

The Scientism of Autism

By

Sami Timimi, MD

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In my last two blogs I reviewed the [scientific basis on which modern mainstream psychiatry](#) rests and then reviewed [the science behind ADHD](#) as a ‘diagnosis’. In both blogs I showed how a poor understanding of the basics of the scientific process was evident and how much of current practice arises out of what I am calling ‘scientism’ not science. I am aware that some think my use of the term ‘scientism’ as opposed to, say, ‘pseudoscience’ or ‘corrupt science’ is a mistake. I think scientism is a more useful term as it can cover many aspects: It can refer to an over-emphasis on the use of scientific knowledge and techniques, but can also refer to the corruption of science.

Use of the positivist, hypothesis-testing, measurement-focused pursuit of objective, value-free knowledge about the world ‘out there’ (beyond our imaginations) works great for systems and phenomena governed by ‘laws of nature’, but is not the most appropriate method for understanding subjective, meaning-generating conscious life. Kidneys don’t have dreams, intentions, or agonise over the meaning of their existence, and so we can use positivist, empirical methods to study them. Corruption of science can happen by methods such as the repetitive use of ‘science’ sounding language to provide an air of authority, whilst ignoring, not publishing, data fishing, and/or minimising facts or research that contradict the opinion expressed. So for me the term ‘scientism’ covers what I think has happened in psychiatry where the idea of being scientific and doing science trumps what the actual science finds *and* marginalises non-empirical approaches to understanding mental life.

Many are seduced by the idea that science will eventually answer the ‘why’ question that will lead us to be able to make diagnoses in mental health (i.e. a classification based on causal explanations) just as we do in the rest of

medicine. For a whole host of reasons, such as financial, conflict of interest, guild and ideological allegiances, since these 'scientists' can't establish anything definitive they resort to scientism. Over time the language and concepts associated with this ideology (for example the belief that we have psychiatric diagnoses and treatments that are specific for these diagnoses) become part of institutions, books, trainings, and of course our broader cultural 'common sense', so we think of them as if they were already established scientific facts, whilst the actual facts and uncertainties fade into smaller cultural spaces (such as this website). To me this is a classic example of the sort of dynamics associated with scientism.

I suspect my two previous blogs on scientism in psychiatry and ADHD were easier for readers of this site to agree with than this one will be. I have been aware of the divergences in critical views on autism, and I know that my view that autism as a concept is similar to other behavioural/psychiatric diagnoses and has no scientific basis is more likely to cause discomfort for some. However, like ADHD, I see Autism and Autism Spectrum Disorders (ASD) as facts of culture rather than a fact of nature.

I often feel conflicted when writing about autism as I am aware that there are many critics of the medicalisation of autism, who see autism through a story of 'neurodiversity' and have done many positive things to help empower some people who have been given the autism label, enabling them to accept and value who they are. I acknowledge and value the courage and insight these activists have and the contribution to the field they have made. But I struggle with the 'neuro' bit of 'neurodiversity' — the evidence just isn't there. I feel this then leads straight back to bio-reductionism rather than freeing people from it. I had an interesting debate about this with Damian Milton, a sociologist and autistic activist coming from this neurodiversity critical autism perspective, which you can [find here](#).

I think it has been harder to critique autism than labels like ADHD as autism has no specific pharmaceutical treatments attached to the label and hence the conflict of interest issue is not so easily apparent. Autism also has its origins as a rare condition diagnosed in children with significant learning difficulties and

high rates of co-existent neurological disease such as epilepsy. This original cohort therefore had strong evidence of neurological abnormalities, but since the expansion into ASD we have a real mixed bag of presentations, problems, and levels of functioning. When I see such 'diagnostic' expansion, I get suspicious that we are not dealing with a diagnosis, but rather a branded commodity that has market appeal and so is vulnerable to what I call the 'elastic band effect' — where the boundaries can be stretched almost endlessly as the descriptions have 'fuzzy boundaries' that are open to subjective interpretation given that there are no physical markers to help accurately measure and categorise any one individual.

