

A proposed Cyberbystander Intervention Model

The unresponsive cyberbystander:
A proposed cyberbystander intervention model
of the mediated social forces inhibiting intervention online

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Abstract

Advancements in computer-mediated communication platforms, methods, and affordances have led to a convergence of the mass and interpersonal. It is therefore important to understand how users process messages in environments where aggression, harassment, and calls for help take place regularly. A comprehensive model of Cyberbystander Intervention is proposed, incorporating elements from the Hyperpersonal Model (Walther, 1996), Social Identity Model of Deindividuating Effects (Lea & Spears, 1991), and Social Impact Theory (Latané, 1981). This new model is necessary for future research in computer-mediated communication, regardless of the valence of the communication the cyberbystander observes.

Keywords: computer-mediated communication, cyberbystander, cyberbullying, social impact, theory, model

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Updating a classic model for the 21st Century

The Bystander Intervention Model (BIM) is a well-documented social psychological model that explains the conditions under which an individual will intervene in an emergency situation (Latané & Darley, 1970). The model has been replicated in a myriad of situations involving thousands of experimental and unwitting participants. The findings help explain why people are not as quick to help their fellow man (or woman) in a given emergency. The original BIM is comprehensive yet flexible to be applicable to nearly any type of emergency. However, this model has yet to be comprehensively tested in a mediated environment, especially in an environment where aggression and harassment takes place. It is necessary to update the BIM using computer-mediated communication (CMC) theories, which can offer commentary on how the offline model of bystander intervention may operate online. A more comprehensive model of cyberbystander intervention is proposed for future research in CMC, regardless of the valence of the communication the cyberbystander observes.

Introduction

The Bystander Intervention Model

There are five key steps that must occur in order for a bystander to intervene: (1) notice that something is happening, (2) interpret the event as an emergency, (3) take personal responsibility for providing assistance, (4) determine actions to take to assist, and (5) actually provide help. This model has been replicated in field and laboratory studies, using seemingly benign and clearly violent situations. The model has remained stable no matter the environment, gender of participants or victims, rewards, or priming.

Notice

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Obviously, one must first notice an event is happening before one can begin to decide to intervene. Various emergencies of increasing violence have been tested to try and determine general thresholds of attention necessary to complete this first step (Latané & Darley, 1970). Online, avoidance may be more natural than offline. A user's intended purpose of mediated communication can draw attention elsewhere (Wang, Tchernev, & Solloway, 2012). 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. This “other activity” is not as immediately interactive, and only portions of the communication may be visible. These exchanges, while in the peripheral, serve as both the impetus for cyberbystander action and reasons for non-intervention, and offer unique challenges to the CMC researcher.

Interpret

The next necessary step towards bystander intervention is interpreting the event as an actual emergency that needs some sort of mediation. 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. Interpretation is both the responsibility of the bystander and the victim or person in need (Latané & Nida, 1981). A meta-analysis of bystander literature found less of a bystander effect in dangerous (vs. non-dangerous) situations and when the perpetrator was present (vs. not present). These findings appear counterintuitive to the original bystander literature where physical safety and social risk (both at risk in dangerous situations where the perpetrator is present) should increase the bystander effect (Fischer, et al, 2011). This difference can be attributed to the cost-reward model (Dovidio et al., 2006) where clear emergencies lead to

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increased arousal, which can reduce the perceived cost of intervention (Fischer et al., 2006). The arousal experienced creates the discomfort of inaction, leading the bystander to take responsibility for action. Could cyberbystanders, then, either misinterpret or explain away the arousal they experience when witnessing cyberbullying? Or, as will be discussed later, is the incivility and impoliteness of the Internet too normative for it to be considered dangerous?

Bystanders have been found to rely on the communication, verbal and nonverbal, from others witnessing the event to determine if it is an emergency (Darley & Latané, 1970). This bystander effect, where apathy trumps altruism or intervention, is strongest in the face of pluralistic ignorance, or when no one else interprets the event as an emergency (Latané & Nida, 1981). In an experimental manipulation where all participants were the sole cyberbystanders (hence no one else to witness, communicate, or intervene) to cyberbullying, 68% reported a hostile/rude event in the chat room post-experiment yet only 12% actually intervened in the moment (Author, 2014). The perception of others' interpretations may affect cyberbystanders' interpretation of events in order to explain away their non-intervention. For example, if a troll finds its way on a friend's Facebook feed, the time stamp reveals it was posted nearly 18 hours ago, 20 people liked the post and no one has responded publically, the friends of the victim (cyberbystanders) may interpret this peripheral indirect communication (or non-communication) as cues this event is not an emergency. The rapid changes in technology, the near constant increase in access, and the moving target of determining who is saying what to whom and through what means *and* to what degree they are aware of its effects make this difficult and daunting. The proposed model suggests these peripheral cues build a case for the cyberbystander to determine the social impact of the harassing communication and the estimated social cost or risk of cyberintervention.

