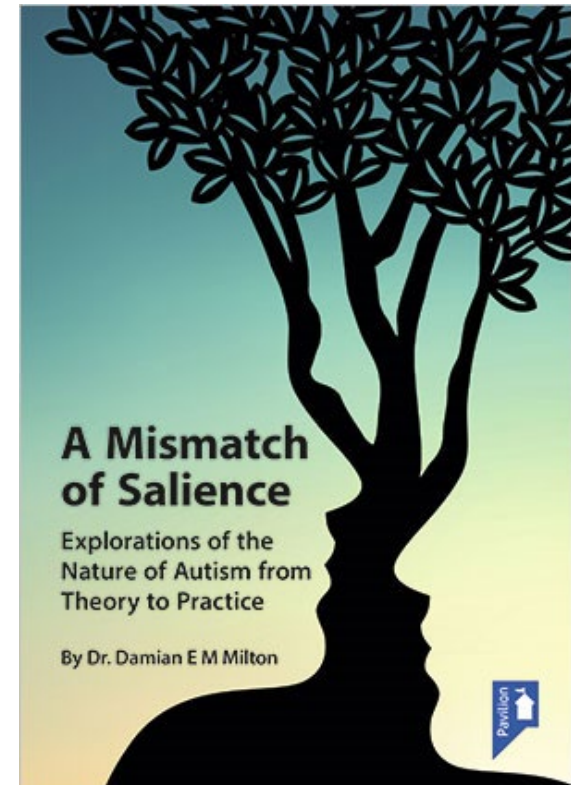


Reflecting upon the double empathy problem: new directions and practical implications.

Dr. Damian E M Milton



A bit about me

- I'm autistic (diagnosed 2009) – as is my son (diagnosed 2005) and one of my daughter's (diagnosed 2023).
- A background in Social Science (initially Sociology).
- Senior Lecturer in Intellectual and Developmental Disabilities, Tizard Centre, University of Kent.
- Visiting Lecturer at LSBU and often at other Universities.
- Chair of PARC and Director at NAT.



- “The autist is only himself...and is not an active member of a greater organism which he is influenced by and which he influences constantly.” (Asperger, 1991: 38).

Mutual incomprehension

- *“95% of people don’t understand me”.*
 - *“Friends are overwhelming”.*
 - *“Adults never leave me alone”.*
 - *“Adults don’t stop bullying me”.*
-
- Quotes taken from Jones et al. (2012).

The 'double empathy problem'

- A case of mutual incomprehension?
- Breakdown in interaction between autistic and non-autistic people as not solely located in the mind of the autistic person. The theory of the double empathy problem sees it as largely due to the differing perspectives of those attempting to interact with one another (Milton, 2012a; 2014a; Milton et al. 2018; Chown, 2014).
- Theory of autistic mind can often leave a great deal to be desired.

The ‘double empathy problem’

- “A disjuncture in reciprocity between two differently disposed social actors which becomes more marked the wider the disjuncture in dispositional perceptions of the lifeworld - perceived as a breach in the 'natural attitude' of what constitutes 'social reality' for ‘neuro-typical’ people and yet an everyday and often traumatic experience for ‘autistic people’.” (Milton, 2012: 883).

