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AN INVESTIGATION INTO CYBERBULLYING PERPETRATION: A ROUTINE ACTIVITY PERSPECTIVE

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Abstract

Cyberbullying, a new form of aggressive behavior occurring on the Internet, has captured much attention of the popular press and academia. Despite extensive media reports, the investigation of cyberbullying perpetration is still in its infancy. Current research on cyberbullying is hindered by a lack of strong theoretical guidance, and has often centered the focus on victimization. In addition, much of the research effort has been devoted to understanding cyberbullying among adolescents, with a paucity of research initiated at the collegiate level. To address this research gap, we draw on routine activity theory to investigate cyberbullying perpetration. Specifically, we construct a research model that examines how aggressive dispositions, attitude toward the victim, and online disinhibition are associated with cyberbullying perpetration. We plan to test our research model with a sample of university students. We believe that our study will advance the understanding of cyberbullying and provide a solid foundation for future theoretical investigation.

Keywords: Cyberbullying, Routine activity theory, Aggression, Online disinhibition
1 INTRODUCTION

With a growing dependence on technologies in our daily activities, many people, especially the youth, are living with the Internet. Every day, they spend a significant amount of time socializing with friends online, searching and browsing online information, and playing online games. While the Internet brings unprecedented convenience to everyday life, it also simmers a breeding ground for various types of undesirable behaviors (e.g., Bose & Leung 2013; Chung et al. 2006), including cyberbullying (Tokunaga 2010).

Identified as a critical issue affecting youths today, cyberbullying refers to any behavior performed through Internet technologies to inflict harm or discomfort on others (Slonje et al. 2013). Prior studies have shown that nearly half of the adolescents surveyed were cyberbullying victims and about one fourth of them were cyberbullying perpetrators (Aricak et al. 2008; Huang & Chou 2010; Raskauskas & Stoltz 2007; Tokunaga 2010). Like victims of traditional playground bullying, those who fall victim to cyberbullying suffer substantial negative outcomes such as loneliness, depression, anxiety, low self-esteem, social dissatisfaction, negative school attitudes, and substance abuse, with the most devastating outcomes being physical harm and suicide (Slonje et al. 2013). For instance, a 15-year old Canadian girl hanged herself after posting an appeal to YouTube, a harrowing video that describes how she was victimized by cyberbullies (Noronha 2012). The alarming psychosocial and physical problems resulting from cyberbullying victimization, coupled with the high prevalence rate of cyberbullying, underscore the serious nature of this phenomenon.

Cyberbullying has only recently received great attention in the academic field. Our review of prior literature shows that the majority of extant cyberbullying studies are descriptive in nature; the lack of strong theoretical guidance characterizing these studies hinders scientific understanding of this phenomenon. In addition, most of the studies conducted focused on examining factors associated with cyberbullying victimization (e.g., Law & Fung 2013; Reyns 2013); there is a scarcity of theoretical investigation into cyberbullying perpetration. Furthermore, much of the scholarly attention on cyberbullying has been directed to adolescents, with a paucity of research initiated at the collegiate level (Smith et al. 2012). Preliminary empirical evidence confirms that cyberbullying is prevalent on university campuses, suggesting that it is very much affecting the well beings of collegiate population, and thus a cause for serious concern (Huang & Chou 2010). Finally, cyberbullying has thus far received scant attention from information systems (IS) researchers, and is typically discussed as part of the greater concern for online security and privacy (e.g., Mishra et al. 2012). Only recently have IS researchers begun to study this phenomenon in its own right (e.g., Xiao & Wong 2013). The research in cyberbullying is still in its infancy in the IS field; little is known about whether findings from the offline context could extent to the online environment, or how the online environment fosters the occurrence of cyberbullying perpetration. As a form of bullying facilitated/enabled by information and communication technology, cyberbullying and its impact are IS-related problems worthy of serious scholarly investigation.

To address the research gaps discussed above, this study seeks to advance the theoretical understanding of cyberbullying perpetration among university students. Specifically, we draw on routine activity theory to explain the development of cyberbullying perpetration. We endeavor to answer the following research question:

What are the personal and contextual factors that motivate people to engage in cyberbullying perpetration?

