

Cognitive distortions and antisocial behaviour: An European perspective

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Social cognition research deals with the study of interpersonal relationships and aims at explaining how people perceive themselves and others, interpret the meaning of interpersonal behaviour, think about the possible answers to a social problem and choose a behavioural response. The majority of theories proposed in order to explain aggressive acts assert that offenders' thinking at the time of their transgression is abnormal and offence-supportive (Gannon, Ward, Beech, & Fisher, 2007). In other words, it is supposed that the basic operations involved in human cognition, namely perception, memory, judgement and decision-making, are somewhat 'deviant' in antisocial individuals. All aspects of these operations involve a complex interplay of perceptual (e.g., attention), thinking (e.g., concept formulation) and memory processes (e.g., retention, retrieval). The particular way in which these operations appear to function in antisocial individuals are commonly referred to as 'cognitive distortions', which serve to justify, minimize and facilitate offending behaviour (Gannon, Polaschek, & Ward, 2005; Gibbs, 1993; Murphy, 1990).

Children growing up in a violent environment tend to see the world as a hostile place, and violence itself as a useful means for conflict resolution (e.g., Lochman & Dodge, 1994). Internalizing these beliefs, and developing and justifying behavioural scripts calling for violent actions can multiply the frequency and intensity of aggressive acts, even resulting in

the chronic suppression of pro-social tendencies (Anderson & Bushman, 2002). Several researchers in Europe have dedicated their efforts to the understanding of the way in which the individual's cognitive processes can give root to and strengthen aggressive tendencies. This article focuses on research conducted in European countries and is aimed at providing an overview of findings from studies analysing the relation between individual's cognitive distortions and a variety of antisocial behaviour, in particular aggressive behaviour and bullying. For sake of clarity, cognitive distortions are conceptualized according to four main theoretical frameworks: social information processing, moral disengagement, moral developmental delay, and cognitive distortions related to moral delay (Gibbs, 2010).

The Social Information Processing theory

Antisocial behaviour and SIP: empirical evidence from European studies

Among the most relevant theories dealing with cognitive distortions, the Social Information Processing (SIP) framework assumes that behaviour is led by cognition, and suggests that it is not the specific situation that needs to be analysed, but one's own interpretation of it and personal motivations guiding to response enactment. In other terms, "SIP theory proposes that individual differences in behavioural responses to social situations are caused by individual differences in mental processing" (Nas, Orobio de Castro & Koops, 2005, p. 364). Since Crick

and Dodge (1994) proposed their model, many studies tried to apply it to several domains within maladjustment, yielding consistent findings. In Europe, only recently different research groups have started to deal with cognitive SIP biases in aggressive children, bullies or young delinquents. It is interesting to note that in a meta-analysis published in 2002 (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002), only 4 out of 41 analysed studies were European, while nowadays they are much more numerous, underlining the growing interest in this field. We summarize here the results of a selection of studies, which included different types of sample and, in some cases, tested also emotions, according to Lemerise and Arsenio's suggestions (2000).

In the Netherlands, Orobio de Castro, Merk, Koops, Veerman and Bosch (2005) tested the various SIP steps in a sample of 7-to-13-year-old aggressive boys in clinical or special education institutions for antisocial behaviour problems, and comparison peers. Participants were asked to answer questions in ambiguous stories concerning being hindered by a peer. Results showed that antisocial boys, in respect to comparison peers, attributed more hostile intents and happiness to perpetrators of ambiguous acts, and less feelings of guilt or shame; they felt angrier and generated more aggressive responses, evaluated aggressive responses less negatively and mentioned less adaptive emotion regulation strategies.

Similar results were found by Di Norcia (2006) in Italy. She developed the Italian version of the SIP interview and administered it to 153 children, aged 9-11 years. As expected, aggressive children, compared to prosocial peers, attributed more hostile intents in ambiguous situations, aimed at more instrumental goals, generated more aggressive responses and felt more skilful in enacting them. Di Norcia (2006) also considered the difference between two types of situations: when the child feels provoked by his/her peers and when the child has difficulties in entering a peer group. The first situation elicited more emotional involvement (e.g., rejected children reacted with more aggression) and fewer competent and assertive problem-solving

strategies, indicating that too strong emotions and the incapacity to cope with them may be linked to impulsive responses.