The evidence-base

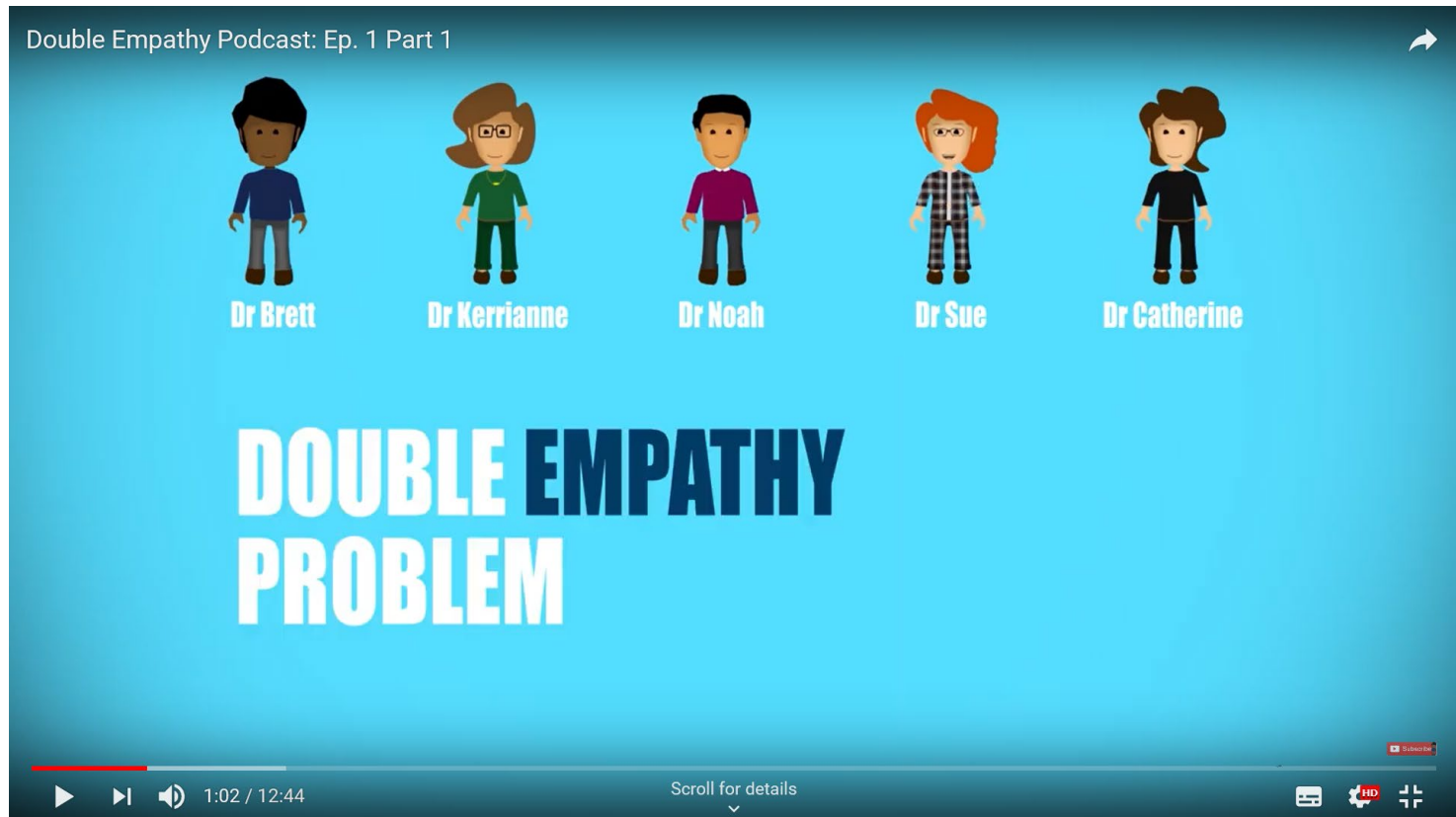
- Sheppard et al. (2016) investigated non-autistic participants' ability to interpret the behavioural reactions of autistic people in naturalistic social interactions.
- Non-autistic participants who viewed the recorded videos were less able to guess which event the video participant had experienced for autistic than non-autistic participants, apart from for reactions to a joke.

Studies of forming first impressions

- 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.
- Supported by work of Sasson et al. (2017a; 2017b; 2018).

- Heasman and Gillespie (2017) investigated perceptions and misperceptions for dyads of autistic individuals and their family members.
- 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.

