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Double Empathy

Damian Elgin Maclean Milton\textsuperscript{1}, Brett Heasman\textsuperscript{2} and Elizabeth Sheppard\textsuperscript{3}

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Definition

The double empathy problem (DEP) refers to a “disjuncture in reciprocity between two differently disposed social actors” who hold different norms and expectations of each other, such as is common in autistic to non-autistic social interactions (Milton 2012: 884). With different dispositional outlooks and personal conceptual understandings, interactions involving autistic and non-autistic people are susceptible to frequent misunderstandings. It is a “double problem” as both people experience it, and so it is not a singular problem located in any one person. However “the disjuncture may be more severe for the non-autistic disposition as it is experienced as unusual, while for the ‘autistic person’ it is a common experience.” (Milton 2012: 885).

In principal, the DEP becomes more marked the wider the disjuncture in dispositional perceptions of what constitutes the social context. It is suggested that “social subtext is never fully given as a set of a priori circumstances, but is actively constructed by social agents.” (Milton 2012: 884). Thus as interactions unfold, an initial gap in mutual understanding due to a dispositional difference can readily become a critical gap in mutual understanding which potentially terminates the interaction.

The explanatory scope of the double empathy problem is broad because it considers both individual outlooks of multiple social actors and the social context in which interactions takes place, such as cultural norms and stereotypes. Features of the double empathy problem that are characteristic of misunderstandings for non-autistic social actors include difficulties in reading autistic facial expressions and interpreting autistic perspectives, overgeneralizing attribution of blame, reduced tendency to critically reflect on one’s own role in contributing to misunderstandings, and underestimating autistic social ability because it may manifest unpredictably. Features of the double empathy problem experienced by autistic social actors include increased anxiety about interactional outcomes, increased frustration, and lower self-esteem, which in turn can have a potentially cascading effect on future mental health, economic prospects, and accessing supports and services.

The difficulty autistic people have in understanding non-autistic people has been extensively researched, although arguably not adequately from an autistic point of view (Milton and Bracher...
2013). We therefore focus on research which highlights the relatively ignored difficulties that non-autistic people have in understanding autistic perspectives.

Historical Background

The DEP theory originated from autistic scholar Damian Milton through discussions when advising parents in the late 2000s. Prior to diagnosis of his son and himself as autistic, Milton had referred to the DEP concept as “conditioned relativism” and “dispositional diversity” in the 1990s (Milton 2014a). Upon learning of his diagnosis, Milton began to explore autism theory including Theory of Mind. The DEP was Milton’s reinterpretation of ToM which re-situated perspective-taking and empathy as a two-way interactional process. It first appeared as a concept in conference presentations from 2010 and was first published in 2012 (Milton 2012). The theory was soon developed further looking at the concept of “interactional expertise” (Collins and Evans 2007; Milton 2014b) using Iris Marion-Young’s concept of “Asymmetrical Symmetry” (Milton 2016a).

The DEP has a number of theoretical antecedents reaching back to George Herbert Mead and his conceptualization of a “social act” (Mead 1934). For Mead social interaction did not comprise of functionally separate stimulus and response elements, because the categorization of such elements depends on one’s position within the social field. Instead a reciprocal relationship exists between stimulus and response whereby the response of one person is simultaneously the stimulus for another person. In this manner, people co-regulate each other’s behavior through interaction. A two-way understanding of human social relations wherein people have the power to mutually reinforce each other’s behavior is the foundation of sociological works by Erving Goffman (1958) and Harold Garfinkel (1964) and underpins later work on “intersubjectivity” (Schegloff 1992).

The DEP shares commonalities with other theories explaining autistic social interaction. Ian Hacking’s research on “the looping effect” explores the two-way effects of empathy that exists between society and individuals (Hacking 1996), wherein knowledge about an autistic diagnosis shapes the way autistic people behave and how others orientate to them, in turn “looping back” to reinforce societal expectations. Similarities can also be found in the work of Beardon (2017) in regard to what he refers to as “cross-neurological theory of mind,” and in the work of Chown (2014) who examined the double empathy problem through the use of Wittgenstein’s criteriological view of mind.

Current Knowledge

A small but growing body of experimental research is consistent with the notion that non-autistic people perceive autistic people differently and are prone to misperceiving autistic people.

