Bystanders' Responses to Witnessed Incidents of Cyberbullying: Independent and Interactive Influences on Intervention

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Thesis submitted in partial fulfilment of the requirements for the Master of Research, 2015

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Summary

Individuals who witness cyberbullying have the potential to reduce and remedy its impacts, either by standing up to the bullies or supporting victims. However, bystanders often fail to intervene in these situations; researchers have encountered difficulties constructing theories that encompass the many factors implicated in the passivity of witnesses. This thesis comprises two parts: a literature review and an empirical paper[1]. The literature review discusses existing theories and accounts of cyberbullying bystander inaction, highlighting the need for a combined model that integrates individual, situational, and socio-cognitive factors. The empirical paper presents a study in which 563 grade 7 and 9 students completed a questionnaire about their experiences with various cyberbullying roles (perpetration, victimisation, witnessing and intervening) and their morals (moral standards, individual and collective moral disengagement). The results indicated that grade, gender, victimisation and witnessing experience were significant predictors of intervention. Additionally, perceptions of peer-group morality moderated the effects of individual morality on intervention. Together, the two parts suggest that researchers should consider interpersonal and interactive determinants of witnesses' reactions. Peer aggression, both traditional and online, is grounded within a social context which must be addressed in the exploration of bystander behaviour.

[1] This thesis is presented as a non-traditional research thesis by publication format as outlined by Macquarie University Higher Degree Research Unit. This format necessitates the preparation of papers which may be submitted for publication. This structure necessitates some repetition between papers.

Certification by Candidate

I certify that the work found within this thesis is all my own and has not been submitted for a higher degree to any other university or institution. All empirical research presented within this thesis was approved by the Human Research Ethics Committee of Macquarie University (reference number: 5201401142). Approval from the Broken Bay Catholic Education Office was also obtained.

Kimberley Allison
08/10/2015

Acknowledgements

To my supervisor, Kay- thank you for all your hard work and encouragement throughout this year, and for your meticulous feedback on the countless drafts of this thesis. Your opinions and advice have been invaluable, and I could not have done this without you. Thank you also to my family and friends for their endless support, especially over the last few months. Special thanks to Alex, Cath, Fran, Hash and Pip for all the conversations, both research-related and not, that have kept me passably sane throughout the year. You guys are amazing, and I am so lucky to have you all in my life.

Cyber-Bystanding in Context:

A Review of the Literature on Witnesses' Responses to Cyberbullying

Abstract

As a form of peer victimisation, cyberbullying can be conceptualised as a group phenomenon; research on cyberbullying should therefore consider all participant roles, rather than focusing solely on perpetrators and victims. Bystanders are of particularly interest in both traditional and cyberbullying as they have the potential to amend the situation by intervening, yet most witnesses remain passive. This paper reviews the literature on cyberbullying bystander behaviour, drawing on both quantitative and qualitative studies to identify factors that influence witnesses' responses. It further compares the ability of two theoretical frameworks (the bystander effect and social cognitive theory) to account for and integrate the diverse findings of these studies. Although the bystander effect is the dominant paradigm for explaining bystander inaction in many contexts, social cognitive theory may be better able to capture the complex and contextually dependent nature of cyberbullying situations. This paper concludes by discussing the implications of this approach for future research, and for potential interventions to improve witnesses' responses.

Cyber-Bystanding in Context:

A Review of the Literature on Witnesses' Responses to Cyberbullying

The increasing sophistication and availability of technological devices has enabled the extensive integration of communication technologies into the fabric of daily life (Deuze, 2010). While the constant connectedness is in many ways advantageous, particularly with regards to sustaining interpersonal contact, there are some drawbacks. One downside is cyberbullying, which is known to affect mental health and impair academic performance (see Cassidy, Faucher & Jackson, 2013, for a review), and in extreme cases has been linked with self-harm and suicidal ideation (Schneider, O'Donnell, Stueve & Coulter, 2012). The extent and potential severity of negative impacts, both on those directly involved and their wider social networks, necessitates a thorough investigation of the phenomenon, moderating factors, and interventions that may reduce the frequency and effects of cyberbullying. This literature review will outline the problem of cyberbullying, including its prevalence and impact. In particular, it will examine the influence of bystanders, who have been largely ignored in previous cyberbullying research; it will further evaluate the use of the bystander effect and social cognitive theory in exploring witnesses' responses. The paper will conclude by identifying means by which bystanders may be encouraged to intervene when witnessing incidents of cyberbullying.

Definition, Prevalence and Impact of Cyberbullying

Cyberbullying is broadly defined as a repeated, intentional act of aggression carried out through an electronic medium against a victim who is less able to defend themselves (Smith et al., 2008). The affordances of technology allow cyberbullying to take many forms (e.g. insults, threats, embarrassing photos) and to be perpetrated through a variety of media (e.g. texting, email, social networking sites). Although Smith and colleagues' (2008)

definition is the most widely accepted, scholars remain in disagreement over several aspects of it: in particular, whether acts need to be repeated in order to qualify as cyberbullying as they do for traditional bullying (Nocentini et al., 2010; DeSmet et al., 2014), and whether the impact on the victim should be taken into consideration (Menesini et al., 2012; Dredge, Gleeson & de la Piedad Garcia, 2014). Estimates of prevalence consequently vary according to the strictness of definitional criteria and the time period assessed. However, most studies tend to report victimisation rates of around 20-40% (Tokunaga, 2010), although rates have ranged as widely as 4-57% (Dehue, 2013).

These high prevalence rates are particularly concerning due to the extensive and enduring effects of cyberbullying on those who are victimised. Almost all victims report some negative impact, most commonly increased anxiety and depression, reduced self-esteem, and emotional distress; psychosomatic complaints (such as pains and sleeping difficulties) and academic issues are also common (see Cassidy et al., 2013, for a review). Furthermore, the consequences of cyberbullying extend beyond the immediate victims: those who witness online aggression may come to believe it is normative and acceptable (Kowalski, 2008; Kowalski, Giumetti, Schroeder & Lattanner, 2014); schools that do not adequately address cyberbullying are perceived as less safe, and even cyberbullies themselves appear to be negatively affected (Cassidy et al., 2013). Evidently, interventions that effectively address and reduce these problems are urgently needed. As cyberbullying is a relatively recent phenomenon, researchers have drawn on the extensive literature of traditional bullying research in their attempt to understand cyberbullying. Consequently, researchers have examined the similarities and differences between the two types of bullying to ascertain whether our understanding and models of traditional bullying can be applied to online interactions.

Relation to Traditional Bullying

Many researchers have conceptualised cyberbullying as the extension of traditional bullying to electronic media (e.g. Williams & Guerra, 2007; Hinduja & Patchin, 2008), and indeed the two forms of victimisation show many similarities. In particular, there is a large overlap in their definition: both involve the intentional harm of a victim who is less able to defend themselves (Olweus, 1993; Smith et al., 2008). Additionally, sources and targets typically know each other in real life (Cassidy et al., 2013). However, cyberbullying is arguably distinct from traditional bullying in several ways. In particular, it is possible for bullies to remain anonymous (Cassidy et al., 2013); it is more pervasive, as it does not require bullies and victims to be physically co-present (Bastiaensens et al., 2015); and it is more difficult for adults to detect and police, as privacy and account settings often exclude them from the online arena where cyberbullying occurs (Dooley, Pyzalski & Cross, 2010; Cassidy et al., 2013). These factors imply that interventions designed to prevent or reduce traditional bullying may not be as effective in addressing cyberbullying; however certain features of more successful interventions may be used to inform the development of cyberbullying interventions. For example, the whole-school approach is generally considered to be one of the most effective means of addressing traditional bullying, and may be similarly useful in addressing cyberbullying (Vreeman & Carroll, 2007; Pearce, Cross, Monks, Waters & Falconer, 2011). In order to effectively address the problem of cyberbullying, researchers must consider the broader school community and explore the different roles individuals can take in cyberbullying incidents. They should further explore the factors motivating choice of roles and actions, and methods by which these factors might be manipulated to encourage pro-social online behaviour.

Although it is frequently oversimplified as a bully-victim dyadic interaction, peer victimisation can be better conceptualised as a group phenomenon involving multiple

individuals interacting in a range of roles. These roles tend to be broadly categorised as bullies, victims, and bystanders; however, Olweus (1993) argues for the existence of eight roles, at least in traditional bullying: bullies, followers, passive supporters, supporters, onlookers, possible defenders, actual defenders, and victims. These roles may be further complicated in cyberbullying, as individuals may become bystanders in various ways. In traditional bullying, bystanders are immediately physically present; cyberbullying bystanders may witness the cyberbullying online as it occurs, or after the incident ends. Alternatively, they may be with the perpetrator or victim when the message is sent or received, or they may have the message forwarded to them by others (Li, Smith & Cross, 2012). DeSmet and colleagues (2014) further note that the roles involved in cyberbullying, particularly those of bystanders, are far more fluid and contextually dependent than in traditional bullying. For example, 8% of the Belgian students surveyed by Van Cleemput, Vandebosch and Pabian (2014) had performed multiple roles within the same incident of cyberbullying.

The roles of bully and victim have both been extensively explored in the cyberbullying literature: bullies as the immediate origin of the antisocial behaviour; and victims as those suffering the greatest impact as a consequence (Cassidy et al., 2013). Interventions to address cyberbullying have accordingly focused on these two groups, aiming to prevent cyberbullying before it starts, or to ameliorate the effects once it has occurred. However, these interventions may be of limited effectiveness as they risk stigmatising both bullies and victims, or counterproductively legitimising aggressive behaviours (Smith, Schneider, Smith & Ananiadou, 2004). By comparison, traditional bullying interventions which aim to change the dynamics of the wider school community have had more success in reducing victimisation (Vreeman & Carroll, 2007). Likewise, a recent meta-analysis of bullying prevention programs found that attempts to encourage bystander intervention were typically effective (Polanin, Espelage & Pigott, 2012). This is consistent with the

conceptualisation of peer victimisation as a group phenomenon, suggesting that interventions must target all involved roles if they are to be truly successful. Research on cyberbullying and interventions would benefit from turning to the role of bystanders, who are known to be critical in bullying interventions, yet who have been largely overlooked in cyberbullying research.

Bystanders of Cyberbullying: Prevalence and Roles

Bystanders may prove to be even more critical to the course of cyberbullying than in traditional bullying, due to their sheer number and presence. Whereas cyberbullying perpetration and victimisation rates tend to be around 5-20% (Bastiaensens et al., 2014; Dehue, Bolman & Völlink, 2008; Van Cleemput et al., 2014) and 20-40% (Tokunaga, 2010) respectively, Lenhart and colleagues (2011) found that 88% of US teens had witnessed incidents of cyberbullying on social media alone. These individuals are considered to be crucial in addressing (or conversely, encouraging) cyberbullying, as their actions may alter the course and effects of incidents in a number of ways. For example, bystanders may intervene in support of victims, either directly (by confronting the bully or comforting the victim) or indirectly (by reporting the incident to adults; DeSmet et al., 2012). In doing so, they may threaten the bully's status and make them stop, as well as ameliorating the negative effects on victims (Bastiaensens et al., 2015; Salmivalli, 2010). Individuals who publicly intervene also increase the likelihood that other bystanders will do likewise, by modelling dissenting behaviour (Anderson, Bresnahan & Musatics, 2014). Conversely, bystanders may encourage the cyberbully or join in with the victimisation, which may make the bully more aggressive and exacerbate the negative impact on the victim (Bastiaensens et al., 2014).

Despite their potential influence, most bystanders remain passive when they witness cyberbullying: Lenhart and colleagues' (2011) survey of US teenagers found that 91% of

those who had witnessed cyberbullying on social media had ignored it at some point. Similarly, Van Cleemput and colleagues' (2014) survey of Belgian students found that 58.6% had remained passive, while Huang and Chou's (2010) survey of Taiwanese high school students also found inaction to be the predominant response. These rates have been replicated experimentally, with 50-90% of participants failing to intervene at some stage in response to various cyberbullying paradigms (Dillon & Bushman, 2015; Freis & Gurung, 2013; Shultz, Heilman & Hart, 2014). This inaction is of particular concern as bystanders may not necessarily condone the bullying, but bullies may perceive their lack of intervention as tacit approval of their actions (Bastiaensens et al., 2014).

The Bystander Effect

The failure of bystanders to take action is perhaps not entirely unexpected. Indeed, the phenomena of bystander inaction has been recognised and explored since 1968, when Darley and Latané published their seminal paper on the bystander effect: the phenomenon whereby individuals are less likely to offer help if other passive bystanders are present. These authors proposed that if bystanders are to intervene, they must first: (1) notice the situation; (2) recognise the need for assistance; (3) feel personally responsible; (4) believe they are able to help; and (5) consciously decide to intervene (Latané & Darley, 1970). However, three key processes often interfere with this progression, deterring bystanders from intervening. The presence of others may decrease the personal feeling of responsibility experienced by each individual present (*diffusion of responsibility*); it may make individuals self-conscious, as other bystanders may judge their actions (*evaluation apprehension*); or individuals may witness the inaction of others and conclude that no action is required (*pluralistic ignorance*; Darley & Latané, 1968; Latané & Darley, 1970). The bystander effect has been consistently and robustly replicated in a variety of contexts (see Fischer et al., 2011, for a review).

However, a relatively small number of studies have examined whether the bystander effect can be replicated online, especially in the context of cyberbullying.

The Online Bystander Effect

The few studies that have empirically tested the bystander effect online have been largely confined to the attempted replication of the classic effect in an online setting. For example, Markey (2000) conducted the first online study of the bystander effect by making repeated requests for help in pre-existing Internet chat-rooms. The results confirmed that individuals were slower to help when other bystanders were present, although requesting help from a specific (named) participant produced the fastest response, independent of how many others were present. Similar results have been obtained in other online settings, namely requests for help sent via email (Barron & Yechiam, 2002; Blair, Foster Thompson & Wuensch, 2005) or posted in public discussion groups (Voelpel, Eckhoff & Förster, 2008). In the case of Barron and Yechiam's (2002) study, it was found that email requests which were sent to only one recipient were more likely to elicit a response than those sent to five recipients, and these responses tended to be longer and more helpful. Likewise, Blair and colleagues (2005) found that the probability of receiving a response to an email request declined as the number of recipients increased, while Voelpel and colleagues (2008) found that discussion groups containing over 100 members were significantly less likely to respond to requests for help than smaller groups.

The results from these online bystander studies did not, however, completely replicate the traditional bystander effect. Interestingly, in both Blair and colleagues' (2005) and Voelpel and colleagues' (2008) studies, the likelihood of receiving a response did not decline linearly as group size increased. Blair and colleagues (2005) found that this relationship followed a hyperbolic curve: the likelihood of receiving a response decreased substantially when the number of recipients increased from one to two, and from two to fifteen, but there

was little change when the number of recipients increased from fifteen to fifty. By contrast, Voelpel and colleagues (2008) found that larger groups (with over 250 members) were actually more likely to respond than medium sized groups (with 100-250 members), which they hypothesised was due to the presence of "perpetual helpers" (p. 286) who feel a heightened sense of responsibility to assist, and who are more likely to be present in larger groups. Lastly, Lewis, Foster Thompson, Wuensch, Grossnickle and Cope (2004) found no evidence to support the bystander effect within their email request paradigm, with response rates virtually equal when the request was made of 1, 2, 15 or 50 individuals.

The failure to consistently replicate the bystander effect online is puzzling, given the apparent robustness of the phenomenon offline (Fischer et al., 2011). It is possible that these inconsistencies are due to fundamental differences in online and offline communication. Specifically, those studies which returned inconsistent results used asynchronous communication media, namely email requests and online discussion groups (Barron & Yechiam, 2002; Blair et al., 2005; Lewis et al., 2004; Voelpel et al., 2008). In contrast to real life tests of the bystander effect, where individuals are immediately present in witnessing the scenario (temporally, if not always physically), in online settings bystanders may only witness the scenario after it has played out. As such, the cyber-bystanders may reason that they are too late and that the individual requesting help has resolved the situation themselves, and therefore conclude that their assistance is no longer required.

This may be particularly relevant to the previously discussed studies: their requests for help tended to be very basic enquiries (e.g. does this institution have a biology department?; Barron & Yechiam, 2002), the answers to which were likely already available online. This issue is likely to affect all bystanders equally, regardless of how many have received the request for help. In the case of larger groups however, the sheer number of bystanders may make it more likely that someone will see the message soon after it was

posted and feel compelled to respond. This may counter the diffusion of responsibility expected in large groups: that is, it is possible that the bystander effect holds in online settings, but is obscured by other effects related to the asynchronous nature of communication. However, it must be noted that this account is speculative; further research must be conducted to untangle the potential explanations for inconsistencies in the bystander effect online.

An alternative explanation for the mixed findings involves the number of bystanders involved in each study, which was typically far higher in online than in offline studies. In the most extreme case, Voelpel and colleagues' (2008) largest discussion group comprised 10,523 members; other studies using the email request paradigms included up to 50 recipients (Blair et al., 2005; Lewis et al., 2004). In contrast, almost all the attempts to replicate the bystander effect offline have used between one and four bystanders (Fischer et al., 2011). It is not unreasonable to suspect that increasing the number of bystanders can only inhibit helping behaviour to a certain extent, beyond which additional bystanders simply do not have any further impact. This is consistent with Blair and colleagues' (2005) findings, which suggest that while the presence of more bystanders did further inhibit helping, they did so with diminishing effect.

