So What Are 'Trait Systemization' and 'Trait Empathisation' and Why Does it Matter for the Institutional Dysfunction and Chaos We Are Living Through?
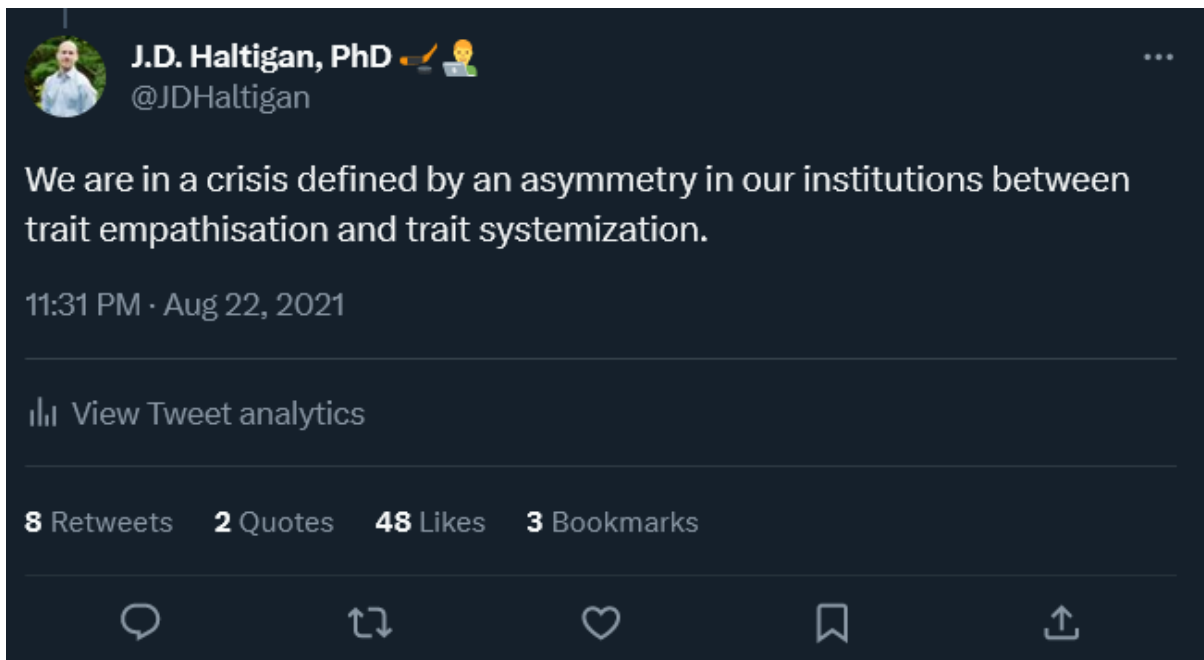
A brief primer on the constructs and Baron-Cohen's Extreme Male Brain Theory (EMBT) of Autism

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**"We are in a crisis defined by an asymmetry in our institutions between trait empathisation and trait systemization."** Readers who have followed me on Twitter for some time will undoubtedly recognize my repeated use of the concepts of 'trait empathisation' and 'trait systemization' in describing the cultural revolution we are living amidst. While I have occasionally explained these terms in various degrees of detail to those who directly asked, I have yet to proffer a complete piece of writing that fully unpacks the line of research that gave rise to these constructs, their 'loose' relations to the social-personality constructs of femininity and masculinity, and why I think these constructs are best able to facilitate an understanding of the cultural chaos we are living through. This post aims to fill that gap.

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The concepts of 'trait systemization' and 'trait empathisation' and their measurement as formal psychometric constructs emerged out of the autism research literature. More specifically, they are foundational to the Extreme Male Brain Theory (EMBT) theory of autism developed by autism researcher Simon Baron-Cohen (note: he is the brother to the comedian Sasha Baron-Cohen). In brief, the logic of the EMBT theory of autism is that the disorder is a reflection of an extreme expression of the normative sex differences in the dimensional traits of systemization and empathisation in which males typically show a profile of stronger trait systemization relative to trait empathisation, whereas females show the opposite profile favoring stronger trait empathisation. As Baron-Cohen describes in his seminal 2002 paper introducing the EMBT:

> *The male brain is a defined psychometrically as those individuals in whom systemising is significantly better than empathising, and the female brain is defined as the opposite cognitive profile. Using these definitions, autism can be considered as an extreme of the normal male profile. There is increasing psychological evidence for the extreme male brain theory of autism.*

So how are 'trait systemization' and 'trait empathisation' empirically (i.e., psychometrically) defined? Let's take a look. First: trait systemization. Before providing the formal definition, I encourage you to do a brief thought exercise: ask yourself what immediately comes to mind for you when you think of someone you know who you would describe as 'systematic' in their personality or mannerisms. Having done this, hold those thoughts in your mind as I formally describe the construct below and ask yourself how well the person's characteristics you had in mind 'map onto' or are consistent with our formal definition of trait systemization as it operationalized in psychological research.

As described in the seminal 2003 paper introducing the 'systemizing quotient' measure

> *Systemizing is the drive to analyse systems or construct systems.*

The systemizing quotient: an investigation of adults with Asperger syndrome or high-functioning autism, and normal sex differences

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Systemizing is the drive to analyse systems or construct systems. A recent model of psychological sex differences suggests that this is a major dimension in which the sexes differ, with males being more drawn to systemize than females. Currently, there are no self-report measures to assess this important dimension. A second major dimension of sex differences is empathizing (the drive to identify mental states and respond to these with an appropriate emotion). Previous studies find females score higher on empathy measures. We report a new self-report questionnaire, the Systemizing Quotient (SQ), for use with adults of normal intelligence. It contains 40 systemizing items and 20 control items. On each systemizing item, a person can score 2, 1 or 0, so the SQ has a maximum score of 80 and a minimum of zero. In Study 1, we measured the SQ of $n = 278$ adults (114 males, 164 females) from a general population, to test for predicted sex differences (male superiority) in systemizing. All subjects were also given the Empathy Quotient (EQ) to test if previous reports of female superiority would be replicated. In Study 2 we employed the SQ and the EQ with $n = 47$ adults (33 males, 14 females) with Asperger syndrome (AS) or high-functioning autism (HFA), who are predicted to be either normal or superior at systemizing, but impaired at empathizing. Their scores were compared with $n = 47$ matched adults from the general population in Study 1. In Study 1, as predicted, normal adult males scored significantly higher than females on the SQ and significantly lower on the EQ. In Study 2, again as predicted, adults with AS/HFA scored significantly higher on the SQ than matched controls, and significantly lower on the EQ than matched controls. The SQ reveals both a sex difference in systemizing in the general population and an unusually strong drive to systemize in AS/HFA. These results are discussed in relation to two linked theories: the 'empathizing–systemizing' (E–S) theory of sex differences and the extreme male brain (EMB) theory of autism.

Keywords: Asperger syndrome; sex differences; systemizing; empathizing

Here, from a 2010 Baron-Cohen paper, is a more detailed description of trait systemization and what it encompasses:

an ASC.

To understand this theory we need to turn to this second factor, the concept of *systemizing*. Systemizing is the drive to analyze or construct systems. These might be any kind of system. What defines a system is that it follows *rules*, and when we systemize we are trying to identify the rules that govern the system, in order to predict how that system will behave (Baron-Cohen, 2006). These are some of the major kinds of system:

- *collectible* systems (e.g., distinguishing between types of stones or wood),
- *mechanical* systems (e.g., a video recorder or a window lock),
- *numerical* systems (e.g., a train timetable or a calendar),
- *abstract* systems (e.g., the syntax of a language or musical notation),
- *natural* systems (e.g., the weather patterns or tidal wave patterns),
- *social* systems (e.g., a management hierarchy or a dance routine with a dance partner)
- *motoric* systems (e.g., throwing a Frisbee or bouncing on a trampoline).