We have organized the reminder of this paper as follows. First, we provide a review of prior literature on cyberbullying. Then, we introduce our research model explaining cyberbullying perpetration and present related hypotheses. Next, we describe our planned research design and conclude the paper by discussing the potential theoretical and practical implications of this study.
2 THEORETICAL FOUNDATION

2.1 Defining Cyberbullying

Cyberbullying is considered a new form of bullying using technologies (Li 2006). Different terminologies have been used in prior research to describe bullying in the cyberspace, including electronic bullying (Raskauskas & Stoltz 2007), Internet bullying (Williams & Guerra 2007), Internet harassment (Ybarra & Mitchell 2004), and cyberbullying (Vandebosch & van Cleemput 2009), with the last term being most popular and widely adopted. Most of the previous studies derived the definition of cyberbullying from the traditional bullying literature. For instance, Patchin and Hinduja (2006) defined cyberbullying “as willful and repeated harm inflicted through the medium of electronic text” (p.152). On the basis of a comprehensive review of past literature, Tokunaga (2010) defined cyberbullying as “any behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others” (p.278).

2.2 Prior Research on Cyberbullying

Over the last decade, we have witnessed increasing scholarly attention directed towards cyberbullying. Existing studies on cyberbullying mostly focuses on (1) the comparison between playground bullying and cyberbullying (Casas et al. 2013; DeSmet et al. 2014; Fenaughty & Harré 2013); (2) the nature, definition, and measurement of cyberbullying (Gámez-Guadix et al. 2014; Slonje et al. 2013; Thomas et al. 2014); and (3) the characteristics (or profiles) of perpetrators and victims (Kwan & Skoric 2013; Navarro & Jasinski 2012; Roberto et al. 2014). Furthermore, a majority of studies focused on factors associated with cyberbullying victimization as well as the related coping strategies (e.g., Völlink et al. 2013). There are relatively few studies examining cyberbullying perpetration in the existing literature.

Among the limited number of studies on cyberbullying perpetration, most focused on investigating demographic, perceptual, and motivational factors associated with cyberbullying perpetration. For example, Slonje et al. (2013) found that cyberbullying often increases with age. Williams and Guerra (2007) noted that individuals from cultures that are tolerant of cyberbullying behavior are more likely to perpetrate such acts. Varjas et al. (2010) showed that revengefulness, boredom, jealousy, trying out a new persona, and redirecting feelings are the major motives associated with cyberbullying behavior. Prior research has also revealed that aggressive dispositions are strongly associated with individuals’ bullying behaviors, providing strong evidence that proactive and reactive aggressions are salient predictors of bullying in both offline and online settings (Burton et al. 2013; Salmivalli & Nieminen 2002).

2.3 Routine Activity Theory

Rooted in the criminology literature, routine activity theory was advanced by Cohen and Felson (1979) to investigate the myth of increasing crimes after World War II. The authors observed that, after the war ended, there was an increasing trend for housewives to go to work, leaving their houses unguarded and consequently more vulnerable to break-ins. In addition, a more prosperous society also offered more opportunities for crime (e.g., there was more to steal compared to in the past). Routine activity theory posits that a criminal offense is likely to emerge where there is a likely offender, who meets a suitable target in the absence of a capable guardian. The theory thus highlights three essential factors that lead to the occurrence of a crime, including (1) presence of a likely offender, (2) availability of a suitable target, and (3) absence of a capable guardian.

Routine activity theory has seen its application in the investigation of a wide range of aggressive behaviors and offenses on the Internet, such as identify theft (Reyns 2013), Internet consumer fraud (Pratt et al. 2010), and online sex experience victimization (Marcum et al. 2010). Recently, IS researchers have also begun to adopt this theoretical perspective to examine cybercrimes. For example, Kigerl (2012) also subscribed to this theory to examine the relationship between national wealth and
cybercrimes, and showed that wealthier nations with more Internet users per capita had a higher cybercrime activity.

In the context of cyberbullying, while there have been a few studies that investigate the phenomenon under the guidance of routine activity theory, most focus on cyberbullying victimization and are descriptive in nature. For instance, Reins (2013) applied the theory to identify potential factors contributing to online victimization in a sample of college undergraduates, and found that respondents who spend a large amount of time using the Internet are more likely to be victimized. Similarly, Mesch (2009) showed that young people who have an active profile on social networking sites and participate in chat rooms are more likely to be bullied online. To our best knowledge, there is a dearth of research that draws on routine activity theory to examine cyberbullying perpetration.

3 RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

Routine activity theory holds that changes in societal routine activities create new grounds for offenses to take place (Cohen & Felson 1979; Felson & Cohen 1980). In the era of information technology, individuals are devoting more and more time to conducting activities online (Daily 2013). Our society as a whole is been experiencing a shift in its routine activities – not a shift in activities away from home as occurred post-war, but a shift towards greater time spent in online spaces, such as social networking sites, instant messengers, and chatrooms and forums. In accordance with the predictions of routine activity theory, such change in the societal routine activities will likely establish a breeding ground for the proliferation of online offenses such as cyberbullying that necessitates serious scholarly investigations.