Even given the potentially universal visibility of content posted to the internet, these numbers are considered large. As part of an experimental manipulation check, Obermaier, Fawzi and Koch (2014) asked participants to subjectively assess the (clearly indicated) number of bystanders present in a scenario on a five-point Likert scale from 1 (*rather few*) to 5 (*rather many*). The results revealed that 24 bystanders was already considered relatively many ($M = 3.53$), with 224 bystanders ($M = 4.30$) and 5025 bystanders ($M = 4.67$) seeming almost excessive by comparison. While these numbers may indeed reflect typical sizes of online groups (Obermaier et al., 2014), they may still be difficult for individuals to

comprehend in terms of their implications for social interactions. As such, the failure to consistently replicate the bystander effect online may be more reflective of the extreme number of bystanders used than of the nature of online interactions.

Further complicating this issue, the paradigms used in previous studies largely imply the presence of bystanders, compared to offline studies in which bystanders' presence is "evidenced" by their physical visibility, speech, or experimenters' testimony (Fischer et al., 2011). While the naturalistic online studies quantified the number of bystanders present as the number of members of a discussion group (Voelpel et al., 2008), users logged on to a chat room (Markey, 2000), or recipients of an email (Barron & Yechiam, 2002; Blair et al., 2005; Lewis et al., 2004), it was never established whether these bystanders actually witnessed the experimental manipulation. That is, most studies did not attempt to determine whether their bystanders received and read the request for help, and those that did were largely unsuccessful (see Lewis et al., 2004, for a discussion of the unreliability of read reports in determining actual numbers of witnesses). Although this is realistic in that it is difficult to conclusively determine how many people have viewed online materials, the fact that these studies were conducted in naturalistic settings- making use of pre-existing groups and participants who were unaware that they were taking part in a study- also makes it difficult to determine how many of the potential participants viewed the request for help.

Moreover, the objective number of bystanders present may not affect all groups equally. In some cases this may contribute to the hypothesised bystander effect- for example, larger online communities (e.g. chat rooms, discussion groups) are likely to have a higher volume of posts. This may mean that requests for help are more easily obscured by new content, decreasing the likelihood of receiving a response despite the increased number of potential helpers. Alternatively, larger online communities may spontaneously form social hierarchies and self-impose structure- for example, by appointing moderators or recognising

regular contributors who become responsible for monitoring and regulating online interactions. In this way, norms and standards may be established for responding to requests for help or resolving hostile situations. This may become the responsibility of those who the community have designated as powerful (e.g. moderators) or popular (e.g. regular contributors), or even those who feel personally responsible for assisting (such as the "perpetual helpers" proposed by Voelpel et al., 2008). These dynamics may prove to be influential in determining the response to requests for help in established online communities; furthermore, their influence may extend to established offline communities which also interact online, such as school-based peer groups. However, researchers so far have not probed the extent to which these communities function and self-regulate. Furthermore, no attempts have been made to explore Voelpel and colleagues' (2008) idea of individuals who feel more personally responsible for helping, and who may consequently intervene more frequently.

Cyberbullying and the Bystander Effect

Despite difficulties in replicating the bystander effect online using paradigms involving requests for help, researchers have continued to argue for its potential application to bystanders of cyberbullying. Incidents of cyberbullying differ from these experimental manipulations in several ways. Most notably, those who are involved in or witness cyberbullying often know each other in real life, and thus their responses to these incidents frequently have consequences for their offline interactions and relationships (DeSmet et al., 2012; Macháčková, Dedkova, Sevcikova & Cerna, 2013). Additionally, these incidents are typically more severe and explicitly involve perpetrators, both of which are known to affect bystander responses (Fischer et al., 2011). Thus, it is possible that the bystander effect may be more robustly replicated online, within the cyberbullying context.

Obermaier and colleagues (2014) were the first to test the bystander effect in the context of cyberbullying, using a Facebook paradigm. Participants were presented with a screenshot depicting a post made on the wall of a university Facebook group: the original post made a request for lecture notes, to which another group member responded by insulting the victim, calling them names and inviting other group members to complain about them. The number of bystanders was manipulated by indicating that the post had been "seen by 2", "seen by 24", "seen by 224" or "seen by 5025" members. The results indicated that the number of bystanders did not directly affect individuals' intention to intervene; however, there was an indirect effect on intention to intervene, mediated by the individuals' feeling of responsibility. Specifically, individuals felt more personally responsible when fewer other bystanders were present, and were subsequently more likely to intervene, which is consistent with the traditional bystander effect (Darley & Latané, 1968).

However, it is important to note that Obermaier and colleagues' (2014) conclusions were drawn from a comparison of the "seen by 2" and "seen by 5025" conditions. As with the previously discussed email request paradigms (Blair et al., 2005; Voelpel et al., 2008), the probability of intervention did not decline linearly as the number of bystanders increased. Rather, intentions to intervene were lowest when the message was "seen by 24" members; participants were not significantly more likely to respond when the cyberbullying had been "seen by 2" than when it had been "seen by 224". Furthermore, 20-40% of Obermaier and colleagues' (2014) sample was unable to recall the number of bystanders with any degree of accuracy, and were subsequently excluded from the analysis; this suggests that a substantial proportion of individuals may not even consciously consider whether others are present when determining how to respond. Thus it appears that in the case of cyberbullying, at least, there are more factors in play than the mere number of bystanders who happen to witness an incident.

Although the bystander effect itself has not been consistently replicated in online studies, the mechanisms proposed to give rise to the phenomenon may still be useful in explaining the inaction of cyber-bystanders. Researchers who are interested in the behaviour of cyberbullying bystanders have conducted qualitative studies which ask participants how they responded to incidents they have witnessed, probing the reasons behind their reactions (or inactions). These studies have uncovered reasons for bystander inaction which can be loosely mapped to the three deterrents originally proposed by Darley and Latané (1968, 1970): diffusion of responsibility, evaluation apprehension, and pluralistic ignorance. Additionally, the studies have surveyed adolescent populations in Belgium (DeSmet et al., 2012, 2014; Van Cleemput et al., 2014), Australia (Dredge et al., 2014; Price et al., 2014), Taiwan (Huang & Chou, 2010) and Czechoslovakia (Macháčková et al., 2013), suggesting potential cross-cultural relevance of their findings.

Diffusion of Responsibility

Darley and Latané (1968, 1970) originally described how the presence of other bystanders may reduce the personal sense of responsibility felt by each individual, as if the responsibility had been divided amongst those present. Qualitative studies have evidenced that passive bystanders typically report feeling less responsible for intervening. Adolescents have explicitly reported remaining passive because they perceived the incident as being none of their business (Huang & Chou, 2010; Van Cleemput et al., 2014). Interestingly, it appears that cyber-bystanders attribute the burden of responding to specific others, rather than the group as a whole. For example, it was often reported that popular or strong students should be responsible for defending others; those who failed to do so were labelled cowardly (DeSmet et al., 2014; Price et al., 2014). Some participants also suggested that the victims' friends should defend them (DeSmet et al., 2012, Macháčková et al., 2013) - indeed, some considered this to be inherently and inextricably part of the definition of friendship (Price et

al., 2014). However, others seemed to suggest that even failing to actively defend one's friends is understandable, because "everyone understands defending is difficult" (DeSmet et al., 2012, p. 61).

Furthermore, these deliberate divestments of responsibility are not limited to the responsibility to intervene, but also extend to perceptions of who is responsible for the cyberbullying incident itself. Cyber-bystanders commonly report classes of victims whose harassment is rationalised and considered deserved- typically those who are unpopular, or who are targeted because of their "strange" behaviour (DeSmet et al., 2012). This is supported by empirical evidence: Holfeld (2014) found that when North American middle school students viewed a (fake) example of a cyberbullying incident, 67% of males and 54% of females made internal causal attributions for the episode. Of these, approximately 30% assumed that the victim had provoked the attack through their behaviour or actions. Furthermore, those victims who were reported to have ignored the cyberbullying were perceived as being significantly more in control, and subsequently blamed more, than victims who appeared to have reported or confronted the bullies (Holfeld, 2014). Thus, blaming the victim for provoking cyberbullies appears to allow bystanders to dispel their responsibility for the situation, excusing their lack of intervention.

Evaluation Apprehension

Bystanders may also be reluctant to intervene because they fear judgement from other witnesses (Darley & Latané, 1968; Latané & Darley, 1970). Evaluation apprehension may have an even stronger influence on online behaviour, as any public intervention may be immortalised and permanently preserved as part of the cyberbullying narrative (Dillon & Bushman, 2015). Moreover, this fear of potential judgement is likely to be heightened in instances of peer aggression and cyberbullying; as previously discussed, those who witness or are involved in cyberbullying commonly interact in real life, and thus online encounters can

have offline implications (DeSmet et al., 2012; Macháčková et al., 2013). In particular, fear of negative evaluation is known to be heightened in the case of close peer interactions (Teachman & Allen, 2007). Adolescents have previously indicated that the identities of the bully and other bystanders are critical in shaping their responses to incidents of cyberbullying, because of the potential for retaliation and judgement for deviating from the passive norm. For example, the Belgian high-school students interviewed by DeSmet and colleagues (2012) reported that they would be less likely to intervene if the cyberbully was popular, as they would be less likely to receive support from their fellow bystanders and more likely to face social consequences for their actions. Similarly, Macháčková and colleagues' (2013) participants noted that they felt obliged to support friends who were cyberbullying others; speaking out would risk offending the bully and damaging the friendship.

Studies conducted in Belgium and Taiwan suggest that the identity of other bystanders, and the cultural values and norms of the community, may further influence individuals' response to the incidents of cyberbullying that they witness. As in Macháčková and colleagues' (2013) study, Bastiaensens and colleagues (2014) noted that students took cues from their friends when deciding how to respond. In some cases this was interpreted as the fear of threatening the relationship; for example, individuals were less likely to intervene if other bystanders were seen to join in with the bullying, especially if those bystanders were close friends. In other cases, the other bystanders appeared to protect against the consequences of the evaluative threat: in more severe incidents of cyberbullying, individuals were more likely to intervene when the other (passive) bystanders were close friends, as they could be a source of support. Huang and Chou (2010) further note that culture may influence how evaluation apprehension is manifested. They suggest that in collectivist cultures, *any* intervention (regardless of the target and intent) would conflict with the communal values of security and harmony, which give rise to norms of passivity and indirect aggression.

Therefore, evaluation apprehension may function differently within the cyberbullying context, as the familiarity of participants may heighten the potential consequences of intervening.

Pluralistic Ignorance

Pluralistic ignorance is described by Darley and Latané (1968, 1970) as the tendency for individuals to rely on other bystanders' reactions to decide whether intervention is necessary. It is also implicated in bystanders' decision to respond. Cyberbullying studies investigating this phenomenon tend to take the opposite approach, however. For example, Anderson and colleagues (2014) noted that modelling dissent increased the likelihood that bystanders would intervene in defence of the victim. Conversely, those who saw only the original cyberbullying post *without* any evidence of other bystanders' reactions were less likely to intervene. A series of studies conducted by Bastiaensens and colleagues (2014, 2015) found that individuals were influenced by the actions of others, and particularly close friends, when deciding how to respond; however, the "bystanders" in these situations were always active, in either reinforcing the bully or defending the victim. Nevertheless, individuals were more likely to defend when other bystanders did so, and similarly more likely to join in with the bullying if other bystanders had done likewise.

By comparison, situational ambiguity is far more frequently mentioned as a factor influencing bystanders' decisions to intervene. Smith (2012) notes that cyberbullying situations may be particularly ambiguous, as the online context means that victims' reactions are not immediately visible, and can be self-censored. Many adolescents report uncertainty over whether incidents that they witness online qualify as cyberbullying, and whether intervention is required (Holfeld, 2014). Similarly, Shultz and colleagues' (2014) sample of college students noted that they would need more information about the participants involved before they could adequately respond; in the absence of this information, they elected to

remain passive. In contrast, more severe (and thus less ambiguous) incidents of cyberbullying were more likely to elicit interventions, as bystanders were more likely to assess the situation as an emergency which required their help (Obermaier et al., 2014). Likewise, direct requests for help from the victim appear to cut through the ambiguity of cyberbullying situations, clarifying the need for help and countering the diffusion of responsibility, and thereby increasing the chance of bystander intervention (Macháčková et al., 2013).

Social Cognitive Theory and Morality

The themes identified through qualitative research with bystanders of cyberbullying loosely map to the three mechanisms proposed to underlie the bystander effect; however other, broader theories of morality may be better able to account for the inactivity of cyberbullying witnesses. In particular, research on cyberbullying bystander inaction may benefit from established theories of morality that extend beyond the specific bystanding situation, considering broader and more interactive influences on actions. This is exemplified by Bandura's (1971, 1986) social cognitive theory, which proposes a triadic structure in which personal, behavioural and environmental factors reciprocally influence each other. These three elements further interact with social and cultural influences to shape the individual's development. In applying this theory to moral behaviour, Bandura (1986, 1990, 1991) proposed that individuals develop moral standards which emerge from and are refined through their interactions with others. These standards are used to guide subsequent actions-behaviour that complies with these standards increases satisfaction and self-esteem, while violations invoke self-condemnation in the form of guilt and shame. Moral standards and emotions may influence individuals' behaviours in their own right. For example, Perren and Gutzwiller-Helfenfinger's (2012) study of German-speaking adolescents found that having lower levels of moral standards and emotions predicted cyberbullying. However, more

attention has been directed to how individuals with sound moral standards may act immorally (or fail to act morally). The apparent failure of moral standards to motivate moral behaviour may be mediated by the individual's cognitions and beliefs, specifically their use of moral disengagement mechanisms and perceived self-efficacy.

Moral Disengagement

Behaviour that conflicts with an individual's moral standards may be allowed or excused through the use of moral disengagement (MD) mechanisms, which enable individuals to selectively avoid the consequences of self-regulation. Bandura (1986, 1990) details eight mechanisms, which fall into four clusters. Behaviours may be framed more positively through *cognitive restructuring*: by providing reasons that justify their actions (moral justification); by comparing their actions to more serious behaviours (advantageous comparison); or by describing their behaviour in more innocuous or understated terms (euphemistic labelling). Individuals may *downplay their responsibility* for their actions if they are acting as part of a larger group (diffusion of responsibility) or can claim to have been pressured by others (displacement of responsibility). They may also *downplay the effects* of their actions (distortion of consequences), thereby avoiding the need to invoke moral sanctions. Lastly, actions may be portrayed as being *evoked by the victim*, either directly by claiming provocation (attribution of blame), or indirectly by denying their humanity (dehumanisation). As such, MD may influence responses to witnessed instances of peer aggression, by allowing bystanders to excuse or justify their inaction.

The relevance of MD to cyberbullying bystanders has been previously identified in qualitative research. DeSmet, Van Cleemput and colleagues (DeSmet et al., 2012, 2014; Van Cleemput et al., 2014) have noted that the reasons adolescents give for not intervening in cyberbullying are indicative of MD mechanisms, such as attribution of blame, diffusion of responsibility and dehumanisation. Indeed, the findings from their qualitative studies are

perhaps more coherently interpreted within Bandura's social cognitive theory of morality, compared to the framework of the bystander effect. There is particularly strong evidence for mechanisms that attribute blame to victims of cyberbullying. For example, participants spontaneously conclude that incidents of cyberbullying are caused or prolonged by victims' attributes or behaviour (Holfield, 2014). Similarly, DeSmet and colleagues' (2012) participants identified peers who they considered deserving of victimisation- namely "loners", whose behaviour apparently excluded them from humane treatment. Likewise, adolescents frequently report the displacement of responsibility for intervening, as they claim that this duty falls to more popular peers (DeSmet et al., 2014) or the friends of the victims (DeSmet et al., 2012; Macháčková et al., 2013; Price et al., 2014), or simply deny that they are personally responsible (Huang & Chou, 2010; Van Cleemput et al., 2014).

Those surveyed also alluded to mechanisms that downplayed or underestimated the severity and impact of cyberbullying incidents. This is most evident in participants who claimed cyberbullying was "no big deal" (Huang & Chou, 2010, p. 1588), which allowed intervention to be reframed as an unnecessary and unwelcome imposition (Huang & Chou, 2010; Bastiaensens et al., 2014). However, the effectiveness of this mechanism may be limited when objective indications of severity are present (Bastiaensens et al., 2014; DeSmet et al., 2014). Other mechanisms may manifest differently in different communities and cultures. For example, while participants from multiple cultures referenced the use of the moral justification mechanism, Huang and Chou's (2010) Taiwanese participants justified their inaction in terms of abiding by cultural values of cohesiveness and harmony. In contrast, European adolescents appeared more concerned about the consequences of inaction for themselves and their immediate friendships (DeSmet et al., 2012; Macháčková et al., 2013). Thus, previous qualitative research seems to suggest the relevance of MD mechanisms to cyberbullying bystander inaction.

The role of MD may also be easier to quantify and empirically test than the three mechanisms of the bystander effect proposed by Darley and Latané (1968). Scales have been developed to assess MD; in accordance with Bandura's (1976, 1981) emphasis on the social and environmental context of behaviours, these are often adapted to be specific to certain domains, including traditional bullying (Thornberg & Jungert, 2014) and cyberbullying (Bussey & Fitzpatrick, 2014). In this way, researchers have demonstrated that MD is implicated in the perpetration of acts of aggression, such as traditional bullying and cyberbullying (see Gini, Pozzoli & Hymel, 2014, for a review). Interestingly, MD may be similarly involved in influencing responses to witnessed instances of peer aggression. Barchia and Bussey (2011b) have previously investigated the association between MD and intervention in traditional bullying. Their survey of Australian students revealed that after controlling for moral standards, lower levels of MD were associated with more frequent intervention in bullying incidents.