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Decide to help

At this stage of the bystander intervention model, the bystander must take personal responsibility to intervene (Latané & Darley, 1970). Here, diffusion of responsibility is most powerful leading to likely bystander effect. The mere presence of another bystander significantly reduces each bystanders' presumed responsibility. Latané's (1981) third equation of his Social Impact Theory, multiplication or division of impact, explains diffusion of responsibility well. How quickly a bystander will intervene will "decrease in proportion to the cube root of the number of bystanders believed to be present" (p. 349). In other online contexts, such as social networks, online discussion forums, and online games, these determinations can be difficult. For example, in a chat room or group message, determining the number of cyberbystanders present is relatively easier to quantify compared to a message board or number of Twitter users reading a given message.

Little experimental research has been done in cyberbystander intervention, but what has been found confirms some original findings of the BIM. Markey (2000) found "the bystander effect was virtually eliminated and help was received more quickly when specific individuals were asked for help by using their screen name" (p. 186). However, the way in which these messages are decoded, in this case calls for help, online and the processes through which cyberbystanders formulate their responses is unclear. What are the most important peripheral communicative cues in mediated environments to cyberbystanders? It is possible bystanders, and therefore cyberbystanders, become stuck at the personal responsibility step of the intervention model. Due to the asynchronicity of computer-mediated communication, it could be difficult for interlocutors 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, as Darley & Latané

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(1968) coin it, the other peripheral social impact information may push the individual towards non-intervention instead of intervention. These peripheral cues must be examined.

Determine how to help – Direct vs Indirect

Perceived self-efficacy and resources available are the most important factors influencing a bystander at this fourth step to determine how to intervene in an emergency (Cramer, McMaster, Bartell, & Dragna, 2006). Once a decision is made to intervene, the Bystander Intervention Model suggests there are two routes: direct and indirect. Direct interventions include obvious attempts to stop the emergency or assist in recovery and carry obvious costs and availability. In an initial experiment where all participants were cyberbystanders (Dillon, 2014), only 13% of cyberbystanders chose to intervene directly. Of that 13%, about half proceeded to either admonish or insult the bully for their behavior. Another third offered assistance to the victim, but not social support or acknowledgment of the bully's communication. The remaining cyberbystanders either laughed at the situation going on or made general comments about the situation to a non-present other. For a victim, either on or offline, as long as the emergency stops and assistance is granted, it may not matter whether the means were direct or indirect. But what about the indirect interventions that are not witnessed, but still lead to the assistance? Their efficacy in comparison to direct interventions has not been determined.

Indirect intervention options are less straightforward and may involve more micro-decisions. Though once a bystander decides to use indirect intervention (or detour as originally described), "it usually does not require a great deal of skill, strength, or courage to carry it out" (Latané & Darley, 1970, p. 35). Indirect intervention options include finding or securing resources that eventually lead to stopping the emergency or helping the victim. These could include finding a someone to rescue the victim or reporting to an anonymous hotline an assault

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or harassment. In the mediated environment, indirect intervention choices could contain less social risk than direct intervention in very straightforward, simple ways. However, if bystander behavior is an important indicator to other bystanders, indirect intervention could lead to perceptions of inaction. For example, Facebook allows users to report posts in their newsfeed as inappropriate, aggressive, or spam. A simple drop-down menu appears next to the post and with a simple click, a cyberbystander uses a indirect intervention in cyberbullying. Online indirect options may be less circumspect than those offline. But as will be discussed later, determining the perceived availability and efficacy of these options is necessary before suggesting them as actual options.