In all these cases, you systemize by noting regularities (or structure) and rules. The rules tend to be derived by noting if A and B are associated in a systematic way. The evidence for intact or even unusually strong systemizing in autism and Asperger

And here are some questionnaire items that tap the construct of trait systemization:

APPENDIX A: THE SYSTEMIZING QUOTIENT

1.	When I listen to a piece of music, I always notice the way it's structured.	strongly agree	slightly agree	slightly disagree	strongly disagree
2.	I adhere to common superstitions.	strongly agree	slightly agree	slightly disagree	strongly disagree
3.	I often make resolutions, but find it hard to stick to them.	strongly agree	slightly agree	slightly disagree	strongly disagree
4.	I prefer to read non-fiction than fiction.	strongly agree	slightly agree	slightly disagree	strongly disagree
5.	If I were buying a car, I would want to obtain specific information about its engine capacity.	strongly agree	slightly agree	slightly disagree	strongly disagree
6.	When I look at a painting, I do not usually think about the technique involved in making it.	strongly agree	slightly agree	slightly disagree	strongly disagree
7.	If there was a problem with the electrical wiring in my home, I'd be able to fix it myself.	strongly agree	slightly agree	slightly disagree	strongly disagree
8.	When I have a dream, I find it difficult to remember precise details about the dream the next day.	strongly agree	slightly agree	slightly disagree	strongly disagree
9.	When I watch a film, I prefer to be with a group of friends, rather than alone.	strongly agree	slightly agree	slightly disagree	strongly disagree
10.	I am interested in learning about different religions.	strongly agree	slightly agree	slightly disagree	strongly disagree
11.	I rarely read articles or web pages about new technology.	strongly agree	slightly agree	slightly disagree	strongly disagree
12.	I do not enjoy games that involve a high degree of strategy.	strongly agree	slightly agree	slightly disagree	strongly disagree

Next, we turn to trait empathisation. One does not need to overthink the intended target operationalization of this psychological construct and the types of self-report questionnaire items that are used to measure it. Below is the seminal paper introducing the "Empathy Quotient" to index trait empathisation.

The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences

Simon Baron-Cohen[1] and Sally Wheelwright[1]

Empathy is an essential part of normal social functioning, yet there are precious few instruments for measuring individual differences in this domain. In this article we review psychological theories of empathy and its measurement. Previous instruments that purport to measure this have not always focused purely on empathy. We report a new self-report questionnaire, the Empathy Quotient (EQ), for use with adults of normal intelligence. It contains 40 empathy items and 20 filler/control items. On each empathy item a person can score 2, 1, or 0, so the EQ has a maximum score of 80 and a minimum of zero. In Study 1 we employed the EQ with n = 90 adults (65 males, 25 females) with Asperger Syndrome (AS) or high-functioning autism (HFA), who are reported clinically to have difficulties in empathy. The adults with AS/HFA scored significantly lower on the EQ than n = 90 (65 males, 25 females) age-matched controls. Of the adults with AS/HFA, 81% scored equal to or fewer than 30 points out of 80, compared with only 12% of controls. In Study 2 we carried out a study of n = 197 adults from a general population, to test for previously reported sex differences (female superiority) in empathy. This confirmed that women scored significantly higher than men. The EQ reveals both a sex difference in empathy in the general population and an empathy deficit in AS/HFA.

KEY WORDS: Empathy; sex differences; Asperger syndrome; social difficulties.

Despite the obvious importance of empathy, it is a difficult concept to define. Researchers in this area have traditionally fallen into one of two camps: theorists who have viewed empathy in terms of affect, and those who have taken a more cognitive approach. We argue that both approaches are essential to defining empathy, and that in most instances, the cognitive and affective cannot be easily separated.

In the paper, the authors provide the relevant conceptual background into both affective empathy and cognitive empathy. Here, I highlight the core text for purposes of this post. First, the affective approach:

The affective approach defines empathy as an observer's emotional response to the affective state of another. This view of empathy arose from writings on sympathy. Within the affective approach, different definitions of empathy vary in how broad or narrow the observer's emotional response to another's emotion has to be.

And next, the cognitive approach:

Cognitive theories emphasize that empathy involves understanding the other's feelings (Kohler, 1929). These theories also refer to cognitive processes such as role-taking, switching attention to take another's perspective (Mead, 1934), or "decentering"; that is, responding nonegocentrically (Piaget, 1932)...In recent terminology, the cognitive component is referred to as using a "theory of mind" (Astington, Harris, & Olson, 1988; Wellman, 1990) or "mindreading" (Baron-Cohen, 1995; Whiten, 1991).