Moreover, the ability to disengage from moral standards may be more important in predicting immoral behaviour than the standards themselves. Bussey, Fitzpatrick and Raman's (2015) investigation of moral determinants of cyberbullying found that moral standards were only significantly associated with cyberbullying perpetration when MD was not accounted for. In this study, the addition of MD to the predictive model reduced the association between moral standards and perpetration to non-significance. It is thus possible that MD is similarly involved in witnesses' response to cyberbullying, and is more influential than moral standards. However, a follow up study by Bussey and Fitzpatrick (2015) failed to find any direct effect of MD on bystander intervention in cyberbullying. Thus, evidence for the influence of MD in cyberbullying behaviours is so far inconclusive.

Self-Efficacy

Discrepancies between the individual's moral values and behaviour may also arise from deficits in self-efficacy. Self-efficacy describes the individual's belief in their ability to successfully execute a particular action (Bandura, 1986, 1997). That is, individuals may recognise cyberbullying incidents as morally wrong and identify the need for intervention, but believe they lack the skills to assist effectively. Self-efficacy for defending is known to be positively associated with defending victims and negatively associated with passive responses to *traditional* bullying (Barchia & Bussey, 2011b; Thornberg & Jungert, 2013). Interestingly, in Thornberg and Jungert's (2013) study defenders and passive bystanders did not significantly differ on measures of morality: both groups reported high moral sensitivity and low moral disengagement. They differed only on defender self-efficacy- that is, both groups were morally obliged to intervene, but only defenders considered themselves capable of intervention (Thornberg & Jungert, 2013). An initial study by Bussey and colleagues (2015) suggests that self-efficacy may be similarly involved in cyberbullying; individual MD was positively associated with cyberbullying perpetration only when self-efficacy to cyberbully was high. Although these findings relate to the perpetration of cyberbullying, they may apply similarly to bystander intervention, particularly given that self-efficacy is known to be associated with intervention in traditional bullying.

Indeed, qualitative research has provided supporting evidence for the influence of self-efficacy on intervention in cyberbullying. Interestingly, these findings suggest that defender self-efficacy may not be a unidimensional construct. The results of DeSmet and colleagues' (2012) focus groups suggest that participants were most confident about their ability to support or advise victims, but were less certain about confronting bullies and notifying their parents about witnessed incidents. Thus, self-efficacy beliefs might influence both whether and *how* witnesses of cyberbullying choose to intervene.

Cyberbullying in Context: Environmental and Social Factors

While MD and self-efficacy may be important influences on witnesses' responses, focussing wholly on these individual factors and cognitions ignores the social and technological contexts of cyberbullying. Bandura's social cognitive framework emphasises the need to consider contextual influences on individuals' behaviour; this is especially the case for cyberbullying, which is grounded in both the social context of the peer group and the technological context of mediated communication. It is therefore important for researchers to consider how these contextual factors influence bystander behaviour. In this way, findings that previously appeared inconsistent- for example, differences in influences on bystander intervention between peers and strangers, or between traditional and cyberbullying- may be explained.

Mediated Morality: Technological Affordances and Moral Disengagement

Although traditional bullying and cyberbullying are similar and often occur in combination, Perren and Gutzwiller-Helfenfinger (2012) argue that the differences between online and offline environments are sufficient for different moral processes to be involved. Specifically, they suggest that the distanced nature of mediated communication obscures the impact of cyberbullying on its victims, eliminating the need to justify immoral actions or inactions. This is consistent with the results of their survey of German-speaking adolescents, which found that cyberbullying perpetration was predicted by moral values and moral emotions (guilt and remorse), but not by MD (Perren & Gutzwiller-Helfenfinger, 2012). Other studies of MD in cyberbullying have returned mixed results. For instance, Wachs' (2012) survey of German adolescents found that MD was more common in cyberbullies than in traditional bullies, in that they were less likely to report having a bad conscience. These mixed results suggest that researchers should not blindly generalise findings about the role of

MD in bystander intervention from traditional bullying to cyberbullying. Rather, it is important to test and (if possible) replicate these effects in online contexts.

Alternatively, aspects of mediated communication may facilitate MD. Pornari and Wood (2010) note that mediated aggression is facilitated by technological affordances- features of the medium which enable (but do not cause) certain patterns of behaviour. In particular, they suggest that the distanced and asynchronous nature of mediated communication and the ability to act anonymously may appeal to those wishing to aggress, because of the lack of (immediate) consequences and the inability to see the impact on victims. Runions and Bak (2015) extend the work of Pornari and Wood (2010) in their explorations of how the specific features of online contexts enable different MD mechanisms. They note that non-mediated (offline) communication is highly dependent on non-verbal and paralinguistic cues, such as facial expression and tone of voice. By contrast, mediated communication is largely devoid of these social and emotional cues, which complicates the interpretation of messages. This effect is proposed to be mediated by empathy: the paucity of social and emotional cues impairs individuals' ability to empathise with each other. This particularly impacts on affective empathy, described as "the ability to effortlessly sense and powerfully experience the emotions of others" (Barlińska, Szuster & Winiewski, 2013, p. 39), which is heavily dependent on these cues. The reduced capacity for empathy online may lead to the individual distorting or downplaying the consequences of their actions, especially with respect to the impact on victims (Runions & Bak, 2015).

Although these mechanisms were initially proposed in relation to the perpetration of cyberbullying, they may apply similarly to inactive bystanders. Here, witnesses who perceive the incident to have little impact on victims may conclude that no intervention is necessary. Runions and Bak (2015) further argue the lack of socio-emotional cues makes mediated communication dehumanising by default, as these cues are required to empathise with others

and perceive their humanity. Additionally, more broadly-oriented social media (e.g. social networking sites) are designed to maximise the spread and sharing of content to vast audiences (boyd[2], 2014). As a result, incidents of peer aggression that occur online may be witnessed by far larger audiences than incidents of traditional bullying. These conditions may further facilitate disengagement mechanisms involving the diffusion and displacement of responsibility, as more witnesses are present to share responsibility (Runions and Bak, 2015). However, the interactions between technological affordances and specific MD mechanisms have not been tested empirically; further research is required to substantiate these theories.

Despite this, it is important to note that technological affordances do not solely facilitate negative behaviours and cognitions. Bastiaensens and colleagues (2015) note that adolescents appear to consider the affordances of different communication mediums when deciding how to respond to cyberbullying incidents, placing particular emphasis on features that allow them control over the situation. These participants favoured private and mediated forms of response which gave them more control over their message (including its timing) and the audience, particularly in more severe incidents where face-to-face or public interventions could risk delays or repercussions for both defenders and victims. Bastiaensens and colleagues (2015) interpret these preferences as indications that adolescents "highly value the ability to control their communication in more difficult social situations" (p. 432). Therefore, consideration of the technological context of cyberbullying should explore both the positive and the negative implications of its affordances.

Peer Influences on Cyberbullying and Intervention

Collective Moral Disengagement. In addition to individual MD strategies, consideration should be given to collective moral disengagement (CMD). Originally proposed by Bandura (Bandura, 2002; White, Bandura & Bero, 2009), this term describes an

[2] Despite APA conventions, boyd has stated that she has chosen to stylise her name without capitals, and prefers to be cited as such (boyd, 2010).

individual's perceptions of their peer's moral credentials, which reflects their impression of social norms. As the development and expression of morality, especially with respect to peer aggression, is inextricably grounded in the social context (Bandura, 2001), it is likely that individuals' tendency to morally disengage will be influenced by their classmates' moral behaviour- or their perceptions of their classmates' morality. The most extensive study of CMD in the context of peer aggression was conducted by Gini, Pozzoli and Bussey (2015). These authors investigated CMD both as it was perceived by individuals (student-level CMD) and at the class level, by aggregating student-level CMD scores amongst classmates (classroom CMD). The results revealed that student-perceived CMD was significantly positively associated with defending behaviours; in contrast, classroom CMD was negatively associated with defending behaviours, but positively associated with passive bystanding (Gini et al., 2015). That is, classes who were more morally disengaged were more passive and less likely to defend. Despite this, individuals who *perceived* their classmates as more morally disengaged were more likely to intervene in defence of victims.

Moreover, CMD seems to qualify the effects of individual MD. In Gini and colleagues' (2015) study, individual MD was not significantly associated with either inaction or intervention when measures of CMD were taken into account. This suggests that peer group morality may actually be a stronger influence on an individual's moral behaviour than their own moral cognitions. It is interesting to note that MD and CMD may also have an interactive effect. For example, CMD was noted to mediate the link between MD and aggression such that individual MD was positively associated with aggression only when CMD was high (Gini et al., 2015). Although this interaction did not significantly predict either passivity or defending, it does provide preliminary evidence that individuals may be more likely to morally disengage if they believe these mechanisms are socially normative.

Prejudices. Cyberbullying perpetration and bystanding behaviour may also be influenced by broader social norms that are not specific to aggression. Victims of peer aggression are disproportionately likely to be members of minority groups, such as those defined by gender, ethnicity and sexual orientation, while perpetrators may be motivated by corresponding prejudices (see Hong & Espelage, 2012, for a review). Byers (2013) has further suggested that in these incidents, witnesses may also be complicit in the perpetrator's prejudice- that is, their own prejudices may be discouraging them from intervening. In support of this, an experimental study by Freis and Gurung (2013) found that individuals who were more accepting of homosexuality were also more likely to intervene in a Facebook cyberbullying paradigm involving a homophobic attack on a confederate. Similarly, Anderson and colleagues (2014) found that individuals who intervened in a simulated incident of weight-based cyberbullying tended to hold less negative views of obesity, in that they did not necessarily equate excess weight with ill health and personal weakness.

Extending this idea in combination with social cognitive theory, prejudices held by the peer group may also influence bystanders' responses. This effect may be direct- for example, witnesses may be discouraged from intervening for fear of becoming affected by the same stigma. Alternatively, individuals may develop prejudicial attitudes through their interactions with and observations of others. Prejudices are inherently social, involving the derogation of one group by another; as such, specific prejudices are not innate but learned at an early age through modelling (Piaget, 1932; Bergen, 2001). Individuals may also be more likely to act on their prejudices (or in the case of bystanders, remain passive) if they believe others share their attitudes- as with the observed interaction between MD and CMD in Gini and colleagues' (2015) study. Previous research on cyberbullying has largely ignored the influence of prejudice on witnesses' responses, perhaps because these studies do not explicitly depict prejudice-based incidents. With the exception of Freis and Gurung (2013)

and Anderson and colleagues' (2014) studies, experimental paradigms typically portray generic instances of cyberbullying with no clear cause. Thus, researchers must consider the possibility that real-world cyberbullying incidents are influenced by prejudices, and that these prejudices may shape bystanders' reactions.

Modelling[3]. Modelling is perhaps the most visible way in which individual witnesses' responses to cyberbullying are affected by their peers. In this process, individuals learn behavioural responses by watching the actions of others, as well as the consequences of these actions (Bandura, 1986). Although modelling is often discussed with respect to the longer-term acquisition of behaviours, several studies suggest that it may have immediate effects in the cyberbullying context. Bastiaensens and colleagues (2014, 2015) noted that bystanders' responses to cyberbullying were influenced by the reactions of others; participants were more likely to reinforce bullies or defend victims if others before them had visibly done so. Anderson and colleagues (2014) similarly found that modelling dissent (by publicly disagreeing with a cyberbully's insulting message) increased the likelihood that subsequent witnesses would intervene. It is possible that these effects do not represent modelling but instead reflect a mediating effect of perceived severity. That is, individuals who see others defend victims of cyberbullying may interpret this intervention as an indicator that the situation is severe enough to require assistance. However, this does not explain why Bastiaensens and colleagues' (2014, 2015) findings were stronger when bystanders were close friends; this result is more consistent with modelling, which is known to be more effective when the observer likes or is similar to the model (Bandura, 1986).

Collective Self-Efficacy. Finally, perceptions of the broader community's ability to address cyberbullying may further influence whether and how witnesses respond to incidents. Barchia and Bussey (2011a, 2011b) have conducted two studies investigating the effect of

[3] Modelling is often grouped under 'behaviour', one of the three main facets of Bandura's social cognitive theory. However, within the context of the review it was considered to be more closely linked with other peer influences on cyberbullying and intervention.

collective self-efficacy- the individual's belief that their wider school community is able to effectively deal with cyberbullying. Collective self-efficacy was negatively associated with peer aggression (2011a) and positively associated with defending (2011b) in the case of traditional peer aggression. That is, individuals were more likely to aggress and less likely to defend if they perceived their community as unable to effectively address bullying. Although this effect has not yet been examined in the cyberbullying context, it is likely that collective self-efficacy will be similarly influential; in fact, it may have a stronger influence online, as communities have had less experience in dealing with bullying in this context. Moreover, addressing cyberbullying effectively requires the mastery of technology, in addition to the skills needed to address traditional peer aggression. Additionally, qualitative research indicates that the perceived efficacies of specific others may influence cyberbullying witnesses' choice of responses. For instance, DeSmet and colleagues' (2012) participants expressed reservations about adults' abilities to resolve cyberbullying, noting that this discouraged them from seeking help from adults. Hence, witnesses may also consider whether others are able to address cyberbullying when deciding how to respond.

Group and Individual Differences

Demographics

Intervention in traditional bullying is consistently predicted by age and gender. In brief, females tend to be more likely to intervene than males (O'Connell, Pepler & Craig, 1999), while intervention typically decreases as individuals get older (Menesini et al., 1997). However, neither factor has consistently predicted cyberbullying intervention. Females are typically predicted to intervene more frequently than males as they tend to have higher levels of empathy (although this may reflect differential motivation; see Graham and Ickes, 1997, for a review) and lower levels of MD (Bandura, 2002). With respect to gender, Bastiaensens

and colleagues (2014) found that females were more likely to help victims, while males were more likely to reinforce the cyberbully. However, the majority of studies have found no significant gender differences (Barlińska et al., 2013; Li, 2006; Macháčková et al., 2013; Van Cleemput et al., 2014). These inconsistent results may arise from the different control variables used in each study, which may have mediated apparent gender differences. For example, Macháčková and colleagues (2013) noted that females were more likely to intervene than males; however, accounting for socio-emotional factors (fear, upset, and requests for help) reduced the gender differences to non-significance.

With respect to age, older adolescents are predicted to be less likely to intervene in cyberbullying, as they are more conscious about fitting in with their peer group and becoming independent (Van Cleemput et al., 2014). Indeed, intervention in traditional bullying is known to decrease with age (e.g. Menesini et al., 1997). Despite these predictions, findings in the cyberbullying context have again been mixed. Van Cleemput and colleagues' (2014) results revealed a negative association between age and intervention. In contrast, Macháčková and colleagues (2013) found no evidence for a relationship between age and intervention in their study. Thus, neither gender nor age seem to consistently predict intervention in cyberbullying.

Individual Differences

Personal factors such as personality traits and empathy may also predict individuals' tendency to intervene in cyberbullying. Freis and Gurung (2013) examined whether bystanders' personality, prejudicial attitudes and empathy would predict their likelihood of intervening in a Facebook cyberbullying paradigm involving a homophobic attack on a confederate. This paradigm returned an unusually high intervention rate of 90.6%, potentially due to the forced nature of responses; intervention was more common in those who were extraverted, or accepting of homosexuality. Interestingly, participants' scores on

extraversion, openness and prejudicial attitudes further predicted whether they would intervene by comforting the victim, changing the subject or attacking the bully, while personal distress empathy predicted the degree of explicit language used in responding. Although intriguing, it is unclear how these personality predictors influence bystanders' responses: the authors offer only brief speculation on the role of extraversion in online impression management (Freis & Gurung, 2013).

By contrast, there is more support for the role of empathy in intervention. Empathy broadly refers to the individual's ability to vicariously experience the emotional states of others (Clark, 1980), and consistently predicts pro-social behaviour, including defending victims of traditional bullying (e.g. Nickerson, Mele & Princiotta, 2008). Van Cleemput and colleagues (2014) have similarly found that individuals higher in empathic concern were more likely to help victims of cyberbullying. Conversely, those with lower levels of empathy were more likely to join in with the cyberbullying, or remain passive. This effect may be mediated by MD- individuals who are more sensitive to the distress of cyberbullying victims may find it harder to justify or excuse their failure to intervene. However, no study has investigated the relationships between empathy, MD and intervention in the context of bystanders to cyberbullying.

Putting Theory into Practice: Designing Programs to Increase Intervention

The logical next stage of cyberbullying bystander research is to investigate means of increasing intervention, with the broader aims of discouraging perpetration and ameliorating the impact on victims. In this respect, social cognitive theory is more useful than the framework of the bystander effect, as it identifies specific facets which may be targeted to improve intervention. Specifically, programs may target personal factors (e.g. empathy), behaviours (e.g. modelling), cognitions (e.g. MD, self-efficacy), or aspects of the broader

social context. However, not all of these facets are viable or practical avenues for intervention, as they are difficult to modify. For example, while Freis and Gurung's (2013) personality predictors are intriguing, they are of limited use to those interested in encouraging witnesses to intervene, as personality traits are generally considered to remain relatively stable over time (McCrae & Costa, 1994).

