>
<td>12 (19%)</td>
</tr>
<tr>
<td>Did not directly intervene</td>
<td>48 (76.2%)</td>
<td>45 (75%)</td>
<td>51 (81%)</td>
</tr>
</tbody>
</table>

χ² (2, N = 234) = 0.64, p = .73

A second research question (RQ2) aimed to find if there are any differences in indirect intervention, as measured by lower chat system and chat monitor evaluations between timing of feedback conditions. A one-way analysis of variance was calculated indicating a significant difference in chat system evaluations across conditions. A Fisher LSD post-hoc analysis indicates this difference is significant between the control and first-incident, and the control and all-incident conditions (see Table 8).

Table 8. Comparisons of indirect intervention by timing and amount of feedback

<table>
<thead>
<tr>
<th></th>
<th>No Feedback</th>
<th>1st Incident</th>
<th>All Incidents</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Chat system evaluation*</td>
<td>1.19a,b</td>
<td>0.80</td>
<td>1.37b</td>
<td>0.90</td>
</tr>
<tr>
<td>Cyberbully evaluation'</td>
<td>1.27</td>
<td>1.54</td>
<td>1.15</td>
<td>1.49</td>
</tr>
</tbody>
</table>

H4 predicted an interaction effect between the amount (number) of feedback of the psychosocial principle and the division of impact principles of social impact theory.
(Latanè, 1981). This hypothesis predicted significantly fewer cyberbystanders will directly intervene in the ALWAYS condition in the presence of five cyberbystanders (5-CYBY) compared to cyberbystanders in the same condition (ALWAYS) in the presence of only one cyberbystander (1-CYBY). A crosstabs analysis suggests there is indeed an interaction effect where significantly fewer individuals directly intervene in chat rooms with five cyberbystanders, with one who offers feedback after each incident compared to chat rooms with only one cyberbystander offering feedback after each incident (see Table 9). Therefore, H4 is supported.

Table 9. Rates of direct intervention in by number of cyberbystanders in ALWAYS conditions

<table>
<thead>
<tr>
<th></th>
<th>1 CYBY</th>
<th>5 CYBY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly intervened</td>
<td>9 (30%)(^a)</td>
<td>3 (9.1%)(^b)</td>
</tr>
<tr>
<td>Did not directly intervene</td>
<td>21 (70%)(^a)</td>
<td>30 (90.9%)(^b)</td>
</tr>
</tbody>
</table>

\(\chi^2 (1, 63) = 4.455, p = .035\)

*Each subscript letter denotes a subset of number of cyberbystander categories whose row proportions do not differ significantly from each other at the .05 level.*

Two research questions aimed to understand if there are any differences in targets (RQ3) or valence (RQ4) of direct intervention communication across conditions. A total of 51 (22.08%) participants directly intervened in the chat room during the cyberbullying, making between one and seven comments \((M = 2.47, SD = 1.54)\) during their time in the chat room. Of these 51, 61\% \((N = 31)\) chose to target only the cyberbully, 22\% \((N = 11)\)
chose to target the cyberbully and cybervictim, 16% \((N = 8)\) chose to target only the cybervictim in their direct intervention, and only one participant (2%) chose to directly intervene communicating with the cyberbully, cybervictim, and the cyberbystander who was providing feedback. Because participants were free to target multiple individuals in their comments, inferential statistical tests like chi-square are not appropriate, as the data are not independent.

RQ4 aimed to determine the valence of the comments made by the 51 individuals who chose to directly intervene. Of the 126 comments made, 32 (25.2%) were coded as offering assistance for the problems such as “just refresh the page,” 9 (7.14%) offered supportive comments such as “I’m sure you’re smart, you’ll get it!,” 58 (45.29%) offered reprimands to the cyberbully specifically with statements like “aren’t you supposed to HELP people,” 18 (14.29%) included insults or name calling like “hey asshole,” and 9 (7.14%) were coded as other such as “what’s going on?” Chi-square tests could not be calculated given the frequency was less than 5 in more than 20% of the cells (Preacher, 2001) and the data are not independent. However, as indicated in Table 10, in the no feedback condition, the most amount of victim assistance offered was in the 5-CYBY condition.

RQ5 aimed to determine if there is a significant difference in the total number of comments made towards the chat monitor (bully) compared to comments made towards other interlocutors (victim, other cyberbystanders, non-present other) by cyberbystanders who directly intervene? A total of 85 (67.46%) comments were made towards the
cyberbully, 40 (31.75%) comments were made towards the cybervictim, and only 1 comment (0.79%) was made towards a confederate cyberbystander. (see Table 11).

Table 10. Frequency of types of direct intervention comments in each of the 7 conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>No Feedback</th>
<th>Feedback</th>
<th>Feedback</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>after 1st</td>
<td>after ALL</td>
<td></td>
</tr>
<tr>
<td>Vic Assistance</td>
<td>1</td>
<td>5</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(3.3%)</td>
<td>(16.7%)</td>
<td>(33.3%)</td>
<td>(16.7%)</td>
</tr>
<tr>
<td>Vic Soc Support</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(22.2%)</td>
<td>(1.1%)</td>
<td>(22.2%)</td>
<td>(22.2%)</td>
</tr>
<tr>
<td>Bully Reprim</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(14%)</td>
<td>(12%)</td>
<td>(18%)</td>
<td>(20%)</td>
</tr>
<tr>
<td>Bully Insult</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(30.8%)</td>
<td>(15.4%)</td>
<td>(7.7%)</td>
<td>(15.4%)</td>
</tr>
</tbody>
</table>

RQ5 aimed to determine if there is a significant difference in the total number of comments made towards the chat monitor (bully) compared to comments made towards other interlocutors (victim, other cyberbystanders, non-present other) by cyberbystanders who directly intervene? A total of 85 (67.46%) comments were made towards the
cyberbullying, 40 (31.75%) comments were made towards the cybervictim, and only 1 comment (0.79%) was made towards a confederate cyberbystander. (see Table 11).

| Table 11. Frequency of types of direct intervention comments in each of the 7 conditions |
|------------------------------------------|----------------|----------------|
| No Feedback                              | Feedback after 1st incident | Feedback after all incidents |
| CYBY                                    | CYBY | CYBY | CYBY | CYBY | CYBY | CYBY |
| Victim Target                           | (7.4%) | (35.7%) | (26.2%) | (14.3%) | (7.4%) | (16.7%) | (9.5%) |
| Bully Target                            | (17.2%) | (12.7%) | (15.9%) | (15.9%) | (12.7%) | (18.8%) | (6.3%) |

**Individual Differences**

A two-part research question inquired of the effects of individual differences on direct and indirect intervention. RQ6a questioned if those who directly intervene differ in empathy, self-construal, belief in a just world, narcissism, and self-consciousness from individuals who do not directly intervene. Independent groups t-tests indicate there are no significant differences between those who intervene and those who do not directly intervene on any of the personality assessments collected (see Table 12).

The second part of RQ6 inquired how an individual’s empathy, self-construal, belief in a just world, narcissism, and self-consciousness correlate indirect intervention
choices. The only significant correlations found between indirect intervention and personality variables was the positive relationship between recommendations of the chat system and trait empathy, $r = 0.14$, $p = .04$, where the higher the individual was in empathy, the more favorable they evaluated the chat system. Many of the personality variables themselves were correlated with each other (see Table 13).

Table 12. *Independent groups t-tests of personality variables by direct intervention*

<table>
<thead>
<tr>
<th></th>
<th>No Direct Intervention</th>
<th>Direct Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Empathy Quotient</td>
<td>39.03</td>
<td>10.53</td>
</tr>
<tr>
<td>Interdependent Self-</td>
<td>5.18</td>
<td>0.77</td>
</tr>
<tr>
<td>Construal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Self-</td>
<td>4.99</td>
<td>0.80</td>
</tr>
<tr>
<td>Construal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belief in Just World</td>
<td>3.02</td>
<td>1.48</td>
</tr>
<tr>
<td>Narcissism</td>
<td>5.20</td>
<td>3.25</td>
</tr>
<tr>
<td>Private Self-</td>
<td>15.32</td>
<td>4.1</td>
</tr>
<tr>
<td>Conscious</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Self-Conscious</td>
<td>12.86</td>
<td>3.15</td>
</tr>
</tbody>
</table>

The second part of RQ6 inquired how an individual’s empathy, self-construal, belief in a just world, narcissism, and self-consciousness correlate indirect intervention choices. The
only significant correlations found between indirect intervention and personality variables was the positive relationship between recommendations of the chat system and trait empathy, $r = 0.14, p = .04$, where the higher the individual was in empathy, the more favorable they evaluated the chat system. Many of the personality variables themselves were correlated with each other (see Table 13).