Differences between the way in which reactively and proactively aggressive children process social information have also been investigated. With the former, we refer to a "hot-headed" type of aggression, defensive, retaliatory, characterized by outbursts of anger and not effective in stopping the provocation, whereas proactive aggression is a "cold-blooded" type of aggression, goal-oriented and usually effective to reach aims (e.g., Camodeca & Goossens, 2005; Dodge & Coie, 1987). In the Netherlands, Orobio de Castro and colleagues (2005) tested whether type of aggression was uniquely associated to SIP variables through partial correlations; results showed that only reactive aggression was linked to hostile intentions attribution, anger and aggressive response generation, whereas proactive aggression was related to positive evaluation of aggression (through approval), which may lead to use aggression only in order to attain one's goals at the expense of others. Both types of aggression were negatively correlated to adaptive emotion regulation. Similarly, Peets, Hodges and Salmivalli (2008), in Finland, found that positive evaluation of aggression (through self-efficacy beliefs) was associated to proactive aggression in preadolescent boys, even if hostile attributions significantly predicted both reactive and proactive aggression.

With reference to delinquents, Nas et al. (2005) conducted a study involving Dutch male adolescents incarcerated for serious crimes. In comparison to the control group, these boys attributed less sadness to the perpetrators of a mishap, mentioned fewer adaptive emotion regulation strategies, generated more aggressive and fewer adaptive responses. However, they did not attribute more hostile intents. Authors explained this unexpected outcome claiming that delinquents may have been subjected to several social skills trainings, and may have therefore learned socially desirable answers. Alternatively, it could also be that stimuli eliciting hostile intent attributions, that typically evoke reactive aggression,

were not appropriate for delinquents, whose aggression is mainly proactive.

Studies on bullying, aiming at investigating SIP processing, have been conducted by Camodeca and colleagues in the Netherlands with children aged 7-10 years. Using ambiguous situations (i.e., the intent of the perpetrator is not clear and the mishap could happen either by accident or with intent), bullies have been found to attribute more hostile intents to perpetrators and to feel angrier than children in the roles of defender of the victims, outsider or not involved (Camodeca & Goossens, 2005). Consequently, they wished to retaliate and scored high on self-efficacy for aggression. Processes of response generation were investigated employing provocation scenarios in which the intent of the perpetrator is clearly hostile. In this case, children were asked to produce responses on what they would have done if they were the victim of that situation: bullies produced less assertive responses than not involved children and stable bullies gave more irrelevant answers in comparison to unstable bullies (Camodeca, Goossens, Schuengel, & Meerum Terwogt, 2003).

Finally, some studies tried to demonstrate that SIP does not depend only on personal characteristics, but varies on the basis of the relationship children have with different peers. Peets, Hodges, Kikas, and Salmivalli, (2007) considered the role of the emotional valence of the relationship between perpetrator and target (i.e., whether it was based on friendship, enmity or neutrality) and of the social and behavioural reputation of the target (i.e., whether he/she was rejected, aggressive, with internalized behaviours or well adapted). Sample comprised 144 10-years-old Estonian children and SIP (attribution of intent and response strategies) was assessed through provocation and rebuff situations. Results showed that, independently of their own aggression, children attributed more hostility to enemies and aggressive children than to friends, neutral or prosocial peers. Consequently, they would respond more often with aggressive and hostile strategies to enemies than to other peers.

Similar results were found in a Finnish study, in

which the target child was either a disliked, liked or neutral peer (Peets et al., 2008): when facing a disliked peer, children attributed more hostility, expected fewer positive relational and instrumental outcomes and felt more efficacious about aggressing. An opposite pattern was found when the target was a liked peer. Similarly, also Camodeca and Goossens (2005) found that the characteristics of the target were important, since children, independently of their bullying role, thought that their behaviour would be less successful if they were interacting with an aggressive child than with a friendly peer.

These findings were replicated (Nummenma, Peets, & Salmivalli, 2008) with another sample from Finland, with the novelty of presenting preadolescents with facial primes of liked and disliked peers, just before they were asked to respond to hypothetical situations. In the case of disliked primes, participants attributed more hostility to the hypothetical peer, experienced more anger, and wished to retaliate more frequently as compared to liked primes. Besides, this experiment demonstrated that relational schemas are automatically activated upon perception of a familiar peer and that this activation influences the way in which adolescents process social information. Although Crick and Dodge (1994) had assumed SIP processes to be automatic and had addressed the importance to assess it, this was the first study to use priming and to provide empirical evidence.