Studies of Mindreading

Several studies have investigated whether non-autistic people find facial expressions of autistic people more difficult to read than those of non-autistic people. The majority of these studies asked groups of autistic and non-autistic participants to pose a series of facial expressions of emotion. Photos of these expressions were then shown to a separate group of raters who were blind to the diagnostic status of the participants and were asked to judge the emotion. Some studies have found the expressions of autistic participants were recognized more poorly than those posed by non-autistic comparison participants (Macdonald et al. 1989; Brewer et al. 2016), although others have found little difference (Volker et al. 2009).

Some studies have attempted to capture emotional expressions in more naturalistic ways, closer to the circumstances under which they may be observed in everyday life. Grossman et al. (2013) used a story retelling task and found that non-autistic adults were equally able to use facial expressions to identify the emotional content of a story told by autistic and non-autistic participants. Faso et al. (2015) elicited emotions in autistic and non-autistic participants by
narrating autobiographical memories to them, finding that the facial expressions of autistic participants were recognized just as accurately as those of non-autistic participants, and in fact, anger was recognized more accurately for autistic participants.

Non-autistic people may also have difficulty interpreting other aspects of autistic people’s behavior. Sheppard et al. (2016) investigated non-autistic participants’ ability to interpret the behavioral reactions of autistic people in naturalistic social interactions. Autistic and non-autistic participants were covertly filmed reacting to a seemingly incidental but actually scripted aspect of the researcher’s behavior. While briefing the participant, she either told them a joke, paid them some compliments, told them about the difficult day she was having, or kept them waiting while doing irrelevant activities. Non-autistic participants who viewed the recorded videos were less able to guess which event the video participant had experienced for autistic than non-autistic participants, apart from reactions to the joke.

Edey et al. (2016) asked autistic and non-autistic participants to manipulate two triangles to create animations depicting mental state interactions such as “coaxing” or “mocking.” Non-autistic observers who viewed the animations were better at identifying the mental state depicted for animations created by other non-autistic participants than autistic participants.

In summary, research in this area suggests that while non-autistic people may sometimes be able to identify facial expressions of autistic people, they have difficulty making sense of autistic people’s behavior in context which might negatively impact on social interactions between autistic and non-autistic people.

**Studies of Metaperception**

Some researchers have combined elements of mindreading and impression formation by examining metaperception, which is the ability to form an impression of what others think about us. Sasson et al. (2018) investigated metaperception using the same videos from Sasson et al. (2017) and Sasson and Morrison (2017b). Video participants were asked to estimate how they thought others would perceive them on a wide range of personality traits, and then observers judged them on the same traits after viewing their video. They found that autistic participants were less accurate than non-autistic participants in judging how they would be perceived as others, because they overestimated how positively they would be perceived.

**Studies of Forming First Impressions**

Research has also asked a more general question of how autistic people are perceived by non-autistic others. If autistic people are perceived less favorably, then this could result in avoidance and social exclusion, contributing to the social difficulties they experience. Stagg et al. (2014) found that non-autistic adults rated autistic children as less expressive and less attractive than the non-autistic children based on brief videos of them. Meanwhile, children rated them lower on a variety of evaluative dimensions. In a study using a much larger sample of adult participants, Sasson et al. (2017) carried out three studies in which they showed that non-autistic adults rated autistic adults and children less favorably than non-autistic adults and children on a wide variety of evaluative dimensions, as well as indicating reduced intentions to engage with them.

Further research by Sasson and Morrison (2017) examined the impact of providing diagnostic labelling information on the impressions formed. They compared non-autistic participants’ judgments of video participants displayed with either no label, the correct diagnostic label, or the alternative label (e.g., labelling the autistic person as having no diagnosis). Autistic and non-autistic participants were rated more positively when labelled as autistic than when no label or the alternative label was provided, although this did not completely eradicate the tendency to form more negative impressions of the autistic participants. Moreover, raters with higher levels of autism knowledge gave more favorable ratings to correctly labelled autistic participants. Taken together these results suggest that diagnostic disclosure might reduce negative first impressions of autistic people, especially for people with greater knowledge about autism.
While Sasson et al. (2018) study asked participants about how they come across to others in general, Usher et al. (2018) studied impressions formed by dyads of adolescents where one member of the dyad was autistic and one was not, who engaged in a 5-min conversation. Autistic participants were found to be more accurate in judging whether the non-autistic partner liked them than non-autistic participants were. This is consistent with non-autistic people having difficulty interpreting autistic people, and suggests that autistic people may be adept in using social feedback from a specific person to gauge how they are perceived by that particular individual.

