Review of A Guide to Asperger Syndrome by Chrisopher Gillberg (Cambridge University Press, 2003).

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There are very few clear and authoritative books on Asperger Syndrome (AS), but this new book by Chris Gillberg is one of them.

Gillberg is a leading child psychiatrist, working in both Sweden and Britiain, and was one of the first clinicians who studied this syndrome after its 'rediscovery' in 1981 by Lorna Wing. The original account of this syndrome had been in written in German by Hans Asperger, the Austrian paediatrician, but it lay relatively unnoticed for 40 years until Wing, and then Gillberg, brought it under their scientific scrutiny.

Gillberg formulated the first set of clear diagnostic criteria, and this book adopts a classical psychiatric approach, to ensure that diagnosis of AS is distinguishable from its close neighbours (autism, obsessive compulsive disorder, and the personality disorders, in particular). Gillberg also provides a masterly overview of the comobid features, the natural history, the medical assessment and what is known about the neurobiology, neuropsychology, and treatment of this condition.

Above all, he adopts a clearly respectful attitude towards the individuals with this condition, many hundreds of whom he has met first hand as part of either his extensive clinical experience or his well-known research program.

This book is likely to be regarded in a similar way to Tony Attwood's best-selling book on Asperger Syndrome, though whereas the Attwood book has been most popular with parents and families, I imagine Gillberg's book will be of most value to clinicians and mental health practitioners. I for one found it very useful to have the DSM-IV criteria for the differential diagnosis of a range of similar conditions laid out side by side, for quick reference, as an aid to assessment.

The book also follows a popular approach of recognizing AS in history, focusing on individuals like Wittgenstein as a likely example of someone who probably had AS, in the days before the condition was recognized.

As a psychologist, I was interested to read Gillberg's summaries of the psychological theories of AS, and his review of these was both even-handed and clear. That it is not quite up to date is not a major weakness, since this is a field that is rapidly developing, and there is likely to have been a lag of close on one year between when he wrote his manuscript and its publication. But a new theory from our group, called the empathizing-systemizing theory, is worth discussing here (Baron-Cohen, 2002). As Comtemporary

Psychology encourages book reviewers to engage in uptodate discussion, I hope Gillberg will forgive me for going beyond what was historically possible in his excellent book:

Gillberg touches on empathizing, and indeed his Emmanuel Miller Lecture in 1994 was one of the first major papers on the idea of autism spectrum conditions as empathy disorders. For me, empathizing is defined as the drive to identify someone else's mental states (their thoughts or their emotions), and to have an appropriate affective reaction to their mental states. He rightly points out that there is a wealth of evidence for empathizing deficits in AS. But systemizing is too new to have made it into his book:

Systemizing is defined as the drive to analyse a system, or build a system. Systemizing entails a very fine grain focus of attention, and it allows specialism, creating an expert rather than a generalist. It is why people with autism may develop 'islets of ability' as they become proficient in a system like naming prime numbers, naming the days of the week any date will fall, compiling a mental list of birthdates or train timetables, etc., People with autism, I suggest, become captivated by an aspect of reality, and seek to discover the underlying structure or lawfulness of the system. They do this by trying to hold everything else constant, and examining how the output changes as they manipulate one variable at a time.

