

Rethinking Fast and Slow Processing in Autism

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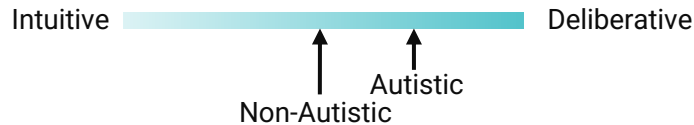
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Background

Dual Process Model of Autism: autistic people think more 'rationally'
(see Rozenkrantz et al., 2021, *TICS*)



Explains autistic difficulties (e.g., rapid social judgements) & strengths (e.g., rational thinking)

But supporting research limited by: i) measures lacking validity, ii) not controlling for general cognitive ability, iii) small underpowered studies

Aim

4 studies (N = 1192) to re-examine associations between autism and intuitive and deliberative thinking

Study 1-3: Associations between autistic traits (Baron-Cohen et al., 2001) and thinking style, in non-clinical samples of the general population

Study 4: Pre-registered comparison of 200 autistic and non-autistic adults matched on age, sex, and general cognitive ability.

Method

Participants completed:

- Cognitive (Numerical & Verbal Cognitive Reflections Test; Toplak et al., 2014; Sirota et al., 2020) & self-report (Rational Experiential Inventory; Pacini & Epstein, 1999) measures of intuitive and deliberative thinking
- Measure of General Cognitive Ability (ICAR; Condon & Revelle, 2014)

Methodological Strengths:

- ✓ Well-validated robust measures
- ✓ Large, diverse samples (N 3x combined previous research)
- ✓ Pre-registered
- ✓ Internal replications, conceptualizing autism dimensionally & categorically

Results

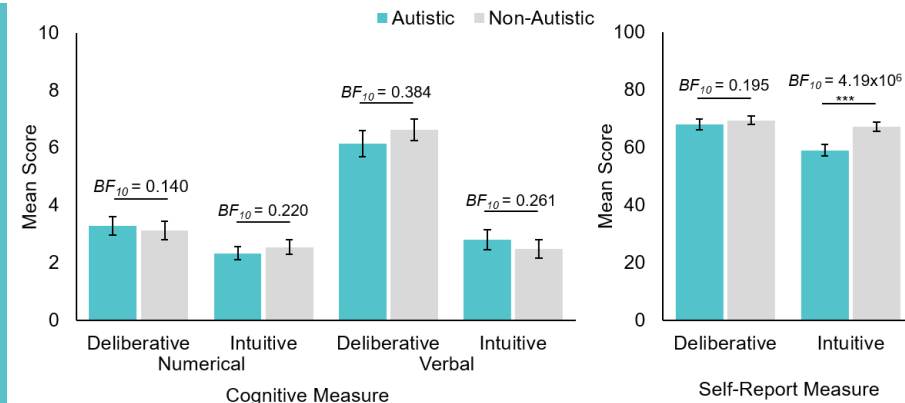
Study 1-3

Accounting for age, sex, and general cognitive ability, autistic traits did:

- not predict intuitive or deliberative thinking on cognitive tasks
- not predict self-reported deliberation
- significantly predict lower self-reported intuition

When $p > .05$, Bayes Factors provided evidence for null hypotheses ($BF_{10} < 1$)

Study 4



Almost no differences between autistic and non-autistic groups

Discussion

Challenge dual process model of autism and appropriateness of interventions grounded in this theory

Other processes likely underpin enhanced rationality in autism (e.g., enhanced local, rather than global processing)

Highlights need for methodologically rigorous studies to improve replicability in autism research

Important to build knowledge of intact processes to refine theoretical accounts – knowledge of similarities between autistic and non autistic people is equally important as differences and may help to improve attitudes towards autism