

EXTREME MALES

BY SIMON BARON-COHEN

Autism is now surprisingly common. But as society becomes more "female" there is less tolerance for those who cannot empathise

YOU MAY HAVE met people who talk only to obtain something they need, or to share factual information. They may answer with "just the facts" when you ask them a question, but otherwise do not ask questions of others. Present a person like this with a *system* however, and they become interested. They tune into the tiny details so intensely that they may become oblivious to all around them. They focus solely on determining the unvarying "if-then rules," which allows them to control and predict the system.

People with autism spectrum conditions often show these signs. Autism is diagnosed when a person shows abnormalities in social development and displays unusually obsessional interests. The interest might be in collecting types of stones, or travelling to every railway station in Britain to look at each depot. In the early 1980s, autism was regarded as the most severe childhood psychiatric condition, and it was thought of as rare. It was considered severe because half of the children didn't speak and most (75 per cent) had below-average intelligence (IQ).

The children's poor social skills meant they didn't learn from others and their narrow obsessions often stopped them from picking up broad knowledge. Many of them lived "in a world of their own" and had difficulty making sense of and predicting another's feelings, thoughts and behaviour. For others with some social interest, they just got social interaction wrong. They would talk to you with-

out eye contact, or stare at you for too long, or touch you inappropriately, or simply badger you with questions and then walk off without warning.

Autism was thought of as rare because, in the 1970s, only four children in every 10,000 seemed to be affected in this severe way. But a shift in understanding occurred during the early 1990s. It had always been known that a small proportion (25 per cent) of children with autism had normal, or even above-average IQ, but slowly such "high-functioning" cases started being



Men do it better

identified more and more. By the late 1990s, it seemed that the high-functioning children with autism were no longer in the minority.

In many of these high-functioning cases of autism, children are late in developing language but that does not seem to stop them developing good or even talented levels of mathematics, chess or other factual, scientific, technical or rule-based subjects.

In the 1990s, clinicians also started talking about a group of children who were just a small step away from high-functioning autism. This group was said to have Asperger syndrome (AS). AS was proposed as a variant of autism. The child with AS has the same difficulties in social and communication

skills and has the same obsessional interests. But such children not only have normal or high IQ, they also start speaking on time. Many children with AS are nevertheless miserable at school because they cannot make friends. They are often teased and bullied because they do not fit in, or have no interest in fitting in. Their lack of social awareness means they may not even try to camouflage their oddities.

If you put classic autism, high-functioning autism and AS side by side, you have what is called the "autistic spectrum." Today, approximately one in 200 children has an autism spectrum condition and many of them are in mainstream schools. This ten-fold increase since the 1970s—most likely a reflection of better awareness and broader diagnosis—requires us to reconceptualise autism radically.

Studies of twins suggest that autism spectrum conditions are strongly genetic in origin. They also appear to affect males far more than females. Autism is neuro-developmental—meaning it starts early, probably prenatally, and affects the development of the brain.

When we look back at the childhoods of people with high-functioning autism or AS, a common picture emerges. They are almost always loners—unable to interact with other children. As adults, many of them will have experienced difficulties at work leading to clashes with colleagues and employers, so that they have had to leave their job.

In their work they are often considered technically expert, but may never get promoted because their "people skills" are so limited.

A significant proportion of adults with autism spectrum conditions experience serious depression and some are even suicidal, because of feelings of social failure. But autism is also a condition where unusual talents are seen. Children on the autism spectrum pay extra fine attention to detail. They discriminate between things that may be unimportant to, or outside the awareness of, the ordinary person. Like noticing the tiny fibres in the blanket on their bed and developing a preference for that particular blanket. They love patterned information and so will spot the similari-

● CORBIS

Simon Baron-Cohen's book, "The Essential Difference: men, women and the extreme male brain," is published by Allen Lane on 1st May. He is director of the Autism Research Centre at Cambridge University

ties in strings of numbers in otherwise disconnected contexts, or the similarities in the veins of leaves, or the sequence of changes in the weather.

One of the most interesting explanations of autism—the extreme male brain theory—was first suggested by the Austrian paediatrician Hans Asperger, in the 1940s. He wrote: “The autistic personality is an extreme variant of male intelligence. Even within the normal variation, we find typical sex differences in intelligence... In the autistic individual, the male pattern is exaggerated to the extreme.” In my book *The Essential Difference*, I define the male brain as characterised by the individual’s systemising being better than his or her empathising. I call this a Type S brain (for systemising). And the female brain is defined as Type E (for empathising). This is characterised by the individual’s empathising being better than his or her systemising.

Empathising is the drive to identify another person’s emotions and thoughts, and to respond to these with an appropriate emotion. The empathiser figures out how people are feeling, and how to treat people with care and sensitivity. Systemising is the drive to analyse and explore a system, to

extract underlying rules that govern the behaviour of a system. The systemiser figures out how things work, or what the underlying rules are controlling a system. Systems can be as varied as a vehicle, a computer, a plant, a musical instrument, an equation, or even an army unit. They all operate on inputs and deliver outputs, using rules.

The central claim in *The Essential Difference* is that, on average, more males than females have a brain of type S, and more females than males have a brain of type E. We know from psychological studies that women are more sensitive to facial expressions. They are better at decoding non-verbal communication, picking up nuances from tone of voice or facial expression, or judging a person’s character. On the other hand, map reading is an example of systemising. Men, on average, can learn a route in fewer trials, just from looking at a map, and correctly recalling more details about direction and distance.

It is not difficult to see how autism could be understood as an extreme of the male brain. In autism, we see individuals with a strong—even obsessional—focus on systems (computers, timetables, historical dates) but who have an impairment in empathising.

Interestingly, if autism is an extreme of the male brain, and this state is a disability, one may ask why its mirror image—the extreme female brain—is not disabling. Individuals with the extreme female brain would have a talent at empathising, alongside an impairment in systemising. It is clear that society is less tolerant of a poor empathiser than of a poor systemiser. Someone with empathising difficulties may end up isolated, ostracised, teased or even bullied, and with no simple strategy for how to circumvent their problem. In contrast, someone with systemising difficulties can pick up the telephone and call for help when a system or machine needs fixing.

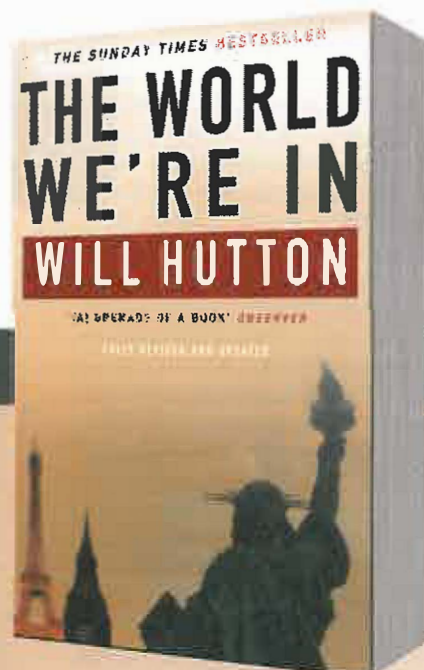
Fortunately, the modern age of electronic gadgets and computers have created more niches for the extreme male brain to flourish and be valued. On the other hand, in the post-1960s world, empathic abilities are now expected of both men and women, so that a person with an empathy deficit may now find life more difficult than ever. Now that autism spectrum conditions are so much more common, it is perhaps time that we learnt more tolerance for those who have difficulties with empathy. ■

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