Social cognition and morality

There are reasons to think that children morally connote situations in which harm is provoked, and behave according to moral rules or, conversely, fail to process social information correctly because they are morally disengaged and their behaviour is influenced by moral biases (Gini, 2006; Menesini & Camodeca, 2008). Arsenio and Lemerise (2004) proposed an integrated approach to studying cognitive distortions related to aggression and antisocial behaviour, in which the two lines of research on SIP and on distortions in moral knowledge and reasoning were combined. By referring to moral domain theory, Arsenio and

Lemerise (2004) hypothesized that moral knowledge and information stored in the long-term memory and influential on SIP are organized in separate domains. Distortions or deficits in processing the moral information during the interactions with peers, along with emotional attributions for moral transgressions, would influence the SIP processes, and might promote aggressive behaviour. Arsenio, Adams and Gold (2009) found that, in provocative situations, reactively aggressive adolescents mainly focus on cues that are possible violations of their own rights and, as a consequence of their wrong attribution of hostile intentions to others, they feel justified for their aggressive reaction. In contrast, due to a biased moral reasoning, proactively aggressive children, including bullies, choose instrumental goals and aggression, despite the possible victim's plight; they would also expect to feel good or happy after acting an aggression, and claim that victims would not feel angry after being victimized.

Consistent with this approach and these outcomes, Gasser and Keller (2009), in Switzerland, explored perspective-taking skills and moral competencies of 7-8 year old bullies, bully-victims, prosocial and victimized peers. Moral competencies were investigated as both moral knowledge (i.e., the understanding of moral rule transgression as wrong) and moral motivation (i.e., the motivation to behave according to what is considered right or wrong), by means of hypothetical stories on moral transgression (e.g., verbally bullying a victim). For each story, participants were asked to pretend they were the perpetrator of the transgression in order to say whether and why the act was right or wrong (moral knowledge), and to predict and justify the emotions they would feel (moral motivation). Compared to prosocial kids, bullies did not show deficits in perspectives skills, assessed by means of second-order false belief hypothetical stories for both cognition and emotions, and they even scored higher than victims and bully-victims for those abilities. Nonetheless, bullies were lower than prosocial peers on moral competencies, in particular on the moral motivation component. Interestingly, bullies were also slightly overrepresented in the group of

children that were high in perspective-taking skills but low on moral motivation. With reference to bully-victims, these children displayed the lowest perspective-taking skills and moral competences. Indirectly, this study entailed the possibility that bullies' distortions in morality depend on the motivational component of morality. In fact, eight-year bullies displayed higher moral knowledge than seven-year bullies did, but these two age-groups of bullies did not significantly differ in their moral motivation. Overall, this study provides some evidence that pure bullies are not deficient in social-cognition, but in the motivation to act morally, so that their good social-cognitive skills can be used in a non-moral way. In contrast, bully-victims show a twofold deficit in both social-cognition and moral functioning.

Findings from Arsenio et al. (2009) and Gasser and Keller's (2009) studies agree in indicating the existence of non-overlapping distortions in social and moral cognitions associated to different forms of aggressive, and probably also antisocial, behaviour. They also suggest the value of adopting a more comprehensive framework in understanding how deficiencies and biases in cognitive skills of different domains (i.e., SIP and moral reasoning), may uniquely intervene and interact in determining aggressive and antisocial actions.

Moral disengagement and antisocial behaviour

Moral disengagement theory and European studies

Research on antisocial behaviour in Europe has a longstanding tradition of studies addressing the relations between moral disengagement mechanisms and different types of negative behaviour. Bandura (1986, 1990, 1991, 2002) described a series of self-serving cognitive distortions, which can lead to aggressive behaviour through a process of moral disengagement, solving the gap between the 'abstract' personal idea of moral behaviour and the individual's behaviour in real life. In other words, these cognitive distortions are perversely valuable coping mechanisms that protect the offenders from negative feelings, such as guilt or shame, which

usually follow an immoral conduct (Bandura, 1991).

