Morality, values, traditional bullying, and cyberbullying in adolescence

Ersilia Menesini[1]*, Annalaura Nocentini[1] and Marina Camodeca[2]

[1]Department of Psychology, University of Florence, Italy
[2]Department of Neurosciences and Imaging, University of Chieti-Pescara, Italy

The aim of the present study was to investigate moral aspects and human values in traditional bullying and cyberbullying, in order to detect differences between the two types of bullying and to test the role of immoral and disengaged behaviours in mediating the relationships between personal values and involvement in bullying. Sample comprised 390 adolescents aged 14–18, balanced for gender, attending different high schools. Traditional and cyberbullying were detected by means of two self-report measures, while the Portrait Values Questionnaire was used to assess 10 values in four dimensions according to the value system model by Schwartz (1992): self-trascendence, self-enhancement, openness to change, and conservation. Finally, immoral and disengaged behaviours were assessed by means of five items about behavioural and personal aspects salient for morality. Results showed that, irrespective of gender, self-enhancement and self-trascendence moderately predicted cyber and traditional bullying, respectively, while immoral and disengaged behaviours predicted both. Indirect effects showed that self-enhancement and openness to change predicted both forms of bullying through immoral behaviour. Results are discussed in terms of similarities and differences between cyber and traditional bullying and with attention to the central role of morality in explaining bullying nature.

In recent years, a new type of bullying has emerged, defined as 'cyberbullying' or electronic bullying. Similar to traditional bullying, it is an aggressive behaviour, frequent, repeated, and aimed at causing harm to someone who is unable to defend him/herself (Olweus, 1993; Smith *et al.*, 1999). However, it is not carried out with conventional forms (i.e., physical, verbal, or relational), but with electronic forms of contact (Smith *et al.*, 2008). These include harassing and threatening by phone calls, text messages, e-mails, defaming websites, and compromising photos or videos circulating on mobile phones (Raskauskas & Stoltz, 2007). These electronic means yield different negative consequences; for instance, it seems that picture/video clip bullying and phone calls are considered more harmful than traditional bullying, but this is not the case for text message and e-mail bullying (Slonje & Smith, 2008).

A few studies examined the relationship between traditional and electronic bullying. Some of them found out that cyberbullying is an extension of traditional bullying (Smith *et al.*, 2008; Ybarra & Mitchell, 2004), or that being a victim or a perpetrator of traditional aggression predicted being a victim or a perpetrator of cyber-aggression (Pornari & Wood, 2010). However, Mitchell, Ybarra, and Finkelhor (2007) affirmed that cyber-context introduced something new in the severity and dynamics of the event as compared to traditional bullying. As a matter of fact, it seems that the nature of electronic bullying is somewhat different from the traditional type in several aspects: the victims cannot escape harassment, which is not confined in one place (e.g., school); the audience reached can be much huger (e g., a video clip to embarrass someone can be sent to a very large number of people); the new technology makes it possible to occur more secretly, to spread more rapidly, and to hide bullies' personal identity more easily (Li, 2007; Slonje & Smith, 2008). This latter feature, the anonymity of cyberbullies, may contribute to a reduction of their sensibility towards the victims (Ang & Goh, 2010).

Bullying and morality

The general aim of this study was to investigate the human values and some morality aspects of adolescents involved in traditional and cyberbullying, trying to trace points in common and differences between them. Morality is a broad concept including several aspects. It may be used to express personal responsibility, moral emotions, judgement of what is right and wrong, conformity to social rules, principled and fair behaviour. Literature on bullying and aggression seems to suggest that, whatever its meaning, bullies seem to be deficient in cognitions, emotions, and behaviours concerning ethical issues and morality. For instance, it seems that bullies are competent in moral judgements and understanding, but they fail in moral compassion and sensibility (Gini, Pozzoli, & Hauser, 2010); they show moral disengagement mechanisms (Almeida, Correia, & Marinho, 2010; Gini, 2006), egocentric reasoning (Menesini *et al.*, 2003), low levels of moral motivations (Gasser & Keller, 2009), of empathy (Caravita, Di Blasio, & Salmivalli, 2009; Gini, Albiero, Benelli, & Altoè, 2007), and of shame and guilt (Menesini & Camodeca, 2008). Fewer studies analysed morality in children involved in cyberbullying or cyber-aggression. Three exceptions are given by the recent works of Ang and Goh (2010), Pornari and Wood (2010) and Bauman (2010). The first one claimed that specific characteristics of cyberbullying (e.g., the anonymity of the perpetrators and the absence of direct confrontation with the victim) seem to result in low levels of both affective and cognitive empathy, suggesting that the latter may play a more important role in cyberbullying than in offline bullying, especially for boys, although a comparison with offline bullying was not provided.

Pornari and Wood (2010), on the other hand, investigated moral disengagement mechanisms. Findings showed that moral disengagement predicted both traditional and cyber-aggression. This study is particularly relevant in showing the role of moral disengagement in relation to both types of aggression, although it fails to consider the co-occurrence of the two types of aggression. However, the contribution to the prediction of cyber-aggression was small, suggesting that children do not need to justify themselves as much as in traditional aggression. Similarly, Bauman (2010) found that moral disengagement predicted acting out behaviours in response to a cyberbullying scenario, but it did not predict involvement in cyberbullying. It is possible that cyber-aggressors have levels of morality, which do not allow them to get involved in traditional

aggression, but the distance from the victim, their anonymity, and the fact that this form of aggression is considered as less serious, a sort of entertainment that does not produce serious consequences, allow them to cyber-aggress without the need of morally disengaging (Pornari & Wood, 2010).