Provide help

The final bystander decision to provide help, be it direct or indirect, is the measurement of bystander intervention. Rates of actual intervention in experiments vary between 80% (solo bystander) to 0% (presence of multiple bystanders). Self-reports of bystanders intervening in bullying situations range from 35-55% (Obermann, 2011; Sutton & Smith, 1999). In an experimental design, while 80% of participants report noticing the cyberbullying, 68% used indirect interventions and only 13% used direct interventions (Author, 2014). How, when, and why cyberbystanders intervene, whether through direct or indirect options, needs to be examined in both field and laboratory experiments.

Bullying vs. Cyberbullying

An important and current context that the cyberbystander intervention model can, and should, be applied to is bullying. Bullying is operationally defined as willful and repeated “aggressive behavior that is persistent, intentional, and involves an imbalance of power and strength” (Hinduja & Patchin, 2010, p. 12). This includes repeated acts of assault, taunting,

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teasing, extortion, ostracism, and intimidation (Myers, McCaw, & Hemphill, 2011; Hawker & Boulton, 2000). Available studies suggest between 9% and 35% of adolescents have had some involvement in electronic aggression in the form harassment or bullying (Kowalski & Limber, 2007). Recent longitudinal studies have revealed victims of bullying are at a greater risk of developing psychiatric disorders such as generalized anxiety and panic disorders, agoraphobia, and anti-social personality disorders (Copeland, Wolke, Angold, & Costello, 2013). Many victims in turn become bullies of others (van der Wal, de Wit, & Hirasing, 2003). Any behavior that meets the repetitive, intentional, power imbalance definition is operationalized as bullying, and when this occurs online, as cyberbullying. Cyberbullying includes, but is not limited to, flaming, online gossips or rumors, teasing via CMC, reputation destruction and cyber-ostracism (Hinduja & Patchin, 2009). Research has suggested up to 85% of adolescents who are victims of cyberbullying are also victims during the school day (Juvonen & Gross, 2008).

The most obvious difference between bullying and cyberbullying may be the environment and mechanisms through which they are perpetuated: the former is face-to-face (FtF) and the latter is through computer-mediated communication (CMC). However, there are other specific characteristics of cyberbullying which function differently online than in person, and include anonymity, disinhibition, virality, limitless boundaries, and asynchronicity.

Anonymity

Very rarely does the physical bully come completely cloaked in darkness or disguise. At a minimum, the victim of traditional bullying may know the physical stature, gender, or general idea of the social identity of their bully. In cyberspace, identities are numerous and fluid. Email addresses, handles, usernames, gamer profiles, chat monikers, and even some social network profiles can be fabricated and virtually traceless. Technology exists where the cyberbully can

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hide IP addresses or mimic others' cell phone numbers. More creative cyberbullies can exploit the affordances of the media and build fake profiles, while not appearing to be completely anonymous, are not truthful in their information. Anonymity makes cyberbullying a difficult pollution to contain.

Anonymity breeds an environment friendly to disinhibition and deindividuation. The frequent anonymity and disinhibition of individuals online facilitates "one's ability to keep his or her identity unknown is a unique method of asserting dominance online" (Ybarra & Mitchell, 2004, p. 1313). However, the cyberbystander can exploit the anonymous environment if he or she chooses to. Much is known about the effects of anonymity on the cyberbully and cybervictim, but only assumptions are made about the effects on the cyberbystander. Anonymity protects the bully from authority figures and from the target seeking retaliation, though anonymity has also been found to be related to long-term cyber-aggression (Wright, 2013). Anonymity affords the same security to the cyberbystander as it does the cyberbully. The social impact and affordance of anonymity may not be readily apparent to the cyberbystander. This can be especially true when the cyberbystander must first balance the other factors compounding the social impact.

Disinhibition

Users in both anonymous and identified environments exhibit disinhibition. It refers to the lack of restraints on behavior due to the anonymity, invisibility, or asynchronicity of the communication. This online disinhibition effect, as Suler (2004) calls it, can lead to relatively benign or even positive online behavior, such as offers of social support (Joinson, 2001) or whistleblowing (Bodle, 2013). Unfortunately, disinhibition "makes it more difficult to control impulsive behavior, because the consequences of inappropriate behavior are not instant or immediately clear to the actor" (Hinduja & Patchin, 2009, p. 22). Suler (2004) and others (see

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Christopherson, 2007 for review) have identified key factors producing an online disinhibition effect, each of which is directly related to the enabling of cyberbullying: dissociative anonymity, invisibility, and dissociative imagination.