Several studies have been conducted with children and adults to analyze the association between moral disengagement and different types of antisocial behaviour, especially within the research group chaired by Caprara in Italy. These studies consistently reported a positive relation between aggressive and violent behaviour and the activation of Bandura's moral disengagement mechanisms (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Caprara, Pastorelli, & Bandura, 1995; Caprara, Barbaranelli, Vicino, & Bandura, 1996; Gerbino, Alessandri, & Caprara, 2008). In particular, moral disengagement was found to affect detrimental behaviour both directly and indirectly, through its impact on other mediating factors. For example, Bandura and colleagues (1996), assessed the association between moral disengagement and two forms of antisocial behaviour (aggressive and delinquent behaviour), measured through self-reports, peer nominations, and teacher reports, in a sample of 10-to-15 year-old Italian students. Their results showed that the relation between moral disengagement and negative behaviour was mediated by prosocial behaviour (negatively), and aggression proneness (positively). In other words, this study indicated that moral disengagement influenced antisocial behaviour by reducing children's prosocial behaviour and by promoting cognitive (i.e., rumination) and affective (i.e., irascibility) reactions that are conducive to aggression. Other studies (e.g., Caprara et al., 1995) have confirmed the strong link between moral disengagement, measured through the Moral Disengagement scale for children, and physical and verbal aggression, both self- and peer-evaluated, especially in male children.

More recently, Paciello, Fida, Tramontano, Lupinetti and Caprara (2008) longitudinally analyzed the stability and change of moral disengagement in a sample of 366 Italian adolescents, followed at four time points from 14 to 20 years. Their growth analysis identified four developmental trajectories: (a) non-disengaged adolescents (37.9% of the sample) who started with initially low levels of moral disengagement followed by a significant decline, (b)

a normative group (44.5%) that started with initially moderate levels followed by a decline, (c) later desistent adolescents (6.9%) who started with initially high-medium levels followed by a significant increase from ages 14 to 16 and an even steeper decline from ages 16 to 20, and (d) a chronic group (10.7%) that maintained constant medium-high levels of moral disengagement. Interestingly, this developmental model attested to the general tendency of moral disengagement to decline over time. In particular, moral disengagement decreased strongly between ages 14 and 16 and less evidently until age 20. The authors argued that the general decrease in moral disengagement "could reflect a change in cognitive and social structures and processes through development of the capacity to assign meaning, to anticipate outcomes, to plan actions, and to learn from social experiences the value of assigning different behaviors" (Paciello et al., 2008, p. 1302). Such changes that occur during adolescence promote moral reasoning and moral agency (Eisenberg, 2000) and may prevent disengagement in adolescents' 'moral life'. For chronically disengaged adolescents (mostly boys), in contrast, moral disengagement could represent a "strategy of adaptation that is embedded into a system of beliefs about the self and others and leads to perceive aggression and violence as appropriate means to pursue one's own goals" (Paciello et al., 2008, p. 1302). This study also attested that adolescents who maintained high levels of moral disengagement were more likely to show frequent aggressive and violent acts in late adolescence.

All these studies referred to aggressive individuals; however, a similar pattern of findings also emerged in school bullying research. Studying a sample of 140 Italian students, for example, Menesini, Fonzi and Vannucci (1997) found that male bullies utilized the moral disengagement mechanisms more than other peers, especially the dehumanization of the victim and the moral justification. A confirmation of these results emerged in a cross-national study, involving Italy and Spain, conducted by Menesini and colleagues (Menesini et al., 2003), who assessed moral reasoning of bullies, victims and defenders,

using the Scan Bullying test (Almeida, del Barrio, Marques, Gutierrez, & van der Meulen, 2001). These authors confirmed the bullies' tendency to show higher levels of moral disengagement, and the presence of a profile of egocentric reasoning in these pupils.

Another Italian study (Gini, 2006) assessed the role of moral disengagement in bullying adopting the Participant Roles approach (Salmivalli, Lagerspetz, Björkqvist, Österman & Kaukiainen, 1996). The author measured moral disengagement tendencies of 581 primary school pupils (aged 8-11), equally divided into boys and girls, and reported that ringleader bullies and their followers (i.e., assistants and reinforcers of the bully) scored higher than defenders and uninvolved students on the moral disengagement. Recently, Caravita, Gini and Capraro (2009) have confirmed the positive association between bullying and both moral disengagement and the beliefs that moral rules can be violated in Italian primary and middle-school students. Interestingly, in the early adolescent group, moral disengagement predicted bullying behaviour under conditions of high perceived popularity.

Victim blame

Despite these important findings, understanding of the effects of moral disengagement on bullying behaviour has been limited by the fact that studies in this area have not reliably distinguished among different moral disengagement mechanisms¹⁾, but rather they have measured moral disengagement as a single construct. A particular mechanism that merits attention is victim blame, which has been widely studied in victimization research (e.g., Lerner & Miller, 1978; Weiner, 1995).