Still in a moral functioning field, Arsenio and Lemerise (2001) suggested that in order to understand the nature of bullying, it is necessary to take into account values as well. Values are considered as the abstract, guiding principles motivating individuals to behave in a certain way and leading them to judge and justify their own and others' actions (cf. Knafo, Daniel, & Khoury-Kassabri, 2008; Schwartz, 1992). Children may differ with each other in the moral values leading their behaviour and in what they consider 'right' or 'wrong' (Arsenio & Lemerise, 2004; Cairns & Cairns, 1991). Therefore, for instance, some children may bully because they pursue a self-enhancing goal instead of a relationship enhancing one (cf. Camodeca & Goossens, 2005; Crick & Dodge, 1994) or because they aim at controlling resources and at gaining power and success (cf. Hawley, 2007).

Despite its importance, only few studies have examined the relationship between the personal value system of children and adolescents and risk behaviours, including violent, antisocial, and aggressive behaviours (Gerbino, Alessandri, & Caprara, 2008; Knafo *et al*., 2008; Tremblay & Eward, 2005).

The value system

In the present study, we employ the value system developed by Schwartz (1992) and validated cross-culturally in more than 70 cultures. It is based on 10 values characterized by different goals and summarized in the following (cf. Knafo *et al*., 2008): *Power* (aiming at high social status through dominance and resource control), *Achievement* (acquiring success through competence according to social standards), *Hedonism* (pursuit of pleasure and satisfaction), *Stimulation* (aspiration for change, challenge, and excitement), *Self-Direction* (independence of thought and action), *Universalism* (understanding, tolerance, and protection of people's and nature welfare), *Benevolence* (caring for the welfare of people with whom one is in social contact), *Tradition* (respect and acceptance of traditional customs from culture or religion), *Conformity* (avoiding actions and impulses violating social norms), and *Security* (need for self and social structure safety, harmony, and stability).

According to Schwartz (1992), these 10 basic values yield an integrated structure shaped around a two-axes model, in which adjacent values share common goals, whereas opposite values have divergent goals. This structure can be summarized into two orthogonal dimensions: self-enhancement versus self-transcendence and openness to change versus conservation. On the first dimension (self-enhancement vs. self-transcendence), power and achievement are opposed to universalism and benevolence. As postulated by Schwartz and Boehnke (2004), this dimension arrays values that represent the extent to which they motivate people to enhance their own personal interests (self-enhancement) versus the extent to transcend selfish concerns and to promote the welfare of others (self-transcendence). On the second dimension (openness to change vs. conservation), self-direction and stimulation are opposed to security, conformity, and tradition. According to Schwartz and Boehnke (2004), values in this dimension represent the extent to which people are motivated to follow their own emotional and intellectual interests in unpredictable and uncertain directions (openness) versus the extent to preserve

the status-quo and the certainty it provides (conservation). Finally, the dimension of hedonism shares elements of both openness and self-enhancement.

Values differently support or contrast aggressive and violent behaviour (Gerbino *et al.*, 2008; Knafo, 2003; Knafo *et al.*, 2008). Since the values of universalism and benevolence (self-transcendence) promote well-being and tolerance towards other people, they correlate negatively with violent and aggressive behaviour. These values emphasize egalitarian attitudes and are negatively related to an individual inclination of dominance and achievement (Altemeyer, 1998; Cohrs, Moschner, Maes, & Kielmann, 2005). The few empirical studies on the relationship between values and bullying demonstrate that there is a negative association between universalism and bullying (Gerbino *et al.*, 2008; Knafo, 2003). On the contrary, the values of self-enhancement, represented by power and achievement, have often been positively associated with violent behaviour and bullying (Gerbino *et al.*, 2008; Knafo, 2003; Myyry & Helkama, 2001).

Other studies focused on the relationship between aggression and the values displayed along the other dimension of openness to change (self-direction and stimulation) versus conservation (conformity, tradition, and security). Openness to change emphasizes the independence of thought and action from external controls and the search of novelty; for this reason, it was associated to risky behaviours such as sensation seeking, antisocial behaviour, and aggression (Goff & Goddard, 1999; Simons, Whitbeck, Conger, & Melby, 1991; Tremblay & Eward, 2005). The conservation values, on the other hand, emphasizing respect for tradition and for social norms, support the use of socially acceptable behaviours. In particular, adolescents who maintain high levels of conformism and conservative values are less inclined to adopt antisocial behaviours and bullying (Knafo, 2003; Mokounkolo, 2004; Tremblay & Eward, 2005).

The present study

The studies on morality and values seem to agree in indicating low levels of morality and lack of care for others in aggressive children. However, to our knowledge, the focus on cyberbullying was scarce, with two studies dealing with moral disengagement and only one considering empathy levels, but evidence is not provided for other components of morality, such as lack of guilt or disobedience. Besides, in some cases there is an overlap between cyber and traditional bullying and therefore the correlation between morality and cyberbullying can be related to the covariance of the two bullying behaviours. Finally, up to now, no study investigated the relationship between values and cyberbullying.