Dissociative anonymity leads people to check their true identity at their keyboard. When one's identity is stripped from the environment, limits on appropriate behaviors and consequences disappear as well. Dissociative anonymity occurs even if your name, network, and image are visible to others. Your physical and corporeal being is not represented online the same way it is offline, and therefore you are disassociated with the actions you take online. The invisibility of computer-mediated communication has been found to amplify online this inhibition effect (Barak, Boniel-Nissim, & Suler, 2008). This factor operates in tandem with dissociative anonymity. Without physically interacting with each other, we are without the nonverbal cues signify our words may be wounding another. Finally, the dissociative imagination the Internet creates can be intoxicating. By behaving differently under pseudonyms and trying on different identities in different contexts, people "may feel that the imaginary characters" used online are "separate and apart from the demands and responsibilities of the real world" (Suler, 2004, p. 324).

When in a state of deindividuation, CMC users will "orient themselves to a salient social category or group" and relate with other users on the basis of group membership (Walther, 2011; Lea, Spears, & de Groot, 2001). The Social Identity Model of Deindividuating Effects (SIDE; Lea & Spears, 1992) presumes users of CMC are wont towards this behavior since the media lacks social-context cues. The media "prevent users from attuning to others' individual characteristics, such as charisma, dominance, or affection" (Walther, 2011, p. 446). Anonymity of messages may depersonalize receivers, makes shared identities salient and triggers social

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identity needs (Lea & Spears, 1992). According to the SIDE model, when deindividuated, social identities, group membership, and associations

Virality

A single post online can go viral and either viewed or reposted multiple times (Slonje & Smith, 2007). Cyberbullying content is high-arousal and can contain rich media like videos or photographs. The virality, or the rapid social transmission of information via CMC, of a message could impact the likelihood of cyberbystander intervention. The textual persistence of CMC affords any slur, joke, or embarrassing video permanence. 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. Various heuristics of online communication can serve as sources of this perceived social risk. Cues such as time stamps, size of network, number of likes, favorites, shares, or retweets may impact a cyberbystander's inclination to intervene. The strength, immediacy, and number of these cues should affect the social impact on the cyberbystander.

Limitless boundaries

In traditional bullying, the victim is safe within the confines of their own home. Summers or weekends offered a reprieve from the assaults, teasing, and harassment. Victims would become adept at avoiding certain neighborhoods, hallways, or hangouts to remain safe. Physical bruises and injuries can heal or at least be concealed. In the 21st century, no adolescent or adult can avoid being caught in any cyber-corner. Over 90% of 12-17 year olds access the Internet daily, and 80% use this access specifically for socializing and communicating with their peers

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(Pew Research Center, 2011). Access to the Internet, endless technological opportunities to record or forward any media, and an increasing reliance on social networking for communication have created a perfect environment for cyberbullies.

The lack of direct supervision has been spotlighted as a particular issue in cyberbullying. Traditionally, bullies would have to ensure supervisors, parents, teachers, or other rule-enforcers do not witness their behavior. Online, the accessibility of the target is near constant and the enforcement of rules or norms of civility. Cyberbullying victims rarely report the harassment to teachers and parents, mainly out of fears their own access to technology would be limited (Agatston, Kowalski, & Limber, 2007). The social distance and perceived lack of social presence CMC affords is a contributing factor to the pervasiveness of cyberbullying.

Asynchronicity

If a person were to say the mean, hateful things most cyberbullies post on the Internet to their victim face-to-face, they would see the immediate reception and reaction of the message. However, one does not need to be present at the actual time of communication in order for the communication to be effective. Though CMC *should* affect social entrainment, or the “synchronization among partners with respect to their interdependent activities within a larger milieu of independence” (Walther, 1996, p. 23), it has been found users will simply adjust within the confines of CMC. The model suggests users “capitalize on the ability to edit, delete, and rewrite messages to make them reflect intended effects before sending them” (Walther, 2011, p. 461). The asynchronous nature of CMC allows more contemplation in message production than in spontaneous or simultaneous conversations (Trevino & Webster, 1992). There are rarely temporal commitments in CMC, that is, no real awkward silences or the receiver having insight of message production (save for video-conferencing or real-time video networking). The

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Hyperpersonal Model posits CMC capitalizes on the absence of regulation of “the flow of task and interpersonal interaction” facilitating interpersonal processes that might otherwise go unnoticed or unavailable (Hesse, Werner, & Altman, 1988). Cognitive resources, therefore, are free to be redirected into enhancing message production leading to inflated interpersonal effects (Walther, 2007).