Surprisingly, literature on school bullying has rarely focused on attribution of blame to the victim. One exception is a recent study by Gini (2008), in which the tendency to blame the victim of bullying in 9- and 12-year-old Italian students ($N = 246$) was measured through an experimental design. Children were randomly assigned to 1 out of 4 hypothetical scenarios describing a bullying episode, in which the gender of the victim and the type of bullying (direct

vs. indirect) were manipulated. They answered five questions about how much they liked the victim and how much they held the victim responsible for what had happened. Results showed that boys blamed the victim more than girls, and victim blame was higher in direct bullying conditions than in indirect bullying ones. As studies on violent crimes (e.g., sexual rape or family violence) have shown, observers usually tend to blame victims for what has happened when a serious event takes place (Kleinke & Meyer, 1990). In the case of bullying, children may have considered direct bullying, in the form of overt physical aggression, to be more serious (perhaps because of the highly visible and immediate consequences this behaviour usually produces) and even motivated by more serious causes, than indirect bullying. This difference in the evaluation of the two types of bullying may have led children who were assigned to the direct bullying condition to blame victim more strongly than children in the opposite condition. Finally, in a regression analysis (after controlling for age, gender, bullying and victimization) victim blame was predicted by the perception of a negative relational atmosphere within the school, in which relationships are based on selfishness and interpersonal dominance (e.g., "You have to watch what you do, or else the other students make fun of you," "Most of my classmates only help a fellow student if they get help in return,").

Interestingly, the possible influence of school climate on moral disengagement mechanisms was confirmed by another study with Italian primary school children (Di Norcia & Pastorelli, 2008), which aimed at investigating prosocial behaviour, aggressive behaviour, and moral disengagement in groups of students with different perceptions of school climate. Results showed that children characterized by a negative perception of school climate scored significantly higher in moral disengagement and aggression, and lower in prosocial behaviour, than children with a positive perception of school climate.

Moral delay and moral domain approaches

Moral development and moral delay

Among contributions on cognitive distortions related to antisocial behaviour a relevant line of research explores possible associations between aggressive or deviant acts and the delay in moral reasoning. In their stadial theories of moral development both Piaget (1932) and Kohlberg (1976) proposed that moral reasoning develops with age across a set of invariant stages: from an immature conception of norms as founded by the adults' authority to an understanding of rules as valid by themselves in reason of their purposes (preserving individual rights and welfare, or maintaining the social order). In both Piaget's and Kohlberg's conceptualizations, the development of the morality stems from social interactions, providing the child with the experience of others' perspectives, and from cognitive development, that makes the child increasingly able to consider and coordinate all the features of the moral situation, instead of focusing only on salient stimuli.

Recently, Gibbs proposed a new revision of Kohlberg's theory (Gibbs, 2010; Gibbs, Basinger & Fuller, 1992), as it has been more extensively explained in previous chapters of this book. In Gibbs' conceptualization, the sequential development of morality is de-emphasized and no relevance is given to the post-conventional level originally proposed by Kohlberg. The pre-conventional level is conceived by Gibbs as an immature stages of morality, characterized by superficiality and self-centration. These features of the immature stage stem from limitations of the child's working memory and perspective-taking skills. In this period, the child is not able to keep in mind all the facets of the situation potentially contributing to moral evaluations, and to coordinate both her own and others' perspectives. As a consequence, in their judgments children mainly focus on self-perceptions, feelings and interests, also displaying egocentric biases. In early adolescence, when the youngsters become able of decentering and develop social-perspective taking skills, a mature

stage of morality (corresponding to the conventional level by Kohlberg) appears in which the reasoning is based on a "moral reciprocity perspective", that is the idea that a behaviour must be acceptable to a person whether he/she is at the "receiving" end of it (Gibbs, 2010).

Despite some differences in describing the developmental stages of morality, these cognitive constructivistic theories agree in assuming that the moral development is not an obligatory process and a moral delay can happen. Moral developmental delay refers to the persistence of the earliest levels of morality in adolescence and adulthood. In the Kohlberg's pre-conventional level of moral development children confuse moral characteristics of people and actions with their salient surface features, consider the rule transgressions as right when they are not discovered and punished by the authorities, and prioritize their own advantages on the others' well-being. Therefore, stopping at this first level of morality might increase the risk of antisociality (Emler & Tarry, 2007; Gibbs, 2010). If this is the case, delinquent youth might display both a moral delay and egocentric biases that make them judging the moral transgression as acceptable.