Table 13. Correlations of personality variables and indirect intervention

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chat Eval</td>
<td>.17*</td>
<td>.14*</td>
<td>.08</td>
<td>-.06</td>
<td>.06</td>
<td>-.04**</td>
<td>-.02</td>
<td>-.07*</td>
</tr>
<tr>
<td>2. Cyberbully Eval</td>
<td>-</td>
<td>-.10</td>
<td>-.07</td>
<td>-.02</td>
<td>.05</td>
<td>.03</td>
<td>.00**</td>
<td>.00</td>
</tr>
<tr>
<td>3. Empathy</td>
<td>-</td>
<td>.35**</td>
<td>.16*</td>
<td>.38**</td>
<td>-.03</td>
<td>.14*</td>
<td>.19**</td>
<td></td>
</tr>
<tr>
<td>4. Inter Self-Construal</td>
<td>-</td>
<td>.23**</td>
<td>.02</td>
<td>-.31**</td>
<td>.07</td>
<td>.16*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Indep Self-Construal</td>
<td>-</td>
<td>-.10</td>
<td>.21**</td>
<td>.21**</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Belief in Just World</td>
<td>-</td>
<td>-.03</td>
<td>.06</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Narcissism</td>
<td>-</td>
<td>.04*</td>
<td>.16*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Priv Self-Conscious</td>
<td>-</td>
<td>0.51*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Pub Self-Conscious</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05 **p < .001
Moral Disengagement Strategies of Non-Intervening Participants

In all but the control (no feedback-no cyberbystanders present) conditions participants who reported noticing something happened in the chat room were asked if they did anything. Those individuals who reported not doing anything were then given the choice of ten reasons why they did not directly intervene (see Table 1). Nine of these strategies were modeled after Moral Disengagement Theory (Bandura, 1999) and the tenth was an open-ended text box.

The most frequently given primary reasons for inaction were displacement of responsibility (N = 19), dehumanization (N = 19), moral justification (N = 17), and lack of self-efficacy (N = 14). Dehumanization, or not knowing the individuals in the situation personally, was also the most frequently cited second reason for inaction (N = 22), followed by lack of self-efficacy (N = 21), and moral justification, or this type of exchange being typical of the support process (N = 14) and not being that bad (N = 14). When examining the third reason given for no direct intervention, participants again endorsed lack of self-efficacy most frequently (N = 23), followed by suggesting it was not their job, or displacement of responsibility (N = 20), and judgment of it not being that bad (N = 14) or not knowing the individuals personally (N = 14).

RQ7 inquired at what rate do participants employ strategies such as moral justification, euphemistical labeling, or advantageous comparison to other situations for non-intervention? Comparison of strategies show dehumanization and lack of self-efficacy are the most common reasons given for inaction and these distributions are not
due to chance, $\chi^2 (8, 463) = 96.70, p < 0.001$ (see Table 14). Comparisons of these moral disengagement strategies across conditions show no significant differences within or between conditions.

H5 predicted non-intervening participants in chat rooms with more individuals present (5-CYB) will use moral disengagement strategies like diffusion or displacement of responsibility and victim blaming more often in comparison to non-intervening participants in chat rooms with fewer people present (1-CYB). A total of 46 (22.20%) participants in the 1-CYB condition claimed displacement of responsibility, diffusion of responsibility, and victim blaming as reasons for their inaction. Comparison to the 60 participants (23.62%) using the same strategies in the 5-CYB condition shows no significant difference ($z = -0.36, \hat{p} = .23, \text{SE} = 0.04, p = .72$). Examinations comparing the proportions of participants choosing each strategy between the conditions also yield non-significant results. Therefore, H5 is not supported

---

2 Total number of reasons given exceeds total number of non-intervening participants ($N = 144$) as each participant gave 5 reasons why they did not act. This question was not asked in the control condition from the previous study, from where these participants were taken.
Table 14. *Moral disengagement strategies by non-intervening participants by condition*

<table>
<thead>
<tr>
<th></th>
<th>1-CYBY</th>
<th></th>
<th></th>
<th>5-CYB</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Feedback</td>
<td>1st incident</td>
<td>All incidents</td>
<td>No Feedback</td>
<td>1st incident</td>
<td>All incidents</td>
</tr>
<tr>
<td>Moral justification</td>
<td>11</td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(19.6%)</td>
<td>(10.7%)</td>
<td>(16.1%)</td>
<td>(17.9%)</td>
<td>(17.9%)</td>
<td>(17.9%)</td>
</tr>
<tr>
<td>Euphemistic labeling</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(14.7%)</td>
<td>(20.6%)</td>
<td>(11.8%)</td>
<td>(17.6%)</td>
<td>(17.6%)</td>
<td>(17.6%)</td>
</tr>
<tr>
<td>Compare to future</td>
<td>12</td>
<td>11</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(24.4%)</td>
<td>(19.6%)</td>
<td>(12.5%)</td>
<td>(12.5%)</td>
<td>(14.3%)</td>
<td>(19.6%)</td>
</tr>
<tr>
<td>Displaced responsibility</td>
<td>14</td>
<td>8</td>
<td>8</td>
<td>13</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>(19.2%)</td>
<td>(10.1%)</td>
<td>(10.1%)</td>
<td>(17.8%)</td>
<td>(19.2%)</td>
<td>(21.9%)</td>
</tr>
<tr>
<td>Dehumanization</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>16</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(15.2%)</td>
<td>(11.4%)</td>
<td>(11.4%)</td>
<td>(20.3%)</td>
<td>(16.5%)</td>
<td>(25.3%)</td>
</tr>
<tr>
<td>Compare to past</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>(17.6%)</td>
<td>(17.6%)</td>
<td>(13.7%)</td>
<td>(19.6%)</td>
<td>(11.8%)</td>
<td>(17.6%)</td>
</tr>
<tr>
<td>Victim blaming</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(42.9%)</td>
<td>(14.3%)</td>
<td>(14.3%)</td>
<td>(14.3%)</td>
<td></td>
<td>(14.3%)</td>
</tr>
<tr>
<td>Diffusion of</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>responsibility</td>
<td>(15.4%)</td>
<td>(11.5%)</td>
<td>(15.4%)</td>
<td>(19.2%)</td>
<td>(19.2%)</td>
<td>(19.2%)</td>
</tr>
<tr>
<td>Lack of self-</td>
<td>13</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>efficacy</td>
<td>(16.5%)</td>
<td>(12.7%)</td>
<td>(12.7%)</td>
<td>(13.9%)</td>
<td>(22.8%)</td>
<td>(21.5%)</td>
</tr>
</tbody>
</table>
A final analysis was calculated to determine if the individuals who chose to endorse any specific strategy differed in their indirect intervention. While they may not have directly intervened, there were still opportunities to indirectly intervene, by way of negatively evaluating the chat system and the cyberbully. Only two moral disengagement strategies were significant at the .10 significance level. Participants who explained not directly intervening because of fear for making it worse (adventageous comparison to future possibilities) were more favorable in their evaluation of the cyberbully \((M = 1.67, SD = 1.69)\) in comparison to those who did not use this excuse \((M = 1.17, SD = 1.46)\), \(t(141) = -1.90, p = .06\). Participants who endorsed the other adventageous comparison to previous events, or it not being that bad enough to act, were also more favorable in their evaluation of the cyberbully \((M = 1.68, SD = 1.64)\) in comparison to those who did not use this excuse \((M = 1.158, SD = 1.5)\), \(t(141) = -1.83, p = .07\).
Chapter 4: Discussion

The main objective of the present study was to test the principles of social impact theory (Latané, 1981) in the context of cyberbullying. Social impact theory has gained popularity among communication scholars in areas such as advertising (Chang, 2012), politics (Shaw & Gimpel, 2012), and computer-mediated communication (Rösner, Winter, & Krämer, 2016; Wang, Zhang, & Hann, 2014). In the present study, hypotheses were based on the feedback component of the hyperpersonal model. Three hypotheses tested each of the principles of social impact theory specifically. First, Principle #3 (multiplication or division of impact) was predicted to lead to inhibition of cyberbystander behavior. The second principle (psychosocial impact) was tested determining if the timing of feedback provided by other cyberbystanders would trigger participant intervention. This study’s design also tested principle #1 (social forces) seeing if the combined social impact of multiple comments from a similar cyberbystander would lead to increased intervention. A final test of principles 1 and 3 interacting – where volume of impact may be diminished by the division of impact, provided the most interesting data. Eight important research questions aimed to answer novel questions, using a novel simulation of a real-world problem. Collectively, the results are promising and give rise to a bevy of opportunities for future directions.
Using a real-time simulation of cyberbullying, this study confirmed the Bystander Effect occurs online, and answered whether diffusion of risk or responsibility plays a more important part in cyberbystander intervention. It was expected as the number of individuals increased in the virtual space, the less likely it would be cyberbystanders would directly intervene in the cyberbullying situation. This test of social impact theory’s (Latané, 1981) third principle was confirmed as nearly twice as many individuals chose to directly intervene in a chat room with one other cyberbystander compared to participants in a chat room with five other cyberbystanders (see Table 5). In fact, the rate of direct intervention in chat rooms with five other cyberbystanders was lower than the rate of direct intervention of those in a chat room without any cyberbystanders. In other words, these intervention rates are just as low as if no one else was there to witness it. The more people available to witness the emergency, and an individual’s response to that emergency, the less likely it was for anyone to do anything, hence the Bystander Effect. Cyberbystander intervention appears more likely if cyberbullying victims are targeted in the presence of one in comparison to five other people.

To date, sparse experimental work testing the Bystander Effect online has found evidence but with questionable external validity. Confirmations of the Bystander Effect have been found in chat rooms (Markey, 2000), email systems (Barron & Yechiam, 2002), virtual environment video games (Kozlov & Johansen, 2010), or sharing unflattering photos through messaging (Barlińska, Szuster, & Winiewski, 2013). It could also be argued, however, the individuals in these studies are not truly bystanders. In each of the aforementioned studies, the participants were approached for help either directly,
necessary help was implied publicly, or they were literally involved in the options of cyberbullying. According to the original Bystander Intervention Model (Latané & Darley, 1968; 1970), bystanders are individuals not originally involved in the emergency or specifically tasked with helping (e.g., first responders). In most cyberbullying instances, or even cyberharassment, trolling, or flaming, help is not requested immediately (Hinduja & Patchin, 2013). In the present study participants were true bystanders to a standardized emergency in a controlled environment. The internal validity is high, but further replication is necessary.