This study aims at analysing the relation between individual values, immoral and disengaged behaviour, and bullying and cyberbullying, taking into consideration the potential moderation effect of gender. In order to assess a measure of morality, we employed five items taken from the Youth Self Report (Achenbach & Edelbrock, 1991), comprising different aspects, such as lack of guilt, disobedience, mean behaviour, and untrustworthiness. These items have already been used in the literature in a morality key and the resulting variable was labelled 'moral disengagement' (Pepler, Jiang, Craig, & Connolly, 2008). However, we preferred to call it 'immoral and disengaged behaviour' in order to avoid confusion with the original construct of moral disengagement (cf. Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Gini, 2006) and to underline the fact that it consists of behaviours that contrast social norms of respect of others (e.g., being

mean) and rules and authority (e.g., being disobedient), or that express withdrawal from one's own responsibilities (e.g., lacking guilt or being untrustworthy).

Given the intertwined nature of traditional and cyberbullying, we might hypothesize that these two dimensions share immoral behaviour and some values, such as a low level of self-transcendence and a high level of self-enhancement. We also anticipated that values may influence involvement in aggressive behaviour both directly and indirectly, that is, by means of morality mediation. In other words, it is expected that values, which are part of one's own personal system and guide the individual in the judgment of what is right and what is wrong, impact moral functioning, which, in its turn, influences involvement in bullying (traditional and cyber). Given the high co-occurrence of traditional and cyberbullying, we tested the model with these two parallel outcomes.

We also hypothesized similarities and differences between the two types of bullying. In particular, we expected traditional bullies to be characterized by lower scores in self-transcendence values in respect to cyberbullies, given that it is possible that cyberbullies may also be caring and empathic in face-to-face relationships and may harass through electronic means just because they could not stand the victim's sufferings. For the same reason, we expected traditional bullies to fail in moral behaviour to a larger extent than cyberbullies (Pornari & Wood, 2010).

On the other hand, cyberbullies are expected to score higher in self-enhancement and openness to change, because being able of controlling others through electronic devices may be a way for an adolescent to gain a high status among peers and to easily reach success and power. As to openness to change, in the virtual context of cyberbullying an important role can be played by stimulation, openness to novelty, availability to change, excitement, and desire of entertainment, as supported by the use of new media (Smith *et al.*, 2008).

Finally, although boys are usually more involved than girls in bullying others, we do not expect gender differences in the relationship between moral aspects (immoral behaviour and values) and bullying, in that bullies (traditional or cyber) may have values and low scores on morality independently from whether they are boys or girls.

Method

Participants and procedure

Participants in the present study were 390 adolescents (50% females), from four high schools in Tuscany, Italy. The age of participants ranged from 14 to 18 years ($M = 15.6$; $SD = 1.00$) and the majority of students were from Italian backgrounds (90%). To avoid potential biases, the schools were selected balancing students' proportions in relation to the school type. School distribution was as follows: 22.1% of the students attended Lyceum high schools, 37.9% attended Technical Institutes, and 40% attended Vocational Schools.

Consent procedure for research consisted of an active approval by the schools and a passive consent by the parents. Due to the prolonged collaboration with these school districts, 100% of the students participated in the research. Trained researchers administered a set of scales tapping different dimensions of psychosocial adjustment in class during school time in about 1 hr. The measures administered involved different risk behaviours (bullying and cyberbullying behaviours), individual values, and morality.

The order of the scales was randomized to minimize potential bias. Participants were assured of confidentiality and anonymity of the questionnaires.

Measures

Cyberbullying

The multiple-item Cyberbullying Scale (CS) (Menesini, Nocentini, & Calussi, 2011a) was used. After a definition of cyberbullying, 10 items asking about the frequency of different cyberbullying behaviours acted by adolescents in the past 2 months were presented and introduced by the question: 'In the last two months, how often have you done the following things to someone?'. Each item was evaluated along a five-point scale: *never*, *only once or twice*, *two or three times a month*, *about once a week*, *several times a week*. Confirmatory factor analysis yielded a monodimensional structure for both genders. Following a suggestion from the study by Menesini *et al*. (2011a), the item 'silent prank calls' was excluded. Furthermore, given that females presented a frequency less than 1% on three items ('Phone pictures/photos/videos of violent scene', 'Nasty or rude e-mails', 'Unpleasant pictures/photos on Web sites'), they were excluded from the analyses. Thus, the final scale was composed by the following six items: 'nasty text messages' (cs1), 'phone pictures/photos/videos of intimate scenes' (cs2), 'insults on web-sites' (cs3), 'insults on instant messaging' (cs4), 'insults in a chatrooms', (cs5) and 'insults on blog' (cs6). Alpha was .82. Given the high non-normality of the items distribution, we collapsed five categories into two for the analyses (0 = *never*, 1 = *from only once or twice to always*).