A very brief history

The word 'autism' was first used in psychiatry in 1911 by the psychiatrist Eugene Bleuler who used the term 'autistic' to denote the state of mind of psychotic individuals who showed extreme withdrawal from the fabric of social life. It is probably the most accurate use of the term as Bleuler used the word to *describe* a state of mind rather than as a diagnosis. Then, in a paper published in 1943, the child psychiatrist Leo Kanner first proposed 'autism' as a diagnosis and used the term to label a group of 11 children, of middle class parents, who were emotionally and intellectually impaired and showing an 'extreme aloneness' from early life. It has been suggested that Kanner coined this new diagnosis in order to have a different word to use after pressure from some parents who did not wish their child to be labelled with the more stigmatising label of 'Mental Retardation' in use at the time. Autism then remained as a rare diagnosis given to young people who had considerable impairments in day-to-day functioning and often had moderate to severe learning difficulties with an estimated prevalence rate of 4 in 10,000 (0.04%).

The year after Kanner first proposed 'autism' as a diagnosis, Viennese psychiatrist Hans Asperger published a paper, largely ignored at the time, in which he described four children with no easily recognisable intellectual impairment, but with social communication problems. In the late 1970s, psychiatrist Lorna Wing saw a similarity in some people she was seeing and those described by Asperger. Dr Wing's ideas intersected with another

psychiatrist, Michael Rutter, and formed the basis for the expansion of the concept of autism into Autistic Spectrum Disorders (ASD). Revisiting the seminal papers by Wing and Rutter reveals the extent to which this expansion of the concept of autism was not the result of any new scientific discoveries, but rather new ideologies. For example, in her paper in [1981 proposing the 'Asperger Syndrome' diagnosis](#), Wing describes six case histories that appear to have little in common with the four cases Asperger described in his paper beyond sharing a lack of social reciprocity and a few other vague similarities. Four of Wing's cases were adults, whereas all of Asperger's were children; two had some degree of learning disability, whereas none of Asperger's did; most of Wing's cases spoke late whereas most of Asperger's spoke early; most of Wing's cases were described as having little capacity for analytical thought whereas Asperger's cases were described as highly analytical; and none of Wing's cases were described as manipulative, mendacious, cheeky, confrontational or vindictive (terms Asperger used about his cases) and so on.

Over the next couple of decades the concept of autism started to attract more professional and public interest, boosted by media coverage from events like the film Rain Man and the vaccine controversies. More people were talking about this 'thing' called autism. Soon there were courses, assessments tools, research, services, documentaries, experts and institutions all dedicated to furthering our knowledge and understanding of autism and how to treat or prevent it. Autism was now a fact of culture. Diagnosis rates continued to expand, leading to more services, research, talking about it (and so on). Now a group of adults who identified with the idea of autism but rejected the notion that this was a disorder emerged. These activists started talking about autism as a difference — a different but equally valid way of viewing and interacting with the world as a result of a different neurological 'wiring'. Tensions have sometimes emerged between this latter group who spoke of themselves as part of the spectrum of 'neurodiversity' and those (often parents) who were struggling to cope with the behaviours of diagnosed children, who were often desperate to find 'treatments' and felt the 'disorder' side of things. Autism had become a visible and lively discourse, by now simply assumed to represent a real, tangible, identifiable 'thing' that could be differentiated from other potential problems (if you identified with the 'disorder' side) or meant that you were fundamentally

different to 'neurotypical' subjects (if you identified with the difference perspective). No one, it seemed to me, was asking the obvious question: On what evidential basis can you conclude that autism represents a natural category that can be differentiated from other natural categories?

When I was training as a child psychiatrist in the early to mid 1990s, I came across two children diagnosed with autism in the whole of my four years of training placements. Both had marked functional impairments and had to attend specialist schools. According to some recent local data I have seen, 1.6% of school age children in my county now have a diagnosis of autism. This means that in the space of two or three decades prevalence has gone from 0.04 to 1.6%, a phenomenal increase of 4000%.

