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Autism, Morality and Empathy

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"Do unto others as you would have them do unto you" (e.g., Matthew 7:12). The golden rule of most religions assumes that the cognitive abilities of perspective-taking and empathy are the basis of morality. According to Goldman (1995), you simulate what you would like to happen if you were in the situation of another and act accordingly. One would therefore predict that people that display difficulties in those abilities, such as people with psychopathy and autism, are impaired in morality. This seems to be confirmed by studies on psychopaths, who show deficits both in empathy and morality (Blair, Mitchell and Blair, 2005). However, Kennett (2002) and McGeer (this volume) suggest that in autism, the deficit of empathy does not lead to a deficit of morality. McGeer attempts to solve this paradox by investigating the "roots of moral agency". She distinguishes a Kantian rational view of morality and a Humean emotional view of morality. She concludes that even if reason plays a key role in morality, this role is merely instrumental. Only emotions can constitute the motivation for moral behaviors. However, according to her, one should not reduce emotional motivation for morality solely to empathy. Other kinds of emotions may also play a role, emotions that would be available to people with autism.

This interesting essay raises a major question, which is challenging both for moral philosophy and cognitive neuropsychiatry. Why do autistics have a sense of morality while psychopaths do not, given that they both display a deficit of empathy? We would like here to refine some of the views on autism and morality. In order to do so, we will investigate whether autism really challenges a Humean view of morality. We will then provide a new conceptual framework based on the distinction between egocentric and allocentric stances, which may help us to make some predictions about the autistic sense of morality.

1. Autism: a challenge for a Humean view of morality?

Autism raises the following paradox:

(a) Humean view: Empathy is the only source of morality.

(b) People who have no empathy should have no morality.

(c) People with autism show a lack of empathy.

(d) People with autism show a sense of morality.

To solve this paradox, McGeer refutes the premise (a) and its consequence (b). She concludes that empathy is not a necessary condition for morality. However, there may be other possibilities to solve the paradox, by refuting either (c) or (d). We will review these possibilities based on experimental works. However, we should keep in mind that both psychopathy and autism are heterogeneous and impairments can range from severe to hardly perceptible. In addition, it is necessary to make allowances for comorbidity between the two disorders. For our present purposes we will consider here AS individuals with normal or superior intellectual ability who show the following features: difficulty in reciprocal social interaction, communication impairments, a lack of flexibility with obsessive tendencies, and a single-minded pursuit of narrow interests.

A lack of empathy?

According to McGeer, the common factor between autism and psychopathy is the lack of emotional empathy (premise c). One possibility is that empathy disorder results from abnormalities in emotion recognition and emotion matching in ASD (Hobson, 1993). However, in studies where the verbal mental age was matched, children with autism have not been shown to be impaired in emotion recognition (Adolphs, Sears, & Piven, 2001; Ozonoff, Pennington, & Rogers, 1990; Prior, Dahlstrom, & Squires, 1990, Castelli, 2005). They have intact autonomic responses when viewing pictures of people who are sad or afraid. Furthermore, most of the tasks used to evaluate empathy in ASD require both cognitive and affective skills (e.g. Empathy Quotient, Baron-Cohen and Wheelwright, 2004). Consequently, they are unable to test emotional empathy per se. Emotion processing abnormalities in autistic disorders cannot be properly understood in terms of a lack of emotions, but rather in terms of less complex emotions, less regulation of emotions and less ability to reflect on one's own emotions (Hill, Berthoz and Frith, 2004). Individuals with ASD have difficulties in integrating the cognitive and affective facets of the other person's mental states (Shamay-Tsoory et al. 2002). None of these limitations rules out automatic emotional empathy. We assume that at least a subgroup of individuals with ASD may have emotional empathy, at least to some degree, even if they may not be able to reflect on their emotions.

The parallel drawn between psychopathy and autism based on a common lack of empathy does not seem to be fully justified. While psychopathy indeed is defined as severe disturbances in emotional empathy, it is less clear that individuals with ASD are unable to empathize (Blair, 2005). If we distinguish here between cognitive and emotional components of empathetic behaviours, we would claim that only the former is impaired in ASD, but not necessarily the latter. We attribute the lack of empathetic behaviour claimed by number of authors (Gillberg, 1991; Yirmiya et al., 1992) to mentalizing deficits (Batson et al., 1987). One may suggest that the partial integrity of the emotional component in people with ASD might explain why they show apparently preserved moral behaviours, in contrast with people with psychopathy. But do they really display a moral sense?

A sense of morality?

According to McGeer, if psychopathy and autism share the same lack of empathy, they differ at the level of morality. Based on several quotations from Temple Grandin, McGeer argues that moral sensibility would be partially preserved in ASD (premise d). How can we go beyond introspective report and test morality experimentally? Moral rules can be applied both to guide our own actions and to judge other people's actions. It is difficult to evaluate moral behaviours in ASD as several irrelevant factors can interfere with their actions, preventing them to act according to moral rules (e.g. executive disorder, for review see Hill, 2004). Here we will limit ourselves to moral judgments, which are more amenable to experimental investigations. Two distinctions are particularly useful: moral/conventional and wrong/bad.