Routine activity theory highlights three key elements in the occurrence of an offense, including a likely offender, a suitable target, and a lack of a capable guardianship. In this study, we draw inspiration from this theory to identify factors contributing to cyberbullying perpetration and construct our research model. Specifically, we posit that a likely offender is captured in an individual’s aggressive dispositions, a suitable target is represented by an individual toward whom the offender holds negative attitude, and a lack of a capable guardianship is reflected by the disinhibited online environment perceived by the individual. Figure 1 depicts our research model.

![Figure 1. Proposed research model](image)
3.1 Aggressive Dispositions and Cyberbullying Perpetration

In this study, we expect that individuals with aggressive dispositions (i.e., proactive aggression and/or reactive aggression) are likely offender of cyberbullying perpetration. Proactive aggression and reactive aggression have been identified in prior research as two major types of dispositions closely associated with a broad range of aggressive behaviors in the offline context (Ang et al. 2014; Aricak et al. 2008; Arsenio et al. 2009; Burton et al. 2013). Proactively aggressive individuals view aggressive behaviors as a means to obtain resources, security, and competence (Crick & Dodge 1996; Dodge & Coie 1987). They are goal-oriented, deliberated, and “cold-blooded” when enacting the bullying acts (Boulton & Smith 1994). Offenses induced by proactive aggression are generally premeditated and internalized over time (Cottle 2004; McAdams & Lambie 2003). On the other hand, reactively aggressive individuals consider aggressive behaviors a reaction to provocation (Crick & Dodge 1996; Dodge & Coie 1987). They are “hot-blooded” and easily triggered by anger or misperceived cues (Wood & Gross 2002). When triggered, they tend to adopt an emotion-laden, defensive yet aggressive response as a way to defend themselves (Boulton & Smith 1994; Crick & Dodge 1996). Cyberbullying may be adopted by individuals with aggressive dispositions as a mean to obtain desired materials/psychological rewards or a way to cope with internal frustration/anger resulting from provocation.

The ubiquity and widespread use of information communication technologies have allowed individuals with aggressive dispositions more opportunities to achieve different goals with cyberbullying. For instance, proactively aggressive individuals could send out threatening messages to victims through instant messaging, intimidating them for resources or authorities (Bolton et al. 2013), whereas reactively aggressive individuals could post harassing messages to victims’ social networking sites to cope with the victims’ provocations in prior interactions (Bolton et al. 2013). Findings from previous studies have evidenced the significant relationships between proactive aggression, reactive aggression, and cyberbullying perpetration. For instance, Renati, Berrone, and Zanetti (2012) found that participants who identified themselves as cyberbullies showed significantly higher level of proactive and reactive aggressions. Ang et al. (2014) also suggested that proactive aggression was a potential predictor of cyberbullying perpetration in their mixed-sample study of American and Singaporean adolescents. Building on this line of literature, we expect that individuals with aggressive depositions are more likely to perpetrate cyberbullying. Thus, we hypothesize that:

\[ H1a: \text{Proactive aggression is positively related to cyberbullying perpetration.} \]

\[ H1b: \text{Reactive aggression is positively related to cyberbullying perpetration.} \]

3.2 Attitude toward the Victim and Cyberbullying Perpetration

In this study, we conceptualize “suitable target” as an individual toward whom the offender holds negative attitude and identify disliking, jealousy, and revengefulness as the primary states of mind that drive the offender to engage in cyberbullying perpetration (Hinduja & Patchin 2007; Smith et al. 2008; Turkel 2007; Varjas et al. 2010). Empirical evidence suggests that individuals may bully a target online because they do not like that person (Hinduja & Patchin 2007), they are envious or resent that person (Varjas et al. 2010), or they are angered by the target and thus want get back via cyberbullying (Varjas et al. 2010). Thus, we hypothesize that:

\[ H2: \text{(Negative) attitude toward the victim is positively related to cyberbullying perpetration.} \]

3.3 Online Disinhibition and Cyberbullying Perpetration

In this study, we expect that perception of online disinhibition fosters cyberbullying perpetration. Hyperpersonal communication theory suggests that characteristics of online environment such as anonymity, invisibility, and minimization of authority (akin to the absence of guardianship in the offline setting) give rise to disinhibited psychological state, a loosening or even complete abandoning of social restrictions and inhibitions (Walther 1996). When individuals perceive high level of online disinhibition,
they may be encouraged to engage in behaviors (e.g., bullying others) that they would normally not have courage to perform in offline settings (Schouten et al. 2007).