The sharpest contrast in rates of direct intervention was found between individuals in conditions where a confederate cyberbystander gave feedback after each incident of cyberbullying, saying “hey, surveys have issues,” after the first incident and “it’s not like surveys make it easy” after the second incident. Cyberbystanders in the condition where feedback was provided by a confederate after each incident in the presence of five cyberbystanders directly intervened only 9% of the time. Three times as many cyberbystanders who saw the same feedback for the same cyberbullying incident in the presence of one cyberbystander chose to directly intervene. The increase in the number of witnesses to the incident did not just diffuse responsibility, it may have given a perspective of amplified impact. This suggests the Bystander Effect does not just perform differently online, it may be amplified due to the nature of the environment.

Little happens online in a vacuum or without a presumed or potential audience. Though others are not physically present, users online can recognize and report the assumed presence of others. The presence of others, especially five other
cyberbystanders, may amplify the presumed presence where users believe there to be more people present than are actually. The interaction between the division and amplification of impact is by far the most interesting finding of the present study. To continue Latané’s metaphor of light bulbs – there may be the presumption of an infinite number of possible light bulbs, or social forces, witnessing the events. Even though only five cyberbystanders were present, some participants in that condition believed there were more than seven individuals in the chat room, some guessed as high as 15. The five confederate individuals may have acted like light bulbs in an infinity mirror (see Figure 3). Their social impact is multiplied over and over again for the cyberbystander, and thus the social impact is greater.

Figure 3. Photograph of an infinity mirror³.

The imagined, or presumed, audience has been found to be as impactful as a present and real audience (Baldwin & Holmes, 1987). These audiences online are

³ Image taken from www.infinitydisplay.com/theory
different that those audiences presumed or imagined with other media. Viewers may imagine an audience when watching television, but social media heuristically reminds users of the possibility of an audience with cues of who is online, who is active, who is in your network, etc. The structure and agency of a medium can influence how a user imagines an audience, and therefore influences the behaviors performed to the actual audience (Litt, 2012). Social presence, therefore, may be more influential than the hyperpersonal nature of the mediated environment.

If the social forces online indeed amplify the diffusion of responsibility, where individuals perceive more people are present online, or at least perceive a greater social impact, online, future studies must test the parameters and limits of this concept. Is there an infinity mirror online? This could be tested outside of the context of cyberbullying, for example, replicating some of the foundational studies used to propose Social Impact Theory (Latané, 1981). In earlier studies, size of audience was positively correlated with the number of words stuttered and anxiety suppression behaviors (Latané & Harkins, 1976). For example, would users feel more anxious trying to persuade others in a chat room (or discussion board, or social networking site) with different sized audiences? Would users be less likely to respond to requests for help in socially dynamic environments when networks are more salient, such as Twitter or Facebook?

The psychosocial forces principle of social impact theory (Latané, 1981) suggests the first source in a situation, the first light bulb to shine on a surface or first person to speak up, would have the greatest impact. Thus, it was hypothesized direct intervention would be more likely in situations where a confederate cyberbystander said something
after the first incident in comparison to conditions where no feedback was provided. Another hypothesis pitted this psychosocial principle against the social forces principle where the volume of social forces may provide more impact than the timing. H3 anticipated increased rates of direct intervention in conditions where cyberbystanders saw a confederate comment after every incident of cyberbullying. These were tests of the diffusion of social risk – if someone else is acknowledging what is going on, it should be a green light for more cyberbystanders to chime in. Analyses found no significant differences in direct intervention between first incident and no-feedback conditions, nor always conditions and other timing conditions. In general, between 19% and 25% of participants chose to directly intervene. These are significantly higher rates of intervention compared to previous research which capture cyberbystander intervention without feedback or others present (Dillon & Bushman, 2015), $z = 3.34$, $p$-hat $= .16$, SE $= .04$, $p < .001$. Collectively, any acknowledgment, be it from the target (as manipulated in Dillon, 2015) or by a confederate cyberbystander, could have a significant difference but the key, however, appears to be whether someone is present.

It is possible results were not as expected because the feedback provided in the study was not received as actual feedback on the events. The feedback would not be considered actual intervention, or even feedback on how one should interpret the situation, the second step of the Bystander Intervention Model (Latané & Darley, 1968; 1970). By saying “hey surveys have issues” or “it’s not like these surveys make it easy,” the script might have shifted the burden of further explicating the harm on the target. The
context of the cyberbullying may have been too mild, and thus the feedback provided was too mild to have an impact.

Participants were asked in post-test questionnaires the sex and age of the cyberbully, other cyberbystanders, as well as the quantity of others in the chat room. Participants were not asked, however, if they noticed the feedback. They were only asked if anything happened and what happened. In all the open-ended text responses, no participants mentioned the feedback. Participants were nearly all correct on the perception of others in the chat room, but they were not asked whether they noticed the feedback provided, or how many times feedback was provided. Future iterations of this design should definitively ask participants if they noticed this key manipulation variable. This could be done easily, inserting a question after inquiring “did you do anything,” simply asking “did anyone else do anything?”

Two research questions inquired about the effects of the division of impact (Bystander Effect) and timing (second principle) on indirect intervention, as measured by poor evaluations of the cyberbully and the chat system. Generally, evaluations of the chat system and cyberbully were relatively low, resulting in means in each condition less than 1.75 on a 4-point scale. Non-significant results may be due to a floor effect, where there is not much statistical room for evaluations to be lower, indicating indirect intervention. Some differences were found between the presence or absence of cyberbystanders. In comparison to the control condition (no feedback nor cyberbystanders), participants gave more favorable reviews of the system when in a chat room with five other people. The Bystander Effect appears to occur in one type of indirect intervention (chat room
evaluations) but not others (cyberbully evaluations). It appears timing does not affect indirect intervention, but the acknowledgement by another cyberbystander, regardless if it was once or after each incident, leads to less indirect intervention when compared to no-feedback, no other cyberbystander conditions.

The remaining inactive individuals may not be as uncaring as the statistics suggest. Yes, there were more individuals who did not directly intervene, and that may be the only action a cyberbullied target may care about in similar real-life situations. The results of a specific interaction effect between timing and number of individuals present leads to the question is there a bandwagon of apathy? The Bystander Effect makes the assumption the underlying cause of inaction is because an individual assumes other witnesses would or should take on the responsibility to help. What if the presumed presence of others, especially if they are considered socially impactful, leads to a bandwagon effect? Commonly seen as a persuasive phenomenon in consumer or political behavior, conformity is one of the underlying operations in social impact theory, serving as a foundation for the psychosocial principle (Latané, 1981, p. 345). Rather than assuming a diffusion of responsibility, what if, online, it has more to do with amplification of the conformity principle and cyberbystanders are simply mirroring other cyberbystanders’ inaction? When one confederate was always acknowledging and providing feedback after each incident, the highest rates of direct intervention were observed. It appears the presence of more individuals, even if one continued to act in the same way, either diluted that effect or augmented the silence of the others.
One of the conclusions drawn from this study is it may not be entirely appropriate to draw from the hyperpersonal model (Walther, 1996). The feedback component of the model provides a confirmation or disconfirmation of the information between senders and receivers. As mentioned, the participants here may not have perceived the communication from the cyberbystanders as feedback per se, but rather as further commentary on the situation, thus helping them at step 2 of the Bystander Intervention Model (Latané & Darley, 1968) to interpret events. Participants in this study also do not perceive chat rooms as asynchronous. The channel itself is not asynchronous and the feedback may not have provided confirmation. Social presence, the presumed audience and amplification of others just present in the online space, and lack of cues and deindividuation are more powerful than the presumed hyperpersonal nature of computer-mediated communication. Looking back, the hyperpersonal model is not as relevant as, for example, the online disinhibition effect (Suler, 2004).

Observing partial replication of social impact theory (Latané, 1981) in a new application and context is promising. Indirect intervention as a concept is understudied, and usually is measured in more extreme cases (i.e., whistleblowers, anonymous reporting of events like Crimestoppers). The way it is measured in this paradigm and design is far from perfect. It was an attempt to collect the different options typically permitted for cyberbystanders to provide feedback on systems. Indirect, or what were originally called detour, interventions are typically less risky for the bystander, but take up more energy. Online, however, these indirect interventions are both less risky and could take up less energy to enact. The indirect intervention tactics measured here did not
occur during the cyberbullying event. The timing of the opportunity to indirectly intervene could severely inhibit the choices of those intervention (Latané & Darley, 1968). Limitations of the online chat system used for the experiment did not permit real-time evaluations.

It is somewhat disappointing, when presented with a relatively mild, and thus less socially risky, cyberbullying situation, fewer than 3 out of every 10 participants chose to directly intervene. By examining the communication strategies of those who directly intervened, however, we might be able to understand what could be useful, or at least genuine, should others feel that empathic push to do something. Three research questions aimed to understand the targets of the direct intervention (RQ3), valence of what was said (RQ4) and total number of comments by target (RQ5). The majority of participants chose to directly communicate with the cyberbully, using more comments, which is not surprising given most cyberbullying intervention training tactics (CDC, 2015).