The asynchronicity of cyberbullying is especially problematic for cyberbystanders. Cyberbystanders walk a fine line of being an actual bystander to someone needing help against an aggressive individual and happening upon a recording of more historical event. The asynchronicity of the communication manipulates the immediacy of the emergency. Asynchronicity could be mistaken for less interactive than say, FtF interpersonal communication. However, as Walther’s (1996) Hyperpersonal Model suggests, CMC, even asynchronous, can still be rich in cues and perceived as interactive.

Online Differences in Bystander Intervention Model

Latané and Darley’s (1970) Bystander Intervention Model can help us predict how a bystander would react in real life. The model should remain stable in the mediated environment though the previously discussed differences may produce a stronger *cyberbystander* effect. Latané and Darley (1970) found emergencies where their model is most appropriate share five clear criteria: threat or actual harm, rare or unusual, the event is neither predictable or expected, bystanders have a range of reactions available, and immediate action is necessary. Some of these criteria may explain why cyberbystanders stumble at one point or another in the process model. However, cyberbystanders can also exploit the affordances of the mediated environment in order to be more vigilant passers-by. Comparing these criteria can identify the areas of the bystander

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intervention model that do not hold true in the mediate environment and how communication theories can fill these gaps.

Threat or actual harm

Interpreting an event as an emergency necessitating assistance is an essential part of the actual model. Cyberbystanders have limited concrete evidence of actual harm to a cyberbullying victim. Certainly the actual content of the harassing message is available for interpretation. But without intonation, facial expressions, and the message receiver's reaction, how is a cyberbystander to delineate between threatening words or joking, harmless words? The most egregious of cyberbullying, like actual threats of harm, photographs or videos depicting or communicating threats, or explicit ostracism leave little room for interpretation.

Walther's (1996) Hyperpersonal Model suggests, "CMC may facilitate impressions and relationships online that exceed the desirability and intimacy that occur in parallel off-line interactions (Walther, 2011). Compared to a 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). Regardless of the richness of the CMC, or the cues included visually or textually, receivers still aim to "fill in the blanks with regard to missing information" (Walther, 1996). Receivers will often over idealize initial clues from the CMC on the basis of group similarity or interpersonal attraction leading to deindividuation. This model claims CMC is *more* personal than face-to-face (FtF) communication because it affords the parties involved access to a myriad of information. 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

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immediately framed in a variety of contexts leading to numerous reactions, be it communicative or behavioral.

Subtler communication can still cause harm to the cybervictim but is ambiguous enough for cyberbystanders that they go either unnoticed or misinterpreted. Without literal communication from the victim that they find the comments harassing or harmful, cyberbystanders must rely on peripheral cues. We know 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? Heuristics like the number of likes a post receives, how often it is shared, forwarded, retweeted, or "favorited" may confuse a cyberbystander. Is this communication truly harmful or is it more ambiguous?

Unusual or rare

For a bystander to intervene, they must first notice the event initially and should be some sort of occurrence the bystander has not encountered often. Computer-mediated communication is no longer a novel means to socialize and communicate. Users have most likely been exposed to the entire spectrum of valence and tones in their time online. Since CMC is now a normative behavior, behaviors exhibited online have normalized as well. Social Information Processing Theory (SIP; Walther, 1992) can also offer explanation of why CMC users are adept and conditioned to accepting unusual, cues-filtered-out means of interpersonal communication. It assumes an accrual approach, where it's the bucket of information accumulated, not any one drip of information.

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Other communication strategies may have become so normal online that they are barely noticed. Online discussions can become uncivil, impolite, and downright nasty rather quickly and could appear to be the norm (Papacharissi, 2004; Shils, 1992). Unfortunately, cyberbystanders may assume aggressive, harassing communication is more the norm than the exception online. Could then, uncivil, harassing, aggressive comments directed towards an individual, rather than a general tone, increase polarization as well? Are lines drawn in the matrix so clearly that cyberbystanders choose no side rather than erring on the wrong side?

