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The Reality of Autism: on the metaphysics of disorder and diversity

Abstract:

Typically, although it's notoriously hard to define, autism has been represented as a biologically-based mental disorder that can be usefully investigated by biomedical science. In recent years, however, problematic findings regarding the biological underpinnings of autism; historical research examining the shifting nature of the categorisation; and a lack of biomedical utility, has led some to suggest abandoning the concept of autism. My interest here is the possibility that autism may remain a meaningful and helpful classification even if it lacks scientific validity and biomedical utility. After arguing that accounts of autism as a psychiatric classification are unsustainable, I draw on feminist philosopher Iris Marion-Young's distinction between groups and serial collectives in order to account for the reality of autism as a social category, best framed in terms of a social model of disability. When taken as a serial collective, I argue we can coherently understand autistic people as forming a marginalised minority, disabled in relation to the specific material and

social contexts. Autism is thus real and valuable for political and ethical, rather than biomedical, reasons.

Introduction[1]

Autism was initially classified by clinicians in the 1940s (Kanner 1943; Asperger 1944). It was later conceptualised as a spectrum condition defined by social and communication impairments and deficits in social imagination (Wing and Gould 1979). The most widely used diagnostic criteria for Autism Spectrum Disorder (ASD) today identifies two core conditions for diagnosis. These are 1) "persistent deficits in social communication and social interaction across multiple contexts" and 2) "the presence of restricted, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association, 2013, p. 31). Diagnosis of ASD is clarified as being 'mild', 'moderate', or 'severe', indicating the purported degree of disability. The process also includes determinations of whether the individual is both verbal or non-verbal, and intellectually disabled or not. Hence, autism—as I shall call it—is currently viewed as a spectrum condition that manifests in varying levels of severity, affecting development throughout the lifespan.

As to what autism *is*, however, the diagnostic criteria only get us so far, with behavioural definitions encountering many issues (Cushing, 2013, pp. 18-22; Fitzgerald, 2004, pp. 22-42). Besides, very few commentators, if any, actually take

the behaviours associated with autism diagnosis to be its defining properties. In the diagnostic manuals—and among philosophers of psychiatry (e.g. Bolton, 2008)—diagnoses are only recommended if the manifest behaviour is taken to stem from the appropriate dysfunction(s) (American Psychiatric Association, 2013, p. 31) at the psychological or biological levels of functioning. As to what this underlying reality is, autism has been associated with various underlying traits such as empathy deficits or so-called 'risk' genes (Baron-Cohen 2008, Frith 2003). Hence, today, autism is generally framed as a neuro-developmental disorder, and is associated with various dispositions at the genetic, neurological, and cognitive levels.

Nonetheless, in recent years, two significant lines of criticism have emerged for those attempting to define or clarify the nature of autism. First, a growing awareness of both the vexed history of the concept and findings that problematise its supposedly biological foundation, has led to a crisis in the meaning of 'autism' from a medical perspective (Timimi et al, 2010; Cushing, 2013; Waterhouse, 2013; Verhoeff, 2015). This has led to some taking the concept to be scientifically invalid or medically useless, and many advocate abandoning the concept (Timimi et al. 2010; Cushing 2013; Waterhouse 2013). Second, the status of autism as a medical pathology has been contested by proponents of the neurodiversity movement. On this view, autism should not be counted as a mental disorder but rather a natural manifestation of neurological diversity (Singer 1999). Neurodiversity proponents have argued in great detail—convincingly, in my view—that at least a significant proportion of distress and disablement associated with autism can be accounted for in terms of marginalisation and oppression (Chapman 2019a; Robertson 2010). Given this, neurodiversity advocates take the classification to indicate a marginalised minority rather than a medical condition, making it more in line with

political identities such as 'trans' or 'gay' than something that we should attempt to treat or cure.