By comparison, empathy may be of greater practical interest, as it appears possible to increase empathy (and by extension, bystander intervention). Barlińska and colleagues (2013) designed a short induction aimed at increasing bystanders' levels of empathy, consisting of a two-minute video of a victim of cyberbullying describing her experiences, including the emotional impact of the victimisation. This induction was trialled on a sample of 584 Polish high school students, and was successful in that it significantly reduced participants' intentions to join in with an unrelated incident of cyberbullying by spreading the humiliating message. These findings are promising, as they suggest that bystanders' reactions to incidents of cyberbullying may be improved through an extremely brief empathy induction. However, it should be noted that the induction only discouraged bystanders from joining in on the cyberbullying; it did not significantly increase prosocial responses, nor was there any attempt to test whether the decrease in negative reactions were maintained in the longer term. Moreover, it is unclear whether the observed changes in response were due to increased empathy levels; focus groups conducted by DeSmet and colleagues (2012) have revealed that Belgian high schoolers are largely unaware of the consequences of cyberbullying. It is therefore possible that the benefits of the induction arose because the video also educated participants of the impacts of cyberbullying. Thus, while empathy inductions may be viable options for intervention, more conclusive evidence is needed to determine whether empathy inductions can reliably increase bystander intervention through increasing empathy.

Targeting individuals' cognitions- particularly those relating to MD and self-efficacy- may further increase their likelihood of intervening in cyberbullying incidents. To date, no intervention explicitly aiming to reduce MD has been developed. However, Hymel, Rocke-Henderson and Bananno (2005) suggest that this may be achieved through increasing empathy or moral agency- targets which are themselves strongly linked to individual factors and self-efficacy. This suggests that programs must be multi-faceted and address multiple determinants of bystander behaviour if they are to successfully increase intervention. Self-efficacy may prove to be easier to manipulate, as there are existing programs which effectively teach students strategies to deal with *traditional* bullying, by modelling skills such as assertiveness (Salmivalli, 1999), peer support (Gini, 2004; Menesini, Codecasa, Benelli & Cowie, 2003) and more general communication and social skills (Cowie, 2000). These programs will require modification if they are to be adapted for the cyberbullying context; however, they may provide a useful starting point for developing programs to increase intervention in cyberbullying.

Lastly, any program aiming to reduce cyberbullying must address the broader social context of peer aggression if it is to be successful. Whole-school approaches are known to be effective in addressing traditional bullying (Vreeman & Carroll, 2007), which suggests that a similarly broad approach may effectively address cyberbullying (Pearce et al., 2011). This may involve the implementation of programs which educate students, parents and teachers on working together to manage cyberbullying incidents, thereby improving collective self-efficacy. Prejudice reduction strategies may also be of use in schools where instances of peer aggression disproportionately affect students from minority groups. Additionally, programs may not need to focus solely on teaching new skills; schools may benefit from the clarification of social norms by articulating and sharing privately held beliefs about online aggression. Adolescents typically view cyberbullying negatively, perceiving bullies as

"losers" or "cowards" (DeSmet et al., 2012, p. 61) and judging them harshly (Dillon & Bushman, 2015). Dillon and Bushman (2015) note that this peer disapproval constitutes a powerful social norm that may be a strong deterrent of cyberbullying, if potential perpetrators were made aware of it. Therefore, active and explicit clarification of peer-group attitudes may communicate the unacceptability of cyberbullying and establish perceptions of collective moral engagement.

It is worth noting that while the social context may be used to effect behavioural change at the individual level, the individual's behaviour may also influence social norms. Anderson and colleagues (2014) found that modelling dissent by publicly countering a cyberbully's prejudicial message not only increased the likelihood of further bystander intervention, but those who witnessed this defending also held more positive attitudes about the stigmatised group. If this effect holds true for other social norms, it suggests that the reciprocal influences between individuals and their social contexts may be employed to magnify the effect of anti-cyberbullying programs.

Strengths, Limitations, and Future Directions

Although cyberbullying is a relatively recent phenomenon, a considerable body of literature has already been established to investigate the role of bystanders in responding- or rather, not responding- to incidents. These studies have been invaluable in establishing the basic principles that guide bystander behaviour; notably, their findings have been remarkably consistent across cultures with only minor variations, suggesting potential cross-cultural applicability. Additionally, researchers have developed and used paradigms depicting multiple forms of cyberbullying, including posting insulting messages (Obermaier et al., 2014), invasive photos (Bastiaensens et al., 2014) and sharing private information (Shultz et al., 2014). This has allowed researchers to explore reactions to many different forms of this

diverse phenomenon, further adding to the generalisability of their findings. Darley and Latané's (1968) research on the bystander effect has long been the dominant framework for examining bystander behaviour across a broad range of contexts. Indeed, grounding research in this theory has been instrumental in mapping out the mechanisms underlying bystander inaction, and many of the reasons offered up by bystanders of cyberbullying to justify their inaction map to the concepts of diffusion of responsibility, evaluation apprehension, and pluralistic ignorance (Darley & Latané, 1968; Latané & Darley, 1970). However, Van Cleemput and colleagues (2014) note that of all the possible responses reported by bystanders to cyberbullying, the lack of response is perhaps the most difficult to explain because of the numerous socio-cognitive and contextual factors that may influence this decision. It is difficult to incorporate the extensive insights generated by qualitative research conducted with cyberbullying bystanders into the existing framework of the bystander effect.

Bandura's social cognitive theory is in many ways an improvement on previous theories, as it positions the factors involved in witnesses' responses as being interactive, and inextricably ground in the social and environmental context. This is particularly important in the case of peer-based aggression; witnesses are often multiply involved in cyberbullying, either as previous perpetrators or victims themselves, or as friends or peers of those directly involved. The use of social cognitive theory enables researchers to conceptualise the reciprocal influences of individual factors (e.g. personality, empathy), behaviours (e.g. modelling) and cognitions (e.g. MD, self-efficacy), and to explore how these factors may further interact with their social context (e.g. existing relationships, social norms, prejudices). Moreover, previous findings regarding cyberbullying bystander behaviour (both qualitative and quantitative) are more easily and logically integrated into the multiple domains of the social cognitive framework. This theory may also facilitate future research on programs to

increase bystander intervention, as it allows researchers to identify points that are easier, more effective, or essential to address.

Although social cognitive theory effectively ensures the consideration of multiple individual, social and contextual determinants of bystander behaviour, researchers must ensure that these factors are adequately addressed in their experimental research. At present, those designing cyberbullying studies must negotiate a difficult compromise between ecological validity and experimental control. Recall paradigms (e.g. DeSmet et al., 2012; Macháčková et al., 2013; Van Cleemput et al., 2014) ask participants about their reactions to incidents of cyberbullying they have witnessed in real life. This method ensures high ecological validity, but results may be affected by response biases- for example, participants might write about incidents they consider prototypical of cyberbullying, or incidents where they defended the victim in order to appear better. Other research teams have designed paradigms which expose participants to simulated incidents of cyberbullying. In these studies, participants are typically asked to imagine that those involved in the incident are their peers or classmates (Barlińska et al., 2013; Obermaier et al., 2014), or close friends (Bastiaensens et al., 2014, 2015; Shultz et al., 2014). While this may be adequate to simulate the relationship between bystanders (participants) and the characters in the scenario, it does not convey the social dynamics amongst the characters involved in the cyberbullying incident. Explicitly detailing the history and nature of previous interactions between characters is obviously unrealistic and impractical. However, in actual cyberbullying incidents participants are typically familiar with each other (DeSmet et al., 2012; Macháčková et al., 2013), and witnesses are therefore likely to have at least a basic awareness of these relational dynamics.

Furthermore, only three paradigms hint at the reason for the cyberbullying- Freis and Gurung (2013) and Anderson and colleagues (2014) portrayed incidents motivated by

homophobia and weight-based prejudice respectively, while Schultz and colleagues' (2014) "victim" was explicitly targeted for their behaviour at a recent social event. However, the majority of paradigms present incidents that are almost entirely devoid of their social context, leaving participants uncertain as to the reason why the cyberbullying is occurring, or who is at fault. Moreover, the characters portrayed in the scenario are typically not given names or profile pictures which clearly indicate either gender or ethnic background. This theoretically adds to the generalisability of findings, but may appear artificial and does not accurately represent the nature of cyberbullying incidents.

In this respect, researchers would benefit from using previous qualitative findings to inform future experimental designs. This applies equally to experimental cyberbullying simulations, and to the response options which are provided to participants. DeSmet and colleagues' (2012) focus group participants identified multiple methods of intervening in incidents of cyberbullying, including comforting the victim, confronting the bully, or reporting the situation to adults. Similarly, studies which allow individuals to freely describe how they react to cyberbullying incidents have found that participants spontaneously mention different means of responding. Rather than responding publicly, many prefer to contact those involved offline, privately, or through alternate media (Bastiaensens et al., 2014, 2015; Shultz et al., 2014). Moreover, these response dimensions may interact; participants particularly reported that confronting bullies was best done offline, for fear that public humiliation would escalate the situation (DeSmet et al., 2012).

It is important to integrate these dimensions into future research paradigms, as preliminary evidence suggests that the use of different response strategies may be influenced by different factors. For example, participants reported that they would not refer incidents to teachers if their efficacy at resolving cyberbullying situations was doubted (DeSmet et al., 2012), while the preference for private intervention was stronger if other bystanders had

reinforced the bullying, particularly if they were close friends (Bastiaensens et al., 2015). Additionally, response preferences may be biased by the way in which the bystander has encountered the cyberbullying incident; individuals may be more likely to intervene offline if they are physically present when the message is sent or received, or more likely to offer support if the victim personally tells them about their experiences. However, these predictions are speculative, as little research has been done into the different ways cyberbullying can be witnessed. The neglect of these response dimensions is an issue which must be addressed if such research is to be used as the basis for designing programs to increase cyberbullying bystander intervention.

Bystanders of cyberbullying are considered to be critical in addressing cyberbullying, yet there is still much to be learned about the factors that influence their responses to the incidents they witness. Previous research on witnesses' responses has done well to identify factors which independently predict intervention; given the heavy influence of the social context on peer aggression, researchers would benefit from the use of a social cognitive model of bystander behaviour. This would shift the emphasis of future studies towards interactive influences, which may help to overcome issues with the ecological validity of previous paradigms. These studies, both past and present, may contribute to the development of programs which aim not only to increase bystander intervention, but also to change social attitudes and norms concerning cyberbullying in a way that reduces its prevalence, impact and acceptability. However, it is important not to overstate the importance and applications of these results: not all incidents of cyberbullying occur in public and are witnessed by others. Instances of peer aggression that occur privately (e.g. emails or text messages sent only to the victim) are likely to be more difficult to address, as this requires the victim to seek help or the bully to become aware of the impact of their actions. Despite this, whole-school interventions targeting bystander intervention may indirectly reduce the prevalence and impact of these

private forms of cyber-aggression by conveying to potential perpetrators that these behaviours are socially unacceptable, and by empowering others to effectively manage incidents that occur. Thus, it is important that cyberbullying research continues to address the broader social context within which these incidents occur, especially with respect to the role of bystanders.

Social Cognitive Influences on Intervention in Cyberbullying:

The Role of Individual and Collective Moral Variables

Abstract

Despite their potential to reduce or remedy the impact of cyberbullying, most bystanders tend not to intervene in the incidents which they witness. Social cognitive theory suggests that this response is likely due to a complex pattern of interactions between personal, behavioural and environmental factors, which is further shaped by the social and cultural context. However, this theory has not been empirically tested in the context of cyberbullying bystanders. In this study, 563 grade 7 and 9 students completed a survey to examine the associations between intervention and morality, at the individual and peer-group levels. Results revealed that intervention was significantly associated with gender, grade, previous experiences of cyberbullying, and the interaction between individual and collective moral variables. Females reported more frequent intervention than males, while grade 7 students reported more frequent intervention than grade 9 students. Intervention was also positively correlated with previous victimisation and witnessing. Finally, collective moral disengagement moderated the effects of individual morality. In disengaged classes, higher moral standards were associated with more frequent intervention, while in morally engaged classes lower moral disengagement was associated with more frequent intervention. These results suggest that consistent with social cognitive theory, individuals' perceptions of social norms moderate the influence of individual morality on intervention.

Social Cognitive Influences on Intervention in Cyberbullying: The Role of Individual and Collective Moral Variables

Bystanders of cyberbullying have the potential to alter the course of the situations which they witness. In particular, they may be able to stop or reduce the impact of cyberbullying incidents by confronting bullies, supporting victims, or reporting situations to adults (Salmivalli, 2010; DeSmet et al., 2012; Bastiaensens et al., 2015). However, the majority of witnesses appear not to intervene when they have the opportunity to; previous studies have indicated that 50-90% of bystanders remain passive in the face of cyberbullying, across a range of surveys (Lenhart et al., 2011, Van Cleemput et al., 2014) and experimental paradigms (Freis & Gurung, 2013; Shultz, Heilman & Hart, 2014; Dillon & Bushman, 2015). Researchers have therefore begun to investigate factors which influence bystanders' responses to witnessed instances of cyberbullying, so that programs to increase bystander intervention may be developed. To date, most studies have examined independent predictors of intervention, such as personality (Freis & Gurung, 2013), incident severity (DeSmet et al., 2012; Bastiaensens et al., 2014) or the number of witnesses present (Obermaier, Fawzi & Koch, 2014). However, researchers have yet to develop a theoretical model that satisfactorily integrates these diverse factors, as well as considering their interactions and their social context.

Cyberbullying is defined as a repeated, intentional act of aggression against a victim who is less able to defend themselves, and which is enacted through an electronic medium (Smith et al., 2008). As with traditional bullying, cyberbullying typically occurs within established peer groups (Cassidy et al., 2013). That is, bullies, victims and witnesses often know each other in real life, and thus their mediated interactions may have consequences for their offline relationships (DeSmet et al., 2012; Macháčková, Dedkova, Sevcikova & Cerna, 2013). This implies that cyberbullying incidents- and by extension, witnesses' responses- are shaped by the previous interactions, attitudes and norms shared by the peer group in which

the incidents occur. Darley and Latané's (1968) bystander effect has long been the dominant theory of bystander inaction across many contexts (see Fischer et al., 2011, for a review), yet the contextually dependent nature of cyberbullying suggests that this theory may be inadequate at capturing the social and relational dynamics inherent in peer aggression. Van Cleemput and colleagues (2014) note that researchers have struggled to explain cyberbullying bystanders' inaction because of the many socio-cognitive and contextual factors that are implicated in this response. This suggests that a broader theory may be needed in order to account for the many complex and interactive influences on witnesses' responses.

Social Cognitive Theory, Morality, and Bystander Inaction

Bandura's (1971, 1986) social cognitive theory proposes that an individual's development is shaped by personal, behavioural and environmental factors, which also reciprocally influence each other. Moreover, these factors are thought to further interact with the individual's social and cultural context. Social cognitive theory is an inherently broad, generalised approach to understanding individual development, however it is often adapted to explain the emergence of more specific behaviours, cognitions and experiences. For example, aggressive actions (including the perpetration of cyberbullying) are frequently explained by applying social cognitive theory to moral behaviour (see Gini, Pozzoli and Hymel, 2014, for a review). This approach may also be useful in exploring passive responses to witnessed acts of aggression such as cyberbullying. Bandura (1986, 1990, 1991) proposes that the individual's interactions with others are crucial to the development and refinement of their moral standards. These standards serve as a moral compass of sorts, in that they are used to guide subsequent behaviour. Complying with these standards by acting morally results in satisfaction and increased self-esteem; immoral behaviour that violates these standards invokes self-condemnation, which manifests as feelings of guilt or shame.

Moral standards may directly motivate witnesses of cyberbullying to respond: those with stronger beliefs that cyberbullying is wrong should feel more compelled to intervene, as remaining inactive would invoke a greater sense of guilt or shame. However, few studies to date have investigated the role of moral standards in peer aggression. Moreover, those which do tend not to relate specifically to cyberbullying bystanders, but rather to *perpetrators* of cyberbullying or bystanders of *traditional* bullying. Perren and Gutzwiller-Helfenfinger's (2012) survey of German-speaking adolescents found that lower levels of moral standards and emotions were associated with more frequent cyberbullying perpetration. Additionally, Obermann's (2011) survey of Danish adolescents identified a subset of cyberbullying witnesses who did not intervene, and who subsequently felt guilty about their inaction. Despite these indications that moral standards may independently influence individuals involved in cyberbullying, studies have tended to focus on those individuals who appear to have moral standards but fail to act accordingly. The discrepancy between moral standards and actions (or lack thereof) appears to be primarily mediated by moral disengagement and self-efficacy (e.g. Barchia & Bussey, 2011b; Bussey & Fitzpatrick, 2015). This study will focus on the role of moral disengagement, particularly as it relates to the social context of the peer group.