The Double Empathy Problem Virtual Symposium



New directions

- Crossover with neuroscientific theory regarding ‘predictive coding’:
- The dialectical misattunement hypothesis:
“...views psychopathology not merely as disordered function within single brains but also as a dynamic interpersonal mismatch that encompasses various levels of description.”
(Bolis et al., 2017).
- A ‘mismatch of salience’.

New directions

- [Using interpretative phenomenological analysis in autism research - Katie Howard, Napoleon Katsos, Jenny Gibson, 2019 \(sagepub.com\)](#)
- [An Expert Discussion on Autism and Empathy | Autism in Adulthood \(liebertpub.com\)](#)
- [Frontiers | Mutual \(Mis\)understanding: Reframing Autistic Pragmatic “Impairments” Using Relevance Theory | Psychology \(frontiersin.org\)](#)
- [Autism and the double empathy problem: Implications for development and mental health - Mitchell - 2021 - British Journal of Developmental Psychology - Wiley Online Library](#)
- [Barriers to healthcare for autistic adults: Consequences & policy implications. A cross-sectional study | medRxiv](#)
- [Non-Autistic Children Do Not Object to Autistic-Like Behaviors – YouTube](#)

New directions – Yu-Lin Chen and Kristie Patten; Debrander et al.

Student-Peer Neurotype Match Rather than Autistic Diagnosis Predicts Peer Connection Density and Strength in Autistic¹ and Non-Autistic Adolescents in an Inclusive School Club

We use an identity-first language as it is preferred by a large percentage of the autistic community (Kenny et al., 2016).

Yu-Lin Chen, PhD, OTR (yulun.chen@nyu.edu) & Kristie Patten, PhD, OTR/L (kristie.patten@nyu.edu)
Department of Occupational Therapy, Steinhardt School of Culture, Education, and Human Development, New York University



Background

- Social connections are crucial to autistic mental health and well-being.
- Research on autistic social connections indicates that autistic students tend to have fewer peer relationships and are peripheral in their classroom social networks.
- Even though social interactions are individually different, little is known about how neurotypes affect autistic students' social outcomes.
- The double empathy problem theory posits that autistic people's social challenges may be due to a bidirectional mismatch between autistic and non-autistic social perceptions and characteristics, emphasizing the role of social and peer context in social interactions.
- Recent studies found that within neurotype social interaction predict better social outcomes than cross-neurotype interactions, suggesting the need to understand how peer factors affect autistic social outcomes.

Objectives

- To compare same-neurotype and cross-neurotype peer connections among autistic and non-autistic adolescents in an after-school social network of peer interactions in inclusive education.
- To investigate whether student-peer neurotype match predicts student's quantity and strength of social connections, baseline autism diagnosis.
- To examine whether student social networks demonstrate assortative mixing based on neurotype of social connectivity, that is, whether students tend to connect with a same-neurotype peer or a peer with similar levels of social connectivity.

Method

- Participants: 6 autistic and 6 non-autistic adolescents (grades 6 to 12).
- Setting: an inclusive school club (Maker Club) at public middle school in a large, urban area.
- Student social networks in the club were plotted based on longitudinal observation of peer interactions in 4 sessions over 5 months.
- The following social network measures were calculated for both within- and cross-neurotype peer connections.
- Degree centrality: The quantity of a student's social connections.
- Node strength: The total strength of a student's social connections, as indicated by interaction rates in four levels.
- Assortativity coefficients were calculated to examine assortative mixing by neurotype and degree centrality in the club networks.

Results

- Figure 1 shows the proportions of within- and cross-neurotype peer connections in autistic and non-autistic students. Both groups showed higher degree centrality and stronger node strength in within-neurotype than cross-neurotype connections (Table 1).
- Mixed effects models showed that student-peer neurotype match was significantly associated with more social ties and stronger connection strength when controlling for student neurotype and gender (Table 2), suggesting that students had more and stronger within-group peer connections than cross-group connections. Autistic neurotypes did not predict either the quantity or strength of connections in both networks.
- Figure 2 plots the average club social network across 4 sessions. The plots reveal a strong tendency for students to connect with a same-neurotype peer, particularly in the subgroup of strong peer connections.

