A Critical Review of the Current Cyber Bullying Research: Definitional, Theoretical and Methodological Issues. Where Do We Go From Here?

Katrina A. Newey
Natasha Magson
University of Western Sydney
k.newey@uws.edu.au.

In a review of general media reports, documented school incidents, individual anecdotes and direct observation of behaviours. Rigby (2002) claims bullying orientated behaviours existed within the schoolyard long before it became a focus for empirical researchers. Dan Olweus is considered the “pioneer” researcher that first brought aggressive school behaviours to empirical attention in the early 1970’s (Olweus, 1993). More recently the academic disciplines have shown a sharp increase in more directed research seeking to understand bullying behaviours occurring within the workplace, classroom, and via new communication technologies (Patchin & Hinduja, 2006; Rigby, 2002). Possibly most notably, research has also increased with regard to the recognition of bullying as an invasive school issue, with harmful long-term effects often being documented for many students and school communities (Hinduja & Patchin, 2007; Li, 2006; Mason, 2008). With recent widespread use of new technologies, school students today have expanded traditional bullying techniques into the virtual environment. This is known as cyber bullying, and includes the use of mobile phones, iPads, online chat, email, websites, and instant messenger (IMs) social networking sites to bully others (Aricak et al., 2008; Smith et al., 2008).

Moreover, cyber bullying has become an increasingly emergent problem in our schools, placing students’ psychological health, safety, and well-being at risk (Li, 2008; Mason, 2008). However many questions are left unanswered since cyber bullying is a relatively new area of research, little is known about cyber bullying in Australian schools. For example, Australian research is yet to elucidate: the nature and prevalence rates for different cyber bullying forms; the longitudinal impact of cyber bullying for bullies, targets, bystanders, families, and communities, all of which are necessary to inform and develop successful intervention strategies. Presently, research on cyber bullying has been impeded by poor theoretical conceptualisations of what it is, inadequate instrumentation to assess bullying, and atheoretical research practises (Griezel, Craven, Yeung & Finger 2008; Marsh, Parada, Craven & Finger, 2004; Parada, 2006). The purpose of this paper is to critically review the current cyber bullying literature. The paper will discuss the gaps evident in the existing literature, and highlight the current shortfalls in the cyber bullying research by reviewing common theoretical and methodological problems. Lastly, the paper attempts to provide rigorous empirical argument on how to address these research problems and provide future research directions and frameworks to contribute to a better theoretical and conceptual understanding when undertaking cyber bullying research.

Cyber bullying is a relatively new phenomenon, and literature on the area is only starting to uncover and explore the nature, definitions, incident rates, gender differences, and the affects this type of bullying has on adolescent students. Australian research it is yet to elucidate the nature and prevalence rates for different cyber bullying forms, which is crucial to our understanding of the phenomenon and to the creation of effective cyber bullying prevention programs (Lodge & Frydenberg, 2007). Research pertaining to traditional bullying behaviour, shows that these maladaptive behaviours increase as students get older, peaking during the early high
school years, however it is not yet clear whether the same trends exist for those using cyber methods.

A recent study conducted by Kowalski and Limber (2008), with students from year 7, 8, and 9, found that 11% of students had been cyber bullied, 7% had been involved in both bullying and being bullied using cyber methods, and 4% had cyber bullied another person in the last two months. These results suggest that this type of bullying may be on the rise as 50% of the teenagers in their sample owned a mobile phone, and 97% of students had access to the internet, with a large proportion of these students using electronic devices daily. Li (2007) also investigated cyber bullying with 177 grade seven students and found 54% were both bullied and targeted with traditional methods, and a quarter of this group had also been subjected to cyber-bullying. Furthermore, one in three students had bullied another by traditional styles; and 15% had bullied others via technological communication sources. However, it is possible that these cyber-bullying prevalence rates may be overestimated due to the problematic research practices. For example, over reliance on small convenient sample sizes and utilising simple instruments with dichotomous variables and single-items indictors (i.e., yes/no fixed survey response choices) simplifies and reduces the complexity of what bullying actually is. Alternatively, researchers should focus on investigating the bullying construct on a continuum (Marsh, Parada, Craven & Finger, 2004). Commonly, bullying researchers have relied upon instruments that have split scales, divided at the researchers own preferred, and often arbitrary, designated point to create distinctive group categories (e.g., indirect/direct bullying classifications). These divisions are created at the researchers’ discretion, as they believe that this grouping may exist, however no justification or conceptual and theoretical reason is given as to why such groups might actually exist. Furthermore, utilising dichotomous variable leads allocating participants into distinctive categories, focusing only on the extreme results outcomes, the bipolar opposites which pays no attention to low and moderate levels of bullying behaviours (MacCallum, Zhang, Preacher & Rucker, 2002; Marsh et al., 2004).