Moral Disengagement

Individuals with high moral standards may not apply them equally across all situations. Moral disengagement describes the process by which individuals justify or excuse immoral behaviours, by reasoning that their moral standards do not apply under certain circumstances. Bandura (1986, 1990) described eight moral disengagement mechanisms, which are grouped in four clusters. Three mechanisms relate to *cognitive restructuring*: individuals may frame their actions as serving a higher purpose (moral justification), compare them to more serious behaviours (advantageous comparison) or describe them in understated

ways (euphemistic language). Two mechanisms allow the individual to *downplay their responsibility* for the incident, if they were pressured by others (displacement of responsibility) or were part of a larger group (diffusion of responsibility). One mechanism allows individuals to *downplay the effects* of their actions by denying or understating the impact on victims (distortion of consequences). Lastly, two mechanisms allow individuals to *shift the focus to victims* by claiming provocation (attribution of blame) or denying the victims' humanity (dehumanisation). Within the cyberbullying context, witnesses who are able to disengage their moral standards may be able to justify or excuse their inaction, by using these mechanisms to reason that intervention is unnecessary.

Moral disengagement has previously been implicated in the perpetration of aggressive acts, including traditional and cyberbullying (Gini et al., 2014). Interestingly, it also seems to predict intervention in instances of traditional bullying. Barchia and Bussey's (2011b) survey of Australian students found that lower levels of moral disengagement were associated with more frequent intervention. It is thus possible that moral disengagement similarly influences witnesses' responses to cyberbullying. Indeed, DeSmet, Van Cleemput and colleagues (DeSmet et al., 2012, 2014; Van Cleemput et al., 2014) have previously noted that the findings of their qualitative studies of cyberbullying behaviour indicate the use of moral disengagement mechanisms. The reasons given by adolescents to explain their inaction particularly evidence strategies which blame victims for their situation, minimise witnesses' responsibility and distort the consequences of cyberbullying. For example, adolescents spontaneously attribute blame for cyberbullying to victims (Holfeld, 2014), and identify peers whom they consider deserving of victimisation (DeSmet et al., 2012). Many participants deny that they are personally responsible for intervening (Huang & Chou, 2010; Van Cleemput et al., 2014); some specifically attribute this responsibility to the friends of victims (DeSmet et al., 2012; Macháčková et al., 2013; Price et al., 2014) or more popular peers (DeSmet et al.,

2014). Lastly, some participants appear to dismiss the impact of cyberbullying by claiming that it is "no big deal" (Huang & Chou, 2010, p. 1588).

Despite these indications that moral disengagement is involved in witnesses' responses to cyberbullying, quantitative studies have failed to evidence this association. Bussey and Fitzpatrick's (2015) survey of Australian students found no direct effect of moral disengagement on intervention in cyberbullying. This parallels research on cyberbullying perpetration where the role of moral disengagement is less consistently evidenced than in traditional bullying (Perren & Gutzwiller-Helfenfinger, 2012). Perren and Gutzwiller-Helfenfinger (2012) attribute these inconsistent findings to the nature of mediated communication, which they argue is sufficiently distinct from face-to-face communication to involve different moral processes. It is generally agreed that socio-emotional cues (e.g. facial expressions, tone of voice) are integral parts of offline communication that are absent online, which complicates the interpretation of mediated messages and disrupts processes involving empathy and moral disengagement (Pornari & Wood, 2010; Perren & Gutzwiller-Helfenfinger, 2012; Runions & Bak, 2015). However, it is unclear whether media facilitate (Runions & Bak, 2015) or obviate (Perren & Gutzwiller-Helfenfinger, 2012) moral disengagement mechanisms, and what the implications are for cyberbullying and witnesses' responses. Thus, further research is needed to clarify whether moral disengagement is relevant to cyberbullying bystanders, and under what circumstances.

Collective Moral Disengagement

In accordance with Bandura's social cognitive theory (1971, 1986), the individual's tendency to morally disengage may also be influenced by social factors, for example whether these strategies are considered normative or acceptable by their peers. Researchers should therefore consider collective moral disengagement- a concept which captures the individual's impression of their classmates' tendency to morally disengage (Bandura, 2002; White,

Bandura & Bero, 2009). Collective moral disengagement has been implicated in the tendency to intervene in *traditional* bullying. Gini, Pozzoli and Bussey (2015) found that defending victims was positively associated with perceived collective moral disengagement, but negatively associated with actual collective moral disengagement. That is, defending was less common in objectively disengaged classes, but students who perceived their peers to be disengaged were *more* likely to intervene.

Interestingly, individual and collective moral disengagement may have an interactive influence on behaviour. Gini and colleagues (2015) note that collective moral disengagement appears to moderate the association between individual moral disengagement and traditional peer aggression. In their study, higher levels of moral disengagement were only associated with more frequent aggression at higher levels of collective moral disengagement. That is, individuals were more likely to disengage their moral standards and act aggressively if they believed these processes to be normative. Although this interaction was not significantly associated with defending victims of traditional bullying, it suggests that individuals may be influenced by their classmates' attitudes and beliefs when interacting in this social context. However, the role of collective moral disengagement has not yet been examined in the cyberbullying context, and nor have the potential interactions between individual- and group-level morality.

Present Study: Aims and Hypotheses

This study aims to examine the influence of moral standards, moral disengagement and collective moral disengagement on the tendency to intervene in cyberbullying incidents. In adopting a social cognitive perspective, it also aims to explore the interactive influences of these variables, particularly with respect to understanding how individual-level morality may be moderated by perceptions of peer-group morality.

It was firstly hypothesised that each of the three social cognitive variables (moral standards, moral disengagement and collective moral disengagement) would be significantly associated with intervention. These predictions were made on the basis of previous research suggesting that moral standards (Perren & Gutzwiller-Helfenfinger, 2012) are associated with cyberbullying perpetration, while individual (Barchia & Bussey, 2011b) and collective (Gini et al., 2015) moral disengagement predict intervention in traditional peer aggression. However, as these three variables are typically inter-correlated, it was expected that the addition of each subsequent factor may displace the previous factors from significance. That is, moral standards were expected to be positively associated with intervention until the addition of moral disengagement (Bussey, Fitzpatrick & Raman, 2015); moral disengagement was expected to be negatively associated with intervention until the addition of collective moral disengagement (Gini et al., 2015); and collective moral disengagement was expected to be positively associated with intervention (Gini et al., 2015).

Social cognitive theory emphasises the existence of reciprocal influences and interactions between factors. Accordingly, it was expected that the main effects of moral standards, moral disengagement and collective moral disengagement would be qualified by their interactions with each other. In the case of individual-level moral variables, moral disengagement is partially dependent on moral standards as the use of disengagement mechanisms imply that the individual has moral standards to disengage. Consequently, moral standards were expected to moderate the relationship between moral disengagement and intervention; a negative association was expected only at higher levels of moral standards. Moreover, the bidirectional influences between factors are grounded in and further interact with their social and environmental context. This is particularly the case for instances of peer-based aggression like cyberbullying, which may be influenced by existing group norms and dynamics. Thus, it was hypothesised that collective moral disengagement would moderate the

effects of moral standards and moral disengagement on intervention. These effects were expected to be strongest when individuals believe that their classmates share their morals. Thus, the positive association between moral standards and intervention and the negative association between moral disengagement and intervention should be strongest at lower levels of collective moral disengagement. Lastly, the strongest effects on intervention should occur when individual and collective morals align. That is, a three-way interaction was expected where intervention would be highest when moral standards are high, and individual and collective moral disengagement are low.

Although gender, grade and cyberbullying experience were not the primary foci of this study, these variables were also assessed. Both gender and age have consistently predicted intervention in traditional bullying (O'Connell, Pepler & Craig, 1999; Menesini et al., 1997), yet evidence for their influence in cyberbullying has been inconsistent (Barlińska et al., 2013; Bastiaensens et al., 2014; Li, 2006; Macháčková et al., 2013; Van Cleemput et al., 2014). Similarly, previous experience with cyberbullying perpetration and victimisation has been associated with witnesses' responses to subsequent incidents (Barlińska et al., 2013; Van Cleemput et al., 2014), however evidence to support these ideas is limited. Thus, a secondary aim of this study was to investigate the influences of grade, gender, and previous perpetration and victimisation on intervention in cyberbullying.

Method

Participants

A total of 563 students participated in this study, including 338 students from grade 7 (138 females; M_{age} = 12.73 years, *SD* = .37 years), and 225 students from grade 9 (84 females; M_{age} = 14.72 years, *SD* = .36 years). These students were recruited from five Catholic and independent schools in New South Wales, Australia; three of these schools were

co-educational, with one girls school and one boys school also participating. Government data suggests that these students are predominantly from upper-middle class backgrounds (Australian Curriculum Assessment and Reporting Authority, 2015). The majority of participants were Anglo/Celtic (55.4%); a substantial minority claimed European (13.4%), East/South East Asian (7.8%) or mixed ethnic descent (14.3%).

Measures

Demographics and Technology Use. Sixteen questions were used to collect demographic information (age, grade, gender and ethnic background). This included seven items assessing participants' access to communication technologies and the Internet, and the frequency and purposes of their use.

Cyberbullying Participant Roles. Four scales were used to assess the frequency with which participants experienced cyberbullying as perpetrators, victims, bystanders and interveners. These scales were adapted from the Cyberbullying Questionnaire (CBQ; Calvete, Orue, Estévez, Villardón & Padilla, 2010).

Cyberbullying Perpetration and Victimisation. A previous revision of the CBQ was used to measure the frequency of cyberbullying perpetration and victimisation. This measure was modified by Gámez-Guadix, Villa-George and Calvete (2014; CBQ-R) to remove redundancies in content and accommodate newer technologies. In the perpetration scale, participants were required to rate "how often in the last school term have you performed the following behaviours", followed by a list of cyberbullying behaviours (e.g. "posting or sending humiliating images of another kid", "deliberately excluding someone from an online group"). Ratings were made using a six-point Likert scale from 1 (*it hasn't happened at all*) to 6 (*many times a week*). While the CBQ-R included fourteen items, exploratory factor analysis in this sample indicated that five items did not load adequately onto the theoretically

specified one-factor solution and should be deleted (see Appendix C)[4]. Hence, only nine items were used in this scale; total scores could thus range from 9 to 54, with higher scores indicating more frequent perpetration. This scale had acceptable reliability (Cronbach's alpha = .79), and the single factor solution accounted for 42% of variance in scores.

The victimisation scale is structured similarly to the perpetration scale, but asks participants to rate "how often in the last school term have the following behaviours happened to you". The CBQ-R victimisation scale contains only nine items: five items relating to the private sharing of content were omitted by the creators. Exploratory factor analysis in this sample indicated that one item did not load adequately and it was consequently deleted, resulting in an eight-item scale (see Appendix C). Total scores could range from 8 to 48, with higher scores indicating more frequent victimisation. The CBQ-R has been validated with Mexican and Spanish adolescents, with factor analyses indicating that cyberbullying perpetration and victimisation were distinct but correlated factors; these factors also had good internal consistency, with Cronbach's alpha values of .90 and .79, respectively (Gámez-Guadix et al., 2014). This scale also had acceptable reliability (Cronbach's alpha = .74), and the single factor accounted for 40% of variance in scores.

Cyberbullying Bystanding and Intervention. Scales assessing how frequently participants witnessed and intervened in incidents of cyberbullying were created for this study, based on the perpetration scale of the CBQ-R. The bystanding scale asked "how often in the last school term have you seen other people perform the following behaviours", while the intervention scale asked "how often in the last school term did you try to help other kids after the following things had happened to them". The fourteen cyberbullying items and response scale were identical to those originally used by Gámez-Guadix and colleagues

[4] It is interesting to note that several participants commented on or questioned items which were subsequently eliminated, noting that these behaviours were not always indicative of cyberbullying. A frequently cited example was the posting of embarrassing photos, which was often used between friends to publicly communicate birthday wishes.

(2014) to assess perpetration. Scores could range from 14 to 84 on both the bystanding and the intervention scales; higher scores indicate more frequent cyberbullying bystanding or intervention, respectively. In this study, the bystanding scale had excellent reliability (Cronbach's alpha = .93), while exploratory factor analysis revealed a one-factor solution accounting for 56% of variance. The intervention scale had similarly excellent reliability (Cronbach's alpha = .95), with a one-factor solution accounting for 63% of variance in scores.

Moral Standards Scale. The Cyber Bullying Moral Standards Scale was adapted from Bussey and colleagues (2015) for use in this study. Participants were asked to rate how good or bad it would be to engage in ten different cyberbullying behaviours on a six-point Likert scale from 1 (*very bad*) to 6 (*very good*); example behaviours included "sending threatening or insulting messages" and "posting or sending humiliating images of other people". Total scores on the ten-item cyberbullying-specific scale could range from 10 to 60, with higher scores indicating *lower* moral standards. In this study, the cyberbullying moral standards scale had good reliability (Cronbach's alpha = .87); exploratory factor analysis indicated that a one-factor solution accounted for 48% of variance in scores.

Moral Disengagement. Sixteen items were used to measure moral disengagement; these were taken from Bussey and Fitzpatrick's (2014) Cyber Bullying Moral Disengagement Scale, which was based on Bandura and colleagues' (1996) Moral Disengagement Scale. Two items were used to assess each of eight moral disengagement mechanisms as they related to cyberbullying: moral justification, euphemistic language, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of consequences, attribution of blame, and dehumanisation. Participants were asked to rate how much they agreed with each item on a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include "kids who get cyberbullied usually do things to

deserve it" and "it's okay to cyberbully a kid who behaved like a jerk". Scores could range from 16 to 80, with higher scores indicating higher individual moral disengagement. In this study, the scale had excellent reliability (Cronbach's alpha = .91); exploratory factor analysis revealed that a one-factor solution accounted for 44% of variance in scores.

Collective Moral Disengagement. Sixteen items were used to measure collective moral disengagement as it related to cyberbullying; these were adapted from Gini and colleagues' (2014) Collective Moral Disengagement scale. Participants were asked what proportion of their class endorsed each of sixteen different statements, on a five-point Likert scale from 0 (*none*) to 4 (*everyone*); these items were identical to those used in the (individual) moral disengagement scale described above. Scores could range from 0 to 64, with higher scores indicating higher collective moral disengagement. In this study, the scale had excellent reliability (Cronbach's alpha = .95); exploratory factor analysis revealed that a one-factor solution accounted for 56% of variance.

Other Measures. As this study formed part of a larger research program, seven other measures were included in the survey which were not used in this study. These were the Child and Adolescent Mindfulness Measure (CAMM; Greco, Baer & Smith, 2011); the Empathic Efficacy Scale (EES; Barchia & Bussey, 2011b); the Center for Epidemiological Studies Depression Scale (CES-D; Barchia & Bussey, 2010); the revised Social Anxiety Scale for Children (SASC-R; La Greca & Stone, 1993); the Children's Emotional Dysregulation Questionnaire (CEDQ; Spence, De Young, Toon & Bond, 2009); a measure of traditional bullying (Barchia & Bussey, 2011b); and four items assessing victimisation and bystanding experiences.

Procedure

Ethical approval for this study was granted by the Human Research Ethics Committee (Human Sciences and Humanities) of Macquarie University (see Appendix A). Once the

study gained ethical approval, participants were recruited from five Catholic and independent schools, whose principals had consented to their students' participation. Students whose parents or guardians had also consented to their participation were asked to provide consent on the day of testing, before beginning the questionnaire (see Appendix B). Approximately 40% of the eligible students participated in this study. The questionnaire was administered in class groups of approximately twenty students, supervised by a combination of teachers and research assistants. Three schools (65.7% participants) completed the questionnaire online; the remaining two schools (34.3% participants) completed the paper version.

After consent was obtained, participants were shown brief definitions of bullying and cyberbullying adapted from Olweus (1993; see Appendix C) before beginning the survey. Participants first completed the questions about demographics and technology use, and the measures of cyberbullying. The remaining eight measures (Moral Standards Scale, moral disengagement; collective moral disengagement; traditional bullying measure; EES; CAMM; CES-D; SAS-CR; and CEDQ) were presented in randomised order (a copy of all instruments used is provided in Appendix C). After completing the questionnaire, participants viewed a brief debrief statement explaining the purpose of the research. They were also able to indicate whether they had experienced distress while completing the survey, and wished to speak to the school counsellor about this.

Data Management

Missing Data. All items had some instances of missing data; in the measures that were used in this study, the proportion of data missing from individual items ranged from .06% to 7.59%. Missing data on the independent variable scales (perpetration, victimisation and bystanding; moral standards; individual and collective moral disengagement) was imputed at the item level. The expectation-maximisation procedure in SPSS was used as it is an effective method of imputing data that is missing not completely at random, relative to

other methods (Allison, 2001). Missing data on the dependent variable (intervention) was only imputed for participants who had completed at least 80% of the items, in order to avoid inflating the predictive ability of the regression model.

Transformation of Scales. Inspection of the dependent and independent variables indicated that all seven scales (cyberbullying perpetration, victimisation, bystanding and intervention; moral standards; individual and collective moral disengagement) deviated from the normal distribution (all positively skewed; standardised skewness coefficients > 14; standardised kurtosis coefficients > 12). Accordingly, these variables were transformed using the log10 function in SPSS.

Results

The results of this study are presented in three sections. First, a multivariate analysis of variance (MANOVA) was used to test for differences between genders and grades for each of the measures. Next, the correlations between measures are presented. Finally, hierarchical regression analysis was used to examine the association between social cognitive factors (moral standards, individual and collective moral disengagement) and intervention in cyberbullying incidents. An alpha of .05 was used for all analyses.