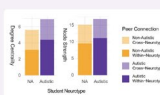


Figure 1. Within- and cross-neurotype social connections.

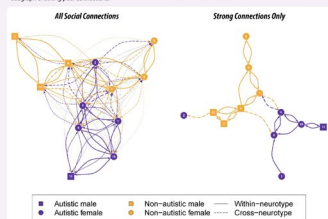


Figure 2. Mean club social network across 4 observation sessions. Each student was represented as a node, and peer connection between two students, as indicated by the social interactions between them, was denoted by an edge between the two nodes. The thickness of the edges between nodes reflects the strength of peer connections in four levels. Because peer behaviors are dynamic, the social networks were directed from the sender of social behaviors to the receiver of social behaviors, as indicated by the arrows.

Figure 2 includes all social connections in the average club network.

Figure 2 includes all social connections in the average club network.

Results (cont)

- The assortativity coefficient by neurotype (mean across sessions = 0.34, SD = 0.22) revealed a tendency for students to connect with same-neurotype peers.
- Students showed little tendency to connect with peers with similar levels of social activity and popularity (mean = 0.06, SD = 0.10).

Table 1. Degree Centrality and Node Strength by Neurotype

Neurotype	Within-Neurotype	Cross-Neurotype	Within-Neurotype	Cross-Neurotype
Autistic	4.0 (2.0)	2.0 (1.0)	2.0 (1.0)	2.0 (1.0)
Non-Autistic	2.0 (1.0)	4.0 (2.0)	2.0 (1.0)	2.0 (1.0)

Table 2. Degree Centrality and Node Strength by Neurotype

Neurotype	Within-Neurotype	Cross-Neurotype	Within-Neurotype	Cross-Neurotype
Autistic	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)
Non-Autistic	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)

Conclusions

- This preliminary study explored the role of interpersonal similarity on autistic adolescents' social networks in natural peer interactions.
- The results showed that matched student-peer neurotype rather than autism diagnosis predicted the quantity and strength of connections, and students tended to connect with their same-neurotype peers.
- This study emphasized that peer context influences autistic social outcomes, suggesting that social interventions may shift the focus from autistic social behaviors to peer context, such as peer understanding.

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Autistic Adults Accurately Detect Social Disinterest in their Conversation Partners when Non-Autistic Adults Do Not

Kilee M. DeBrabander, M.S., Desiree R. Jones, M.S., & Noah J. Sasson, PhD
School of Behavioral and Brain Sciences, The University of Texas at Dallas, Richardson, Texas

Background

- Misinterpretation often to how one perceives they are perceived by others.
- Consistent with a social cognitive deficit model, some studies report that autistic people are less accurate at predicting how they are perceived.
- However, these studies that assess misperception using discrepancies between self- and informant reports or video recordings to obtain impressions.
- Within real-world social interaction, autistic participants may be more accurate than non-autistic (NA) participants at predicting how they are perceived by NA conversation partners.
- This may be because they are less likely than NA participants to demonstrate a "self-enhancement" bias in which NA people overestimate how positively they are viewed by others.
- Here, we examine the accuracy of misperception of autistic and NA adults within same-diagnostic and mixed-diagnostic conversational dyads.
- Participants predicted how their conversation partner would evaluate the quality of the interaction, their own interactive traits, and their social interest in future interactions with them.
- No hypothesis for autistic adults would show greater misperception compared with autistic relative to NA conversation partners.