Nowadays I get the impression that any child who attends our Child and Adolescent Mental Health Services could end up getting a 'diagnosis' of ASD. Particularly when the young person is not responding to what is considered the 'correct' treatment, I often hear autism being suggested as a possible *reason* for the problems or lack of treatment response. So we end up in what I call 'semantic games', a kind of 'what shall we call this' rather than an understanding of what might be contributing to their presentation or what might make a difference to them. Naming is understandably popular with many, such as other professionals, teachers, parents, and some teenagers. But in my experience it can become a trap as people confuse (understandably) what has been sold to them as a 'diagnosis' with it actually being a diagnosis. In other words, they imagine that because they 'have autism' it helps them understand the reasons for their troubles and therefore professionals will now know how best to help them. My clinics have many people who have gone down this route, but where things have gotten bad again and now they think there must be another diagnosis and therefore another treatment and so they slip further onto the path of becoming a disempowered, helpless patient/parent at the mercy of being prescribed more, often useless, treatments (whether drugs or psychological) that further disempower. It's a very hard cycle for all (professional, child and family) to step out of.

So what is the science supporting such a meteoric rise in prevalence?

Evidence to support the claim that autism is a ‘neurodevelopmental disorder’, in other words to do with the development of the brain, comes mainly from genetic and neuroimaging studies (for further details and further references for the discussion below, see chapter 2 in [Re-Thinking Autism: Diagnosis, Identity and Equality](#)).

Scientism in autism genetics

The argument that autism is a strongly genetic condition rests primarily upon twin studies. I explained in my last blog on [Scientism in ADHD](#) why estimating genetic heritability using the twin method does not give you reliable results. The only reliable way to establish the genetic component is through molecular genetic studies, of which there is a growing database involving whole genome scans of thousands of children with the autism label.

No specific, characteristic, rare, common or polygenetic genes for autism have been discovered, but not for want of looking. Thus various candidate genes, linkage studies, genome scans, and chromosome studies have all failed to produce and reliably replicate any particular genes for autism. The more failures that pile up, the more ‘complex’ autism genetics must be, according to advocates, whilst the most likely explanation for this finding — that there is no such thing as genes that cause autism — remains unmentionable. The continuing failure to identify specifics seems to have resulted in the majority of the human chromosome being identified as potentially harbouring autism genes, with major reviews typically concluding: “*Many research teams have searched for genes that may be involved. They haven’t turned up any prime candidates yet, only dozens, maybe hundreds of bit players*” ([Hughes, 2012](#)) and “*With the advent of next generation sequencing techniques, the number of genes found that are associated with ASD is increasing to over 800 genes; consequently, it is becoming even more challenging to find unified explanations and functional associations between the genes involved*” ([Al-jawahiri and Milne, 2017](#)). Instead of facing up to the possibility that genes are not revealing themselves because they are not there, we are instead moving into an era where multiple research teams come together to create banks of ‘big data’ in the hope that this can

reveal tiny associations. It is hard to face the possibility that this mass of research money has led to a wasted endeavour.

The high ratio of males to females in ASD diagnoses also poses a problem for genetic theories. Genetic mechanisms need to account for this (such as autism being transmitted through the X chromosome) and thus far no molecular genetic studies have found an X or Y chromosome link.

Scientism in autism neuroimaging

An important consideration to take into account in any analysis of neuroimaging profiles is that of 'neuroplasticity'. This refers to the remarkable ability of the nervous system (particularly in children) to grow and change in response to environmental stimuli. The remarkable plasticity of the human brain makes it difficult to determine precise cause and effect when individuals with differential life experiences subsequently show what appear to be differences in neurological structure or functioning. This inconvenience makes it difficult for researchers to 'pin down' behavioural aberrations into neurologically valid and clinically meaningful categories. Thus, neuroanatomical and functional differences could be the result of environmental factors affecting brain development (like psychological trauma), differential maturation rates and variations resulting from heterogeneity in the sample (for example, the effects of confounds such as intellectual ability).