And on the relation between affective empathy and sympathy:

In moral philosophy, Adam Smith described sympathy as the experience of "fellow-feeling" we have when we observe someone else's powerful emotional state (Smith, 1759). Sympathy is therefore a clear instance of the affective component of empathy. Sympathy is said to occur when the observer's emotional response to the distress of another leads the observer to feel a desire to take action to alleviate the other person's suffering (Davis, 1994). The observer may not actually act on this desire, but at the very least the observer has the emotion of wanting to take appropriate action to reduce the other's distress.

Finally, here are some of the items used to tap the trait empathisation construct:

	agree strongly	agree slightly	disagree slightly	disagree strongly
6. I really enjoy caring for other people.	agree strongly	agree slightly	disagree slightly	disagree strongly
7. I try to solve my own problems rather than discussing them with others.	agree strongly	agree slightly	disagree slightly	disagree strongly
8. I find it hard to know what to do in a social situation.	agree strongly	agree slightly	disagree slightly	disagree strongly
9. I am at my best first thing in the morning.	agree strongly	agree slightly	disagree slightly	disagree strongly
10. People often tell me that I went too far in driving my point home in a discussion.	agree strongly	agree slightly	disagree slightly	disagree strongly
11. It doesn't bother me too much if I am late meeting a friend.	agree strongly	agree slightly	disagree slightly	disagree strongly
12. Friendships and relationships are just too difficult, so I tend not to bother with them.	agree strongly	agree slightly	disagree slightly	disagree strongly
13. I would never break a law, no matter how minor.	agree strongly	agree slightly	disagree slightly	disagree strongly
14. I often find it difficult to judge if something is rude or polite.	agree strongly	agree slightly	disagree slightly	disagree strongly
15. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	agree strongly	agree slightly	disagree slightly	disagree strongly
16. I prefer practical jokes to verbal humor.	agree strongly	agree slightly	disagree slightly	disagree strongly
17. I live life for today rather than the future.	agree strongly	agree slightly	disagree slightly	disagree strongly
18. When I was a child, I enjoyed cutting up worms to see what would happen.	agree strongly	agree slightly	disagree slightly	disagree strongly
19. I can pick up quickly if someone says one thing but means another.	agree strongly	agree slightly	disagree slightly	disagree strongly
20. I tend to have very strong opinions about morality.	agree strongly	agree slightly	disagree slightly	disagree strongly
21. It is hard for me to see why some things upset people so much.	agree strongly	agree slightly	disagree slightly	disagree strongly
22. I find it easy to put myself in somebody else's shoes.	agree strongly	agree slightly	disagree slightly	disagree strongly

Note that, for both trait measurement questionnaires, what is 'measured' is not a single answer any particular item per se, but rather the respondents average score across all of the relevant

items that are intended to tap the target construct (i.e., systemization or empathisation).[1]

To illustrate the practical cognitive and behavioral (i.e., leadership) consequences of these trait profiles, consider an extreme, yet not uncommon, example that characterizes the American political landscape; a maximal juxtaposition: Ron DeSantis (governor of Florida) and Kathy Hochul (governor of New York). Setting aside their political party affiliations (itself a topic of interest relevant to these traits), consider their public stances regarding their responses to the COVID pandemic. On the one hand, DeSantis demonstrates a clear command of the quantitative empirical literature indicating the inability of community masking to prevent COVID spread and an informed cost-benefit understanding of the COVID vaccines which also did not prevent spread of the disease, and which were clearly associated with some increased health risk in certain subpopulations (adolescent males). Hochul, on the other hand, has based her leadership on emotion and feelings, and quasi-religious sentiment, untethered to any robust command of the empirical research on the issue. We could extend this example to their public statements and governing decisions regarding crime and gender ideology, but I think the point is clear.

Indeed, DeSantis' obvious elevation on trait systemization is what others have described as 'being slightly on the [ASD] spectrum' and a possible attack point in his presidential candidacy. In fact, this aspect of DeSantis is what undoubtedly has made him an exceptional governor from a functional standpoint and why he would be a president who would effect change and address national crises with insightful and calculated celerity (see as an example his rapid response to rebuild the collapsed Pine Island and the Sanibel Causeway bridges in the aftermath of hurricane Ian.