Most public service announcements and anti-bullying programs urge bystanders to “step in” and “say something” if they see something. However, little guidance is given what to actually say. Participants in the current study chose to engage more often using more words with an openly hostile and rude individual. It would be far easier to offer assistance, like 25% of participants did, offering advice from a participant perspective (e.g., “just refresh the page” or “just skip it I think we can do that”). Yet the most widely used communication strategy was to reprimand the cyberbully harshly for not doing their job (45%). Many participants chose to insult the cyberbully (14%), often using profanity or name calling. Could cyberbystanders be relying on the communication presented to
them for the model? Results here, and in other similar studies (Dillon, 2015; Dillon & Bushman, 2015) suggest when presented with a hostile situation, cyberbystanders choose to meet with equal hostility and impoliteness.

Looking at the reasons given why some chose not to act can shed light on the strategies employed by those who did act. Participants were given the opportunity to list the top five reasons why they did not do anything in the chat room after the fact. These nine provided reasons were structured from Moral Disengagement Theory (Bandura, 1991; 1999) and yielded interesting patterns. One of the most frequently endorsed moral disengagement strategy was the lack of self-efficacy, “I wouldn’t know what to say.” Self-efficacy is a crucial component of bystander intervention (Latané & Darley, 1968; 1970). If bystanders, either off or online, do not feel they can adequately supply the help necessary, they will not directly intervene and may not indirectly intervene. If participants believe they are supposed to interact with a hostile and rude individual with equal hostility and rudeness, they may not feel they can. It is possible cyberbystanders do not want to engage with a jerk, for fear they themselves can be targets, as suggested from other research (Bastiaensens et al., 2014). They also may not feel entirely comfortable meeting the bully on their level.

The other most endorsed moral disengagement strategy suggests cyberbystander inaction has more to do with the environment than the individual unable or unwilling to act. Cyberbystanders who chose not to engage directly blamed the dehumanizing nature of the interactions, “I don’t know these people personally.” In the current study, no real names, avatars, or connections were made in the chat room. All usernames were alpha-
numeric (e.g., N461), and each participant was kept in their own private physical space, never interacting face-to-face with anyone other than the lead researcher, who was not involved in the chat room. Others have found invisibility, as textually based computer-mediated communication is often described, can hasten disinhibition (Morahan-Martin & Schumacher, 2003; Suler, 2004). This effect is similar to what has been found in offline face-to-face studies of anonymity and invisibility (Gergen, Gergen, & Barton, 1973; Zimbardo, 1969), which leads to an inhibition of social norms and graces. The nature of the online environment dehumanizes those involved, and participants, at least 17% of participants, who did not act expressed this very reason for their inaction.

Though no participants in this study decided to engage in disinhibited behavior like joining in with the cyberbully, there were deviations from the norm of providing feedback what was occurring was notice and/or not okay. One could argue helping strangers or interjecting in cyberbullying situations is not a standard social norm. However, in this study, four of the seven conditions had someone saying something after each incident. In two of the remaining three conditions, someone said something at least once. If participants were unable to adhere to at least a humanity rule of thumb to “do unto others,” the majority appeared to do so when a situational norm of acknowledging the behaviors.

The endorsement of these moral disengagement strategies (Bandura, 1991) may possibly map onto the different stages of the Bystander Intervention Model (Latané & Darley, 1968; 1970). Understanding the reasons for inaction can help us understand at what point in the model, or at what step, bystanders get stuck. This mapping could be
applied to offline bystanders as well as cyberbystanders (see Figure 4). For example, justifying not doing anything because the bystander does not know these people personally (dehumanization) could be an indication of no emergency needing attention (step 1). Advantageous comparison of the events as ‘not that bad,’ or calling it ‘part of the process’ of online communication (moral justification) could indicate the cyberbystander does not interpret events as important enough to attend to. Explanations of inaction due to displacement (not my job) or diffusion (someone else must have done something) of responsibility could indicate a bystander did not complete step 3, or taking responsibility to provide assistance. Cyberbystanders who claim a lack of self-efficacy (I don’t know what to do) or advantageous comparisons to future (don’t want to make it worse) are probably stuck at how to help the person needing assistance. Future research should consider this overlap in design and hypotheses. Additionally, in-depth qualitative research during the decision making process could offer rich data, in the moment.

Figure 4. Moral disengagement strategies mapped on Bystander Intervention Model
Limitations

In social science experiments, it is best to have the strongest, clearest manipulation possible in order to see the truest effects for your sample. There are some procedural limitations inherent in the current design, which may have constrained the magnitude of the manipulation used here. Of particular note are perception of cyberbullying witnessed and methodological constraints. The cyberbullying presented in this study is quite mild – a participant has trouble with a survey and the chat monitor tasked with helping that individual responds multiple times with negativity and mild name-calling (e.g., “dumb”). The manipulation and script used in the current study certainly met the definition of cyberbullying (Tokunaga, 2010): repetitive (happened twice during the 30 minute study), intentional (communication clearly directed towards the individual needing help), and including a power imbalance (support personnel bullying an individual needing support).

It could have been considered unethical to escalate the cyberbullying against the confederate cybervictim, and would have complicated IRB protocol review and debriefing. It is possible many of the participants, though they recognized the bad behavior on the part of the cyberbully, they did not consider the actions as meeting a threshold for action. Key to the Bystander Intervention Model (Latané & Darley, 1968; 1970) is the interpretation of the events as necessary for intervention (Dillon, 2015). Other bystander research has found the more severe the emergency the more likely bystander intervention (Fischer et al., 2011), including in bullying situations (DeSmet et al., 2012). Unfortunately, participants were not presented with a clear, operational
definition of cyberbullying, nor were they asked if what they saw was cyberbullying in their opinion. In order to measure cyberbystander intervention in a cyberbullying context, the perception of the behavior as cyberbullying may have been an important moderator to take into consideration. Future examinations, using this paradigm especially, should measure a participant’s perception of the behaviors involved.

It is difficult to ascertain if participants did not consider what they witnessed as actual cyberbullying without any data of that perception. One of the limitations of laboratory experiments that simulate real-world situations is the authenticity of the simulation. Some studies have used vignettes to gauge cyberbystander reactions to hypothetical cyberbullying situations (Bastiaensens et al., 2014), fictitious social media posts (Shultz, Heilman, & Hart, 2014). In these types of studies, it is easier to ask a participant the extent to which they agree what they are witnessing meets criteria for cyberbullying. Participants in the current study were not asked explicitly whether they believed it was cyberbullying, only if they noticed anything that happened. It is difficult to inquire about the behaviors under manipulation without completely blowing the cover of the design.

Participants did not indicate the extent of their understanding or perception of the relationship between the chat monitor (cyberbully) and other participant (targeted victim). In the instructions prior to the study beginning, participants were told the chat monitor was “a research assistant trained in the chat system” and will help with any issues with any of the surveys. Participants from this particular participation pool are most likely familiar with the dynamics of research assistants, understanding they are
receiving course credit/grades or payment for their work. Given this ‘customer service’ dynamic between chat monitor and participants (e.g., they are being paid to help and not doing so is in violation of their job description), it may not be surprising that those who chose to directly intervene chose to speak with the chat monitor over the targeted victim. In cyberbullying research, the power dynamic is an important variable (Hinduja & Patchin, 2013) especially considering the victim is supposed to have little power in the situation. Participants in this experiment may have assumed the victim, and the other confederate cyberbystanders, had considerable power in the event and evaluation materials. This assumption could have affected the results presented here. Future research should vary the explained dynamic between bully and target, or at a minimum measure perceptions of the dynamic and relationship from participants to control in analyses.

Asking of perceptions of events after the fact may be complicated even if done properly. Too many questions could call into question the cover story, and influence answers. Too few questions, and we miss out on understanding fully the participant’s perception of events (as is this case). In the current study, a funneled debriefing process was used to try and determine not just whether the participant was aware about the deception being used, but also to help determine if they judged the behaviors as severe. In this debriefing process, however, only general questions were asked, “What did you think about the people involved in the experiment?” and “Do you have any feedback for us?” Research assistants were trained to note any comments made by participants pointing out the behaviors. Very few mentioned actually cyberbullying, but many pointed out the cyberbully’s behavior as “rude,” “uncalled for,” or they told the assistant what actually
transpired. Research assistants were trained to feign surprise and inquire as naturally as possible for more information. Future iterations using this paradigm should adjust the debriefing process, and have the research assistant explicitly ask, “do you think the chat monitor was cyberbullying that person?” It would be a (more) natural way to gauge participant perception of the events that transpired.

Besides perceptions of events, data were not collected of participants’ perceptions of the confederate cyberbystanders’ actions. Each confederate cyberbystander checked in at the same points of the survey as the actual participants, to give the impression they were actual participants completing actual surveys. However, participants’ noticing or perception of the authenticity of these check-ins was not properly assessed. Research in social loafing and lurking can offer justification for future versions of this design. Social loafing, or “the tendency for individuals to expend less effort when working collectively than when working individually” (Karau & Williams, 1993, p. 681) could explain the high propensity of participants to do nothing. Though participants were not tasked with working collectively, individuals in the same online space can constitute a community of sorts with a collective goal of communicating. Participants’ perceptions of lurking behaviors by others seen or unseen in the chat room was not collected. Lurkers, or individuals who review online communication without necessarily commenting, engaging, or making their presence known (Sun, Rau, & Ma, 2014), are an important part of online communities (Edelmann, 2013). However, some may perceive lurkers as free-riders (Morris & Ogan, 1996), who perceive and receive information but do not act or contribute. Participants in the present study may not have recognized each of the
confederate cyberbystanders in their chat rooms actively engaged. Therefore, the impact of their presence in the chat room may be overestimated.