Bullying Definitions: The Distinction Between Traditional and Cyber-Bullying

Traditional and Cyber Types

Traditional bullying has been defined as the misuse of a power acted on behalf of the aggressor to the target (Orpinas & Horne, 2006). Furthermore, the aggressor is perceived as physically, socially, or psychologically more powerful than the target. Olweus (1993) argues this power imbalance exploited by the aggressor to control, inflict pain, and commit repetitious attacks over time, makes up the core of what constitutes bullying behaviour. Physical bullying includes any deliberate physical act with the potential to harm another; this can include punching, slapping, fighting with weapons, kicking and damaging another person’s property. Verbal bullying includes the intentional use of words to inflict psychological harm on another, for example teasing, verbal taunts, put downs, yelling, and coercing (Olweus, 1993; Orpinas & Horne, 2006). Social/relational aggression is characterised by emotional manipulation of peer relationships and can include social exclusion, rumours, and gossiping (Orpinas & Horne, 2006).

More recently, existing definitions of bullying have been extended to cyber attacks which are intended to provoke fear, distress or hurt towards targets using communication technologies (Baldry & Farrington, 2000; Manson, 2008; Olweus, 1993). Cyber bullying can include hurtful, derogatory, and destructive messages sent through: email, cellular phone, iPads, chat rooms, instant messaging, websites, blog pages and personal social networking pages (e.g., MySpace, Bebo, Twitter and Facebook); phone calls; text messages; picture post; and video clips (Aricak et al., 2008; Manson, 2008; Smith et al., 2008). However, since cyber bullying is a new
area of research, it is not surprising that conceptual issues need to be further explored and addressed. Furthermore, since communication technology is constantly advancing and changing the ways we communicate and respond to each other, it is difficult for the research community to find consensus in defining cyber bullying, accurately pinpointing the cyber technology involved, and the methods in which technology can be employed to be hurtful and harmful to others (Kowalski, Limber & Agatson, 2008).

Types of Cyber Bullying

Cyber bullying differs to traditional bullying by way of extending the use of traditional types of bullying behaviours with the use of new technologies. Although the different types of cyber bullying are currently not well understood, researchers are starting to make distinctions between methods by which cyber bullying is carried out such as:

1. **Flaming** - refers to a type of cyber bullying that typically occurs in public online forums (e.g., discussion rooms and chat rooms) when individuals or groups become the target of angry and rude messages via electronic means. If continual argument persists, usually including rude and vulgar language then a “flame war” has begun (Hinduja & Patchin, 2009; Kowalski et al., 2008; Willard, 2006).

2. **Online harassment** - has been defined as repeated or persistent aggressive text messaging or emailing, which is directed at a specific target for the purpose of annoying or hurting someone. This is sometimes also referred to as a "text war" (Hinduja & Patchin, 2009; Kowalski et al., 2008; Willard, 2006).

3. **Identity theft** - occurs when a perpetrator pretends to be another person and either hacks or obtains the password of their target's account, and sends hurtful and harmful information to the friends of the target. Examples include students posting untrue and hurtful information about their targets on slam books for others to read, and digitally altering photos to make a target look ugly or fat on purpose (Kowalski et al., 2008; Willard, 2006).

4. **Outing** - refers to sending or posting personal and private information that was meant to be kept secret and should have not been leaked online (Kowalski et al., 2008).

5. **Exclusion/ostracism** - can commonly occur where a target can be blocked or deleted off a friends list, excluded from an online group, or when friends purposely do not respond to text or email (Kowalski et al., 2008; Willard, 2006).

6. **Misinformation** - refers to the spreading of untrue and damaging information about another through posts on web pages, slam books, emails, text messages or via instant messaging. Examples include students posting untrue and hurtful information about their targets, and digitally altering photos to make a target look unattractive (Kowalski et al., 2008; Willard, 2006).