Previous empirical studies have provided evidence for the relationship between online disinhibition and cyberbullying perpetration. For instance, in an exploratory study of high school students, Varjas et al. (2010) observed that the perception of being disinhibited in the online environment was one of the salient factors that promoted cyberbullying perpetration. Raskauskas and Stoltz (2007) also found that the disinhibited feeling distanced perpetrators from their targets physically and emotionally, and thus encouraged the occurrence of cyberbullying. Therefore, we hypothesize that:

*H3: Online disinhibition is positively related to cyberbullying perpetration.*

### 4 Research Methodology and Data Analysis

#### 4.1 Measures

Measurement items for proactive aggression, reactive aggression and online disinhibition were adapted from prior literature with minor modification to fit the cyberbullying research context. We borrowed the measures for proactive aggression (e.g., I had fights with others to show who was on top), and reactive aggression (e.g., I yelled at others when they annoyed me) from Raine et al. (2006), and measures for online disinhibition (e.g., I feel less nervous when sharing personal information online) from Schouten et al. (2007). Furthermore, we developed measurement items for negative attitude toward the victim (e.g., I did not like that person) and cyberbullying perpetration (e.g., I disseminated private information/messages or posted images/videos without permission) through synthesizing extant literature. As the current research context deals with negative behaviors in the online environment, we also included the social desirability scale (e.g., I sometimes try to get even, rather than forgive and forget) from Reynolds (1982) to detect potential response bias. All the constructs were measured on 7-point Likert scales from (1) strongly disagree to (7) strongly agree.

#### 4.2 Pre-test

We conducted a pre-test with 50 undergraduate and postgraduate students to solicit feedback on the questionnaire and measurement items. In particular, we verified (1) clarity of instructions, (2) clarity of wordings, (3) relevance of the items, (4) absence of biased words and phrases, (5) use of standard English, (6) formatting of the questionnaire (Fowler 2009). Other than minor modifications in formatting, no major problems surfaced in the pre-test.

#### 4.3 Data Collection (Planned)

We plan to collect data from a group of active SNS users through posting recruitment posters on university campuses. Interested participants could follow the URL provided in the poster and participate in a self-administered online survey. The online survey will brief potential participants about the purpose of the study, as well as inform them that participation is anonymous and that all the data collected will be presented in an aggregated form without personal identification. The online questionnaire will consist of two parts: (1) demographic information and (2) factors associated with proposed research model. We plan to collect 400 responses to test the proposed research model.

#### 4.4 Data Analysis Technique (Planned)

We will employ Partial Least Square (PLS) to perform the statistical tests in this study for two reasons: (1) PLS does not have any distributional assumption (Wixom & Watson 2001), and hence is more appropriate in the negative behavioral research (such as cyberbullying), where data generally does not fit the normal distribution (e.g., Xiao & Wong 2012), and (2) PLS provides robust tests to assess both
measurement model (i.e., psychometric properties of the measurement items) and structural model (i.e., casual relationships among constructs) simultaneously (Chin 1998; Hair et al. 2014).

5 EXPECTED CONTRIBUTIONS AND CONCLUSION

This study aims to investigate the personal and environmental factors predicting cyberbullying perpetration. Building on routine activity theory, we developed a research model to examine how proactive aggression, reactive aggression, (negative) attitude toward the victim, and online disinhibition drive cyberbullying perpetration. We plan to test our research model with active SNS users and analyze data using structural equation modeling techniques.

In terms of theoretical contribution, our study is expected to contribute to the advancement of knowledge in the cyberbullying literature. First, extant research in cyberbullying is characterized by a general lack of theoretical guidance, which has stymied the accumulation of knowledge in this area. Our study is one of the first attempts to investigate cyberbullying perpetration in a rigorous, theory-driven manner. The findings of our study will provide a solid foundation for future cyberbullying research. Second, our study also contributes to literature on routine activity theory by extending its application to the investigation of cyberbullying perpetration.

In terms of practical contribution, our study will provide guidance to school counselors, parents, and the government agencies on how to cope with cyberbullying perpetration. First, the findings of our study will inform school counselors and parents about potential criteria to identify likely offenders and suitable targets of cyberbullying. Relevant educational programs can then be offered to help students overcome their aggressive impulse and/or resolve conflict among students. Second, our study also provides insights to government agencies on the role online environment plays in encouraging cyberbullying. Carefully designed educational campaigns can then be introduced to raise public awareness of Internet etiquette, acceptable online behaviors, and cyberspace offenses in the future.

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