This research hypothesis yielded a surge of studies giving some confirmation that a moral delay exists in delinquent adolescents and adults (for recent reviews see Gibbs, 2010; Gibbs, Basinger, Grime, & Snarey, 2007; for meta-analyses see Nelson, Smith, & Dodd, 1990; Stams et al., 2006). The areas of moral reasoning in which antisocial youth appear to be more delayed pertain the reasons offered for obeying the law and the justifications for moral values (Gibbs, 2010). That is, even when antisocial youth understand and affirm the importance of moral values (e.g., non stealing or obeying the law), they seem unable to grasp the deepest bases of the value worth, and serving self-interests and wishes becomes more salient than preserving moral values in actual actions.

The European contribution to the understanding of moral delay related to antisocial behaviour

Possible associations between a delayed moral reasoning and delinquency have been explored at least in three European countries: England, (e.g., Palmer & Hollin, 1998, 2000), Germany (e.g., Krettenauer & Becker, 2001) and the Netherlands (e.g., Brugman & Aleva, 2004; Van Vugt et al., 2008). Overall, the European studies in which the moral reasoning was assessed by administering production measures have given some evidence that delinquents are morally delayed. Nevertheless, other research projects failed in finding a significant relation between delinquency and being morally delayed (e.g., Leenders & Brugman, 2006; Renwick & Emler, 1984). Tarry and Emler (2007), for instance, explored the maturity of socio-moral reasoning as a possible predictor of delinquency in adolescence, controlling for the effects of other factors potentially influential: the attitudes toward institutional authority and the strength of supporting moral values. Participants were 789 12-15 year-old boys, pupils of three all-male comprehensive schools in England. The level of moral maturity was measured by administering the Sociomoral Reflection Measure – Short form (Gibbs, Basinger & Fuller, 1992) while a self-report measure was used in order to assess participants' delinquent behaviour. The moral maturity did not predict changes in the variance of self-reported delinquency, and was not related with the delinquent behaviour in both zero-order correlations and correlations in which the effects of age and verbal IQ were partialled out. In contrast, both having positive attitudes toward institutional authorities (i.e., teachers, school regulation, police officers and the law), and endorsing moral values were negatively associated to delinquency. These outcomes suggest that other facets of the moral development should be considered in order to explain antisocial behaviour.

Notwithstanding the interesting data by Tarry and Emler's (2007), the debate on the relation between antisociality and the delayed moral judgment is still open in Europe. Brusten, Stams and Gibbs (2007) criticized the validity of Tarry and

Emler's findings, and a recent meta-analysis including 50 studies on this topic (Stams et al., 2006), realized by Dutch scholars, confirmed that juvenile delinquency in adolescence is significantly associated to the moral delay, also controlling for socio-economic status, gender, age and intelligence.

The study by Tarry and Emler (2007), however, expresses the increasing trend in European research of considering distortions and delay of moral reasoning in a more comprehensive framework of the moral functioning in which the content of the supported values, the emotions attributed to actors of moral behaviour, and the subsequent motivation to behaving accordingly to moral norms are also considered (e.g., Krettenauer & Eichler, 2006).

Gibbs' cognitive distortions and antisocial behaviour

In the previous paragraph, we documented the large body of empirical studies addressing the issue of the relation between moral disengagement mechanisms and different forms of aggressive behaviour. Comparatively, European scientists conducted less research that was explicitly based on Gibbs' theory of self-serving cognitive distortions linked to the moral delay (Gibbs, 2010), namely self-centered, blaming others, minimizing/mislabelling, and assuming the worst. In this paragraph, we briefly report on the empirical investigations of Gibbs' self-serving cognitive distortions that facilitate antisocial behaviour, as measured by the "How I think Questionnaire" (HIT-Q, Barriga, Gibbs, Potter & Liao, 2001), an instrument that is particularly useful in measuring the effects of cognitive-behavioural programs like EQUIP (Gibbs, Potter & Goldstein, 1995).

In Europe, Nas, Brugman and Koops (2008) translated and validated the HIT-Q in the Netherlands by investigating its factor structure, the convergent and discriminant validity, and by comparing the scores of 312 male adolescent delinquents with those of 141 nondelinquents, matched for IQ. The confirmatory factor analysis showed that the four-factor solution based on the four cognitive distortions was the most appropriate for the Dutch version of the HIT-Q (with fit indexes

similar to those of the North American version). Moreover, internal consistency, convergent and divergent validity were satisfactory. Finally, Nas and colleagues' (2008) results indicated that the delinquent adolescents scored significantly higher in self-serving cognitive distortions compared to non-delinquents peers. Interestingly, these authors found that intelligence moderated this relation, since differences in cognitive distortions emerged only between the normal IQ groups and not between the low IQ groups. Unfortunately, only boys participated in this study, thus limiting the generalisability of these findings to the male population.