One of the most visually impactful human interactions I encountered that immediately struck me as illustrating with remarkable clarity the differences between trait systemization and trait empathisation, and their practical potential consequences, happened as I was watching CNN in 2017. In a segment discussing US military involvement in the middle East and the possible removal of Bashaar al-Assaad, Rula Jebreal was emotionally calling for U.S. military involvement given the potential of lives lost, particularly children. In stark contrast, Spider Marks takes a much more measured, systematic analysis of the potential drawbacks of U.S. military involvement, particularly given the possibility that such involvement could escalate tensions leading to national security concerns and presumably further military involvement that could potentially put many more lives at stake. It was a systems-level analysis. It is worth noting, as well, that Marks is not devoid of empathy, recognizing the emotional appeal of Jebreal's position. Most striking for me in the context of my own research investigating emotional dysregulation in psychopathology were Marks' comments towards the end of the segment: Marks: "...we [the U.S military and our allies] **self-regulate** [in determining how we engage in these domains of war]". As you watch the clip, in particular from ~5:45 on (and the side-by-side footage), try to keep the constructs described above in mind and judge for yourself if you agree with my assertions.

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Just cut the clip: Jebreal (trait empathisation), Marks (trait systemization). See the crisis we are living through more clearly now? Our institutions are rife with trait empathisation & no systemization. Longhouse leads to chaos & disorder.

BREAKING NEWS **LIVE**
59 U.S. TOMAHAWK MISSILES FIRED INTO SYRIA CNN
1:32 AM ET
10:50 ▶ IT'S THE FIRST DIRECT MILITARY ACTION U.S. HAS TAKEN AGAINS DON LEMON

[Video: https://www.youtube.com/watch?v=vCaieSGAKoI]

It is also insightful to think about the construct of trait empathisation in the context of the Longhouse atmosphere and professional managerial class (PMC) culture that now pervades our academic, cultural, and corporate institutions; likewise, it is equally insightful to think of the construct of trait systemization as it applies to military training. Both DeSantis and Spider Marks, of course, have served in the military.

One may wonder why I prefer the constructs of trait systemization and empathisation to the social-personality psychology constructs of femininity and masculinity. The primary reason is that I feel the former trait constructs, anchored in research on autism and more specifically the EMBT theory of autism, offer a more precise way to understand the core cognitive-behavioral trait profiles that are currently completely distributed asymmetrically throughout all of our institutions and which, consequently, is a core reason for the chaos and dysfunction we are living through, from unbridled diversity, equity, & inclusion (DEI) in academia, the uncritical acceptance of general ideology and 'gender-affirming' care, the push to destigmatize mental

health conditions wholesale, to the delusional 'restorative justice' mindset that is contributing to increased crime and violence in many of our major cities. In each of these instances, the motivation for these positions is 'empathy' without grounded systems-level thinking that accounts for regularities and empirical, lawful relations among behaviors and outcomes that define the human condition.

Elevated empathetic responding and frames of reference become the 'intrusive, over-stimulating mother', the "Devouring Mother," with no structure. Chaos. One analogy I have found useful to think about it is the visual of an awning over a patio at an outdoor restaurant. Unmitigated trait empathisation is the awning cover material blowing aimlessly in the wind—a magic carpet—not anchored by the scaffolding of the awning frame that structures and grounds—the lawful relations that govern how systems in the world operate.

Recommended reading:

Simon Baron-Cohen's book: The Pattern Seekers: How Autism Drives Human Invention is a thought-provoking read that provides additional detail on all of the research discussed in this post.

For an additional perspective see Paul Bloom: Against Empathy

1. There are different psychometric approaches to creating summary (e.g., mean, sum) scores on questionnaire measures such as the systemizing and empathasing quotients. Indeed, one can also create 'latent' or 'unobserved' factors that are 'error-free' statistical representations of the trait constructs using a methodological procedure known as factor analysis. I don't go into depth on this here, nor every single subsequent methodological paper published concerning the reliability or validity of the SQ and EQ, but am happy to discuss this more with the interested reader.