Metaperception has also been investigated between dyads of autistic and non-autistic people who know each other well. Heasman and Gillespie (2017) used the Interpersonal Perception Methodology (IPM) to investigate perceptions and misperceptions for dyads of autistic individuals and their family members. Both groups predicted that the other would rate them differently than they had themselves on a number of characteristics, evidencing an ability to take a perspective distinct from their own. Moreover, there were few differences for either group between predicted ratings of the other and actual ratings made by the other, such that both groups were fairly accurate in estimating others’ perceptions. When asked about reasons for misunderstandings, family members tended to cite an extreme impairment in social understanding of the autistic person, while autistic participants themselves reflected on both the self and other as causes of misunderstandings.

Overall, studies of metaperception suggest that autistic people are quite good at estimating how specific others perceive them but may have some difficulty judging how they come across in general. Consistent with the DEP, non-autistic people may have difficulty working out how they are perceived by autistic people whom they have just met.

Neurodiverse Interactions

It has been observed that autistic people appear to have a greater affinity with other autistic people than non-autistic people generally do (Chown 2014). This raises the possibility that autistic people may show improved, if not superior, understanding of other autistic people and may consequently show few signs of “social impairment” in the company of their in-group. Research conducted by Gernsbacher et al. (2017) is consistent with this. Autistic and non-autistic participants completed the Broad Autism Phenotype Questionnaire (designed to measure autistic traits) but with the context specified as either non-autistic people or other autistic people, e.g., “I like being around autistic people/non-autistic people.” Both groups reported having more autistic traits when the context was specified as the out-group as opposed to the in-group, and the level of social impairment of the two groups did not differ when the in-group was the context.

Other studies have been less successful in demonstrating an in-group advantage in perception for autistic people. For example, Brewer et al. (2016) found that both autistic and non-autistic viewers were poorer at identifying the emotions posed by autistic participants, suggesting that emotion expression in autism may be idiosyncratic to the individual. In Edey et al. (2017) there was also no in-group advantage: autistic viewers were equally able to identify the mental state depicted in animations created by autistic and non-autistic participants. Nevertheless, more research is needed in this area as it remains possible that an in-group advantage in understanding may be observed in more natural contexts.

Interventions Addressing the DEP

The DEP has been incorporated into a number of autism training and intervention programs. It is one of five elements of best practice in autism that form the National Autistic Society’s (UK) SPELL framework, which incorporates measures to reduce the double empathy gap. Other autism interventions that target the social situation rather than solely the autistic person also have the potential to ameliorate DEP effects. For instance, ATLASS training by Studio3 focuses on acknowledging how the context (carer or service staff) influence the autistic person’s behavior, mediated by levels of stress. AT-Autism also include elements of the DEP in their Synergy programme.
which is for professionals working in schools and aims to develop their understanding of how various factors including aspects of the social environment affect the autistic child’s experience of the world. Further research is needed to evaluate such interventions taking into account perspectives of both the autistic and non-autistic participants.

**Future Directions**

Expanding the current evidence base for the double empathy problem will help to improve understanding about the processes through which it occurs, its scale and impact across different contexts of social life, and possible interventions that can ameliorate its negative social effects for both autistic and non-autistic individuals.

Further research could explore the empirical link between being misunderstood or perceived negatively and measures of quality of life (e.g., mental health) (Milton and Sims 2016). A variety of factors could be investigated with respect to this relationship. For example, the effects of a two-way breakdown in empathy and understanding may result from a difference between monotropic individuals, who have the tendency to localize attentional resources on a specific interest to the exclusion of other potential inputs, and polytropic individuals who are capable of spreading their attentional resources to multiple inputs simultaneously (Murray 1992; Murray et al. 2005). Further research on the link between the DEP and monotropic could shed light on the developmental origins of the DEP, particularly given that most research to date has focused on adults, but we might assume these difficulties arise as a consequence of a transactional, albeit socially situated, developmental process. Another feature to explore is the role of culture in amplifying misunderstandings. Milton (2014) explored theoretically to what extent the DEP is culturally embedded, given the different representations and approaches to autism in popular culture and suggested that culture may contribute to some difficulties in “interactional expertise” (Collins and Evans 2007) between autistic and non-autistic people. Cultural misinterpretations are an area of interational difficulty that are easier to change than one’s dispositional nature, thus in addition to developing new, holistic interventions, the DEP may also have implications for updating existing interventions, which often place social normativity as an assumed improvement on quality of life, when this is not always the case (Milton 2016b).