Various reactions

While the specifics of the intervention may vary in terms of efficacy, what is common in most every emergency is some sort of action is required. For example, a fire could be put out using water, an extinguisher or retardant, smothering, or letting it burn out by limiting its fuel. Reactions to emergencies online can be also be varied, but a user's understanding of this variety may be limited. As previously discussed, of the choices of how to react, bystanders can choose to directly intervene or to use indirect actions. Detour interventions, as Latané & Darley (1970) describe them "consist of reporting the emergency to the relevant authority rather than attempting to cope with it directly" (p. 35). Cyberbystanders may have more indirect intervention options available to them, but they must first be aware of these affordances.

Requires immediate action

Immediacy in a mediated environment is a gray area. Are requirements of immediate action measured from the victim, aggressor, or bystander's perspective? How are the cultural and situational norms of these requirements determined by the cyberbystander? Due to the asynchronicity of computer-mediated communication, is anyone really considered a bystander? Philosophy aside, the limited research in cyberbystander intervention has shown users do

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consider themselves cyberbystanders even if the incident has been dealt with by the time they come across the evidence online (Markey, 2000). Help forums and wikis on the Internet are constantly re-referenced and updated even if solutions have already been offered, tried, and deemed successful. The threshold of what a cyberbystander deems “immediate” may vary from medium to medium, situation, or context. These specific differences need to be tested in both the field and laboratory to better understand their mediating effects.

Possible Points of Cyberintervention

In the four decades since Latané and Darley’s groundbreaking experiments, their model has held steady in hundreds, if not thousands, of iterations. Bystander, victim, and situational characteristics have been found to increase the likelihood of bystander intervention. Some of these findings, if exacerbated in the mediated setting, may increase the likelihood of cyberbystander intervention.

Bystander characteristics

A cyberbystander’s specific purpose for being in the mediated environment should play a role. If an individual is visiting an online message board like Reddit to find information on a specific subject, they may not recognize the harassment of one individual. When scrolling through a Facebook feed searching for an update on a specific friend, one may not recognize the subtle insults being hurled at another. Attention may be situational but working memory is also an individual characteristic of the cyberbystander.

Victim characteristics

Similarity and categorization of individuals in distress is an important and powerful heuristic to the bystander. It has been shown to affect bystanders at each step of the bystander intervention model. The results suggested bystanders in emergency situations may look to group

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identity of all those present in order to decide to act, specifically affecting how ambiguous the situation may appear. Some research has found bystanders relied on social information about the victim to determine actions (Levine, Cassidy, Brazier, and Reicher, 2002) but have also found bystanders need not have strong, affiliative ties victims in order to intervene (Levine & Crowther, 2008). In fact, this second study found mere social categorical sameness facilitates helping behavior. Their results suggest “social category membership and group size interact to promote helping only when the victim in need is also an in-group member” (Levine & Crowther, 2008, p. 1437).

If affiliation with victims increases bystander intervention offline, the connections visible online may mitigate the dissociative anonymity typical in cyberbullying situations. Rather than the social and spatial distance between the bystander and being the main characteristic maximizing the bystander effect, multiple connections in social network and communication could be more salient. Similar to the attempt of “circles” or “groups” in Google+, if each individual communicating online understood how connected, even tenuously, they were to their interlocutors, it could increase cyberbystander intervention and minimize the cyberbystander effect. Additionally, if these same connections are visible and salient between cybervictim and cyberbully, some of the ambiguity of the communication may also be attenuated. If a cyberbully is picking on someone they have few connections with or only negatively interact, that could be a cue to a bystander the communication is clearly not okay.

Situational characteristics

In offline, face-to-face bystander research, indirect intervention choices use considerably more energy than direct intervention. If a student wanders by a poor soul being shoved into a locker by a group of bullies, they may talk themselves out of directly intervening (e.g., physical,

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social threat). Instead, they vow to find a teacher to help the victim either out of the locker or to punish the bullies. Now the student needs to find a teacher, describe what they witnessed, describe the location and the victim, all while trying not to get involved. More than likely, these four steps are four too many and the indirect intervention remains the road less traveled.

Exploitation of the anonymity and deindividuation the mediated environment affords can open more indirect intervention options, further reducing the social risk. Some online comment threads allow “down votes” or the community at large to collapse entire comment threads if deemed inappropriate or too “trollish” (e.g., comments on most newspaper or media websites). General distaste or disapproval of the crowd, or a flood of indirect interventions, could lead to eventual direct intervention or cultural, norm shifts.