Traditional bullying

A multiple-item scale was used to measure involvement in bullying behaviours (Menesini, Calussi, & Nocentini, 2012). After a definition of bullying, 11 items asking about the frequency of different bullying behaviours acted by adolescents in the past 2 months were presented and introduced by the question: 'In the last two months, how often have you done the following things to someone?' Items comprised the following aspects: physically hurting (b1), calling names (b2), teasing (b3), threatening (b4), leaving out (b5), spreading rumours (b6), bullying because of peer's race/colour (b7), damaging or stealing belongings (b8), bullying because the victim has a disability (b9), bullying because of peer's religion or culture (b10), calling someone gay even if it was not true (b11). Each item was evaluated along a five-point scale: *never*, *only once or twice*, *two or three times a month*, *about once a week*, *several times a week*. Preliminary Confirmatory factor analysis yielded a monodimensional structure for both genders. Alpha was .90. Given the high non-normality of the items distribution, we collapsed five categories into two for the analyses (0 = *never*, 1 = *from only once or twice to always*).

Individual values

Adolescents' values were measured by the Portrait Values Questionnaire (PVQ), developed by Schwartz (1992) and adapted in Italy by Capanna, Vecchione, and Schwartz (2005). The PVQ consists of 40 items, measuring the 10 basic values explained in the Introduction. It includes short verbal portraits of 40 people (matched to the respondent's gender). Each portrait describes the person's goals, aspirations, or wishes, pointing implicitly at the importance of a single broad value (i.e., Power value: 'It is important for

her to be rich. She wants to have a lot of money and expensive things'; Conformity value: 'It is important for him always to behave properly. He wants to avoid doing anything people would say is wrong'). For each portrait participants responded to the question 'How much like you is this person?' They checked one of six boxes labelled: very much like me, like me, somewhat like me, a little like me, not like me, and not like me at all (Knafo *et al.*, 2008).

On the basis of the two orthogonal dimensions, self-enhancement versus self-transcendence and openness to change versus conservation, four summated scores were computed. The reliability alphas were .74, .83, .60, and .80 for self-enhancement, self-transcendence, openness to change, and conservation, respectively. We decided to use these broad dimensions instead of the 10 single values because, from a methodological point of view, the correlations among values within each dimension are high, as confirmed by the literature, and these general dimensions seem to be closer to adolescents' values system as reported by other papers (e.g., Caprara, Scabini, Steca, & Schwartz, 2011; Liu *et al.*, 2007).

Immoral and disengaged behaviour

In order to have a morality measure, we used students' reports on five items: 'I don't feel guilty (m1), I have been mean to others (m2), I am not trustworthy (m3), I have been disobedient at school (m4), I have been disobedient with parents (m5)'. These items were derived from the Youth Self Report (Achenbach & Edelbrock, 1991) and already used in another study about bullying (Pepler *et al.*, 2008). Students rated each question on a three-point scale (0 = *not true*, 1 = *somewhat or sometimes true*, 2 = *very true or often true*). The tenability of the factorial structure for the construct will be carried out in the Structural Equation Model (see the Results section). Alpha was .61.

Statistical analyses

In order to investigate whether individual values and morality were related to bullying and cyberbullying and whether gender moderated these relations, Multiple-Group Structural Equation Modeling was used. In particular, the model posited that the four individual values (e.g., self-enhancement, self-transcendence, openness to change, and conservation) are directly associated to bullying and cyberbullying and indirectly associated through the effect of immoral and disengaged behaviour. Although we assumed causal effects, we need to underline that in cross-sectional studies, such as this one, causality cannot be determined: in our study, we intended to investigate whether data were consistent with the hypothesized model. The measurement model was tested for the variables: morality, bullying, and cyberbullying.

The following nested models were compared: (1) Unconstrained Multiple-Group Model across gender, in which the same pattern of structural paths was tested without constraints across groups. Measurement invariance for morality and outcome measures were imposed across genders in order to conduct meaningful comparison; (2) Constrained Multiple-Group Model where structural paths were constrained to be equal across groups. The analyses were conducted with MPlus version 4.2 (Muthén & Muthén, 2006). Referring to the categorical nature of the bullying and cyberbullying data, the estimator used for the analysis was a mean- and variance-adjusted least-squares estimator WLSMV (weighted least squared mean variance). Theta parameterization instead of Delta parameterization was used (Muthén & Muthén, 2006). Model fit was evaluated using the χ^2 statistics, the root mean square error of approximation (RMSEA), and the comparative

Table 1. Correlations, means, and standard deviations of the study variables in males and females

	1	2	3	4	5	6	7
1. Self-enhancement		−.61	−.02	−.32	.25	.24	.20
2. Self-trascendence	−.59		−.31	.11	−.24	−.19	−.11
3. Openness to change	.10	−.36		−.71	.35	.15	.10
4. Conservation	−.47	.04	−.61		−.34	−.25	−.21
5. Immoral and disengaged behaviour	.36	−.34	.33	−.34		.47	.38
6. Traditional bullying	.44	−.37	.21	−.26	.48		.51
7. Cyberbullying	.37	−.26	.17	−.24	.40	.57	
Males: M (SD)	−.38	.10	.27	−.19	2.29	3.19	1.29
	(.72)	(.55)	(.60)	(.43)	(1.96)	(2.84)	(2.11)
Females: M (SD)	−.87	.38	.40	−.20	1.95	1.59	.70
	(.75)	(.52)	(.87)	(.54)	(1.66)	(1.85)	(1.20)

Note. Correlations are above the diagonal for boys and below the diagonal for girls.

fit index (CFI). Recommended cut-off points for these measures are .08 (Brown & Cudek, 1993) or .06 (Hu & Bentler, 1998) for RMSEA; .90 (Bollen, 1989) or .95 (Hu & Bentler, 1998) for CFI. In addition to these overall fit indices, the comparison between two nested models is tested through the significance of difference in the χ^2 value[1].