7. **Cyber stalking** - takes harassment to another level and usually involves repetitive threats, lurking, and intimidation. For example a student may receive an anonymous email containing threats to physically hurt, or spy on that student, e.g., I've been watching you (Li, 2007; Willard, 2006).

8. **Happy slapping** - is a relatively new cyber bullying term which occurs when perpetrators intentionally bully, hit, assault or make fun of their targets whilst being video recorded for the sole purpose of leaking the
video on a public website, and/or sending the video via email, internet, or mobile phone for others to view (Kowalski et al., 2008; Willard, 2006).

9. **Sexting** - can be defined as the practice of sending sexual images such as nude or partially nude photos of the targets or themselves, through mobile phone picture messaging to other students to view (ABC, 2009; Battersby, 2008).

Although, this paper has revealed some of the plausible types of cyber bullying, more research is necessary to confirm how information technology is used to cyber bully others. There are still many questions that need to be asked about the possible different types of cyber bullying for example: (a) what are the different types of cyber bullying?; (b) what are the prevalence rates of each type?; (c) is one type of cyber bullying more common than in comparison to other types?; (d) is one type more harmful than another?; and (e) how can we reduce these types of cyber bullying behaviours from occurring?

**Methodological and Theoretical Issues in Bullying Research**

Before further reviewing the existing literature on bullying, several limitations and methodological issues need to be taken into account. Thus far, bullying research has suffered from definitional and methodological issues, which makes research in this field problematic. As cyber bullying is a new area being researched, many questions have been raised and left unanswered, for example: Why do students become involved in cyber bullying?; What motivates student involvement?; Are students that are involved in traditional bullying behaviours more likely to be involved in cyber bullying behaviours? Additionally, this area of research has also been plagued by poor theoretical conceptualisations of what cyber bullying is, thus resulting in poor definitions, inadequate instrumentation to assess bullying, and atheoretical research practises.

Little is known in Australian research about the nature, prevalence rates and longitudinal psychosocial outcomes for cyber bullying involvement for bullies, targets, bystanders, families, schools and community (Dooley, Pyazaski & Cross, 2009; Griezel, Craven, Yeung & Finger 2008). However, traditional bullying literature can help shed light in understanding the fast growing new cyber bullying phenomenon (Mason, 2008). Overall, traditional bullying studies have found that bullies are perceived by their victims to be more physical or socially stronger. Bullies are often linked with having a positive association to violent behaviours, strongly associated with poorer school performance and have poor relationships with their parents. Literature consensus reveals that boys are more likely to be involved in physical types of bullying and girls are more likely to be associated with social/relational types of bullying (Hawker & Boulton, 2000; Manson, 2008). In a study by Li (2007), a significant correlation between the traditional bully and the cyber bully was found, as well as the traditional victim and cyber victim. Therefore, students who may be involved in the bullying cycle at school may have a higher chance of harassing others or being victimised through communication technology, when compared to students not involved in traditional school bullying. The preliminary research by Li appears to support the link between traditional and cyber bullying, indicating that the cycle of violence continues from the playground to the virtual environment. Hence, Li recommends that cyber bullying should not be examined as a separate entity but rather a connected bullying issue that has developed out of traditional bullying types and adopted technology (Beran & Li, 2005; Li, 2007).
The majority of bullying research is based on quantitative experimental designs. In particular, it has been suggested that there is a lack of existing qualitative or mixed methods research within this field. One of the first published qualitative articles investigating bullying with student, parent, and teacher interviews resulted in enriching our understandings about bullying by accessing individual experiences/differences that are lost in large scale quantitative designs (Misha, Pepler, & Wiener, 2006). Misha et al. suggested that understanding the complexities of bullying can only be understood by investigating the individual, social, and environmental influences simultaneously and that this can be achieved through the use of qualitative analysis. In agreement with this line of argument is a review article by Powell, Mihalas, Onwuegbuzie, Suldo and Daley (2008) highlights how a mixed methods approach can enhance research outcomes by gathering data that draws upon multiple methods and resources, benefits include: (a) triangulation– seeking confirmation of a research question using two different types of analyses; (b) complementarity- seeking clarification and enrichment from utilising two different methodologies; (c) initiation - identifying the differences in each of the two methodologies and drawing on these differences when explaining results; (d) development- using results from one analyses to help inform another analyses; and (e) expansion- expand on the depth of knowledge by adopting two different types of analyses. However, it’s advisable that when making a choice to adopt a mixed methods approach, it should be utilised only when the research question warrants it and research outcomes are most likely to produce better result outcomes.