However, the biggest problem for autism studies, as with ADHD, comes from the lack of consistently replicated findings. This consistent inconsistency plagues research in this area. For example, studies focusing on the cerebellum have documented an increase in cerebellar volume among children diagnosed with an ASD, while others have found smaller than average cerebellar volumes; yet others have reported no significant differences. Similarly, studies on the amygdala have found wide inconsistencies, including some studies that found significant differences in volume and others that found no differences. Similar inconsistencies have been found in cortical thickness with differences often becoming insignificant once intellectual ability level was controlled for. And so on.

The confused and contradictory reality of autism brain research was illustrated clearly for me when I participated in a debate about autism with a colleague at an academic event in March last year (2017). We each had to put forward papers supporting our view. The colleague I was debating with believes that autism is a 'known' disorder of the nervous system and that with sufficient research we will discover its neurological basis. These are the three papers he put forward:

1. "[The emerging picture of autism spectrum disorder: genetics and pathology](#)," a 2015 paper by Chen and colleagues. This paper proposes that research points to a primary role in ASD for the limbic system and cerebellum.
2. "[Neuroimaging in autism spectrum disorder: brain structure and function across the lifespan](#)," a 2015 paper by Ecker and colleagues. This paper focuses on frontal and temporal lobes and the cerebral cortex as the primary sites of interest.
3. "[Autistic spectrum disorders: A review of clinical features, theories and diagnosis](#)," a 2015 paper by Fakhoury. This paper plumps for the primary issue in ASD being the balance of excitatory and inhibitory synapses.

It is a complete mess. No common theme emerged from these three 'state of the art' research reviews. Theories come and go and no one has a clue really what, how or where this apparent neurodevelopmental abnormality is. In none of the three papers was there evidence of a reasonable attempt to control for, or even mention, intellectual disability as a possible contributory factor to any differences found in studies. Recently some researchers are finally giving up on the notion that they will find anything. A 2016 paper entitled "[ASD validity](#)," which includes the renowned autism researcher Christopher Gillberg amongst its authors, concludes, "*The findings reviewed indicate that the ASD diagnosis lacks biological and construct validity*," and they recommend disbanding ASD diagnoses as a basis for research. Sadly, they go on to suggest a broader neurodevelopmental construct instead. None of this evidence (or rather lack of it) seems to have the slightest dent in the continuing expansion in the numbers receiving ASD labels or in the assumption that there exists a natural thing called autism.

Scientism defines what autism is

These days the same behaviourally defined syndrome (ASD) is applied to residents of institutions with little hope of living independently and a long list of the great and the good such as Mozart, Van Gogh, Edison, Darwin — all of whom, along with many others, have been retrospectively diagnosed as having an ASD (just type ‘famous people with autism’ into google). From an ‘impairment’ perspective, this is the entire human spectrum, suggesting that ASD, as it is currently defined, is too wide to have any meaningful features, beyond perhaps some degree of social awkwardness.

This problem of having a vast repertoire of presenting behaviours and levels of functioning that can lead to a diagnosis is referred to as the problem of ‘heterogeneity’. Not only do the ‘core’ features such as difficulties in social communication have a large cross-over with people who would not consider themselves as having a ‘disorder’, but autism as a mental state (referring back to Bleuler’s original use of the term autism to denote a state of social withdrawal) and elements of autism symptoms as traits are common in a variety of mental health diagnoses, from ADHD to depression and anxiety to psychosis. Heterogeneity is widely accepted as an issue in ‘mainstream’ publications about autism. However, far from seeing this as a major problem regarding the validity of the concept, it is often explained away as a reflection of the ‘complexity’ of autism. This leads to the ludicrous situation where a consultant at a conference was proudly talking about the first 100 patients they had diagnosed with ASD at their new national clinic and how “*if you put those 100 people together in a room and talked to them you would struggle to see what they had in common.*” This was put forward to explain how varied ASD presents in real people, but the pointlessness and bizarreness (just from a common sense, let alone scientific, point of view) of giving people who had little in common the same label seemed lost on this consultant (and sadly most professionals in the autism industry).