Table 1 reports descriptive statistics and correlations between the computed scales.

Results

The baseline model (Model Unconstrained), with the invariance of factorial structure and all the paths free across gender, showed acceptable fit indices (χ^2 (93) = 164.511; p = .00; CFI = .90; RMSEA = .064). All the factor loadings were significant, their standardized estimates exceeded .30 for both genders, and all the intercepts were significant. These results indicate that the variables measurement in the model was similar in the two genders.

Constrained model tested the gender invariance of the structural paths between individual values, immoral and disengaged behaviour, bullying and cyberbullying. Fit indices showed acceptable values (χ^2 (85) = 146.579; p = .00; CFI = .92; RMSEA = .060), and the difference between the two nested models was not significant ($\Delta\chi$(3) = 3.455; p = .33), suggesting that structural paths are the same across gender. The final model is presented graphically in Figure 1.

In both genders, self-enhancement and openness to change are positively associated with immoral and disengaged behaviour, which is positively associated with both bullying and cyberbullying. The direct paths from self-enhancement to cyberbullying and from self-trascendence to bullying are significant at a lower level (p = .07). Finally, positive indirect effects were found from self-enhancement and openness to change to bullying and cyberbullying via immoral and disengaged behaviour. As we can see, the relation between cyberbullying and traditional bullying is high, underlining a consistent

---

[1] *Using the WLSMV estimator, differences in model fit for nested models do not correspond effectively with the difference in estimated χ^2 and degree of freedom between the two models: DIFFTEST Mplus option was used for this purpose.*
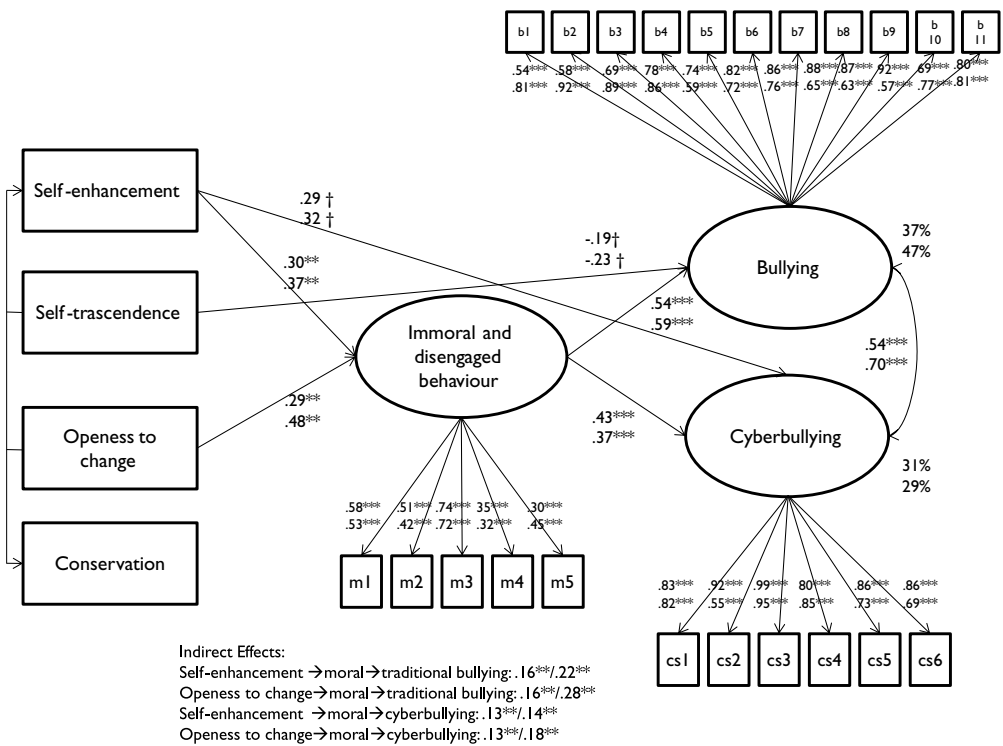
Figure 1. Multiple-group structural equation modelling of bullying and cyberbullying across gender. *Note.* Upper values refer to males and lower values refer to females. † = .07. **$p < .01$. ***$p < .001$.

co-occurrence of these behaviours. Overall, the model accounted for 37% and 47% of bullying variance and 31% and 29% of cyberbullying variance in males and females, respectively.

Discussion

The outcomes of the present study partially confirm the hypotheses and provide further evidence of the negative relationship between bullying and morality (cf. Gini, 2006; Menesini & Camodeca, 2008; Menesini *et al.*, 2003), adding knowledge on cyberbullying and values.

Generally speaking we can surmise that, in respect to morality, traditional bullies and cyberbullies share the same difficulties, being both predicted by absence of moral aspects, such as lack of guilt, disobedience, meanness, untrustworthiness. Therefore, our findings seem to contrast with those by Pornari and Wood (2010) and Bauman (2010), who claimed a lower moral disengagement in cyberaggressors and cyberbullies. However, we underline that the variable we investigated is a bit different from moral disengagement, that is a form of self-regulatory process through which people try to justify their amoral conduct (Bandura *et al.*, 1996; Gini, 2006; Gini *et al.*, 2010). Instead, we analysed moral aspects that can characterize both types of bullies. From this point of view, it is possible that the cyberbullies' anonymity or the distance from the victim is not influent for their moral functioning.