Similar results have been reported in Sweden by Lardén and colleagues (Lardén, Melin, Holst & Långström, 2006), who compared a group of incarcerated adolescent delinquents ($N = 58$, 29 girls, aged 13-18) with a matched group of control adolescents on cognitive distortions (as measured by the HIT-Q) and sociomoral reasoning (as measured by the Sociomoral Reflection Questionnaire, Gibbs et al., 1992). Their results indicated that delinquent adolescents showed less mature moral judgments and more cognitive distortions than control adolescents. Moreover, gender differences emerged, in that girls made more mature moral judgments and self-reported less antisocial cognitive distortions than boys.

Distortions in the structure of moral knowledge: the Moral domain approach

Starting from stadial theories, the Moral domain approach (Helwig & Turiel, 2004; Turiel, 1983) states that, by interacting in social contexts, children organize their moral knowledge in distinct domains, mainly related to (1) moral obligations, aimed at granting persons' well-being and rights and independent from social expectations, (2) social-conventional rules, aimed at preserving the social order and dependent on authorities' dictates (Turiel, 1983), and (3) personal choices (Nucci & Nucci, 1982a; 1982b).

These three cognitive domains of knowledge are coexistent and non-developmentally subsequent from each other. Furthermore, breaking a rule also

depends on the domain it is perceived to belong to. There is some evidence that children consider transgressions in the conventional and personal domains as more acceptable and less serious than transgression in the moral domain (Nucci & Nucci, 1982b; Smetana, 1995; Tisak, 1995). Therefore, a distortion in moral cognition may stem from considering a moral rule as a social-conventional norm, which might make easier the norm transgression. That is, breaking moral norms preserving from hurting others becomes possible if the person conceives these norms as non-worthy by themselves, but dependent on the adult authority, and attributes social conventional characteristics to them, such as being non-universally valid and context-dependent. According to this hypothesis, children with behavioural disorders tend to focus on social-conventional aspects of moral transgressions, such as leading to a punishment, and in provoked situations violent youngsters judge moral transgressions as more acceptable than non-violent peers (Astor, 1994; Nucci & Herman, 1982).

Some European researchers have recently explored possible cognitive distortions in moral domain thinking as related to bullying and antisocial behaviour. In a study involving 129 children (aged 7 to 10) and 189 early adolescents (aged 11 to 15), Caravita, Miragoli and Di Blasio (2009) tested the hypothesis that, similarly to delinquent kids, bullies attribute social-conventional characteristics to anti-bullying moral norms at a larger extent than their peers. Children's rule understanding was investigated by administering a self-report measure proposing hypothetical scenarios in which school rules of two different domains (moral and social-conventional) were transgressed by a child. Bullies have been found to perceive social-conventional rules as more violable than bystanders and victims. Furthermore, when compared to their classmates, bullies valued moral rules as more dependent on the school authorities (i.e., teachers and head-teachers), and only valid in the school context, thus, as more social-conventional.

In another research project (Caravita, Gini et al., 2009), the evaluation of moral rules as acceptable

predicted the variance of bullying among early adolescents (aged 11 to 15), even when the effect of moral disengagement mechanisms was controlled for. Altogether, these findings suggest that in childhood and early adolescence bullies share a distorted and immature knowledge of moral norms, since their worth is perceived to depend on the context authorities' decision. As a consequence of this perception, rules preserving the others' well-being, that is the moral norms, are conceived to be valid only in the contexts in which they are explicitly established, and the context authority has also the power to allow their transgression. On converse, perceiving the moral rules as breakable is likely to be associated with higher rates of bullying behaviour.

Based on the same theoretical framework, and also referring to studies on the moral delay, Leenders and Brugman (2005) suggested that in case of a moral transgression the actor might reinterpret the transgression as conventional, in order to protect his/her own self-esteem. Specifically, this "domain shift" might happen since the non-moral transgression is perceived as less threatening for the individual's self-esteem than the moral transgression. Cognitive dissonance could be the mechanism through which the interpretation of the situation changes by emphasizing the non-moral aspects of the situation instead of the moral aspects. Leenders and Brugman (2005) tested this hypothesis on a sample of 278 Dutch early adolescents. Participants' delinquent behaviour was assessed by a self-report measure. Moral shift was measured through four hypothetical situations concerning moral norm transgressions in the same four categories that were used in the self-report measure of delinquency (i.e., vandalism, aggression, minor theft, serious theft). Per each story fillers were asked to evaluate the acceptability, the seriousness, the generalisability, and the rule-authority contingency of the transgression. Adolescents showed a domain shift from the moral towards non-moral domains only in the evaluation of hypothetical situations about delinquent behaviour that they had self-reported. The authors interpret these outcomes as consistent

with the hypothesis that the domain shift takes place as a consequence of cognitive dissonance.