Participants were asked for reasons for inaction, and many did endorse a moral disengagement strategy of advantageous comparison that “it wasn’t that bad” ($N = 51$). This does not entirely address whether the participant considered the actions cyberbullying. Given this is a post-hoc explanation of inaction, it may be more of an excuse given than a true reason. This strategy was not employed more often in any given condition, and it was not the most frequent reason given. It is possible a small percentage of individuals chose to not directly intervene simply because it did not meet the threshold for cyberbullying as they understand it. Their inaction may have been more situational rather than due to the manipulation of social forces, as tested in this dissertation. Rather than this being a moral disengagement strategy, where an individual explains away their moral responsibility to act, this may be an important commentary on the main independent variable used in the study.

The participants and data in the no cyberbystander-no feedback conditions were taken from a previous study (Dillon, 2015) in order to make comparisons to the present data. These control participants were not randomized into that condition in this study, and therefore, the present study is not a true experiment. Future studies should completely randomize participants into all conditions to facilitate proper statistical comparisons.

Two hypotheses predicting individual differences like empathy and narcissism would have an effect on direct or indirect intervention were found to be null. Due to the methods used in this protocol, it may be difficult to make assumptions about the
personality variables used in this study. An examination of the order and timing of the questionnaires may elucidate some issues with collection of the data. Though items were randomized within each block of the survey, all participants completed Rosenberg’s Self-Esteem Scale, the Social Dominance Scale, and Davis’ Interpersonal Reactivity Index in the time leading up to Participants are told, at the beginning of the study, the key purpose for their time in the laboratory is to pilot test a chat system, “to determine if the system works properly during survey completion.” They were lead to believe the surveys were included to determine if the chat system operated properly while someone was filling out “common surveys used in studies” at the university. These personality questions totaled 181, some requiring participants to choose between two statements (Narcissism Personality Inventory) and other on scales of agreement up to seven points. Participants were given 30 minutes to complete all procedures, including consent and debriefing, and very few took longer than this duration.

The sheer volume of personality variables and the short duration participants were given for the study very well could have led to participant fatigue. This fatigue may explain low reliability statistics for some of the personality variables used for key analyses (e.g., Public Self-Consciousness α=.52) and for some not used (e.g., empathy sub-scale of the Interpersonal Reactivity Index α=.27). This could also explain why key variables which typically negatively correlate with each, like the Narcissism Personality Inventory and the Empathy Quotient, did not (r=-.03, p=.67), or why positive correlations were very weak, like an individual’s public self-consciousness and their interdependent self-construal (r = .16, p = .02). Unfortunately, no attention checks were included in any
of the measurements to determine if participants were actually reading and responding questions properly. Future use of any personality variables or lengthy questionnaires should definitely include attention checks, validity measurements, and if possible, social desirability.

Further indication the data were questionable is how significantly different so many of the means of personality variables in the current sample were from reported means in validation or replication literature. Comparisons were made to other research using the same assessments to determine if the results collected in the present study are reliable. For example, narcissism measured in the current sample was significantly lower than recent research (Mehdizadeh, 2010), \( t(\text{df}) = -6.07, \ p < .001 \). The current sample had a significantly lower belief in a just world score compared to foundational literature (Dalbert, Montada, & Schmitt, 1987), \( t(\text{df}) = -7.41, \ p < .001 \). In short, personality variables measured here did not appear to behave in ways expected, indicated by low reliability and correlation statistics and comparisons to previous data. These reasons probably lead to null results on H5 and H6, but further inquiry is necessary. These differences may be due in part to how they were presented to participants and exacerbated by participant fatigue. Future studies that wish to examine the predictive qualities of personality variables like empathy or narcissism in cyberbystander intervention should pretest these variables and include attention checks.

The two most endorsed moral disengagement strategies suggest cyberbystander inaction has more to do with the environment than the individual unable or unwilling to act. Cyberbystanders who chose not to engage directly blamed the dehumanizing nature
of the interactions, “I don’t know these people personally.” In the current study, no real names, avatars, or connections were made in the chat room. All usernames were alphanumeric (e.g., N461), and each participant was kept in their own private physical space, never interacting face-to-face with anyone other than the lead researcher, who was not involved in the chat room. Others have found invisibility, as textually based computer-mediated communication is often described, can hasten disinhibition (Morahan-Martin & Schumacher, 2003; Suler, 2004). This effect is similar to what has been found in offline face-to-face studies of anonymity and invisibility (Gergen, Gergen, & Barton, 1973; Zimbardo, 1969), which leads to an inhibition of social norms and graces. The nature of the online environment dehumanizes those involved, and participants, at least 17% of participants, who did not act expressed this very reason for their inaction.

Though no participants in this study decided to engage in disinhibited behavior like joining in with the cyberbully, there were deviations from the norm of providing feedback what was occurring was notice and/or not okay. One could argue helping strangers or interjecting in cyberbullying situations is not a standard social norm. However, in this study, four of the seven conditions had someone saying something after each incident. In two of the remaining three conditions, someone said something at least once. If participants were unable to adhere to at least a humanity rule of thumb to “do unto others,” the majority appeared to do so when a situational norm of acknowledging the behaviors.

**Implications & Future Directions**
When watching what people do when presented with an opportunity to help, and most choose not to, it is hard to hold an optimistic worldview. If no one will help here, how can we expect others to help when in real life? There are many results here, however, that should buoy any optimism that remains, and perhaps, can be capitalized in the future. First, people recognize and notice cyberbullying. Three separate studies using this simulation design have found over 60% of participants typically report the cyberbullying event after the fact (Dillon, 2015; Dillon & Bushman, 2015). This is a good replication of previous studies and debunks the idea people don’t stand up for targets of cyberbullying because they don’t notice it. People see it, they just do not know what to do. These behaviors are noticed, but are they explained away as “not bad enough” before opportunities to engage pass them by?

It is possible the way cyberbullying is discussed in popular culture, the news, and even public service announcements and anti-bullying programs is insufficient. Yes, revenge images through sexting (Willard, 2010), online threats of offline violence (Snell & Englander, 2010), calls to commit suicide (Wong-Lo, Bullock, & Gable, 2011) are clear cyberbullying violations. But other behaviors like cyberostracism (Kassner, Wesselmann, Law, & Williams, 2012), online rumor mongering (Wen et al., 2014), and general teasing (Wong-Lo & Bullock, 2014) are also considered cyberbullying and when occurring often, can lead to detrimental effects. It is possible cyberbystanders, when faced with a ‘mild-in-comparison’ situation, will be less likely to act even if they notice it. Future research in cyberbystander behavior in cyberbullying must first understand how cyberbystanders interpret behaviors they already notice. Qualitative research can yield
exciting findings and would the best opportunity to parse out the mechanisms of how
cyberbystanders interpret events. Without confirmation of the second step, we cannot
begin to draw satisfactory conclusions of what we find at steps three through five of the
Bystander Intervention Model (see Figure 1).

Also heartening to see in the present results is participants disapproved of
cyberbullying, at least of individuals and systems that allow cyberbullying, as evidenced
by the indirect intervention rates. No matter how many individuals were present, or how
many times someone else gave feedback on the situation, cyberbystanders still gave poor
evaluations of the cyberbully. Participants were also pretty displeased, in general,
strongly recommending other communication students not use the chat system. More
individuals disapproved of the cyberbully and the environment allowing it to happen than
approved. The effects of cyberbullying range from a nuisance to terrifying, claiming the
social and physical lives of adolescents, college students, and even adults. But the results
here suggest there is a large population of individuals who notice and disapprove of the
actions of a few, ripe for training and persuasion to do something about it. In short,
people don’t suck as much as it might seem.

Further proof of people sucking less than it seems is examining reasons for
inaction. Of the options given, the moral disengagement strategy of victim blaming, “the
people involved seemed to ask to be treated this way,” was the least often chosen (< 2%).
The blame for the bad behavior, indicated in indirect intervention tactics, is squarely on
the shoulders of the cyberbully. The differences between ratings of the lead researcher,
uninvolved with the situation were significantly higher (close to a B+) than those of the
cyberbully (D), t(232) = 18.860, p < .001. Participants evaluated these individuals side by side and found one to be significantly more at fault and heinous than the other. A good portion of participants chose to interact directly with the target, offering assistance (25%) and social support (7%). There were no differences, so far, in the type of person who chose to speak with the bully compared to the type of person who chose to speak to the victim. In short, participants appear to notice, blame the appropriate party, and have show the capability to offer social support or assistance to someone in need. We must capitalize on this.

Cyberbullying prevention programs and public service announcements could take advantage of on these findings. Campaigns should recognize cyberbystanders notice these behaviors, but also recognize the disapproval of these behaviors is normative, and apathy does not have to be. Participants also were not shy in making their comments generally, 51 participants made a total of 126 comments averaging 2.47 comments. Use modeled behaviors that lead to the activities ceasing. Use real communication other cyberbystanders have used when showing what to do or say or type. Work with actual cyberbullying targets and determine best intervention strategies, and model them for users to learn. Future studies should test these for authenticity and results. If slogans, bylines, and trademarks are test marketed, there is little to no reason why these types of intervention strategies cannot be tested similarly.