These findings, together with the high correlations between the two forms of harassment, may support those studies claiming that cyberbullying could be an extension of traditional bullying (cf. Smith *et al*., 2008; Ybarra & Mitchell, 2004), but differences can still be traced in the values domain, although they are statistically weak. Only traditional bullying is predicted by low scores in self-trascendence, whose focus is directed to the others and their well-being. Therefore, those who use face-to-face aggression are characterized mainly by low benevolence and prosocial attitude, supporting the knowledge about their lack in tolerance, peace, and respect. This pattern mirrors bullies' low levels of moral functioning and integrate with values those studies focusing on bullies, moral disengagement and moral emotions (cf. Almeida *et al*., 2010; Gini, 2006; Gini *et al*., 2010; Menesini *et al*., 2003; Menesini & Camodeca, 2008).

On the other hand, cyberbullying is predicted by self-enhancement, in which the focus of attention is directed to the self, being the person aimed at obtaining success, power, social status, and dominance. It is possible that being able in using electronic devices, while at the same time remaining anonymous to the victims and maybe at the centre of attention among other peers, could be a successful way to reach a high status and to show one's own personal competence.

However, stronger, indirect effects are evident in that self-enhancement and openness to change influence both cyber and traditional bullying through immoral and disengaged behaviour. These findings again underline a similar morality pattern for the two types of bullying. Disengaged morality seems to be the central mechanism linking values to bullying. Actually, the values of self-enhancement and openness to change would not be wrong or associated to maladjustment *per se*, because they point to personal characteristics such as success motivation, ambition, high social status (self-enhancement), independence, curiosity, need of novelties, high arousal level (openness to change), or hedonism, that is, entertainment and enjoyment, which is posited in between the aforementioned values (Schwartz, 2011). These values may be present in every person, but it is interesting that, in order to motivate bullying, immoral behaviour is needed. Such an outcome suggests that morality plays an important role in bullying and it could be seen as the key clarifying why neutral (or even positive) characteristics and values become maladaptive and may lead to antisocial behaviour. Again, morality could have a central part in explaining why children without particular social, cognitive, and affective deficits (Gini, 2006), but instead capable of reaching their goals and acquiring status and leadership, which are part of their values, become bullies, whereas others with the same characteristics become positive or prosocial leaders.

In this line, Hawley (2007) suggested that people who are motivated to control social and material resources can use prosocial or coercive strategies, or both, and that they differ from each other on the type of strategy used. Besides, individuals who are able to use both (the so-called bi-strategic persons) seem to be the most successful in acquiring resources, dominance, and leadership, and in reaching their own aims. Therefore, it could be possible that coercive or bi-strategic children (as it could be the case for bullies) do not differ from prosocial children in their motivations or competence, but in the fact of being unconcerned for others' welfare. Gini *et al*. (2010) suggested that lack of moral compassion is what characterizes bullies, who are as morally competent as control children. Giving this central role in explaining bullying, we think that morality deserves more attention in future research on bullying.

In the present work, we did not find gender differences. Although usually boys are more involved in traditional bullying than girls, the pattern for cyberbullying is not so clear (cf. Smith *et al*., 2008; Ybarra & Mitchell, 2004). Similarly, gender differences

have not always been found for moral aspects; for instance, while it seems that girls scored higher than boys in moral reasoning, probably because they are more decentrated and relationship oriented (Malti, Gasser, & Buchmann, 2009), the same evidence is not provided for moral emotions (Menesini & Camodeca, 2008) and for moral disengagement (Gini, 2006; Gini *et al.*, 2010). As to values, boys and girls seem to favour distinct values, but they share the same bipolar dimensions when values are associated to their level of aggression or bullying (Menesini *et al.*, 2011b). Therefore, evidence is not provided that girls and boys also differ in the four bipolar dimensions. From the findings of the present study, we could surmise that the association patterns between value system and bullying, through moral mediation, are independent from gender, that is to say that traditional or cyberbullies, whether being girls or boys, are characterized by the same values and share common immoral aspects.

This study presents strengths and limitations. One of the strengths deals with the fact that scores for bullying and cyberbullying are controlled in terms of covariance. Therefore the moderated effects of immoral and disengaged behaviour are significant for cyberbullying apart from the variance related to traditional bullying. Besides, a novelty of this study consisted in trying to uncover the pathway from personal values to behaviours, whose importance was underlined by Arsenio and Lemerise (2001, 2004). Nonetheless, we are aware that values and moral motivations may overlap with each other and that other motivations or other values, not analysed in this study, may also contribute to explain bullying behaviour, which can be determined by different reasons, including, for instance, peer pressure, family background, or personal goals. For these purpose, further studies are needed in order to investigate more values and to better uncover their role in determining certain behaviours.