Another problem evident in the current research is the lack of a universal definition of cyber bullying. Definition choices influence instrument selection (i.e., whether to investigate types of bullying with reference to direct and indirect types, or the four physical, verbal, social, and cyber types) and which cut-off points to use when categorising data. For example, common criteria for bullying includes repetition, however, the frequency of the repeated attacks is not stipulated (e.g. weekly, fortnightly or monthly). Furthermore, cyber bullying is a new area of research. This means there are many theoretical and conceptual issues that need to be explored and addressed. New literature published in the area has yet to address whether cyber bullying is in fact a new type of bullying or can be defined under the broad banner of bullying as new sub type (Li, 2006, 2007). These definitional problems lead to researchers using a diverse selection of research tools, conceptualisations and theoretical frameworks, which in turn makes comparisons across empirical studies impractical, and advancements in our understanding of this emerging research field unattainable.

The use of dichotomous variables is also problematic. Since the end of the 1990s there has been a surge of literature concentrated on categorising participants into separate groups of victims, bullies, bully/victims, and those not involved (Solberg, Olweus & Endresen, 2007). To establish such groups for statistical purposes, researchers dichotomise variables with arbitrary cut-off points. However, different cut-off points have been used by different researchers, and as yet, no agreed upon cut-off criteria has been established. This allocation process is often problematic as individual participants can fall into more than one category and some participants narrowly miss cut off points of categories such that scores are included in opposing groups, thus the dichotomy problem may lead to biases in results. Unfortunately, cyber bullying research has largely supported these problematic statistical methods. A possible solution to this problem is to use: a) a developmentally appropriate instrument based on a strong theoretical frameworks; b) factors created within the instrument should measure different dimensions within the scale, demonstrating strong internal validity; and f) it is recommended the scale
should be a multidimensional measure using continuous variables (Griezel, Craven, Yeung & Finger 2008; Marsh, Parada, Craven & Finger, 2004; Parada, 2006).

An existing lack of reliable and valid instrumentation to measure cyber bullying thwarts further understanding of this important social problem. Past cyber bullying studies have been built on problematic single-item traditional bullying instruments (e.g., Bully/Victim Questionnaire; Olweus, 2003). Additionally, many articles fail to mention validity or reliability of these instruments. More recently, a new multiple-item multidimensional behavioural psychometrically sound scale has been introduced to traditional bullying research: the Adolescent Peer Relations Instrument (Parada, 2000). There is a vast need to create similar multidimensional instruments which are applicable to cyber bullying.

**Theoretical Frameworks to Understanding Bullying**

Researchers have been challenged to underpin the theoretical phenomena behind bullying. Bullying literature has pointed to many different theoretical frameworks and perspectives, which endeavour to explain and uncover the reasons why bullying occurs (Rigby, 2002). One theoretical position that proposes to explain aggressive maladaptive behaviour patterns in children is Crick and Dodge’s (1994) modified version of social information processing theory. This model proposes that children are faced with daily social dilemmas, by which they need to make relatively quick informative responses for.

Crick and Dodge (1994) suggest that each child’s decision-making process is influenced by their inherited biological personality and temperament traits. Decisions are further subjected to influence of past memories and schema scripts. It is hypothesised that early socialising experiences set up and develop the new decision neurological pathways. As these pathways become continually used, neurological networks become embedded and part of an automatic response set. When students are faced with an overwhelming social decision, there is often too much information to attend and encode. Students will often rely on these neurological networks to simplify the cognitive task. These simplifying rules include the use of heuristics and schemas, which make processing more efficient but can result in biased judgements. For example, children that have developed maladaptive neural networks are more likely to interpret neutral or ambiguous cues as antagonistic situations and thus are more likely to engage in aggressive behaviours, which ultimately lead to enacting inappropriate social responses (Crick & Dodge, 1994).