The DEP may have important application to a number of different areas of social life, particularly for older autistic populations who experience rapid increases in the size and diversity of their social networks as they progress through adolescence and adulthood (White et al. 2009). For example, as mentioned above, the DEP may help to explain why so many autistic adults have such high comorbidity with mental health issues. Pressures for children to become independent in late adolescence can place an increasing strain on family relationships, which may be amplified by the DEP effects especially if autistic people are disproportionately held accountable for breakdowns in understanding (Heasman and Gillespie 2017). Breakdowns in family relations may consequently deny autistic people of the few social supports available and could detrimentally impact perceptions of autism acceptance (Cage et al. 2017). Future directions for research should examine the perspectives of autistic family members in addition to autistic people themselves to identify the supports required as they transition towards being an informal carer.

Finding and retaining employment for autistic people is another context in which the DEP is particularly salient. The social encounter of the job interview and the difficulty in managing professional relations (which are qualitatively different from all other relationships) are two environments governed by complex roles, norms, and expectations which can easily lead to misunderstandings (Hendricks 2010). Future research can examine employers’ potential biases in social perception of autistic adults which may impede progress in job interviews and daily working tasks. This may help to identify the contributing factors towards the current autism employment gap observed in many countries.
The Double Empathy Perspective (DEP) may also help to shed light on the numerous encounters autistic people face as they progress through the justice system, such as providing a police statement or testimony in court. In such interactions autistic people will be highly anxious potentially reducing their credibility as their behavior and intentions are susceptible to misinterpretation. In addition, research has shown that autistic people have difficulty in recalling events personally experienced (Maras and Bowler 2014), thus future directions for research can examine the perspectives of magistrates in interpreting and scaffolding such recall, as well as the impressions that jury members may take from such encounters.

Late diagnosis of autism can leave many autistic adolescents and adults facing a variety of neurotypical interactions as they attempt to access support and services for their disability. The process of assessing disability needs may be further complicated by masking and camouflaging (Dean et al. 2017) and anxiety about outcomes both in terms of financial support and impacts on one’s identity (Kite et al. 2013). Moreover, research on other disability assessment procedures have highlighted the difficulty in translating one’s impairment into criteria on assessment forms since caregivers and care-receivers have divergent perspectives on the burden of care (Moore and Gillespie 2014). Further research should therefore examine the DEP in terms of the perspectives involved in the social encounters experienced throughout the diagnostic pathway, and the institutional barriers that exist between the disabilities experienced and the instruments used to measure the support needs of disabilities.

Sexuality, sexual health, and gendered self are important frontiers for future research on the DEP since one’s sense of self is relationally formed (Dewinter et al. 2017; Yergeau 2017). In addition to misunderstanding autistic perspectives, the complex sensory needs many autistic people experience may further contribute to misalignment of perspective in sexual encounters. Autistic vulnerability in social understanding means there is great risk of potential harm or abuse that might result from DEP misunderstandings in intimate relationships. Further research should explore these risk factors to inform education and support provided.

Finally, the DEP also has epistemological implications in terms of participatory and emancipatory research. The two-way nature of misunderstandings that are observed in interpersonal relations also exist between researcher and participant. For example, in the UK autistic adults report a mismatch between their priorities for research and the funding for autism research, which should focus more on how to make a difference to people’s day-to-day lives (Pellicano et al. 2014). It is therefore important that research design and engagement benefit from autistic involvement (Milton and Bracher 2013; Milton 2014b).

See Also

- Monotropism

References and Readings


Autism and Developmental Disorders, 46(4), 1247–1254.


## Author Queries

*Encyclopedia of Autism Spectrum Disorders*

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