As to the limitations, all the measures we used to detect bullying (traditional and electronic) are based on self-reports, although cyberbullying, by its nature, can be less accurately detected by peers. Future research may enlarge the present findings by employing a more complete assessment of bullying, which takes into account different ways of traditional bullying (e.g., direct or relational) and different ways of cyberbullying (e.g., threatening e-mails or defaming videos), together with different roles played by peers, such as those of the follower of the bully or the defender of the victim.

Despite the interesting associations found in this work, the cross-sectional design does not allow to trace causal links between values and involvement in bullying. Longitudinal studies are appreciated in order to detect the developmental pathways of morality and bullying and in order to test whether values guide behaviour (which is the most common explanation) or whether it is possible that behaviour is able to modify one's own value system.

Another limitation of the study is related to the measure of the immoral and disengaged behaviour, which was not developed on purpose to assess morality and that for this reason includes aspects difficult to group in one single dimension. Although, as we have mentioned in the introduction, morality is a broad construct including several facets, and although it is impossible to measure all of them simultaneously, we encourage further studies making use of a more detailed measure, whose different aspects, such as moral motivations, emotions, judgments, behaviours can be easily grouped, and which provides models able to explain the complex associations with bullying.

Research on cyberbullying, given the specificity of the topic, is at its beginning. Looking at increasing and quick proportions of the use of electronic means among pre-adolescents and adolescents, we may surmise that the phenomenon of cyberbullying is

going to get larger and larger. Furthermore, new technologies and more powerful means are always implemented.

At present, this work is the first to take into account morality and human values in cyberbullies as compared to traditional bullies. The pattern that emerged suggests the need of intervention, which takes into account cyberbullies as well as programmes including the importance of values and morality.

Acknowledgements

References

Achenbach, T. M., & Edelbrock, C. (1991). *Manual for the youth self report and profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Almeida, A., Correia, I., & Marinho, S. (2010). Moral disengagement, normative beliefs of peer group and attitudes regarding roles in bullying. *Journal of School Violence*, *9*, 23–36.

Altemeyer, B. (1998). The other "authoritarian personality." In M. Zanna (Ed.), *Advances in experimental social psychology: Volume 30* (pp. 47–92). San Diego, CA: Academic Press.

Ang, R. P., & Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry and Human Development*, *41*, 387–397.

Arsenio, W. F., & Lemerise, E. A. (2001). Varieties of childhood bullying: Values, emotion processes, and social competences. *Social Development*, *10*, 59–73.

Arsenio, W. F., & Lemerise, E. A. (2004). Aggression and moral development: Integrating social information processing and moral domain models. *Child Development*, *75*, 987–1002.

Bandura A., Barbaranelli C., Caprara G. V., & Pastorelli C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology*, *71*, 364–374.

Bauman, S. (2010). Cyberbullying in a rural intermediate school: An exploratory study. *Journal of Early Adolescence*, *30*, 803–833.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.

Brown, M.W., & Cudek, R. (1993). Alternative ways of assessing model fit. In K. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.

Cairns, R. B., & Cairns, B. D. (1991). Social cognition and social networks: A developmental perspective. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 249–278). Hillsdale, NJ: Erlbaum.

Camodeca, M., & Goossens, F. A. (2005). Social cognitions, anger and sadness in bullies and victims. *Journal of Child Psychology and Psychiatry*, *46*, 186–197.

Capanna, C., Vecchione, M. E., & Schwartz, S. H. (2005). La misura dei valori. Un contributo alla validazione del Portrait Values Questionnaire su un campione italiano. [Measuring values. A contribute to the validation of the Portrait Values Questionnaire in an Italian sample]. *Bollettino di Psicologia Applicata*, *256*, 27–40.

Caprara, G. V., Scabini, E., Steca, P., & Schwartz, S. H. (2011) (Eds.). *I valori nell'Italia contemporanea [Values in contemporary Italy]*. Milan, Italy: Franco Angeli.

Caravita, S. C. S., Di Blasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development*, *18*, 140–163.

Cohrs, J. C., Moschner, B., Maes, J., & Kielmann, S. (2005). Personal values and attitudes toward war. *Peace and Conflict: Journal of Peace Psychology*, *11*, 293–312.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74–101.

Gasser, L., & Keller, M. (2009). Are the competent the morally good? Perspective taking and moral motivation of children involved in bullying. *Social Development*, *18*, 798–816.

Gerbino, M., Alessandri, G., & Caprara, G. V. (2008). Valori, disimpegno morale e violenza nei giovani adulti. [Values, moral disengagement and violence in young adults]. *Età Evolutiva*, *90*, 88–96.

Gini, G. (2006). Social cognition and moral cognition in bullying: What's wrong? *Aggressive Behavior*, *32*, 528–539.

Gini, G., Albiero, P., Benelli, B., & Altoé, G. (2007). Does empathy predict adolescents' bullying and defending behavior? *Aggressive Behavior*, *33*, 467–476.

Gini, G., Pozzoli, T., & Hauser, M. (2010). Bullies have enhanced moral competence to judge relative to victims, but lack moral compassion. *Personality and Individual Differences*, *50*, 603–608.

Goff, B. G., & Goddard, H. W. (1999). Terminal core values associated with adolescent problem behaviors. *Adolescence*, *34*, 47–60.