It is also clear cyberbystanders want other opportunities to indirectly intervene, beyond recommendations or reporting mechanisms. When given the opportunity to, the majority of participants engaged in some sort of indirect intervention, though differences
between conditions were not significant. Most online platforms have some sort of reporting system, but the efficacy of these programs is unknown. If cyberbystanders do not perceive the indirect intervention options as efficient, they will not be used or perhaps even considered. Future studies examining indirect intervention should expand the possibilities. Testing could include trying private/direct messaging systems, real-time evaluations, how often users block or report (timing of these strategies), screenshots, or post-test evaluations using opinions (e.g., a rating system and then a public evaluation for other users before they download or use the application). Indirect interventions use less social risk and are apparently desired, which creates an opportunity to help more targets.

**Conclusion**

Individuals from all age groups have fallen victim to or perpetrated cyberbullying. This fact leads us to the assumption individuals from all age groups serve as cyberbystanders to cyberbullying. The detrimental physical, mental, social, and academic effects of cyberbullying are well documented (Kowalski & Limber, 2013). Less is known, however, beyond behavioral intentions of those who witness these behaviors. Cyberbullying and cyberbystander research has been limited as of late to self-report surveys, field studies, or fictional based scenarios. The present study offered a real-time simulation of cyberbullying to capture cyberbystander direct and indirect intervention, and reasons for inaction. Results were mixed but implications are promising. The Bystander Effect indeed occurs online, and the social impact of the number of forces available to witness exceeds the supposed impact of action by one of these forces. Further inquiry is necessary to continue the discovery of different ways we can help our
connected users while online. But it is promising to note: we notice, we disapprove, and may need to just better gauge who is watching us in order to shut down the bandwagon of apathy and instead cultivate an environment of empathy.
References


*Journal of Moral Education, 31*(2), 101-119. DOI: 10.1080/0305724022014322


National Communication Association (Human Communication & Technology Division). Las Vegas, NV.


*Aggressive Behavior, 32*(6), 528-539. DOI: 10.1002/ab.20153


*Computers in Human Behavior, 38*, 1-7. DOI: 10.1016/j.chb.2014.05.012


Konrath, S., Meier, B. P., & Bushman, B. J. (2014). Development and validation of the single item narcissism scale (SINS). *PloS one, 9*(8), e103469.


research among youth. Psychological Bulletin, 140, 1073-1137. DOI: 10.1037/a0035618


*Computers in Human Behavior, 23,* 1777-1792. DOI: 10.1016/j.chb.2005.10.005


Pew Research Center (October, 2014). “Online Harassment” Available at http://www.pewinternet.org/2014/10/22/online-harassment/


Utz, S. (2004). Self-construal and cooperation: Is the interdependent self more cooperative than the independent self?. *Self and Identity, 3*(3), 177-190. DOI: 10.1080/135765004444000001

Van den Bos, K. (2013). Meaning making following activation of the behavioral inhibition system: How caring less about what others think may help to make sense of what is going on. In K. D. Markman, T. Proulx & M. J. Lindberg (Eds.),


Appendix A: Researcher Script
LEAD RESEARCHER SCRIPT

Say verbatim the text in *italic* font.

BEFORE THE PARTICIPANT ARRIVES

1. Roll a die to determine what condition the participant is in:
   Condition 1 = North = no acknowledgment/1 bystander
   Condition 2 = South = no acknowledgment/5 bystanders
   Condition 3 = East = 1st incident/1 bystander
   Condition 4 = West 1st incident/5 bystanders
   Condition 5 = Northwest = 2nd incident/1 bystander
   Condition 6 = Southwest = 2nd incident/5 bystanders

2. On the computer, open the Qualtrics survey link.

3. Enter the subject identification code on the first page.

4. Open the IRC chat room and enter the subject identification code in the room.

5. On the clipboard post the post-experiment notes sheet. Enter the subject identification number.

6. Behind the scenes in the chat room, enter subject identification of confederates. In conditions 1, 3, and 5 only one other confederate. In conditions 2, 4, and 6, five confederates. Always use the same group as the participant (N, S, W, E or C) and a subject identification numbers (use 416, 423, 431, 449, 458, 460)

Say verbatim the text in *italic* font.

1. When the participant arrives, ask them to turn off their cell phone, leave all personal belongings in the common area of the lab, and escort them to an available room.

2. Introduce yourself and request the participant read the consent form on the screen carefully:
   “Thank you for coming today. My name is ______ and I’ll be running your experiment today. Please read the consent form on the screen here. If you agree to participate, please indicate. Then we can get started. If you do not choose to participate, we can arrange the alternative assignment through the C-REP program if necessary.”

3. If participant agrees to participate, indicate on the consent form and click the “next” button.
4. If participant does not agree to participate, indicate on the consent form and terminate the experiment. Contact the C-REP coordinator for an alternative assignment if the participant requires research participation credit.

5. **TO ALL:** Explain procedures to the participant:

   “Today you will be piloting a new support chat feature of the SONA system. Researchers understand students may prefer to participate in research online instead of in the laboratory. Sometimes these online surveys can have issues or participants have questions that are better answered by trained research personnel. We are piloting an online chat that will be monitored by research assistants.

   We have here some common surveys used here at Ohio State that we would like you to fill out. There are no right or wrong answers, though it is important you try to answer all of them truthfully. This will help us determine if there are any issues while the chat room function is open. So our research assistant monitoring the chat room knows someone may be need assistance, please notify the chat room when you are BEGINNING your survey with “STARTING SURVEY.” Throughout your survey you will be prompted to type something in the chat room, just so we know it’s still working. When you have completed the survey, please notify the chat room with “FINISHED SURVEY.” You’ll notice the usernames in the chat room are only subject identification codes. We’ll be piloting different versions of the chat room today, so you may or may not have other participants in your room.

   If you experience any problems with your surveys, such as error messages or the survey closes unexpectedly, indicate the issue in the chat room here. If you have issues with the chat room, or something happens that just doesn’t seem right, please open your door. Then I will come investigate to see what the glitch or issue is. Since we’re piloting different types of chat rooms, it’s important for us to know if something is not right.

   That’s all the instructions we have. Do you have any questions about what you need to do? [Answer any questions] Remember to notify the chat room when prompted and to let me know if there are issues with the chat room. Please open your door when you are done with your survey and you get to the window that says STOP HERE.”
CHAT ROOM MONITOR DIRECTIONS:

1. Under the “confederate” subject id codes, enter “STARTING SURVEY NOW.”

2. Under “RA Support” chat username, enter “STARTING CHAT SUPPORT NOW.”

3. Start timer after actual participant enters the same text.

IF PARTICIPANT IS IN EXTERNAL ATTRIBUTION CONDITION, USE THE FOLLOWING EXCHANGE

4. After 3 minutes have passed begin the following exchange
   Confederate: I’m having issues with the 8th question on the second page. my answer won’t record.
   RA: OMG. did you press the little button there to answer the question?
   Confederate: Yes.
   RA: If these are the type of questions we’re going to get this is going to suck. Try it again.
   Confederate: I did.
   RA: how did you get into college? cant you take a survey right?
   Confederate: what should I do?
   RA: I cant handle your stupidity right now. There are other people with bigger issues. figure it out yourself.
   (IF IN CONDITIONS 3-6): Confederate Cyberbystander: hey, surveys have issues

5. 1 minute after participant posts completion, under the confederate chat usernames type: PART 1 COMPLETED.

6. After another 3 minutes have passed begin the following exchange:
   Confederate: now I’m having a problem with those either choice A and choice B survey.
   RA: seriously? How dumb are u?
   Confederate: my choice wont stay on the screen.
   RA: can you read the directions? Do you seriously need your hand held on each question?
   Confederate: I read the directions.
   RA: Are you sure you understand the directions? You don’t seem very smart.
   Confederate: what should I do?
   RA: your hopeless. I’m not trained to babysit subjects. Figure it out yourself.
   (IF IN CONDITIONS 5 & 6): Confederate Cyberbystander: it’s not like these surveys are always easy

7. 1 minute after participant posts completion, under the confederate chat usernames type: PART 2 COMPLETED.
If participant engages in the chat room discussion: ask if the participant has issues with their survey. If they challenge or engage, just type “ok.”

If participant notifies chat room of issues (e.g., misspellings): Type: “ok”

LEAD RESEARCH ASSISTANT SCRIPT CONTINUED

1. If participant opens door,
   a. Make note of time on post-experiment notes using the stopwatch time
   b. Open the door and ask, “What do you need?”

2. If participant complains about RA’s treatment of other subject: Act surprised, pretend to not realize it and say: “I see what you are saying. Please continue with your survey until you are done.”

3. When participant opens door:
   a. Close the chat room window (and if applicable the music or timer windows).
   b. Say “We just have a few more questions about the effectiveness of the SONA Chat Support then we’re all done. When you have completed these surveys, please open your door and we’ll finish the study.”
   c. Click “next” on the survey for the subject to continue the final questionnaires.

4. When participant completes final survey, close all windows and begin debriefing.

Debriefing
Commence the funneled debriefing process: Now that you’re finished with the studies, I want to follow up by asking you a couple questions.
   a) What did you think about the surveys we asked you to complete today? Some participants find it tedious so I’m trying to get a sense of people’s opinions.
   b) What did you think about the chat room support?
   c) What did you think about the people in the experiment today? Do you have any feedback for us? Did anything catch your attention?
   d) Do you have any comments or observations that would be useful for us to know about the experiment today? We often take participants’ comments into account when designing our future studies.