Gender and Grade Effects

Descriptive statistics are displayed in Table 1. A MANOVA was run in order to determine whether there were any differences between genders and grades on any of the measures (cyberbullying perpetration, victimisation, witnessing and intervention; moral standards; individual and collective moral disengagement). Results revealed that females reported more frequent intervention ($F_{1,552} = 9.80$, $p = .002$, partial $\eta^2 = 0.017$) and lower moral disengagement ($F_{1,559} = 8.36$, $p = .004$, partial $\eta^2 = 0.015$) than males. There were also significant differences between grades: grade 9 students reported more frequent perpetration

Table 1

Descriptive Statistics

	Males	Females		Year 7	Year 9		Total
	M (SD)	*M (SD)*	*F*	*M (SD)*	*M (SD)*	*F*	*M (SD)*
1. Perpetration	0.978 (.059)	0.975 (.047)	0.92	0.971 (.041)	0.986 (.070)	7.70**	0.977 (.055)
2. Victimisation	0.960 (.093)	0.969 (.102)	0.61	0.961 (.097)	0.968 (.096)	0.63	0.964 (.096)
3. Bystanding	1.242 (.142)	1.265 (.136)	2.70	1.231 (.119)	1.281 (.162)	16.34***	1.251 (.140)
4. Intervention	1.208 (.116)	1.245 (.135)	9.80**	1.222 (.129)	1.223 (.119)	0.001	1.223 (.125)
5. Moral Standards	1.071 (.106)	1.058 (.084)	1.89	1.057 (.092)	1.079 (.104)	6.98**	1.066 (.098)
6. Individual Moral Disengagement	1.336 (.143)	1.308 (.107)	8.36**	1.317 (.122)	1.338 (.142)	2.24	1.325 (.131)
7. Collective Moral Disengagement	1.366 (.162)	1.391 (.151)	2.45	1.361 (.149)	1.399 (.170)	6.43*	1.376 (.158)

Note. Higher scores on the Moral Standards scale indicate *lower* moral standards.

* $p < .05$, ** $p < .01$, *** $p < .001$

($F_{1,559}$ = 7.70, p = .006, partial η^2 = 0.014) and witnessing ($F_{1,559}$ = 16.34, p < .001, partial η^2 = 0.029), lower moral standards ($F_{1,559}$ = 6.98, p = .008, partial η^2 = 0.012), and higher collective moral disengagement ($F_{1,559}$ = 6.43, p = .011, partial η^2 = 0.012) than grade 7 students.

Correlations between Measures

Correlations between the independent and dependent variables are reported in Table 2. Bivariate Pearson correlations revealed that almost all variables were significantly positively correlated, with the exception of intervention in cyberbullying, which was not significantly correlated with either moral standards or moral disengagement.

Associations between Social Cognitive Variables and Intervention

A hierarchical regression analysis was conducted to investigate the role of moral standards and individual and collective moral disengagement in intervention in

Table 2

Correlations between Dependent and Independent Variables

	1.	2.	3.	4.	5.	6.	7.
1. Perpetration	-						
2. Victimisation	.40***	-					
3. Bystanding	.39***	.56***	-				
4. Intervention	.22***	.47***	.57***	-			
5. Moral Standards	.31***	.22***	.20***	.05	-		
6. Individual Moral Disengagement	.34***	.18***	.20***	.08	.45***	-	
7. Collective Moral Disengagement	.23***	.24***	.37***	.20***	.30***	.50***	-

Note. Higher scores on the Moral Standards scale indicate *lower* moral standards.
* p ≤ .05, ** p < .01, *** p < .001

cyberbullying. Gender and grade were included as control variables as multivariate analyses of variance and covariance indicated differences on these groups on several variables. Perpetration and victimisation were similarly included because of their observed correlations with social cognitive factors and intervention, and because perpetration and victimisation have been previously found to predict intervention in cyberbullying (Barlińska et al., 2013; Van Cleemput et al., 2014). Bystanding was also included to control for exposure to cyberbullying incidents; it was considered important to distinguish between participants who chose not to intervene, and those who had not had the opportunity to. Thus, grade, gender, perpetration, victimisation and bystanding were included as control variables, with moral standards, individual and collective moral disengagement, and the interaction between these variables used as predictors of intervention.

A seven-step model was created in which grade and gender were entered at step one. The three controlled participant roles were entered in step two. Moral standards, moral disengagement and collective moral disengagement were entered in steps three, four and five respectively. The three two-way interaction terms were added in step six. Lastly, the three-way interaction between moral standards, individual and collective moral disengagement was entered in step seven. All continuous variables were mean-centred before the analysis was run, with interaction terms created by multiplying the mean-centred variables.

Preliminary analyses indicated that the planned hierarchical regression analysis did not violate assumptions of homoscedasticity, multicollinearity or independence of residuals (Durbin-Watson statistic = 1.77). Additionally, although there were outliers in the dataset, none of these cases were of sufficient influence (all Cook's distances < 1) or leverage (all leverage values < 0.2) to skew the results. The P-P plot indicated that the residuals were not normally distributed; however, the planned hierarchical regression was run regardless, as regression tends to be fairly robust to non-normality (Box & Watson, 1962).

Table 3

Hierarchical Regressions Examining Associations between Intervention in Cyberbullying and Participant Roles, Moral Standards, and Individual and Collective Moral Disengagement

	Intervention in Cyberbullying						
Variable	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Gender	0.142**	0.095**	0.090**	0.090**	0.090**	0.086*	0.090**
Grade	0.009	-0.083*	-0.078*	-0.078*	-0.078*	-0.074*	-0.071*
Perpetration		-0.029	-0.011	-0.010	-0.011	-0.012	-0.012
Victimisation		0.215***	0.222***	0.222***	0.222***	0.229***	0.229***
Bystanding		0.471***	0.474***	0.474***	0.475***	0.470***	0.471***
MS			-0.073*	-0.072	-0.071	-0.035	-0.038
MD				-0.003	-0.001	-0.029	-0.022
CMD					-0.006	-0.001	-0.013
MS x MD						-0.032	-0.012
MS x CMD						-0.109**	-0.075
MD x CMD						0.099*	0.112*
MS x MD x CMD							-0.080
Total R^2	.020**	.376***	.381***	.381***	.381***	.392***	.394***
ΔR^2		.356***	.005*	.000	.000	.011*	.002

Note. MS = moral standards; MD = moral disengagement; CMD = collective moral disengagement

* $p \leq .05$, ** $p < .01$, *** $p < .001$

Table 3 displays the results of the seven-step hierarchical regression. All iterations of the model were significant; as the three-way interaction in step seven did not significantly increase the predictive value of the model ($\Delta R^2 = .003$, $F_{1,540} = 2.45$, $p = .118$), the sixth step is reported here. This model accounted for 39.2% of the variance in intervention scores. The overall model was significant ($F_{11,544} = 31.83$, $p < .001$). Additionally, gender ($b = 0.022$, $SE_b = 0.009$, $\beta = 0.086$; $t_{544} = 2.49$, $p = .013$), grade ($b = -0.009$, $SE_b = 0.004$, $\beta = -0.074$; $t_{544} = -2.15$, $p = .032$), victimisation ($b = 0.300$, $SE_b = 0.055$, $\beta = 0.229$; $t_{544} = 5.44$, $p < .001$) and

bystanding (b = 0.419, SE_b = 0.039, β = 0.470; t_{544} = 10.84, p < .001) emerged as significant individual predictors of intervention. Specifically, females, grade 7 students, and those who had more experience as victims or witnesses of cyberbullying reported more frequent intervention in cyberbullying incidents.

Additionally, the interaction between moral standards and collective moral disengagement (b =-0.732, SE_b = 0.269, β = -0.109; t_{544} = -2.72, p = .007) and the interaction between individual and collective moral disengagement (b = 0.479, SE_b = 0.210, β = 0.099; t_{544} = 2.28, p = .023) were also significantly associated with intervention. In order to interpret these interactions, simple slopes were calculated at one standard deviation above and below the mean for collective moral disengagement. Figure 1 shows the results of the simple slopes analysis of the interaction between moral standards and collective moral disengagement. This

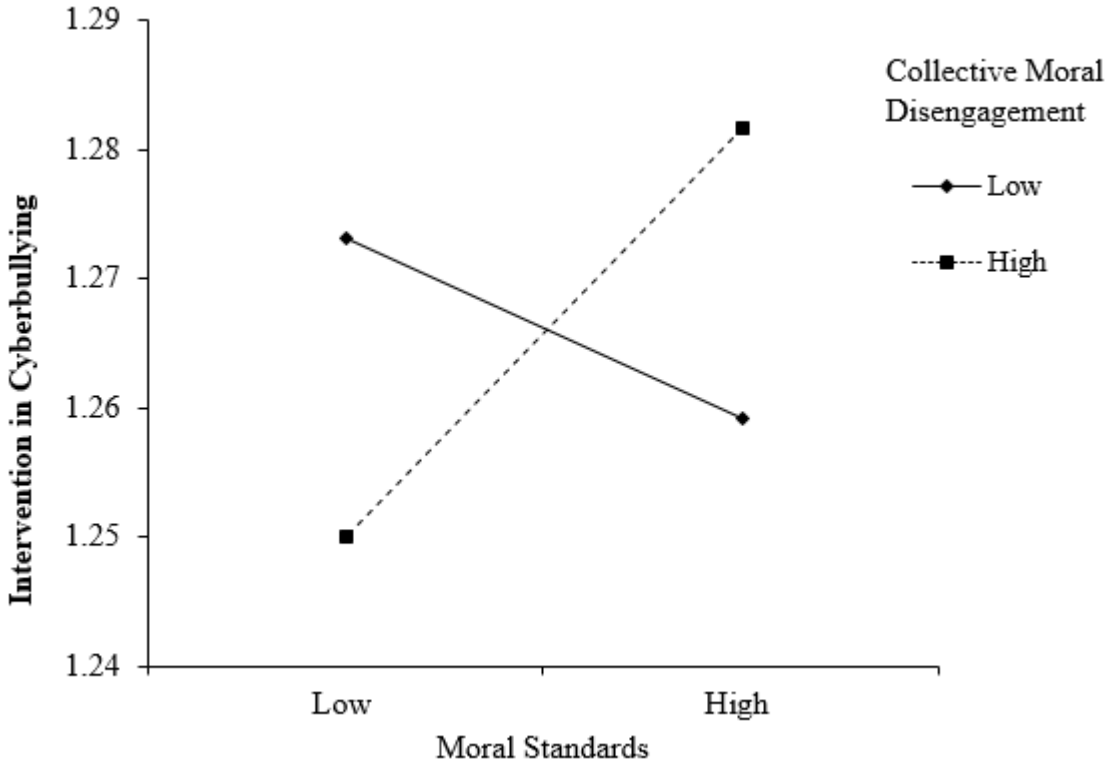

Figure 1: Intervention in cyberbullying as a function of moral standards and collective moral disengagement.

revealed that moral standard scores were negatively associated with intervention when collective moral disengagement was high (β = -0.161; t_{544} = -2.49, p = .013). That is, higher moral standards were associated with more frequent intervention at higher levels of collective moral disengagement. However, when collective moral disengagement was low, this association was not significant (β = 0.071; t_{544} = 0.96, p = .336).

Figure 2 shows the results of the simple slopes analysis of the interaction between individual and collective moral disengagement. This revealed that individual moral disengagement was not significantly associated with intervention at one standard deviation above (β = 0.048; t_{544} = 1.032, p = .302) or below (β = -0.104; t_{541} = -1.632, p = .103) the mean of collective moral disengagement. However at *lower* levels of collective moral disengagement, the (non-significant) negative relationship between individual moral disengagement and intervention is stronger.

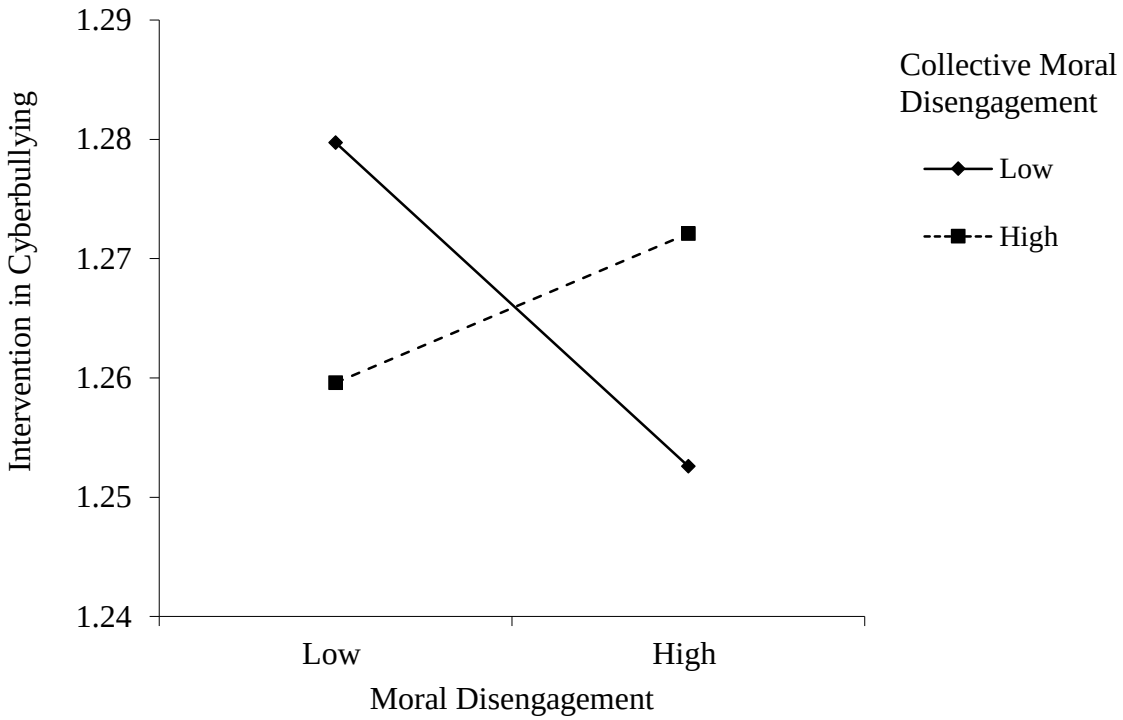

Figure 2. Intervention in cyberbullying as a function of individual and collective moral disengagement.

Discussion

This study builds on previous research by exploring the responses of cyberbullying witnesses from a social cognitive perspective. It aimed to examine the roles of moral standards, moral disengagement and collective moral disengagement in influencing the tendency to intervene in cyberbullying incidents. This provided an indication of the extent to which individuals' responses were influenced by their social context. The results indicated that while none of the three social cognitive variables was independently significantly associated with intervention, both moral standards and moral disengagement interacted with collective moral disengagement to influence bystander intervention. This suggests that collective moral disengagement may moderate the effect of the individual's morals on their tendency to intervene. Specifically, higher moral standards were only associated with more frequent intervention at *high* levels of collective moral disengagement. In contrast, higher levels of moral disengagement were more strongly associated with less frequent intervention at *lower* levels of collective moral disengagement. Together, these results suggest that collective moral disengagement may determine which aspect of the individual's morality has the strongest influence on their response to cyberbullying. That is, if the individual perceives their classmates to be morally disengaged, their level of moral standards is associated with their tendency to intervene. In contrast, if they perceive their classmates to be morally engaged, their own tendency to morally disengage is more strongly associated with intervention. Lastly, gender, grade, previous victimisation, and bystanding were all significantly associated with intervention. Females tended to report more frequent intervention, as did grade 9 students and those who reported more frequent victimisation and witnessing.

Social Cognitive Influences on Intervention

Contrary to hypotheses, none of the three social cognitive variables had a significant main effect on intervention, even before their interactions were added to the regression model. This contrasts with the previous literature, which has suggested that moral disengagement (Barchia & Bussey, 2011b) and collective moral disengagement (Gini et al., 2015) are associated with intervention in *traditional* peer aggression. However, it is consistent with the results of two previous studies, which failed to find any direct effect of moral disengagement on bystander intervention in cyberbullying (Perren & Gutzwiller-Helfenfinger, 2012; Bussey & Fitzpatrick, 2015). It is possible that moral standards and social cognitions are simply not as important in cyberbullying as they are in traditional bullying. Perren and Gutzwiller-Helfenfinger (2012) argue that mediated communication eliminates the need for moral disengagement, as the lack of socio-emotional cues combined with the distanced, asynchronous nature of communication makes messages ambiguous and open to variable interpretation, as well as obscuring the impact on victims. Alternatively, Runions and Bak (2015) note that aspects of mediated communication may facilitate moral disengagement; central to this argument is the idea that the lack of cues impairs empathy and dehumanises users by default. It is not clear whether this would affect all individuals equally, or if the proposed increases in moral disengagement would be detected by scales which primarily assess individuals' conscious cognitions and justifications. Nevertheless, the majority of cyberbullying studies suggest that moral values and social cognitions may not be as influential in the cyberbullying context; further research is needed to explore whether mediated communication increases (Runions & Bak, 2015) or simply obviates (Perren & Gutzwiller-Helfenfinger, 2012) moral disengagement.