Wherever you look, what is evident is a heterogeneity and a lack of conceptual clarity about what autism is. This confusion is apparent when examining ‘diagnostic criteria’ for other common ‘diagnoses’. For example, in ‘conduct disorders’ you can find “*inability to form bonds with peers and egocentrism,*

which is shown by a readiness to manipulate others for favours without any effort to reciprocate together with a general lack of feelings for others.” This description bears (arguably) a closer resemblance to the descriptions of the cases Hans Asperger wrote about than Lorna Wing’s cases (discussed above). One of the core features of the autistic spectrum is supposed to be a lack of empathy, a lack that is thought to cause enduring difficulties in social interactions. How is this type of ‘lack of empathy’ to be differentiated from the lack of empathy found in conduct disorder or indeed the ‘personality disordered’ criminal? Other ‘disorders’ such as ‘Attachment Disorder’ also describe children who lack empathy and have dysfunctional patterns of social interaction. Attachment disorder is described as often associated with some form of neglect, abuse, or trauma, however, in the absence of robust evidence on aetiology in autism, making the distinction between social dysfunction in the context of conduct disorder, attachment disorder or ASD becomes little more than a matter of the semantics carried by the subjective opinion of the diagnoser. This confusion of symptom crossover is not limited to conduct and attachment disorders, but spans potentially the entire spectrum of psychiatric diagnoses.

Take for example the ‘symptom’ of “Restricted and repetitive behaviours.” You will find versions of this in criteria describing Obsessive Compulsive Disorder, Obsessional Personality Disorder, Schizoid Personality Disorder, ADHD (such as with computer games), depression (morbid preoccupation with negative aspects), eating disorders (fixation with food and/or weight) and so on. Away from manuals and medicalised symptoms you can also find this with: most men (e.g. with football/soccer!), sportsmen and women (with their sport and training regimes), and humanity in general as an obsessive interest in a restricted sphere is characteristic not only of a depressed state of mind, but also of the application needed for discovery and exploration. Most high achievers thus have the capacity to ‘fixate’ on their area of interest/expertise.

What about the symptom of “lack of empathy”? You can see this in many formal diagnoses, such as depression, conduct disorder, psychosis, ADHD, personality disorders, attachment disorder and so on. It can also appear as a result of a lack of self-confidence in social situations. In fact, any experience connected to a preoccupation with one’s own problems tends to reduce interest in other

people's lives and interests. The extent to which one can feign interest in all subjects or empathise with all predicaments is limited. As expectations for social empathy (e.g. in school and in the workplace) increase, more may appear to lack this capacity. Perceived poor achievement or a sense of inferiority in a competitive culture may lead people to turn away from a range of common interests. And so on.

Thus what are considered primary symptoms of ASD like “lack of empathy” and “restricted and repetitive behaviours” cannot be thought of as isolated individual pathology/difference, without an understanding of the context in which they appear. When you start to dig around the undergrowth that constructs our idea of autism, it becomes apparent that it is so shallow; nothing can realistically take hold there. It is no surprise that all we have is scientism holding up autism as a concept. If we can't find any boundary to hold the concept together, even a vague one, how on earth do we expect to find biological correlates or markers? The reason we can't find any is thus obvious. According to the real science, then, autism should be seen as a fact of culture, not a fact of nature.

Autism is past its use-by date

I believe that the concept of autism and ASD, just like ADHD, is not just an example of the rampant scientism that has colonised the fields of psychiatry and psychology, but further, that we should stop using them. At the very least we have to stop calling them and thinking of them as ‘diagnoses’ (something with explanatory power).

