**Creating truly radical change in autism research: A response to Frith and Mottron**

**Running Title: Response to Frith and Mottron**

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**Keywords:**Subtypes (of ASD), Developmental Psychology, Social Cognition and Theory of Mind

Frith (2021) and Mottron (2021) recently called for a backwards shift in autism research towards identifying cognitive deficit and ‘prototypes’, to remedy a more heterogeneous diagnostic criteria. Frith argues that our current conceptualisations of autism have shifted too far away from the idea of ‘disorder’. Likewise Mottron argues that autism has been ‘trivialised’, diluted by the inclusion of the merely quirky. Whilst there is much to critique in the suggestion that research into the mechanisms of autism should be prioritised over the identification (and associated support) of autistic people, here we focus on two key points: autism as a discrete variable, and cognitive deficits as a core feature of autism.

The initial introduction of autism as a diagnostic category in the 1940s was grounded in early 20th century conceptualisations of normality and productivity (Evans 2014). These conceptualisations were reified in the stratification of autism into ‘classic’ (or ‘Kanner’s’) autism, and Asperger Syndrome, which were later collapsed with acknowledgement that it provided little insight into the support needs of autistic people, and was stigmatising (Woods, Waldock, Keates and Morgan, 2019). Mottron acknowledges that attempts to identify a singular genetic marker for autism has failed, as have attempts to divide autism with biomarkers, and it is now recognised these endeavours are unlikely to succeed. Frith acknowledges that theories of cognitive deficit are foiled by heterogeneity. The most parsimonious explanation here does not require a narrowing to prototype, but an acknowledgement of human error.

Multiple co-occurring diagnoses are common in both autistic adults and children, and attempts to distill ‘pure’ autism have proved futile so far. ‘Autism’ may currently represent a particular clustering of characteristics within the wider umbrella of developmental differences (Astle et al. 2021), or may reflect more broadly the psychiatric othering endemic in the 20th century. As we debate the nature of autism, autistic people continue to experience poorer mental and physical health outcomes, victimisation, and stigma which is often grounded in cognitive deficit views of autistic people as mindblind and lacking empathy. Differences at the cognitive level fail to translate to real world social skill (Morrison, Pinkham, Kelsven, Ludwig, Penn and Sasson, 2019) whereas advances in theory about autistic social style (Milton, 2012) have been confirmed in robust and ecologically valid social research (Crompton, Ropar, Evans-Williams, Flynn, and Fletcher-Watson, 2020). These findings suggest that it is indeed better theory we need, and not simply smaller, more stratified groups of autistic people.

 From birth our cognition is shaped by our interaction with the outside world, just like our behaviour. Perhaps it is time to acknowledge that separating humans into smaller categories based upon their perceived difference from normative expectations is unhelpful. Whilst a desire to understand the link between brain, mind, and behaviour is a basic impetus in Psychology, this cannot be separated from the social context (or ‘extraneous variables’) that has underpinned our knowledge. A truly radical approach would be research that aims to understand autistic people, instead of the entity we call autism.

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