The mixed results for the role of collective moral disengagement in predicting intervention is perhaps of more interest. Contrary to both hypotheses and previous findings

(Gini et al., 2015), collective moral disengagement was not significantly associated with intervention, although the zero-order correlation between the two variables was both positive and significant. Gini and colleagues (2015) have previously found a positive association between collective moral disengagement and defending, whereby individuals who perceive their classmates as more morally disengaged were more likely to intervene in instances of peer aggression. This was interpreted as suggesting that individuals who defend feel more personally responsible for intervening, and have the empathic, moral and social capacities to do so. Although there was no main effect of collective moral disengagement in this study, Gini and colleagues' (2015) account may be applicable to the observed interaction between moral standards and collective moral disengagement. Specifically, individuals who consider their peers to be morally disengaged are more likely to intervene if their own moral standards are high. That is, in the morally disengaged classroom, the responsibility for intervention falls to those with the strongest beliefs that cyberbullying is unacceptable.

The observed interaction between individual and collective moral disengagement is also of interest, as it provides further support for the influence of group norms on individuals' behaviour. In this study, the negative association between individual moral disengagement and intervention was stronger at lower levels of collective moral disengagement. This is consistent with hypotheses, and suggests that individuals' tendency to intervene is highest when they are morally engaged *and* they perceive their classmates to share their attitudes. Moreover, this appears to support Gini and colleagues' (2015) findings on the interactive roles of individual and collective moral disengagement in traditional peer aggression. These authors found that higher levels of moral disengagement were only associated with more frequent aggression at higher levels of collective moral disengagement. That is, individuals would only act on their morally disengaged cognitions if they considered these beliefs to be normative and shared by their classmates. The difference in directionality of the findings

between studies is likely because aggression is associated with moral *dis*engagement (both individual and collective), whereas intervention requires moral *engagement*.

It is interesting to note that Gini and colleagues (2015) did not find a significant interaction between individual and collective moral disengagement with respect to defending or passive bystander, despite suggesting that these behaviours are likely influenced by an interactive combination of personal and contextual factors. It should also be noted that while the interaction was significant in this study, the simple slopes analysis was not significant at one standard deviation above *or* below the mean of collective moral disengagement; as such, this effect may only hold for classes which are extremely morally engaged. Further research is thus needed to clarify whether the inconsistent evidence for the interaction is an artefact of the sample or measures used, or if it genuinely indicates that individual and collective moral disengagement have a stronger interactive influence on intervention in cyberbullying than in peer aggression.

Again contrary to predictions, no significant interaction between moral standards and moral disengagement was observed in this study, nor was there a significant three-way interaction between moral standards, moral disengagement and collective moral disengagement. It was expected that moral disengagement would only be associated with intervention at higher levels of moral standards, as individuals with lower moral standards would not consider cyberbullying as sufficiently problematic to require disengagement mechanisms. This may not have been the case in this study as scores on the moral standards scale were heavily skewed (even after being log-transformed), indicating that the majority of participants considered cyberbullying to be morally wrong. Thus, even those with relatively low moral standards had sufficient standards to disengage, and consequently the interaction between moral standards and moral disengagement was not significant. Alternatively, these individual moral variables may not influence bystander intervention in the cyberbullying

context- a view which is supported by their lack of significant main effects. Moreover, the three-way interaction between the social cognitive variables did not reach significance, which adds support to the suggestion that moral standards and moral disengagement do not necessarily exert a combined effect on defending whereby one variable moderates the effect of the other. Rather, the results of this study suggest that peer group morality moderates the association between individual-level morality and intervention.

Bystander Intervention and Previous Experiences of Cyberbullying

In this study, previous cyberbullying victimisation and witnessing (but not perpetration) were significantly positively associated with intervention. While the relationship between witnessing and intervention is unsurprising, the correlation between victimisation and intervention is of more interest. Van Cleemput and colleagues' (2014) study found that witnesses who had previously been victimised (either online or traditionally) were more likely to report having intervened in a cyberbullying incident, a finding which was replicated in this study. It is possible that previous victims tend to judge witnessed incidents of cyberbullying as more severe; they may perceive the impact on victims to be greater, and consequently feel more compelled to intervene. Runions and Bak (2015) note that the lack of cues in mediated communication creates ambiguity in messages, leading audiences to project their own interpretation of events onto victims. These interpretations are likely biased by the individual's own experiences; thus, perpetrators may dismiss witnessed incidents as non-serious or joking, while victims may interpret interactions as more distressing or severe. This is supported by a study by Barnett, Nichols, Sonnentag and Wadian (2013), in which adolescents with previous negative experiences of teasing displayed a hostile attribution bias. These individuals were more likely to interpret ambiguous teases as hostile, and display negative emotional and behavioural responses.

An alternative explanation is that previous victims may belong to social (e.g. peer groups) or technological (e.g. websites) contexts where the perpetration (and by extension, witnessing) of cyberbullying is more common, and therefore tend to intervene more frequently. While this may have been true of Van Cleemput and colleagues' (2014) findings, it does not appear to explain the results of this study as victimisation was still significantly associated with intervention after controlling for witnessing. If past experiences bias the interpretation of ambiguous situations, previous cyberbullying perpetration should also be associated with less helpful responses to cyberbullying. In this study, cyberbullies were no less likely to intervene than those with no history of cyberbullying; it may be that perpetration experiences affect witnesses' responses in other ways. For example, it may increase their propensity to join in with the bullying (Barlińska et al., 2013), rather than decreasing their tendency to intervene. Future investigations into the influence of previous cyberbullying experiences should therefore assess a range of behavioural responses, rather than examining each possible response in isolation.

Group Differences in Intervention

Contrary to hypotheses and previous research, this study found evidence for both grade and gender differences in intervention. Although initial analyses of variance suggested there were no grade differences in intervention, after controlling for perpetration, victimisation and witnessing experience in a multiple regression analysis, a significant negative association between grade and intervention emerged. This contrasts with Macháčková and colleagues' (2013) study, which failed to find any evidence of any age differences; however, it is consistent with Van Cleemput and colleagues' (2014) findings, as well as those from traditional bullying (Menesini et al., 1997). These discrepancies may arise from the different variables controlled in each study, particularly with respect to cyberbullying experience. In this study, initial analyses of variances revealed that grade 9

students reported witnessing cyberbullying more frequently than did grade 7 students, yet they were not significantly more likely to intervene. This suggests that grade differences in intervention are relative rather than absolute; that is, younger students appear to intervene in a greater *proportion* of witnessed incidents than grade 9 students, despite no absolute differences in intervention frequency existing.

In contrast, gender differences in intervention appeared in the initial analyses of variance and remained significant even after controlling for previous cyberbullying experience and social cognitive variables in a multiple regression analysis. Bastiaensens and colleagues (2014) have previously obtained similar results, as have many researchers of traditional bullying bystanders (e.g. O'Connell, Pepler & Craig, 1999); however, most studies have not found significant associations between gender and intervention in cyberbullying (Barlińska et al., 2013; Li, 2006; Macháčková et al., 2013; Van Cleemput et al., 2014). The reason for these inconsistencies is unclear; as with the effect of age on intervention, they may be due to different control variables used. Compared to males, females typically score higher on empathy (subject to motivational influences; Graham & Ickes, 1997), which in turn is associated with defending victims of cyberbullying (Van Cleemput et al., 2014). It is thus possible that the gender differences observed in this study were mediated by empathy, which was not assessed here.

Strengths, Limitations, and Future Directions

This study was the first to explore the interactive influences of individual and collective morality on the decision to intervene in cyberbullying. Moreover, it did so while controlling for the effects of gender, grade and previous experience of cyberbullying, and used a social cognitive framework to integrate findings with previous research literature. Cyberbullying experience was assessed using a previously validated, multi-item measure which allowed participants to indicate experience with behaviours that they might not

initially have considered cyberbullying (e.g. exclusion from online groups). This allowed the study to capture a broader range of cyberbullying forms and experiences, and may have reduced response biases.

However, this study is not without its limitations. Chiefly, given the theorised bidirectional influences between facets of the social cognitive model used, it is difficult to draw solid conclusions about the extent to which individual and collective factors influence each other, as well as the tendency to intervene in cyberbullying. A longitudinal study design would have helped to clarify the nature of these associations, as would multi-level analyses that allow data to be nested in class and school groups; however, this was beyond the scope of the current project. Similarly, it would have been ideal to assess other factors which social cognitive theory posits as influencing individuals' behaviour- such as empathy and efficacy, both individual and collective. Again, time constraints limited the number of measures that could be used in this study, meaning that only variables which were considered central to the research question could be assessed. Lastly, despite attempts to reduce response biases by using more in-depth assessments of cyberbullying experiences, it is possible that individuals overstated their tendency to engage in socially desirable behaviours such as intervention. This issue could be reduced through experimental research paradigms, in which participants have the opportunity to respond to a simulated incident of cyberbullying.

Despite its limitations, this study represents a significant contribution to the literature on bystanders of cyberbullying. It was the first study to empirically test the interactive effects of individual and collective morality on witnesses' responses in the cyberbullying context, with the results suggesting that the perceptions of peer group morality may moderate the effect of individual moral standards and moral disengagement on intervention. Moreover, it was also among the first to suggest the applicability of social cognitive theory to cyberbullying bystander research, given that cyberbullying often occurs within established

peer groups and may be accordingly influenced by their history of interactions and group norms. Extending investigations of interactive influences to other individual and social variables- particularly empathy and efficacy beliefs- would enable researchers to clarify which of the many factors are the strongest influences on bystander responses. Identifying these factors would provide a strong foundation for designing programs to increase bystander intervention, which have the potential to reduce the prevalence and impact of cyberbullying in schools.

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Appendices

Appendix A: Ethics Approval

Office of the Deputy Vice-Chancellor
(Research)

Research Office
Research Hub, Building C5C East
Macquarie University
NSW 2109 Australia
T: +61 (2) 9850 4459
http://www.research.mq.edu.au/
ABN 90 952 801 237

MACQUARIE University
SYDNEY·AUSTRALIA

20 March 2015

Associate Professor Kay Bussey
Department of Psychology
Faculty of Human Sciences
Macquarie University
NSW 2109

Dear Associate Professor Bussey

Reference No: 5201401142

Title: *Factors Associated with Cyberbullying*

Thank you for submitting the above application for ethical and scientific review. Your application was considered by the Macquarie University Human Research Ethics Committee (HREC (Human Sciences & Humanities)) at its meeting on 28 November 2014 at which further information was requested to be reviewed by the Ethics Secretariat.

The requested information was received with correspondence on 17 February 2015.

I am pleased to advise that ethical and scientific approval has been granted for this project to be conducted at:

- Macquarie University

This research meets the requirements set out in the *National Statement on Ethical Conduct in Human Research* (2007 – Updated March 2014) (the *National Statement*).

This letter constitutes ethical and scientific approval only.

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the *National Statement,* which is available at the following website:

http://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research

2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol.

3. All adverse events, including events which might affect the continued ethical and scientific acceptability of the project, must be reported to the HREC within 72 hours.

4. Proposed changes to the protocol must be submitted to the Committee for approval before implementation.

It is the responsibility of the Chief investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the Ethics Secretariat on 9850 4194 or by email ethics.secretariat@mq.edu.au

The HREC (Human Sciences and Humanities) Terms of Reference and Standard Operating Procedures are available from the Research Office website at:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics

The HREC (Human Sciences and Humanities) wishes you every success in your research.

Yours sincerely

Dr Karolyn White
Director, Research Ethics & Integrity,
Chair, Human Research Ethics Committee (Human Sciences and Humanities)

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research* (2007) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.

Details of this approval are as follows:

Approval Date: 20 March 2015

The following documentation has been reviewed and approved by the HREC (Human Sciences & Humanities):

Documents reviewed	Version no.	Date
Macquarie University Ethics Application Form	2.3	July 2013
Correspondence from Mrs Rhiannon Fogliati responding to the issues raised by the HREC (Human Sciences and Humanities)		Received 17/02/2015
MQ Participant Information and Consent Form (PICF)-Principal	2	23/02/2015
MQ Participant Information and Consent Form (PICF)-Parent	2	23/02/2015
MQ Participant Information and Consent Form (PICF)- Student – Paper Version	2	23/02/2015
MQ Participant Information and Consent Form (PICF)- Student – Online Version	2	23/02/2015
Information letter for staff room and newsletter	2	23/02/2015
Participant Survey		

Appendix B: Consent Forms

Principal Consent

Department of Psychology
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (02) 9850 8085
Fax: +61 (02) 9850 8062
Email: kay.bussey@mq.edu.au

"Factors Associated with Cyberbullying"

Dear Principal,

We are seeking permission for children in Grades 5, 7 and 9 to participate in a research project entitled "Factors Associated with Cyberbullying". The aim of this research is to investigate factors that are associated with children being mean to each other in their cyber interactions. We anticipate the results of this study will be of benefit to your school in planning strategies to reduce bullying and victimisation. This research is being conducted by Dr. Kay Bussey (Associate Professor), Mrs Rhiannon Fogliati (Research Assistant), Mrs Philippa Johnson (MRes student) and Ms Kimberley Allison (MRes student) from the Faculty of Human Sciences, Department of Psychology at Macquarie University (Dr. Kay Bussey, phone: 02 9850 8085, email: kay.bussey@mq.edu.au; Mrs Rhiannon Fogliati, phone: 02 9850 8075, email: rhiannon.fogliati@mq.edu.au).

Children will complete a 40 minute questionnaire at school in Term 2. The questionnaire will be completed in a group setting, ensuring minimal disruption to the school day. Each child who participates will be asked to answer questions about their experiences of cyber bullying, their self-efficacy to respond to cyber-bullying, and the psychological effects that cyber-bullying has on them. No names will be submitted in the questionnaire to ensure confidentiality. The study will be conducted on school premises in a location determined by you. If you consent to this study being conducted at your school we will provide information and consent forms outlining the aims and the procedures of the research to be sent home to parents. Researchers from Macquarie University will administer the questionnaire either be administered online (if the resources are available) or in a pen and paper format.

Consent will be obtained from parents by sending a letter home detailing the nature of the study and asking approval for student participation. Parents will provide their consent via a returned form or email. It is requested that **ALL** students return this consent form, regardless of whether their parents consent to them participating. Consent will also be obtained from students before they begin the questionnaire. It is possible that some students may experience distress as a result of recalling bullying experiences. If a student does experience distress, it may be necessary for that student to speak to a school counsellor. Students will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to them when they stop filling in the questionnaire (which can be at any time). Although this is unlikely, I would appreciate you informing the counsellor of this possibility.

All data gathered is strictly confidential and students' responses are identified only by an individual code. The data is held in a secure area and accessible only to the project's researchers. No participant will be identified in any publication or presentation of results. Approval to conduct the study has been granted by the Macquarie University Human Research Ethics Committee.

At the completion of this study a summary of the research results will be forwarded to you. We would greatly appreciate your involvement in this important project.

Thank you,
Dr Kay Bussey

APPROVAL OF PRINCIPAL'S CONSENT - please detach copy below and return to researcher.

I ***(block letters)*** _____ , have read the above information and any questions I have asked have been answered to my satisfaction. I have kept a copy of this form. I give consent for this research to be conducted in my school. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Principal's Name ***(block letters)*****:** _____

Principal's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

……..……..……

CONSENT FORM – RESEARCHERS' COPY

I ***(block letters)*** _____ , have read the above information and any questions I have asked have been answered to my satisfaction. I have kept a copy of this form. I give consent for this research to be conducted in my school. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Principal's Name ***(block letters)*****:** _____

Principal's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

……..……..……

Parent Consent

Dear Student,

Please give this letter to your parent/guardian when you get home and return the signed consent form by _____. If you do, you will go in the draw to win 1 of 3 iPod Shuffles.

Department of Psychology
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (02) 9850 8085
Fax: +61 (02) 9850 8062
Email: kay.bussey@mq.edu.au

"Factors Associated with Cyberbullying"

Dear Parent/Guardian,

We are seeking permission for your child to participate in a longitudinal research project entitled "Factors Associated with Cyberbullying". **The study has been approved by the school principal and will be conducted at your child's school.** Please sign the attached form and return it to the school, regardless of whether you would like your child to participate. The aim of this research is to investigate factors that are associated with children being mean to each other in their cyber interactions.

Children will complete a 40 minute questionnaire at school in Term 1 or 2 and again in Term 3 or 4. The questionnaire will be completed in a group setting in a location directed by the school principal, ensuring minimal disruption to the school day. Participants will be identified by a unique code and all data gathered are strictly confidential. No names will be submitted in the questionnaire to ensure confidentiality. The principal of your school has been given a copy of the questionnaire for his/her approval prior to the commencement of the research. Children who participate will be asked to answer questions about their experiences of cyberbullying, their self-efficacy to respond to cyberbullying, and the psychological effects that cyberbullying has on them. Cyberbullying is bullying through e-mail, instant messaging, in a chat room, on a website, or through a text message sent to a mobile phone. The effects of cyberbullying are varied, although they may include children experiencing low mood or increased anxiety.

Most students who have participated in similar research have enjoyed the experience. However, if your child shows any signs of not wishing to participate, s/he can stop at any time. Also, you can withdraw your consent for your child's participation at any time without giving a reason. It is possible that some students may experience distress as a result of recalling bullying experiences. If your child does experience distress as a result of completing this questionnaire, they will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to them when they stop filling in the questionnaire (which can be at any time). Organisations such as the Kids Helpline also provide telephone and online support to students who are distressed. They can be contacted on 1800 55 1800 or at http://www.kidshelp.com.au/. If you would like more information on Cyberbullying or Cyber safety, please visit the Cybersmart

(http://www.cybersmart.gov.au/) or ThinkuKnow (http://www.thinkuknow.org.au/) websites. A copy of the research results will be made available to your child's school once they are available.