Findings from Leenders and Brugman's (2005) study, along with their interpretation on the role played by cognitive dissonance for the domain shift, indirectly suggest a possible overlap between the cognitive distortions acting in moral disengagement and the domain organization of the moral knowledge. Specifically, the moral shift from the moral domain to the social-conventional domain in the interpretation of the transgression might act as a moral disengagement mechanism. Possible connections and overlap between the domain organization of the moral knowledge and the moral disengagement mechanisms have been investigated in an Italian study by Caravita and Gini (2010) involving 235 children (8-11 year-olds) and 305 early adolescents (11-15 year-olds). This study has provided some evidence that possible distortions in the domain moral knowledge, that is perceiving the moral rules as social-conventional, and moral disengagement mechanisms constitute distinct cognitive components of the moral functioning, also uniquely predicting the bullying behaviour. Specifically in middle-childhood, the bullying behaviour has been shown to be positively associated only to perceiving moral rules preserving from harming others as socio-conventional, whereas only moral disengagement was positively linked to bullying among adolescents. This data suggest the existence of some developmental differences in the cognitive distortions of moral reasoning associated to bullying others in different ages, that is the childhood and the adolescence years.

Conclusions

The European studies presented in this review state the active scientific work around cognitive and moral distortions and maladjusted behaviour. The strength and consistence of the relations among constructs throughout different research works demonstrate the reliability of these links. These studies help in enlarging our knowledge in this domain and open new pathways for research and

interventions. However, they also highlight the need to continue researching in this field. In Peets and colleagues's (2007, 2008) studies, for example, individual differences in attributions were almost null, and even aggressive children seemed to fail to show cognitive distortions if the type of relationship between the participant child and the target was taken into account. More research is needed to test, for instance, whether aggressive children's attributions are influenced by unknown or familiar targets or by their history of rejection, which could account for a cumulative effect of hostility (Peets et al., 2007). Similarly, also moral judgments can be influenced by the target peer or by the fact of being the perpetrator or the victim of a mishap; different justifications and different moral disengagement mechanisms could be used on different situations.

Furthermore, future studies may be devoted to investigate real-life events, also with the help of naturalistic observations. For example, usually SIP processes or moral disengagement and distortions have been assessed in hypothetical situations and although attention has been paid in order to make them as similar as possible to real-life events, still social desirability problems may occur and the responses may not mirror actual ones, which are influenced by many variables, such as context, emotional arousal, mood, antecedents of the specific act, particular relationship with the perpetrator, characteristics of the target or presence of bystanders (cf. Gini, Pozzoli, Borghi, & Franzoni, 2008; Orobio de Castro, 2000; Peets et al., 2007). It is worth considering also the role of peer affiliations and groups: not only affiliation with deviant peers renders children more at risk to enact antisocial behaviour, but it may also have an influence on the development of children's cognitive and moral processes.

Finally, longitudinal studies may help in tracing developmental trends, since at this time it is difficult to establish a causal direction between (distorted) cognitive and moral processes and antisocial behaviour. Although it is more straightforward to hypothesize that one's own thoughts, beliefs and mental processes, built throughout one's life and

including memory, attention, regulation skills, knowledge, are antecedent of behaviour, one cannot exclude that being an aggressive child leads to social responses from peers and adults that, in their turn, influence cognitive processes and moral judgments. It is therefore more likely that a vicious circle between cognitive distortions, moral reasoning and final behaviour takes place, according to which, for example, hostile attributions leading to aggressive behaviour contribute to social reputation and to rejection, which, in their turn, deprive children of opportunities to learn social abilities and to improve their cognitive processes. Similarly, employing moral disengagement mechanisms or justifying morally wrong actions may make children impermeable to sanctions and punishment, and therefore being a straight way to go on transgressing.

Notes

- 1) Bandura identified eight different mechanisms, expressing the tendencies to redefine the behavior and the seriousness of its consequences, to minimize the individual responsibility for the immoral action, and to strip the victim of the action of his/her human qualities.

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