I am pleased that a movement grew to reclaim some sense of the self-worth that was stolen by the ‘disorder’ paradigm of autism. However, I don't believe the neurodiversity movement is likely to lead to the sort of shift I am thinking of. Whilst some might claim that the creation of the alternative categories of ‘neurotypical’ and ‘neurodiverse’ is a playful liberation from the pathologising medics, it still perpetuates the ‘us’ and ‘them’ dynamics and further solidifies the individualisation that feeds neoliberal politics. It replaces the marketization opened up by autism as a disorder with marketization in the sphere of neuro-identity. As I have discussed above, there is no measurable, characteristic

'neuro' bit here. Those who believe that we have found it have been sold a lie. We are all (humanity) simply neurodiverse.

Autism is part of the paradigm of medicalising, pathologising, and individualising that serves neoliberal politics and economics so well. The oppressive and insecure contexts that people, families, and communities must endure in the quest to make the ideal entrepreneurial, competitive, efficient, emotionally intelligent (to sell oneself or services, or cleverly manipulate others) qualities needed to be considered 'normal' means that when individuals can't keep up, our societal constructs can blame this perceived failing on their interiority. Autism is one of those failings that can be branded, given a 'scientific' (scientism) badge and marketized. The focus then shifts onto the 'failed' person, who can be 'supported/treated', and the broader social context is freed from deeper examination. Further, politicians, bureaucrats, charities, and policymakers can look like they really care when they talk sympathetically about those blighted with this disability and how they are helping and supporting these people.

But at what cost do we continue to widen and widen the ASD net? Who has looked at the data of what happens to those caught in this net? Where is the evidence that a diagnosis improves the real world outcomes for those diagnosed? Why are we not researching this basic question? How many are warned about the potential negative outcomes associated with a diagnosis? I know, for example, that certain professions will not accept anyone who has an ASD diagnosis, but I don't know how widespread this issue might be. In a recent report on 'neurodevelopmental' disorders and services in the county where I work, I read that "*15% of adults with an autism spectrum disorder are in full time employment.*" I don't know what this means, but that seems like a worrying statistic to me. Labels carry associations and stereotypes few of us are able to see beyond. How many of us stop just seeing and trying to get to know "Jane" (or whoever) when we are told "she has autism"?

I understand that there are many who have found the act of 'naming' helpful. Parents may be enabled to have a new sympathy for their child and adults may feel that something about their life now makes sense. But at what price? How

long do these initial feelings of relief last? What goes missing from that person's narrative when a label that cannot explain is used to explain? I worry about these questions and why I never see them being asked in mainstream literature on the subject. I worry about the potential for a subtle kind of violence that can be inflicted on someone thus labelled that may limit their own, their family's and a whole host of people's beliefs about what they can and can't do, what they need protection from and don't. I worry about how having the label of autism provides a cruel kind of hope. Parents may feel now that something is understood, 'experts' will know what to do to help. As the days, months and years accrue with matters not improving, what does that do to parents' feelings about their 'disordered child' and their 'autism'? These are the types of dilemmas I regularly see in my consulting room.

In my practice I often meet families who have had a child diagnosed with autism, where matters haven't improved, where parents feel disempowered because they believe that they cannot have the 'expertise' to know what to do and they can't seem to find the 'experts' who do. I regularly meet young people whose own dilemmas are not given a full hearing, where the assumption is that they feel the way they do "*because they are autistic.*" For some people ASD is a ticket of entitlement, giving them access to learning supports (for example) that could be helpful for other children who are denied this support because they don't have 'autism'. But I also see regular examples where an autism label excludes kids who could find input helpful because, for example, their social anxiety is *because* they have autism and so there is nothing we can do about that.

So, my advice to all practitioners is to try not to give the diagnosis any privileged position in treatment. Keep in mind what those you are working with want to see change and work collaboratively on that, just as you would with any other person or family. Autism, like any other psychiatric 'diagnosis', is not a diagnosis. It has no explanatory power and so can't tell you what will prove to be helpful or not with any particular individual, family, or community.

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Sami Timimi, MD

No More Psychiatric Labels: A child and adolescent psychiatrist, Sami Timimi writes about the Critical Psychiatry movement, an international network of doctors (primarily psychiatrists) who critique current mainstream practice in mental health and are hoping to reform it.