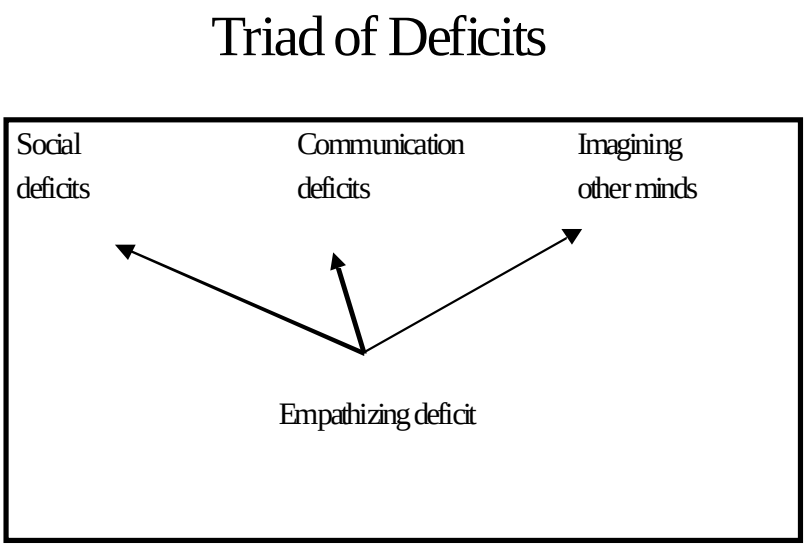
For someone described as 'low-functioning', this might entail running water out of a tap and watching for hours as the water droplets fall in a very specific pattern, as the tap/fawcett is opened very slightly more. Or it might involve watching the same video over and over again, perhaps hundreds of times, so that one can predict every tiny detail that will be in the next frame. Total lawfulness. For someone described as 'medium functioning' this might entail knowing which bus everyone they know takes to work, and all the bus routes. Again, striving for lawfulness. For someone described as 'high-functioning', this might involve noting how the underlying rock and soil changes as one goes from one part of the country to the another. Once again, reality becomes entirely predictable, and the laws one discovers, of where the clay turns to chalk, become wholly repeatable. People with autism can't help systemizing, and sometimes it pays off. Big time.

A clear example is Richard Borcherds (Baron-Cohen, 2003), who despite his Asperger Syndrome (AS), won the Fields medal for mathematics, the equivalent to the Nobel Prize. My suggestion is that people with autism try to systemize the whole world, but that some types of information lend themselves to systemizing more easily than others. Information from the social world doesn't. Nor does fiction or chatting. On the other hand, train timetables, mathematics, collections of facts, and music all do lend themselves to systemizing, as they are ultimately systems. And to crack the system one is going to have to start by trying to understand local details, and work outwards. Under certain conditions, this could even give the impression of 'weak central coherence', if one is zooming in on local features. But ultimately, many people with AS do not end up with fragmented knowledge, as weak central coherenc would predict, but instead achieve a good understanding of the whole system, be it a machine, a photographic method, a chemical process, or a mathematical equation.

The new empathizing-systemizing (E-S theory) can, I think, make sense of two core or universal triads of features characterizing individuals on the autistic spectrum (including people with AS). These are shown in Figure 1. Empathizing and systemizing may have nothing to say about *every* associated feature of autism or AS, but the theory does not set out to explain everything. Only the core characteristics below.

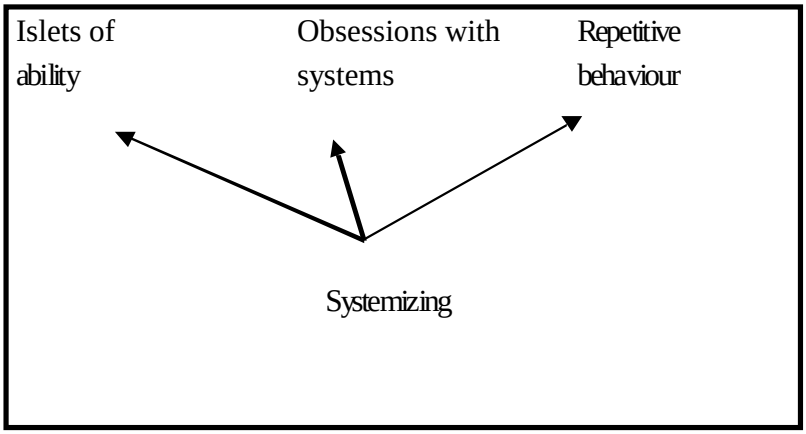
Figure 1: Baron-Cohen's (2002) Triads of Deficits and Strengths:

A Triad of Deficits



B: Triad of Strengths

Triad of Strengths



But leaving this recent psychological theory to one side, and returning to Gillberg's book, I can recommend it unreservedly. I have already given my copy to the clinicians in our adult AS clinic, as essential reading. I just wish this book had been available years ago, so that this condition could have been better understood sooner.

References

Baron-Cohen, S, (2002) The extreme male brain theory of autism. Trends in Cognitive Sciences, **6**, 248-254.

Baron-Cohen, S (2003) The essential difference : men, women and the extreme male brain Penguin/Basic Books