The distinction between conventional and moral has been a major breakthrough in the study of morality (Turiel, 1983; Smetana, 1985). Having a moral sense means being able to distinguish between a moral violation (e.g. pulling hair) and a conventional violation (e.g. chewing gum at school). The distinction is made from the age of 39 months and is cross-cultural (Smetana and Braeges, 1990; Song, Smetana and Kim, 1987). In folk psychology, moral violation is considered as universal and objective (Nichols & Folds-Bennett, 2003). Conventional violation is merely a question of context and authority. Moral violation is less permissible than conventional violation. When asked why,

children's replies reflect the belief that conventional violation depends on social order while moral violation involves someone being hurt. According to Blair, the sense of morality ultimately derives from a Violence Inhibition Mechanism (VIM) activated by distress cues. However, the story may not be as simple.

Not all the phenomena that lead to someone being hurt can be considered as a consequence of a moral violation. Indeed, it is necessary to make the distinction between judging that something is wrong and judging that something is bad (Nichols, 2002). An earthquake killing thousands of people cause severe distress and pain, and as such is bad, but it is not wrong. Furthermore, if by hurting someone, you help her, then it cannot be considered as a moral violation. One should temper the temporary pain or distress with the global happiness or good for the person. The act cannot be evaluated in itself without its background and its consequences that may justify it or not. Punishment is thought to be appropriate only for moral and conventional transgressions, but not for non-transgressions (cf. Davidson, Turiel, & Black, 1983; Zelazo, Helwig, & Lau, 1996).

There are thus at least three components in a moral violation: (1) it is a transgression of a normative rule, (2) this rule is not conventional or contextual and (3) the transgression involves someone suffering without further moral justification. The question is now whether people with ASD can detect moral violation.

Blair (1996) tested the capacity to draw the distinction between moral and conventional in children with ASD. Subjects were asked about the permissibility, the seriousness and the "authority jurisdiction" of the violation. Individuals with ASD were not significantly different from controls on any of these questions. They were able to distinguish between moral and conventional violations, despite their impairment in theory of mind. Blair concluded that individuals with ASD were able to detect distress in others. However, there are at least two problems here.

First, another study about recognition of faux-pas seems to refine the previous results. A faux-pas occurs when someone says something that he should not say because it may disturb or hurt someone else's feelings. Shamay-Tsoory et al. (2002) showed that two Asperger individuals were able to detect the faux-pas, but not to understand them. Interestingly, they were not able to provide an appropriate explanation of why it was a faux-pas. They referred to violations of rules (e.g. you are not supposed to do that) rather

than to the fact that the victim of the faux-pas was hurt. This result is consistent with another study where subjects had to judge culpability in different stories (Grant et al., 2005). Children with ASD were able to judge the culpability of children but were not able to justify why by appealing to the pain caused. We would like to suggest that people with ASD are able to detect someone's distress, but are more interested in normative rules than in emotions.

A second problem comes from the classical task used by Blair. The critical question to distinguish between moral and conventional concerns the "authority jurisdiction": would it be O.K. for the child to do X if the teacher says that the child can? The rule is moral if the child should not do X even if the teacher says that the child can do X. However, to understand that does not mean that one understands that it is a moral violation. Indeed, it merely means that it does not depend on the teacher's authority, it is beyond his or her jurisdiction. But it could depend on someone else's authority, like one's parents. If so, it would still be conventional.

In conclusion, we are not convinced that there is as yet sufficient evidence to rule out the possibility that individuals with mentalizing impairment have an intact moral sensitivity. It rather seems that they are able to detect a transgression of a normative rule and detect someone else's distress, but not necessarily to relate them to each other. Furthermore, there is no convincing evidence that they can understand that some rules are not conventional. Indeed, the introspective self-reports provided by McGeer can all be interpreted as the consequence of an acute sense of normative rules, but they do not provide any cue about the sense of morality. McGeer reports that Temple Grandin has no social intuition. The question is: does she have moral intuitions? Or is she merely an "expert computer program" as she claimed to be? We would like now to provide a new conceptual framework that may help to interpret the sense of morality in ASD.

2. Egocentrism and allocentrism in social and moral cognition

We suggest that it is misleading to characterize ASD as a lack of empathy associated with a preserved sense of morality. The limitations in social and moral cognition in ASD require a more subtle conceptual framework, which takes into account the difference

between two kinds of attitudes. We would like here to introduce a distinction between egocentrism and allocentrism in social cognition, based on the distinction that is made in visuo-spatial perception (Frith and de Vignemont, 2005). We propose that it makes a difference whether the other person can be understood using an egocentric stance ("you") or an allocentric stance ("he/she/they").

