Please cite as: Browning, H. & Veit, W. (2021) Autism and the Preference for Imaginary Worlds. *Preprint.*

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Autism and the Preference for Imaginary Worlds

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Abstract: Dubourg & Baumard mention a potential role for the human drive to systemise as a factor motivating interest in imaginary worlds. Given that hyperexpression of this trait has been linked with autism (Baron-Cohen 2002, 2006), we think this raises interesting implications for how those on the autism spectrum may differ from the neurotypical population in their engagement with imaginary worlds.

Edgar Dubourg and Nicolas Baumard have developed an exciting integrative theoretical proposal for the evolutionary basis of our cultural fixation on imaginary worlds, based on our drive to explore and seek novel information about our environment. In passing, they mention another potential (complementary) explanation for the appeal of imaginary worlds, based on the cognitive mechanisms that drive us to a preference for systemisation, drawing on work by autism research Simon Baron-Cohen. Baron-Cohen (2002) argued that humans can be rated along the two dimensions of empathising and systemising. Systemising involves the drive to understand a system and how it operates. Autism, in his view, is associated with a lower score on the empathising dimension and a high score on the systemising dimension – they are 'hyper-systemisers' (Baron-Cohen 2006). More recent research conducted on a sample of over 600,000 individuals has supported this claim (Greenberg et al. 2018).

This naturally leads to the thought that those with a higher systemisation drive would have a higher interest in the fictional worlds described; and in particular that those on the autism spectrum might show a strong interest. Although Dubourg and Baumard do not speculate about how autism may relate to their hypothesis, we think there is something interesting here worth exploring, regarding how people on the autism spectrum might differ from the neurotypical population in their engagement with and preference for imaginary worlds. Anecdotally, there is something appealing to this line of enquiry. Both of the authors of this commentary are on the autism spectrum, and we both show a strong preference for fictions taking place within imaginary worlds, having spent far too much time on the works referred to by the authors (such as the Harry Potter series, the Marvel Cinematic Universe, One Piece, Naruto, Game of Thrones, Star Wars, and the like) and even having written philosophical explorations of them (Browning & Veit, forthcoming).

A preference for 'world-dominant' fiction, that focusses primarily on the details of the setting rather than the characters or narrative, is in fact commonly taken to be a trait associated with autism, and

matches well this idea that autism relates to a higher systemising and lower empathising ability. Autism spectrum traits often include an 'obsessive' focus with a subject matter – particularly the details of 'closed systems' (Baron-Cohen 2002); a trait that dovetails nicely with the "encyclopaedic impulse" described by Dubourg & Baumard that fans of imaginary worlds regularly display. Imaginary fictional worlds provide a perfect closed system for one to investigate and systemise – unlike the real world, it is possible for one to gain a complete knowledge and understanding of all the facets of an imaginary world. Autism has often been associated with 'geek' culture of the type that surrounds imaginary worlds. While this has not been well-explored in the academic literature, there are plenty of online discussion boards in which autistic individuals discuss the ways in which they feel their autism influences their preference for deep engagement with such imaginary worlds.

While all this theorizing on the links between a drive for systemising and engagement with fictional worlds remains speculative, it provides an interesting avenue for research both in terms of sex differences, as the authors suggest, and the effects of autism. The hypothesis provides testable predictions regarding the correlation of ASD traits and level of interest in world-dominant as opposed to story-dominant fictions. It would also be interesting to investigate the degree to which autism is related to creation of and engagement with 'paratexts' such as online fanwikis that serve as a globally accessible resource for systemising all knowledge about the minute details of these worlds. Of course, we should expect differences in degrees, rather than radical binary differences. ASD, after all, is found on a spectrum and symptoms can differ.

Another potentially interesting question this could help answer is why individuals often seem to stick to a limited number of fictional worlds, exploring them in depth, rather than increasing novelty by expanding exploration 'across the board'. This is likely to be an instance of the exploration/exploitation trade off, where the latter of which can be divided into systemisation and successful information usage. After all, focus on one fictional story will inevitably consume time that could be spend on exploring others. If autism can be understood as hyper-systemisation, we may well have an excellent target system to study this side of the equation, with a hypothesis that more autistic individuals are more likely to stick to the details of a few fictional worlds, rather than engaging with a large number; a prediction consistent with association of ASD with a narrower range of interests (Baron-Cohen 2006).

It is important to also note that research into autism is still in its infancy, and Baron-Cohen's work (alongside other work of autism researchers) has been criticized for its focus on verbal report among those with so-called 'high-functioning' autism. With autism increasingly recognized as a broad spectrum, non-verbal autistics may not be well represented in theories developed using only the those in the 'high-functioning' part of the spectrum (Chapman & Veit 2020a,b). This may be important, as for example it has been found that preference for fiction over non-fiction in children with autism correlates with their communicative abilities (Davidson & Weismar 2018). There is obviously still then a lot to understand about autism itself, before any speculation of this type can be strongly empirically grounded. Here, we simply wish to offer a new model/hypothesis for a subset of the phenomena linked with autism - i.e. systemisation and interest in imaginative worlds - in a spirit of scientific pluralism without thereby implying that this rules out other explanations (Veit 2019). Despite these caveats, we remain optimistic that an evolutionary lens on autism may offer exciting new pathways for future research.

Conflict of interest statement:

The authors have no conflicts of interest to report.

Funding Information:

WV's research was supported under Australian Research Council's Discovery Projects funding scheme (project number FL170100160).

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