Approval to conduct the study has been granted by the Macquarie University Human Research Ethics Committee. This research is being conducted by Dr. Kay Bussey (Associate Professor) and Mrs Rhiannon Fogliati (Research Assistant) from the Faculty of Human Sciences, Department of Psychology at Macquarie University (Dr. Kay Bussey, phone: 02 9850 8085, email: kay.bussey@mq.edu.au; Mrs Rhiannon Fogliati, phone: 02 9850 8075, email: rhiannon.fogliati@mq.edu.au).

Please discuss this project with your child before giving approval. During discussions, it is important to make your child aware that s/he can withdraw from participation at any time, even if s/he has not completed the questionnaires. Please assure your child that s/he will not be asked any questions if s/he decides not to participate or withdraws his/her participation.

Regardless of whether you do or do not want your child to participate, **PLEASE** indicate your consent on the form below and return the form to your child's school, or respond via email, by _____.

You can indicate your consent in the following ways:

- **Sign the enclosed forms. Detach and return the 'researcher's copy' to your child's school,**

OR

- **Email _____, stating whether or not you consent to your child's participation**

We would be very grateful for your child's participation. If you have questions please do not hesitate to contact Dr Kay Bussey.

Thank you,

Dr. Kay Bussey

……

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

"Factors Associated with Cyberbullying"

PARENTS' COPY FOR CHILD PARTICIPATION

I ***(block letters)*** _____, **WANT / DO NOT WANT (please circle)**

MY CHILD *(block letters)* _____ **TO PARTICIPATE IN THIS STUDY.**

CHILD'S GRADE_____ CHILD'S HOMEROOM CLASS_____

Parent or Guardian's Name ***(block letters)*****:** _____

Parent or Guardian's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

……

"Factors Associated with Cyberbullying"

RESEARCHERS' COPY FOR CHILD PARTICIPATION

I ***(block letters)*** _____, **WANT / DO NOT WANT (please circle)**

MY CHILD *(block letters)* _____ **TO PARTICIPATE IN THIS STUDY.**

CHILD'S GRADE_____ CHILD'S HOMEROOM CLASS_____

Parent or Guardian's Name ***(block letters)*****:** _____

Parent or Guardian's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Student Consent Form – Paper Version

Department of Psychology
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (02)9850 8085
Fax: +61 (02)9850 8062
Email: kay.bussey@ mq.edu.au

Dear Student,

This questionnaire is designed to find out how you feel about your interactions with peers at school. This is not a test. There are no right or wrong answers. All responses will be confidential and identified only through a unique code. Your name will not be recorded and your teachers, parents and other students will not see what you have written. The only people who will see your answers are the researchers at Macquarie University. The questionnaire will take about 40 minutes to fill out. Your participation in this study is completely voluntary and you can choose to stop at any time without giving a reason. If you experience distress as a result of completing this questionnaire, you will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to you when you stop filling in the questionnaire (which can be at any time). Alternatively, you may wish to seek support from the Kids Helpline by calling 1800 55 1800 or by visiting http://www.kidshelp.com.au/. If you would like to fill out this questionnaire, please sign the consent form below. If you have any questions, please do not hesitate to put up your hand and one of the researchers will answer your questions.

……..……..……..……

STUDENT'S COPY:

I ***(block letters)*** **_____,** have read the above information and **I DO WANT TO PARTICIPATE IN THIS STUDY.** Any questions I have asked have been answered to my satisfaction. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Student's Name ***(Block letters)*:**_____
Student's Signature ***(Block letters):***_____ Date***:***_____
Investigator's Name: Dr Kay Bussey
Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

……..……..……..……

RESEARHER'S COPY:

I ***(block letters)*** **_____,** have read the above information and **I DO WANT TO PARTICIPATE IN THIS STUDY.** Any questions I have asked have been answered to my satisfaction. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Student's Name ***(Block letters)*:**_____
Student's Signature ***(Block letters):***_____ Date***:***_____
Investigator's Name: Dr Kay Bussey
Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

Student Consent Form – Online Version

Please note that the text below will appear on Qualtrics and thus, has not been presented on a Macquarie University letterhead.

Dear Student,

This questionnaire is designed to find out how you feel about your interactions with peers at school. This is not a test. There are no right or wrong answers. All responses will be confidential and identified only through a unique code. Your name will not be recorded and your teachers, parents and other students will not see what you have written. The only people who will see your answers are the researchers at Macquarie University. The questionnaire will take about 40 minutes to fill out. Your participation in this study is completely voluntary and you can choose to stop at any time without giving a reason.

If you experience distress as a result of completing this questionnaire, you will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to you when you stop filling in the questionnaire (which can be at any time). Alternatively, you may wish to seek support from the Kids Helpline by calling 1800 55 1800 or by visiting http://www.kidshelp.com.au/. If you have any questions, please do not hesitate to put up your hand and one of the researchers will answer your questions.

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

☐ If you would like to participate in this study, please check the box to continue to the questionnaire.

Appendix C: Participant Questionnaire

Demographics Questions

What school do you go to?

What grade are you in?

What home room class are you in?

What is your gender?

- Male
- Female

What is your age in years and months?

Years:

Months:

What is your date of birth? (DD/MM/YYYY)

What country were you born in?

- Australia
- Other (please specify)

What country was your mother born in?

- Australia
- Other (please specify)

What country was your father born in?

- Australia
- Other (please specify)

What is your ethnicity?

- Anglo/Celtic (eg. English, Irish, Scottish, Welsh background)
- European (eg. French, German, Greek, Italian, Spanish background)
- East/South East Asian (eg. Chinese, Japanese, Korean, Vietnamese background)
- South Asian (eg. Bangladeshi, Indian, Pakistani, Sri Lankan background)
- Middle Eastern (eg. Egyptian, Lebanese, Turkish background)
- Aboriginal/Torres Strait Islander
- Pacific Islander (eg. Fijian, Samoan, Tongan background)
- Mixed ethnic descent (please specify)
- Other (the above categories do not adequately represent my ethnicity; please specify)

Definition of Bullying

We say that a person is being bullied when another person, or several other people do any of the following:

- say mean and hurtful things
- make fun of him or her
- call him or her mean and hurtful names
- completely ignore or exclude him or her from their group of friends
- leave him or her out of things on purpose;
- hit, kick, push, shove around, or lock him or her inside a room;
- tell lies or spread false rumours about him or her
- send mean notes and try to make other students dislike him or her;
- and other hurtful things like that.

Cyberbullying is bullying through e-mail, instant messaging, in a chat room, on a website, or through a text message sent to a mobile phone.

When we talk about bullying, these things happen repeatedly, and it is difficult for the person being bullied to defend himself or herself. We also call it bullying, when a student is teased repeatedly in a mean and hurtful way. Cyberbullying is when these mean things happen over the internet or via a mobile phone.

Cyberbullying Participant Roles and Experience of Cyberbullying

How often in the last school term **have you performed** the following behaviours while on the internet or on a mobile phone/tablet?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. Sending threatening or insulting messages	O	O	O	O	O	O
2. Posting or sending humiliating images of another kid	O	O	O	O	O	O
3. Posting links of humiliating images to other people for them to see	O	O	O	O	O	O
4. Writing embarrassing jokes, rumours, gossip, or comments about another kid on the internet	O	O	O	O	O	O
5. Posting or sending links with rumours, gossip, etc. about another kid so that other kids can read them	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
6. Hacking to send messages by email or social networks that could make trouble for another kid	O	O	O	O	O	O
7. Recording a video or taking pictures while a group laughs and forces another kid to do something humiliating or ridiculous	O	O	O	O	O	O
8. Posting or sending the images described in Item 7 to be seen by other kids	O	O	O	O	O	O
9. Recording a video or taking pictures while someone hits or hurts another kid	O	O	O	O	O	O
10. Posting or sending the images described in Item 9 to be seen by other kids	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
11. Broadcasting another kid's secrets, compromising information or images online	O	O	O	O	O	O

12. Deliberately excluding someone from an online group	O	O	O	O	O	O
13. Recording a video or taking pictures of other kids performing some type of sexual behaviour	O	O	O	O	O	O
14. Posting or sending the images described in Item 13 to be seen by other kids	O	O	O	O	O	O

Circles indicate items which did not load adequately, and which were not included in the final scale.

How often in the last school term have the following behaviours **happened to you** via the internet or a mobile phone/tablet?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. I have received threatening or insulting messages	O	O	O	O	O	O
2, Other people have posted humiliating images of me on the internet	O	O	O	O	O	O
3. Other people have written embarrassing jokes, rumours, gossip, or comments about me on the Internet	O	O	O	O	O	O
4. Other people have hacked my email or social networks to send messages that could be troublesome for me	O	O	O	O	O	O
5. Other people have used a mobile phone to record a video or take pictures of me while a group laughs and forces me to do something humiliating or ridiculous	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
6. Other people have used a mobile phone to record a video or take pictures of me while someone hits or hurts me	O	O	O	O	O	O
7. Other people have broadcast secrets about me online that involve compromising information or images of me	O	O	O	O	O	O
8. Other people have deliberately excluded me from an online group	O	O	O	O	O	O

9. Other people have used a mobile phone to record a video or take pictures of me involving a sexual behaviour	O	O	O	O	O	O

Circles indicate items which did not load adequately, and which were not included in the final scale

How often in the last school term have you **seen other people** perform the following behaviours while on the internet or on a mobile phone/tablet?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. Sending threatening or insulting messages	O	O	O	O	O	O
2. Posting or sending humiliating images of another kid	O	O	O	O	O	O
3. Posting links of humiliating images to other people for them to see	O	O	O	O	O	O
4. Writing embarrassing jokes, rumours, gossip, or comments about another kid on the internet	O	O	O	O	O	O
5. Posting or sending links with rumours, gossip, etc. about another kid so that other kids can read them	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
6. Hacking to send messages by email or social networks that could make trouble for another kid	O	O	O	O	O	O
7. Recording a video or taking pictures while a group laughs and forces another kid to do something humiliating or ridiculous	O	O	O	O	O	O
8. Posting or sending the images described in Item 7 to be seen by other kids	O	O	O	O	O	O
9. Recording a video or taking pictures while someone hits or hurts another kid	O	O	O	O	O	O
10. Posting or sending the images described in Item 9 to be seen by other kids	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
11. Broadcasting online other kid's secrets, compromising information or images	O	O	O	O	O	O
12. Deliberately excluding someone from an online group	O	O	O	O	O	O
13. Recording a video or taking pictures of other kids performing some type of sexual behaviour	O	O	O	O	O	O
14. Posting or sending the images described in Item 13 to be seen by other kids	O	O	O	O	O	O

How often in the last school term did you **try to help other kids** after the following things had happened to them while on the internet or on a mobile phone/tablet?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. Someone had sent them threatening or insulting messages	O	O	O	O	O	O
2. Someone had posted or sent humiliating images of them	O	O	O	O	O	O
3. Someone had posted links of humiliating images of them for other people to see	O	O	O	O	O	O
4. Someone had written embarrassing jokes, rumours, gossip, or comments about them on the internet	O	O	O	O	O	O
5. Someone had posted or sent links with rumours, gossip, etc. about them so that other kids could read them	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
6. Someone had hacked their account to send messages by email or social networks that could make trouble for them	O	O	O	O	O	O

7. Someone had recorded a video or taken pictures while a group laughed and forced them to do something humiliating or ridiculous	O	O	O	O	O	O
8. Someone had posted or sent the images described in Item 7 to be seen by other kids	O	O	O	O	O	O
9. Someone had recorded a video or taken pictures while another person hit or hurt them	O	O	O	O	O	O
10. Someone had posted or sent the images described in Item 9 to be seen by other kids	O	O	O	O	O	O

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
11. Someone had broadcast their secrets, compromising information or images online	O	O	O	O	O	O
12. They had been deliberately excluded from an online group	O	O	O	O	O	O
13. Someone had recorded a video or taken pictures of them performing some type of sexual behaviour	O	O	O	O	O	O
14. Someone had posted or sent the images described in Item 13 to be seen by other kids	O	O	O	O	O	O

Moral Disengagement

For the following items, please read each statement and select the response to show how much you agree.

	Strongly Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Strongly Agree
It's alright to send mean messages to a kid using a mobile phone or the internet if they have poked fun at your friends	O	O	O	O	O
Posting a mean message about a cyberbully is just teaching them "a lesson"	O	O	O	O	O
It is unfair to blame a kid who only had a small part in the harm caused by a whole group of kids sending mean messages about someone	O	O	O	O	O
It's okay to email a mean message to another kid because posting it on Facebook for everyone to see is worse	O	O	O	O	O
Kids can't be blamed for texting mean comments when all their friends do it	O	O	O	O	O
It is okay to cyberbully because it doesn't really do any harm	O	O	O	O	O

	Strongly Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Strongly Agree
If kids are annoying, it is their own fault if they get sent a mean message on their mobile phone or through the internet	O	O	O	O	O
Some kids who are cyberbullied deserve to be treated like animals	O	O	O	O	O
If kids have mean comments texted to them on their mobile phone, then it's okay for them to text mean comments to other kids	O	O	O	O	O
Sending a mean message about someone on Facebook is just a way of joking around	O	O	O	O	O
A kid who only suggests sending a mean message to another kid on the internet should not be blamed if other kids go ahead and do it	O	O	O	O	O

Compared to the illegal things that people do, sending a mean email about a kid is not very serious	O	O	O	O	O
	Strongly Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Strongly Agree
Kids can't be blamed for sending mean comments on a mobile phone if their friends pressured them to do it	O	O	O	O	O
Posting mean comments about other kids on Facebook does not really hurt them	O	O	O	O	O
Kids who get cyberbullied usually do things to deserve it	O	O	O	O	O
It's okay to cyberbully a kid who behaved like a jerk	O	O	O	O	O

Collective Moral Disengagement

In your classroom, how many kids think that…

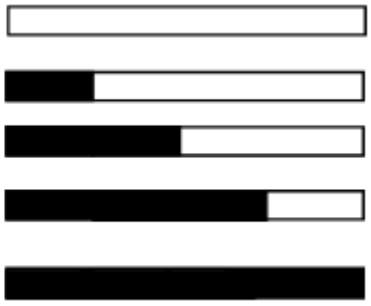
0 = None

1 = About a quarter (25%)

2 = About a half (50%)

3 = About three quarters (75%)

4 = Everyone



	None	About a quarter (25%)	About a half (50%)	About three quarters (75%)	Everyone (100%)
Sending a mean message about someone on Facebook is just a way of joking around	O	O	O	O	O
Kids can't be blamed for sending mean comments on a mobile phone if their friends pressured them to do it	O	O	O	O	O
A kid who only suggests sending a mean message to another kid on the internet should not be blamed if other kids go ahead and do it	O	O	O	O	O
Posting a mean message about a cyberbully is just teaching them "a lesson"	O	O	O	O	O
Kids who get cyberbullied usually do things to deserve it	O	O	O	O	O
Kids can't be blamed for texting mean comments when all their friends do it	O	O	O	O	O

	None	About a quarter (25%)	About a half (50%)	About three quarters (75%)	Everyone (100%)
Posting mean comments about other kids on Facebook does not really hurt them	O	O	O	O	O
If kids are annoying, it is their own fault if they get sent a mean message on their mobile phone or through the internet	O	O	O	O	O
Some kids who are cyberbullied deserve to be treated like animals	O	O	O	O	O

Compared to the illegal things that people do, sending a mean email about a kid is not very serious	O	O	O	O	O
It's okay to email a mean message to another kid because posting it on Facebook for everyone to see is worse	O	O	O	O	O
If kids have mean comments texted to them on their mobile phone, then it's okay for them to text mean comments to other kids	O	O	O	O	O

	None	About a quarter (25%)	About a half (50%)	About three quarters (75%)	Everyone (100%)
It's okay to cyberbully a kid who behaved like a jerk	O	O	O	O	O
It is unfair to blame a kid who only had a small part in the harm caused by a whole group of kids sending mean messages about someone	O	O	O	O	O
It is okay to cyberbully because it doesn't really do any harm	O	O	O	O	O
It's alright to send mean messages to a kid using a mobile phone or the internet if they have poked fun at your friends	O	O	O	O	O

Moral Standards

How good or bad would it be to bully another kid by…

	Very bad	Quite bad	A little bit bad	A little bit good	Quite good	Very good
1. Sending threatening or insulting messages?	O	O	O	O	O	O
2. Posting or sending humiliating images of other people?	O	O	O	O	O	O
3. Writing embarrassing jokes, rumours, gossip, or comments about another person on the internet?	O	O	O	O	O	O
4. Recording a video or taking pictures by mobile phone while a group laughs and forces another person to do something humiliating or ridiculous?	O	O	O	O	O	O
5. Posting or sending the images described in Item 4 to be seen by other people?	O	O	O	O	O	O

	Very bad	Quite bad	A little bit bad	A little bit good	Quite good	Very good
6. Recording a video or taking pictures by mobile phone while someone hits or hurts another person?	O	O	O	O	O	O
7. Posting or sending the images described in Item 6 to be seen by other people?	O	O	O	O	O	O
8. Deliberately excluding someone from an online group?	O	O	O	O	O	O
9. Recording a video or taking mobile phone pictures of other people performing some type of sexual behaviour?	O	O	O	O	O	O
10. Posting or sending the images described in Item 9 to be seen by other people?	O	O	O	O	O	O