Participants aware of manipulation purposes or those who guess the hypothesis of this study should be noted in the post-experiment form.

OK, You are now done with the experiment and here is the debriefing form. Please read it carefully as it explains what our hypothesis is and how we are trying to test it. As you will see, the experiment you took part in today has important implications for the scientific study of emotion so we are very grateful for your time and participation. Please feel free to ask me any questions you might have. Finally, we ask that you do not share this hypothesis with any students here at OSU since this would compromise the research being done here. Thank you again for your participation!
Answer any questions and provide the participant with a copy of the debriefing form if they would like.
**Post-Experiment Form:** Enter information on the post-experiment form in the Qualtrics survey link. Notify PI of any issues.
<table>
<thead>
<tr>
<th>TIMING</th>
<th>#461</th>
<th>SONASUPPORT</th>
<th>CONFEDERATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>START</td>
<td>Starting survey now</td>
<td>Starting chat support now</td>
<td>Starting survey now</td>
</tr>
<tr>
<td>3 MIN</td>
<td>I’m having issues with the 8th question on the second page. My answer won’t record</td>
<td>OMG. Did you press the little button to answer the question?</td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>If these are the type of questions we’re going to get this is going to suck. Try it again.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>I did</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>How did you get into college? Can’t you take a survey right?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>What should I do?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>I can’t handle your stupidity right now. There are other people with bigger issues. Figure it out yourself</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td></td>
<td></td>
<td>Hey surveys have issues</td>
</tr>
<tr>
<td>5 MIN</td>
<td>PART 1 COMPLETED</td>
<td>PART 1 DONE</td>
<td></td>
</tr>
<tr>
<td>6 MIN</td>
<td>Now I’m having issues with those either choice A and choice B survey.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>Seriously? How dumb are you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>My choice won’t stay on the screen.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>Can you read the directions? Do you seriously need your hand held on each questions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>I read the directions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>Are you sure you understand the directions? You don’t seem very smart.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>What should I do?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td>You’re hopeless. I’m not trained to babysit subjects. Figure it out yourself!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP</td>
<td></td>
<td>It’s not like these surveys are always easy</td>
<td></td>
</tr>
<tr>
<td>8 MIN</td>
<td>PART 2 COMPLETED</td>
<td>PART 2 DONE</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Personality Questionnaires
Rosenberg Self-Esteem Scale (Rosenberg, 1965)
Please answer questions 1-10 using the following scale.
1 = strongly agree
2 = agree
3 = disagree
4 = strongly disagree

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

Self-Construal Scale (Singelis, 1994)
Please read each statement carefully and indicate the degree to which you agree using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. I have respect for the authority figures with whom I interact.
2. It is important for me to maintain harmony within my group.
3. My happiness depends on the happiness of those around me.
4. I would offer my seat on a bus to my professor.
5. I respect people who are modest about themselves.
6. I will sacrifice my self-interest for the benefit of the group I am in.
7. I often have the feeling that my relationships with others are more important than my own accomplishments.
8. I should take into consideration my parents’ advice when making education/career plans.
9. It is important to me to respect decisions made by the group.
10. I will stay in a group if they need me, even when I’m not happy with the group.
11. If my brother or sister fails, I feel responsible.
12. I’d rather say “No” directly, than risk being misunderstood.
13. Speaking up during a class is not a problem for me.
14. Having a lively imagination is important to me.
15. I am comfortable with being singled out for praise or rewards.
16. I am the same person at home that I am at school.
17. Being able to take care of myself is a primary concern for me
18. I act the same way no matter who I am with
19. I feel comfortable using someone’s first name soon after I meet them, even when they are much older than I am
20. I prefer to be direct and forthright when dealing with people I’ve just met
21. I enjoy being unique and different from others in many respects
22. My personal identity independent of others, is very important to me
23. I value being in good health above everything

Belief in a Just World Measurement (DePalma, Madey, Tillman, & Wheeler, 1999)
Please answer questions 1-6 using the following scale:
1 = strongly agree
2 = moderately agree
3 = slightly agree
4 = neutral
5 = slightly disagree
6 = moderately disagree
7 = strongly disagree

1. I feel that people get what they are entitled to have
2. I feel that a person's efforts are noticed and rewarded
3. I feel that people earn the rewards and punishments they get.
4. I feel that people who meet with misfortune have brought it on themselves.
5. I feel that people get what they deserve.
6. I feel that rewards and punishments are fairly given.

Revised Self-Consciousness Scale (Schier & Carver, 2006)
Please answer questions 1-23 using the following scale:
0 = not at all like me
1 = a little like me
2 = somewhat like me
3 = a lot like me

1. I’m always trying to figure myself out.
2. I’m concerned about my style of doing things.
3. It takes me time to get over my shyness in new situations.
4. I think about myself a lot.
5. I care a lot about how I present myself to others.
6. I often daydream about myself.
7. It’s hard for me to work when someone is watching me.
8. I never take a hard look at myself.
9. I’m self-conscious about the way I look.
10. I get embarrassed very easily.
11. I usually worry about making a good impression.
12. I generally pay attention to my inner feelings
13. It’s easy for me to talk to strangers.
14. I’m constantly thinking about my reasons for doing things
16. I’m concerned about what other people think of me.
17. I sometimes step back (in my mind) in order to examine myself from a distance.
18. I feel nervous when I speak in front of a group.
19. I’m quick to notice changes in my mood.
20. I’m usually aware of my appearance.
21. I know the way my mind works when I work through a problem.
22. Large groups make me nervous.

Narcissism Personality Inventory (Ames, Rose, & Anderson, 2006)
In each of the following pairs of attitudes, choose the one you MOST AGREE with.
Mark your answer by writing EITHER A or B in the space provided. Please only mark ONE ANSWER for each attitude pair.

1. A When people compliment me I get embarrassed.
   B I know that I am a good person because everybody keeps telling me so.

2. A I prefer to blend in with the crowd.
   B I like to be the center of attention.

3. A I am no better or no worse than most people.
   B I think I am a special person.

4. A I like having authority over other people.
   B I don’t mind following orders.

5. A I find it easy to manipulate people.
   B I don’t like it when I find myself manipulating people.

6. A I insist upon getting the respect that is due me.
   B I usually get the respect I deserve.

7. A I try not to be a show off.
   B I will usually show off if I get the chance.

8. A I always know what I am doing.
   B Sometimes I am not sure what I am doing.

9. A Sometimes I tell good stories.
   B Everybody likes to hear my stories.
10. A I expect a great deal from other people.  
   B I like to do things for other people.

11. A I really like to be the center of attention.  
    B It makes me uncomfortable to be the center of attention.

12. A Being in authority doesn’t mean much to me.  
    B People always seem to recognize my authority.

13. A I am going to be a great person.  
    B I hope I am going to be successful.

    B I can make anyone believe anything I want them to.

15. A I am more capable than other people.  
    B There is a lot I can learn from other people.

16. A I am much like everybody else.  
    B I am an extraordinary person.

Single Item Narcissism Scale (SINS; Konrath, Meier, & Bushman, 2014).

To what extent do you agree with the following statement: I am a narcissist. (NOTE: A narcissist means egotistical, self-focused, and vain).

1 = Strongly agree  
2 = Slightly agree  
3 = Slightly disagree  
4 = Strongly disagree

Not at all  
Very much  
like me  
like me

Empathy Questionnaire (Baron-Cohen & Wheelwright, 2004)

Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by indicating your answer. There are no right or wrong answers, or trick questions.

1 = Strongly agree  
2 = Slightly agree  
3 = Slightly disagree  
4 = Strongly disagree

1. I can easily tell if someone else wants to enter a conversation.  
2. I prefer animals to humans.  
3. I try to keep up with the current trends and fashions.
4. I find it difficult to explain to others things that I understand easily, when they don’t understand it the first time.
5. I dream most nights.
6. I really enjoy caring for other people.
7. I try to solve my own problems rather than discussing them with others.
8. I find it hard to know what to do in a social situation.
9. I am at my best first thing in the morning.
10. People often tell me that I went too far in driving my point home in a discussion.
11. It doesn’t bother me too much if I am late meeting a friend.
12. Friendships and relationships are just too difficult, so I tend not to bother with them.
13. I would never break a law, no matter how minor.
14. I often find it difficult to judge if something is rude or polite.
15. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.
16. I prefer practical jokes to verbal humor.
17. I live life for today rather than the future.
18. When I was a child, I enjoyed cutting up worms to see what would happen.
19. I can pick up quickly if someone says one thing but means another.
20. I tend to have very strong opinions about morality.
21. It is hard for me to see why some things upset people so much.
22. I find it easy to put myself in somebody else’s shoes.
23. I think that good manners are the most important thing a parent can teach their child.
24. I like to do things on the spur of the moment.
25. I am good at predicting how someone will feel.
26. I am quick to spot when someone in a group is feeling awkward or uncomfortable.
27. If I say something that someone else is offended by, I think that’s their problem, not mine.
28. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn’t like it.
29. I can’t always see why someone should have felt offended by a remark.
30. People often tell me that I am very unpredictable.
31. I enjoy being the center of attention at any social gathering.
32. Seeing people cry doesn’t really upset me.
33. I enjoy having discussions about politics.
34. I am very blunt, which some people take to be rudeness, even though this is unintentional.
35. I don’t tend to find social situations confusing.
36. Other people tell me I am good at understanding how they are feeling and what they are thinking.
37. When I talk to people, I tend to talk about their experiences rather than my own.
38. It upsets me to see an animal in pain.
39. I am able to make decisions without being influenced by people’s feelings.
40. I can’t relax until I have done everything I had planned to do that day.
41. I can easily tell if someone else is interested or bored with what I am saying.
42. I get upset if I see people suffering on news programs.
43. Friends usually talk to me about their problems as they say that I am very understanding.
44. I can sense if I am intruding, even if the other person doesn’t tell me.
45. I often start new hobbies but quickly become bored with them and move on to something else.
46. People sometimes tell me that I have gone too far with teasing.
47. I would be too nervous to go on on a big rollercoaster.
48. Other people, often say that I am insensitive, though I don’t always see why.
49. If I see a stranger in a group, I think that it is up to them to make an effort to join in.
50. I usually stay emotionally detached when watching a film.
51. I like to be very organized in day-to-day life and often make lists of the chores I have to do.
52. I can tune into how someone else feels rapidly and intuitively.
53. I don’t like to take risks.
54. I can easily work out what another person might want to talk about.
55. I can tell if someone is masking their true emotion.
56. Before making a decision I always weigh out the pros and cons.
57. I don’t consciously work out the rules of social situations.
58. I am good at predicting what someone will do.
59. I tend to get emotionally involved with a friend’s problems.
60. I can usually appreciate the other person’s viewpoint, even if I don’t agree with it.