Another relatively new theoretical perspective called the online disinhibition effect which tries to explain why some individuals can act and say things online that they would not ordinarily convey in a face-to-face conversation. For example, some individuals may reveal very personal, intimate, and private information about themselves online that they would not normally share with others. Similarly, other individuals may become more rude, cruel, and critical during online conversations. Online anonymity is one of the factors that help create the disinhibition effect. Individuals can hide behind usernames that do not reveal their true personal identity. Therefore individuals can compartmentalise their online persona from their offline identities. Furthermore, the invisibility factor gives individuals the opportunity to do and say things they would not usually do, as they do not have to deal with the repercussion of their actions. Additionally, the online aggressor is not presented with the target’s reactions or responses, (e.g., facial expressions, emotions, and body language), therefore the aggressor is not left with the burden of guilt, as they do not see the responses of their targets. Lastly, online relationships can create a false sense of security and closeness. Such relationship bonds are often inaccurately misinterpreted and give a false sense of safety, leading the individual to convey thoughts and feeling that they would not normally express in real life situations (Suler, 2004).
The Relation of Traditional and Cyber Types to Psychosocial Constructs

Since research into the area of cyber bullying is relatively new, little is known about the short term and long-term effects of student involvement. Campbell (2005) reports that although the long-term consequences of cyber bullying are not known, it is speculated that such consequences could be more severe than traditional methods, as cyber bullying has the potential to reach wider audiences, are conducted in secret, and words and photos can be repeatedly viewed by the target (Lodge & Frydenberg, 2007). This is concerning when we consider that cyber bullying has become an increasingly emergent problem in our schools, placing students’ psychological health, safety, and well-being at risk (Li, 2007; Mason, 2008).

However, emerging research is finding similarities between traditional and cyber bullying psychosocial outcomes (Mason, 2008). In collaboration with the National Institute of Child Health and the Human Development unit (Nansel et al., 2001), a youth survey was conducted with 686 students from grades 6-10, throughout the United States. The students completed the Health Behaviour of School Aged Children survey, to investigate the psychosocial adjustment effects for involvement in traditional bullying behaviours. This study found that involvement in bullying behaviours were strongly associated with poorer psychosocial adjustment outcomes. In contrast, students who were targeted reported feeling lonely and had difficulties making connections and friendships with fellow classmates. Nansel and colleagues (2001) suggested that students lacking in social support seemed to be more susceptible to being targeted. In addition, they also found students that were involved in bully behaviours had an increased likelihood of involvement with other deviant behaviours and undesirable outcomes such as under aged drinking and smoking, experiencing poorer academic achievement outcomes. However, perpetrators were more confident than targets in their ability to form new social relationships (Nansel et al., 2001).

More recently, a study conducted by Beran and Li (2005) investigated the psychosocial consequences of student involvement in cyber bullying with 432 students from Canada (grades 7 to 9). The results of the study found that targets of cyber bullying reported feelings of sadness, anger, anxiety. Beran and Li also expressed concern that such stressful and hurtful experiences may impact on targeted students’ ability to concentrate, learn, and succeed at school. Moreover, Hinduja and Patchin (2008) suggest it is important to recognise that students may experience or be involved in multiple methods of bullying behaviours, as cyber bullying incidents that occur after school hours, can arrive back to the school yard the next day via traditional methods (Hinduja & Patchin, 2008; Smith et al., 2008). Therefore, it is generally accepted in traditional bullying literature that involvement in bullying behaviours can negatively affect both short-term and long-term psychosocial outcomes. This includes poor self-concept, depression, anxiety, school absenteeism, poor school performance, involvement in antisocial behaviours, violence and in some severe cases suicide ideation and suicide (Beran & Li, 2005; Lodge & Frydenberg, 2007; Nansel et al., 2001). Currently, cyber bullying research has revealed that the psychosocial outcomes are similar to, if not more severe than traditional bullying research outcomes. Thus, future longitudinal cyber bullying studies are needed to explore the nature and incidence rates of different types of cyber bullying and victimisation, their relation to psychosocial drivers and outcomes, and the cause-and-effect role of cyber bullying may have on drivers of life potential. This research can then be utilised to inform and help develop empirically driven prevention and intervention programs to ensure the safety and psychological wellbeing of students (Campbell, 2005; Lodge & Frydenberg, 2007).