Proposed Cyberbystander Intervention Model

A new Cyberbystander Intervention Model is proposed, updating Latané and Darley’s (1970) original Bystander Intervention Model with components from Latané’s (1981) Social Impact Theory (see Figure 1). Cyberbystanders’ attention to cyber-emergencies will be attenuated by Latané’s third principle, multiplication or division of impact (indicated by $I=f(1/SIN)$). This same principle should disrupt a cyberbystander’s interpretation of any emergency they do eventually notice. Should a cyberbystander notice a cyber-event and recognize it as an emergency, Latané’s first law of social forces, indicated by $I=f(SIN)$, and the second principle, the psychosocial law, indicated by $I=sN^t$, should moderate any movement of the cyberbystander towards personal responsibility to help. Once a cyberbystander takes personal responsibility to intervene, the perceived affordances of indirect options in the medium will determine actual intervention. If there are no perceived indirect options to intervene, the cyberbystander has only direct intervention choices. More energy and time would be necessary

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for direct intervention and characteristics of the cyberbystander (e.g., affiliation with victim), situation (e.g., nature of the original cyberemergency), and cybervictim (e.g., communication indicating specific assistance requested or needed) will determine direct intervention outcomes.

Social impact theory

Social impact theory (Latané, 1981) takes into account the various factors and forces involved to determine the social impact of event. Each principle of the theory involves some function of the strength (S), immediacy (I), and number (N). The theory is described in terms similar to a light bulb, where 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 hypothesis of social impact is based, in part from conformity 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 and pluralistic ignorance (Latané & Darley, 1968; Latané & Nida, 1981).

Social Impact Theory has admitted limitations and has been expanded by Latané (1996) to a Dynamic Social Impact Theory. Latané (1981) assumed his model "views people as passive recipients of social impact and not as active seekers" (p. 355). In this proposed model, if tested in computer-mediated communication contexts applying some assumptions of CMC theories like the Hyperpersonal Model (Walther, 1996) and SIDE (Lea & Spears, 1991), we may realize online users are not passively absorbing any social impact of their cyber-environment. Rather than the focus of the social communication, this model is applied to understand the cyberbystander rather than the cybervictim. Therefore, each application is pivoted somewhat

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from its original conceptualization. The cyberbystander should be affected by the social impact not only on the target (cybervictim) but perhaps themselves when weighing intervention options (including non-intervention).

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 component is particularly applicable to bullying and cyberbullying since in the operationalization of such phenomena, power imbalance is necessary to be quantified as such (Hinduja & Patchin, 2009). The cyberbystander must determine the status of the perpetrator and the status of the victim. If the victim is of lower status in relation to *both* the cyberbystander and perpetrator, the social impact for the *cyberbystander* (which is really what we’re concerned about) would be diminished. If this one component of the equation does not reach a specific threshold for the cyberbystander, he or she will not take personal responsibility to help.

The second component of the social forces principle is immediacy. Latané defines immediacy as “closeness in space or time and [the] absence of intervening barriers or filters” (p. 344). The asynchronicity of computer-mediated communication can complicate a cyberbystander’s determination of immediacy. What heuristic cues are involved in increasing the immediacy of cyber bullying? For example, if a post bullying another person is 18 hours old, would that have less strength or immediacy to the victim and/or the bystander than a post that is only 18 minutes old? How do cyberbystanders determine immediacy if time stamps are not available? I suspect cyberbystanders recognize these cues and use them in cases against direct intervention.

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Social proximity and social presence should also affect determinants of immediacy online. Research in the effects of CMC in the effectiveness of group learning suggests media low in social presence results in deindividuation (Kreijns, Kirschner, Jochems, & VanBuren, 2004). 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, 1992). 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” (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. It would be expected the cyberbystander will rely on the expressed and assumed relationship ties between the victim and perpetrator to determine immediacy in the given emergent situation. It is also expected the cyberbystander’s *own* relational ties with both the victim and the perpetrator, (and I suspect more the perpetrator than the victim) would mediate the effects of any immediacy felt between the other parties.