Methods

- 47 autistic (A) males with confirmed diagnoses, NA males.
- Three dyad types: A-A, A-NA, NA-NA.
- Dyadic and diagnostic groups comparable on age (mean = 20.5 years; SD = 1.15) but differed slightly on age ($\chi^2 = 22.5$, $p = .001$).
- Age, sex, and IQ were covaried in analyses.
- Methods: 1. Intraclass 5-minute "get to know you" conversation with personally unfamiliar A or NA partner.
- Computerized questionnaires.
- Recall Interview: Evaluation Measures (REM) - 11 items assessing conversation quality, disclosure, engagement, and intimacy. Arranged to create an overall quality composite.
- First Impression Scale (FIS) - 10 items assessing perceptions of others on six traits (e.g., awkwardness) and four social interest (e.g., I would hang out with this person). Traits analyzed independently; social interest arranged to a composite.
- After the conversation, A and NA participants completed two versions of the REM and FIS.
- First, on their partners.
- Then, on how they believed their partner would rate them.

Results

Active Partner Interpersonal Model (APIM): Estimate effects of the active, the passive, and interaction of the two on each partner's conversational outcomes.

The Truth and Bias Model: Across the "truth" of a judgment (e.g., partner's accuracy at predicting how they were rated by their partner) and the "bias" or direction of a judgment (e.g., the degree to which a person over- or under-estimated how they were rated by their partner).

Results:

- Active truth value and active misperception ratings were significantly related for interaction quality, awkwardness, and trustworthiness.
- Active using their partner more favorably on these items predicted that their partner would rate them higher in return.
- No significant partner effects: Participants' predictions of how they were rated by their partner did not align with their partner actual ratings.
- Significant interaction between active diagnosis and the partner's truth value for social interest ($p = .001$).
- Active misperception for social interest was significantly related to the partner actual evaluation for autistic adults ($p = .007$) but not NA adults ($p = .20$).
- Misinterpretation of intelligence was significantly and negatively related to the truth value for NA adults ($p = .02$).
- NA participants who perceived themselves to be more intelligent were rated as less intelligent by partners. This effect was not significant for autistic adults ($p = .16$).

Conclusions

- Both autistic and NA adults showed relatively poor misperception for many traits.
- All participants, not just autistic ones, had difficulty predicting how others viewed them after a conversation.
- However, only autistic adults' ratings of their partner's social interest aligned with how these partners actually perceived them.
- They accurately predicted both when their partners wanted to interact again and when they did not. Such findings are inconsistent with a social cognitive deficit interpretation.
- In contrast, NA adults predicted that their conversation partners would be more interested in future interaction with them than their autistic and NA partners actually reported.
- Autistic adults did not share the typical NA "self-enhancement bias."
- This may be due to prior poor social experiences and internalized beliefs that contribute to them expecting low social interest.
- The more accurate appraisal of their partners social interest could relate to greater social interest and social anxiety than NA adults who assume greater social interest from others.

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Power

- Important to remember that the double empathy problem originated from lived experience and social theory and is thus conceptualised as situated within wider unequal (and intersectional) power relations.
- Avoiding tokenism and ceding power. Humility and rapport (tacit knowledge) building.
- Reducing imposition of social expectations.
- This to me is 'translation into practice (and other) settings'.

Collaboration

- Setting the agenda.
- Design and development of strategies and methodologies.
- Avoiding tokenism.
- The Participatory Autism Research Collective (PARC): www.PARCAutism.co.uk

A couple of quotes to conclude:

- “Grant me the dignity of meeting me on my own terms...Recognise that we are equally alien to each other, that my ways of being are not merely damaged versions of yours. Question your assumptions. Define your terms. Work with me to build bridges between us.” (Sinclair, 1993).

- “When I am in an environment I feel comfortable in, with people who are kind and tolerant, and doing things I enjoy, then I am as happy as the next person. It is when people tell me I should think, speak or behave differently that I start to feel different, upset, isolated and worthless. So surely the problem is a lack of fit with the environment rather than something inside my brain that needs to be fixed?”
(Victoria, ‘Are You Taking Something for It?’, issue 76, 12; cited in Milton and Sims, 2016).

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