Self-Concept and its Integral Role in the Bully/Target cycle
Self-concept is a self-evaluation system principally based on how someone feels internally about themselves, and what we know about our selves (Hattie, 1992). Self-concept affects our cognitions, emotions, motivations and behavioural responses (Parada, Marsh, Craven & Papworth, 2005). Personality theorists believe that self-concept is developed in our childhood and is formed from our life experiences, upbringing, social environment, and feedback from influential individuals (Hattie, 1992; Hay, 2005). Understanding the role of self-concept in bullying behaviour is fundamental, as ultimately how we feel about ourselves allows researchers and practitioners to start to understand why individuals are involved in certain behaviours (Marsh, Parada, Craven & Finger, 2004).

Traditional bullying research has consistently found that students being bullied display poor self-concept outcomes in most, if not all facets of self evaluation (i.e. physical, social, academic), whereas inconsistent self concept outcomes have been found for bullies (O’Moore & Kirkham, 2001; Hawker & Boulton, 2000). O’Moore and Kirkham (2001) reviewed a nationwide study in Ireland, examining students from both primary and high schools (aged 8 to 18 years). Their results indicated students involved in either bully or target roles were subjected to lower self-esteem outcomes, when compared with students not involved. Furthermore, students involved in both bully and target behaviours were further subjected to lower self-esteem outcomes. The results revealed that both victims and bullies in primary school felt anxious and inferior in areas of physical appearance, popularity, academic performance and school status. However, as bullies approached high school there was a trend to feel less anxious and feel more physically attractive, however these factors were not found to be significant when compared to students not involved in bullying. However, Staub’s (1999) posited that bullies act aggressively toward students to enhance their self-concept, further arguing that their self-concept is enhanced by their new found growth of social status, power and physical authority over others.

A new theoretical reciprocal effects model sheds light onto why the bullying cycle may continue to be perpetuated. Investigating the bullying cycle through causal modelling techniques, research has found that bullies and their targets roles are interconnected, and their roles are mutually reinforcing and co-exist with each other (Marsh et al., 2004). Many similarities were found between the bully and victim roles. For example, those involved in both roles, reinforced bullying behaviours, held an external locus of control, had problems controlling inappropriate emotional reactions and responses, were stressed, depressed, and had lowered self-concepts. Furthermore, bullies and victims were less likely to utilise pro-social skills (i.e., ignore a bullying situation, problem solve or seek adult help). Thereby, the study findings concluded bullying leads to victimisation and victimisation leads to bullying (Marsh et al., 2004). Therefore, due to the numerous detrimental effects of traditional bullying on self-concept and related outcomes, future research needs to explore whether cyber bullying also produces lower self-concept and poor school outcomes for both targets and perpetrators.

**Recommendations for Future Research Directions**

Future research should endeavour to explore and build on recent existing cyber bullying literature by extending such research within Australian schools. Empirical researchers should try to provide further clarification in underpinning cyber bullying theoretical perspectives which will provide a concrete conceptual framework. Therefore utilising this approach will lead to better definition choices and instrument selection, which are imperative to collecting valid and reliable results. Research should progress on the current shortfall of cyber bullying research by:
a) Further explore the nature of cyber bullying and distinguish the distinct types of cyber bullying that may exist;

b) creating a valid and reliable, developmentally appropriate, theoretically driven and psychometrically sound, multi-dimensional cyber bullying measure;

c) assessing the nature, incidence and prevalence rates of different types of cyber bullying target experiences;

d) explicating the psychosocial determinants (e.g., multidimensional self-concepts, depression, pro-social behaviours, adolescent well-being and school belonging) of cyber-bullying and the cause-and-effect role of cyber bullying on drivers of life potential based on longitudinal causal modelling techniques; and

e) using a mixed methods approach to gaining a greater depth of understanding into students’, parents’, principals’, and teachers’ perceptions of the nature, impact, and successful intervention strategies for cyber bullying will be elucidated through both semi-structured interviews and focus group sessions. Hence, collecting theoretical driven valid and reliable data, will contribute to a better understanding of students interactions in both traditional and cyber types of bullying.

Only by acknowledging past research problems and implementing these above recommendations into future cyber bullying research can we advance our understanding of this emerging social problem, thereby allowing us to develop informed and effective intervention strategies and programs to address this technologically driven problem affecting our Australian youth.

References


Marsh, H. W., Parada, R. H., Craven, R. G., & Finger, L. (2004). In the looking glass: A reciprocal effects model elucidating the complex nature of bullying,