**Demographic Information**

Please complete the following demographic questionnaire. Put an X next to the category that most closely approximates your demographic information for each queried field. If you have any questions, please ask the experimenter.

**Sex:**

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

**Ethnic Category:**

<table>
<thead>
<tr>
<th>Hispanic</th>
<th>Non-Hispanic</th>
</tr>
</thead>
</table>

**Racial Category:**

<table>
<thead>
<tr>
<th>American Indian/ Alaskan Native</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Hawaiian or other Pacific Islander</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Black or African American</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>More than one race</td>
<td></td>
</tr>
</tbody>
</table>

**Please indicate your current age**

Age

**Please indicate your class rank at OSU**

<table>
<thead>
<tr>
<th>Freshman</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Post-Experiment Questionnaires
1. Did you have any problems with your survey while you were here?
2. Did you have any problems with the SONA Support?
3. Did anything happen in the SONA Support?
   (If “YES” is chosen, the following will appear):
   a. What happened?
   b. Did you do anything?
      i. Yes, I told lead researcher
      ii. Yes, I said something in the chat room
      iii. No
   (If “NO” is chosen the following will appear):
      1. If you did not say or do anything, why not?
4. Would you recommend the SONA Support to other research participants?
   4 = Strongly recommend using
   3 = Recommend using
   2 = Do not recommend using
   1 = Strongly do not recommend using

Because each of our researchers are training in the new system, please assign each researcher in today’s study a letter grade for each of the items listed below. As always, your response is confidential and your name will not appear anywhere.
A - Excellent
B - Good
C - Acceptable
D - Needs Improvement
E – Unacceptable

<table>
<thead>
<tr>
<th>PERFORMANCE</th>
<th>Head Researcher</th>
<th>Chat Room Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. performance in his/her respective role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. respectful and mature manner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. professionalism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. enthusiasm and positive attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. motivation and involvement in experiment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. interpersonal demeanor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. helpfulness to participants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. orderliness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Please provide an overall grade of the researchers’ performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Please provide an overall grade of the researchers’ performance in the present study, as compared to researchers you’ve</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Because this was an online study, we would like to know if you were able to determine certain things about the people you interacted with. This will help us determine if we should use real names in the chat support system in the future.

5. What condition were you in? [This serves as a manipulation check as participants will only be in a chat room]
   a. SKYPE
   b. CHAT
   c. SKYPE & CHAT

6. What gender do you believe the CHAT MONITOR was?
   a. Male
   b. Female

7. How old do you believe the CHAT MONITOR was?
   a. Undergraduate age
   b. Graduate age
   c. Staff age
   d. Faculty age

8. How many other participants were in the room with you?
   ENTER NUMBER HERE: _____

9. [If more than 0 is entered] What ages and gender do you think they were?

<table>
<thead>
<tr>
<th>1st other participant</th>
<th>Gender</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male/Female/Not sure</td>
<td>Undergrad/Grad/Staff/Faculty/</td>
</tr>
<tr>
<td></td>
<td>Wasn’t there</td>
<td>Not Sure/Wasn’t there</td>
</tr>
<tr>
<td>2nd other participant</td>
<td>Male/Female/Not sure</td>
<td>Undergrad/Grad/Staff/Faculty/</td>
</tr>
<tr>
<td></td>
<td>Wasn’t there</td>
<td>Not Sure/Wasn’t there</td>
</tr>
<tr>
<td>3rd other participant</td>
<td>Male/Female/Not sure</td>
<td>Undergrad/Grad/Staff/Faculty/</td>
</tr>
<tr>
<td></td>
<td>Wasn’t there</td>
<td>Not Sure/Wasn’t there</td>
</tr>
<tr>
<td>4th other participant</td>
<td>Male/Female/Not sure</td>
<td>Undergrad/Grad/Staff/Faculty/</td>
</tr>
<tr>
<td></td>
<td>Wasn’t there</td>
<td>Not Sure/Wasn’t there</td>
</tr>
<tr>
<td>5th other participant</td>
<td>Male/Female/Not sure</td>
<td>Undergrad/Grad/Staff/Faculty/</td>
</tr>
<tr>
<td></td>
<td>Wasn’t there</td>
<td>Not Sure/Wasn’t there</td>
</tr>
</tbody>
</table>
Appendix D: Post-Experiment Questionnaires
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th><strong>YES</strong></th>
<th><strong>NO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Did participant open door?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. At what time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Did participant engage in chat room (besides directives)?</td>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td></td>
<td>a. Pull chat text, save in document (check if done)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Did participant complete survey?</td>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td>4</td>
<td>Was participant aware of deception?</td>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td>5</td>
<td>Has participant requested data be removed?</td>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td>6</td>
<td>Has SONA credit been awarded?</td>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td>7</td>
<td>Notes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E: Debriefing Form
Now that the study is over, I need to tell you more about it. Before I do, however, I need to explain something to you. In some types of studies if we told people what the point of the experiment was ahead of time, then some people might do whatever it is they think we want them to do, just to be helpful. Other people might do the exact opposite of what they think we want them to do, to show us that we can’t figure them out. When people are trying to second guess what the experiment really is about, and they behave a certain way because of it, our results get messed up. That’s because people aren’t behaving like they naturally would in the real world. The whole point of this experiment is to find out how people would naturally behave. Do you understand why we can’t tell participants all about a study at the beginning?

Now, I’d like to explain more about this study. The purpose of this study was to determine what it would take for you to notice and respond to a situation in a computer-mediated environment, like online. Our hypothesis is if you were in online with other people present, you would be less likely to say or do anything to someone treating another person unfairly or rudely. But, if you saw someone saying something to that rude person, you might be more likely to chime in too. A roll of a die determined what condition you would experience. The research assistant and other participants in the chat room were both part of the experiment. The text and conversations you may have seen were completely scripted and no one was being harassed or bullied today. We couldn’t tell you this before hand because we didn’t want you to second-guess what we expected you to do, and then behave differently from how you might naturally react. There was no other way to do the study and get valid results. Does this make sense?

The present study is important because it will help us to understand what it would take to get people to intervene if something goes wrong online. These findings could have implications for people who get bullied or teased a lot online. They can even inform how people like you or us can regulate emotions in every day life. Please note that your behavior today does not reflect your personality or who you are as a person. It was a result of the context you were in, which was manipulated by the experiment.

We want to remind you that there are no correct answers or behaviors in this study. Also, your responses will be confidential because they will be analyzed as part of a group. In addition, your identity (name, phone number) will not be attached to any of the data you provided. If you would like to withdraw your data from the study, please let me know. You will have two weeks to decide whether to withdraw your data.

There is one last thing. We would appreciate it if you didn’t tell anyone about this study. If other people found out what this study was about before hand, our results would get messed up, for all the same reasons that I was telling you about earlier. Do you have any questions or comments? Thanks for your participation – we really appreciate it!

If in the next two weeks you decide you would prefer us not to use your data, please contact us the investigator, Dr. Brad Bushman at bushman.20@osu.edu. We will ask you to provide the email address you gave us on your consent form so we know what data to remove. Your name and email address will not be included on the data for analysis and everything is kept completely confidential in password-protected databases and locked offices. After two weeks, we will remove your email address from the database and be unable to identify your data, should you want it removed. Although there are no direct benefits to you as a participant, this research may benefit science and society. We also know of no risks associated with this study. However, some people might become upset after participating in this study. If you are feeling extremely upset, I will be happy to escort you to the Counseling and Consultation Service at the Ohio State University, Younkin Success Center (4th Floor), 1640 Neil Avenue Columbus, OH 43210, 614-292-5766. Please let me know if you would like me to do that.

That’s basically it. Do you have any questions? Later, if you have questions about the study, you can contact the investigator, Dr. Brad J. Bushman at bushman.20@osu.edu or by phone at (614) 292-3400. If you decide that you do not want your data included in the study, please contact Dr. Bushman within 2 weeks. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Responsible Research Practices (ORRP) at (614) 688-8457.

Thank you very much for participating in the study! We really appreciate it!