The third component of the first principle is sheer quantity. Latané likens the effects of each person present for the social event under the microscope like another light bulb lighting a surface. This presumed quantity of individuals witnessing the cyberemergency should be a cue to the cyberbystander this is clearly an emergency (step 2 of the original bystander intervention model). At the same time, though the social impact of that multitude of individuals 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

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one may not know the truth number of individuals who witnessed an event. 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? In relation to others or just towards the cyberbystander? These questions of presence would affect cyberbystanders' perception of the number of individuals present as well.

Principle 2: Psychosocial Law, $I = sN^t$, $t < 1$. Latané (1981) drew from a psychophysical law to describe his second principle, “the amount of social impact, I , experienced will equal some power, t , of the number of sources, N , times a scaling constant, s ” (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. Latané and Harkins (1976) found the greatest increase in stage fright and anxiety for a speaker was between audience members, and leveled substantially as the audience size increased. Even in Asch's (1956) data, conformity did not increase beyond a group of three.

It is suspected the first person, or few people, to agree, like, laugh at, favorite, or generally support a perpetrator's treatment of a victim online would be the most powerful damper on a cyberbystander's assumption of personal responsibility to intervene. This assumption could be tested quite easily by manipulating certain cues (see study proposal). Additionally, the “biggest increment in social inhibition should occur with the addition of the first other bystander; subsequent ones should have decreasing marginal impact” (Latané, 1981, p. 349). In near-synchronous computer-mediated communication contexts (e.g., chat rooms, group

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text or instant messages, email correspondence, online games), the number of cyberbystanders could be tested in increasing amounts to determine if this principle is a mediator.

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). Latané (1981) describes an example of a person giving a speech in front of 10 people vs. 100 people. The more people present, the more pressure the speaker feels. In various studies Latané and Harkins found the larger the audience the more tension and embarrassment speaker felt (Latané & Harkins, 1976). The audience, however, would feel a divided impact. The larger the audience, keeping the speaker constant (at one), the less likely the argument will be as effective if the audience were smaller. The audience attending a concert in a small jazz club will have a decidedly different experience in terms of connecting with the performer than if the concert were held at Madison Square Garden.

This principle should act at two different points of the original bystander model. First, if an emergency or perpetration by one individual is directed towards multiple targets (or is not specific enough of a statement), the cyberbystander who comes upon this emergency will either notice or not recognize it as an emergency. For example, if a racist tweet towards a general group (#angrywhitemen), cyberbystanders would probably not notice it as cyberharassment or at least reject it as an emergency necessitating intervention. If a racist tweet is more specific in its target (e.g., @Colbert is an #angrywhiteman), the wattage of the bulb is more focused and would have more of an impact on a cyberbystander.

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On the other hand, the more individuals who appear to witness and not intervene in an emergency would have the same effect online as it has been found offline. Besides the sheer *possible* number of individuals who are serving (or have served) as cyberbystanders, immediacy can serve as a pseudo-bystander in the limited context of CMC. By this, the impact of the *recency* helps the cyberbystander estimate how many other cyberbystanders could have seen the message. For example, a cyberbullying tweet appeared on Twitter 4hrs ago. In that time, four people retweeted or favorited the message. The average number of followers among these four people is 80. A cyberbystander could see a minimum of 80 people had seen this message. If the cyberbystander chooses to respond directly to this message, that's 80 other individuals to judge the intervention. Additionally, that's 80 cyberbystanders amplifying the cyberbystander effect. If the cyberbystander recognizes this division or multiplication of impact, but still experiences the dissonance of inaction, they may be pushed more towards seeking indirect interventions compared to the direct intervention that seems most uncomfortable. Continuing with the previous example, a private message to the victim or the original perpetrator could be a course of action that assuages the anxiety the cyberbystander feels.

Conclusions

The Bystander Intervention Model appears at first glance to be a legitimate model to use to explain cyberbystanders' reactions to cyberbullying. There are important differences, however, between on and offline environments, namely anonymity, disinhibition (and resulting deindividuation), virality, limitless boundaries, and asynchronicity. Incorporating the three main principles of Latané's Social Impact Theory (1981) at key points of the bystander intervention model can account for or at least test the effects of these differences on *cyberbystander* intervention. There are multiple platforms and media in which this specific point could be tested.

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Other experiments examining perceptions of these affordances, perception of the number of other cyberbystanders, and more investigation into non-intervention would continue to gauge the proposed model's stability.

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Figure 1 Proposed Cyberbystander Intervention Model