The distinction between egocentric and allocentric representations was first made in spatial cognition (for review, see Jacob and Jeannerod, 2003). The spatial location of the same object can be encoded either in its perceptual relation to the agent (egocentric representation) or in its relation to other objects independently of the agent (allocentric representation). Each of these representations plays a specific role. The egocentric representation is directly linked to the actions that the agent can perform toward the object. The allocentric representation relates objects together and allows comparing them with each other. Similarly, one can have two different attitudes toward the same person. When we adopt an egocentric stance the other person is understood in her relationship with the self. This relationship can be based on more or less direct interactions (e.g. the person I am talking to), but also on social status (e.g. a member of my family or a colleague). What the other feels, thinks or does is relevant for the self. It is necessary to know the other according to an egocentric stance if one wants to interact with the other and to locate oneself in the social world. When we adopt an allocentric stance the other person is understood in her relationship with other people independently of the self. The allocentric stance allows you to understand that people exist outside their interactions with you. It is necessary for understanding the mutual relationships between people. The allocentric stance is detached from interactions with people, while the egocentric stance is immersed in social interactions and directly connected to them.

Egocentric and allocentric representations are normally in permanent interactions. The allocentric social knowledge is based on inferences drawn from memories of past egocentric interactions. Conversely, the egocentric stance is influenced by a wider allocentric knowledge of people. We suggest that this interaction is broken in Asperger syndrome.

Consequently, individuals with Asperger syndrome display extreme egocentrism, disconnected from allocentrism. Their social world is self-focused. They may forget for

instance that people have their own life, outside their interaction with them. They often report being the victim and seem to be less sensitive to other people's suffering. One example of the ambivalence of morality in ASD comes from the study of the sense of fairness using social economic games in simple one-to-one situations in autism (Sally and Hill, 2005). These games included the ultimatum and dictator games, where one partner can either offer or refuse a share of a given amount. High-functioning individuals with autism were using the same "irrational" principles as controls, that is, they refused to accept amounts given to them that were lower than about a third of the total and likewise, offered amounts that were somewhat less than half the given amount. People with ASD are sensitive whether they are treated fairly or not. This is consistent with egocentrism. Interestingly, in the dictator game, the distribution of the offers differed in ASD. Normal adults shaded their offers so that they could get one or two extra for themselves. In contrast, adults with autism seemed to obey to one of the two following rules: make a perfectly equal offer or keep everything. In this situation, there is no flexibility or degrees of fairness in ASD, unlike normal adults. The rule used in the dictator game is mathematical and rigid. This is the consequence of a very abstract allocentrism disconnected from egocentrism. People with ASD do not provide any description of how people *do* behave, but rather how people *should* behave. They live in a very normative social world. We suggest that the so-called moral behaviors in ASD result from abstract allocentrism. They thrive on the idea of rules, as noticed by McGeer. This is shown whenever AS individuals talk about rules that other people might follow in their social interactions that they feel they have worked out by logical analysis:

> In first grade I became increasingly obsessed with rules. I studied people's behaviors and actions and read written rules carefully to try to make sense of my school community and fellow human beings. (Dawn Prince-Hughes, 2002, p. 110)[1]

Baron-Cohen and coll. (2003) showed that individuals with ASD had a higher score in systemizing quotient. Systemizing is defined as the drive to analyze, identify underlying rules and build systems. People with ASD do not necessarily appeal to

[1] The following quotations are taken from Williams (2004).

emotions or other mental states to understand the social world, they merely predict other people's behaviors on the basis of regularities between inputs, operations, and outputs:

> There is a process of using my intellect and logical decision making for every social decision. Emotion doesn't guide my decision; it is pure computing. (Temple Grandin, 1996, p. 103)

People with ASD have social knowledge and are able to see social structures and relationships in a detached way that can give rise to a reputation of being cold and distanced. However, their personal logic for how the social and the moral world should work may be very formal and far from reality. It is even more difficult for them that ordinary people do not always follow the rules in our daily practice or can create their own rules (Dewey, 1991):

> There are days when just trying to make sense of the rules for social interaction is too difficult. It is especially so when we take into account that individuals often write their own rules! For example it's fine to take your clothes off to have a bath, but only a model takes her clothes off for the photographer; or you can laugh at that story, even though it's about a fat lady, because it's a joke. (Wendy Lawson, 2001, p. 98)
>
> The human saga is just not reliable enough for me to predict (Liane Holliday Willey, 1999, p. 85)

It is not surprising that individuals with ASD are sensitive to normative rules, given that they only way they have to cope for their lack of social intuitions. Still it does not mean that the rules that they obey are nothing more than conventional for them.

We tentatively suggest that most individuals with ASD are not insensitive to the distress of other people. However, their emotional empathy may not go far enough and does not necessarily explain why they are able to make normative judgments and indeed genuinely act in a law-abiding way. We suggest that they are more interested in normative rules than in emotions due to an abstract allocentrism disconnected from egocentric interactions with others. It is difficult to understand whether the normative rules they obey are merely conventional, extracted from their abstract analysis of their surrounding, or properly moral. Only in the latter case would they believe that moral

rules (as opposed to conventional rules) are objective and universal beyond anybody's jurisdiction. Only then can we decide whether autism really does challenge a Humean view of morality.

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