Hawley, P. H. (2007). Social dominance in childhood and adolescence: Why social competence and aggression may go hand in hand. In P. H. Hawley, T. D. Little, & P. C. Rodkin (Eds.), *Aggression and adaptation. The bright side to bad behavior* (pp. 1–30). Mahwah, NJ: Erlbaum.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, *4*, 424–453.

Knafo, A. (2003). Authoritarians, the next generation: Values and bullying among adolescent children of authoritarian fathers. *Analyses of Social Issues and Public Policy*, *3*, 199–204.

Knafo, A., Daniel, E., & Khoury-Kassabri, M. (2008) Values as protective factors against violent behavior in Jewish and Arab high schools in Israel. *Child Development*, *79*(3), 652–667.

Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. *Computers In Human Behaviour*, *23*, 1777–1791.

Liu, H., Yu, S., Cottrell, L., Lunn, S., Deveaux, L. V., Brathwaite, N., . . . Stanton, B. (2007). Personal values and involvement in problem behaviors among Bahamian early adolescents: A cross-sectional study. *BMC Public Health*, *7*, 135.

Malti, T., Gasser, L., & Buchmann, M. (2009). Aggressive and prosocial children's emotion attributions and moral reasoning. *Aggressive Behavior*, *35*, 90–102.

Menesini, E., Calussi, P., & Nocentini, A. (2012). Cyberbullying and traditional bullying: Unique, addictive and synergistic effects on psychological health symptoms. In Q. Li, D. Cross, & P. K. Smith (Eds.). *Cyberbullying in the Global Playground: Research from international perspectives* (pp. 245–262). Chichester, UK: Wiley-Blackwell.

Menesini, E., & Camodeca, M. (2008). Shame and guilt as behaviour regulators: Relationships with bullying, victimization and prosocial behaviour. *British Journal of Developmental Psychology*, *26*, 183–196.

Menesini, E., Nocentini A., & Calussi P. (2011a). The measurement of cyberbullying: Dimensional structure and relative item severity and discrimination. *Cyberpsychology, Behavior and Social Networking*, *14*(5), 267–274.

Menesini, E., Nocentini, A., & Calussi, P. (2011b). Valori, comportamenti e relazioni sociali in adolescenza [Values, behaviours and social relationships during adolescence]. In G. V. Caprara, E. Scabini, P. Steca, & S. H. Schwartz (Eds.). *I valori nell'Italia contemporanea [Values in contemporary Italy]* (pp. 116–133). Milan, Italy: Franco Angeli.

Menesini, E., Sanchez, V., Fonzi, A., Ortega, R., Costabile, A., & LoFeudo, G. (2003). Moral emotions and bullying: Across-national comparison of differences between bullies, victims and outsiders. *Aggressive Behavior*, *29*, 515–530.

Mitchell, K. J., Ybarra, M. L., & Finkelhor, D. (2007). The relative importance of online victimization in understanding depression, delinquency, and substance use. *Child Maltreatment*, *12*(4), 314–324.

Mokounkolo, R. (2004). Les adolescents, la violence et les incivilités: Etude exploratoire dans un échantillon de collégiens et de lycéens francais [Adolescents, violence, and antisociality: An exploratory study in a sample of French college and high school students]. *Bulletin de Psychologie*, *57*, 171–180.

Muthén, L. K. & Muthén, B. O. (2006). *MPlus user's guide version 4.1*. Los Angeles, CA: Muthén & Muthén.

Myyry, L., & Helkama, K. (2001). University students' value priorities and emotional empathy. *Educational Psychology*, *21*, 25–40.

Olweus, D. (1993). *Bullying at school. What we know and what we can do*. Oxford, UK: Blackwell.

Pepler, D., Jiang, D., Craig, W., & Connolly, J. (2008). Developmental trajectories of bullying and associated factors. *Child Development*, *79*, 325–338.

Pornari, C. D., & Wood, J. (2010). Peer and cyber aggression in secondary school students: The role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive Behavior*, *36*, 81–94.

Raskauskas, J., & Stoltz, A. D. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental Psychology*, *43*(3), 564–575.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). New York: Academic Press.

Schwartz, S. H. (2011). I valori umani di base: Un'introduzione [Basic human values: An introduction]. In G. V. Caprara, E. Scabini, P. Steca, & S. H. Schwartz (Eds.), *I valori nell'Italia contemporanea* [*Values in contemporary Italy*] (pp. 13–44). Milan, Italy: Franco Angeli.

Schwartz, S. H., & Boehnke, K. (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality*, *38*, 230–255.

Simons, R. L., Whitbeck, L. B., Conger, R. D., & Melby, J. N. (1991). The effect of social skills, values, peers, and depression on adolescent substance use. *Journal of Early Adolescence*, *11*(4), 466–481.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, *49*, 147–154.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, *49*, 376–385.

Smith, P. K., Morita, Y., Junger-Tas, J., Olweus, D., Catalano, R. F., & Slee, P. (1999). *The nature of school bullying. A cross-national perspective*. London, UK: Routledge.

Tremblay, P. F., & Eward, L. A. (2005). The Buss and Perry Aggression Questionnaire and its relations to values, the Big Five, provoking hypothetical situations, alcohol consumption patterns, and alcohol expectancies. *Personality and Individual Differences*, *38*, 337–346.

Ybarra, M. L., & Mitchell, K. J. (2004). On line aggressor/targets, aggressor and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, *45*(7), 1308–1316.