Here I'm interested in asking whether the neurodiversity framing of autism may have room for a coherent conception of autism even if the medical model does not. On the one hand, on the medical view, for those who want to defend the reality of autism, the task is firstly to ask what the standards of validity to count as a psychiatric classification are, and then to show that the concept of autism fulfils the conditions of these standards. For instance, depending on which understanding of psychiatric validity is evoked, they can ask whether it is a natural kind (i.e. something that is there anyway, regardless of human ways of carving things up) (Cooper 2005 pp. 45-76; Cushing 2013), or whether it some kind of medical utility (Zachar 2015). On the other hand, neurodiversity proponents tend to respond to those who advocate abandoning the concept as a political issue rather than a problem of nosology. In the words of autistic researchers Woods et al (2018), for instance, those who seek to abandon the concept "envision autism and consequently the autistic voice as a non-entity" (p. 976), and overlook "the flourishing distinctive autistic culture" (p. 977). On the neurodiversity view, then, denying the validity or reality of autism seems to be taken more as a political act of misrecognition than a position in psychiatric nosology.

When it comes to attempts to defend the reality and define the nature of autism, this may open up new resources from social metaphysics that are unavailable on the medical account. This would be much as, say, "black" or "gay" may be valid political classifications despite lacking validity as biological classifications. Curiously, although there's now a wealth of literature written by autistic researchers analysing autistic disablement in light of marginalisation and oppression (e.g. Milton, 2016a; Robertson, 2010; Booth, 2016; Chapman 2019a), there's been no systematic attempt

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to draw on analyses of the social metaphysics of race, gender, or sexuality, in order to rigorously analyse the nature of autism in line with the neurodiversity perspective.[2] I aim to fill this lacuna, by drawing on feminist analyses of the metaphysics of gender to propose a new way of understanding the nature and reality of autism.[3] My core positive aim is to show that autism is a politically useful classification indicating something real, in line with the neurodiversity view, and to provide a framework for understanding this reality. In doing so, I aim to both fend off the proposal to abandon the concept of autism altogether, and show the metaphysical superiority and practical benefits of this approach over the various medical accounts of autism's nature.

I begin by reviewing leading medical accounts of autism that posit a biological or psychological essence. I argue that they are unconvincing, since they conflict with available evidence and are based on untenable essentialist commitments. I then consider two more nuanced non-essentialist defences of the medical conception of autism, the first being a soft naturalist account, and the second framing autism as a practical (i.e. medically-useful non-natural) kind. I argue that these accounts fail, since the boundaries of autism are normatively-determined, and since the concept in fact lacks medical utility. I then turn to the neurodiversity conception of autism, and argue that it has more room to coherently account for the nature of autism. To achieve this, I first consider and then reject the possibility that autism should simply be reduced to a political identity. Finally, I draw on Iris Marion Young's (1994) notion of a "serial collective", which frames autism in relation to current social and material conditions more primarily than in relation to shared identification or

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[2] That is, although analogies between autism and marginalised groups are often invoked in discussions of whether autism is inherently harmful and/or dysfunctional, social-metaphysical analyses of concepts like "black" and "woman" have not been drawn on to rigorously define or clarify the nature of autism as such.

[3] It's worth noting that, although some advocates of neurodiversity retain essentialist and naturalist assumptions, or at least rhetoric, regarding autism, the neurodiversity approach has plenty of room for viewing autism as a social kind. This will become more apparent below.

internal properties. I'll show that this allows us to account for the nature and reality of autism in such a way that avoids each of the problems encountered by previous attempts.

Scientific Essentialist Accounts of Autism

Although representations have changed over time, since the 1970s autism has typically been framed as a natural phenomenon of which we are developing an ever-greater scientific understanding. Fellowes (2017) notes how popular histories treat "the autistic spectrum as a fact waiting to be discovered" (p. 56), while the authors (Goldani et al. 2014) of a recent literature review of the biomedical science of autism proclaimed that "[n]ew potential biomarkers for [autism] are being identified every day" (p. 1). More generally, as Nadesan (2005, pp. 19-20) observes:

> In the search for its essence, the being of autism, […] autism continues to be implicitly and explicitly theorized as a definitive entity whose origins can be found in faulty genetics, neurological impairments (e.g. of the amygdala) or impaired biochemistry. The implicit but dominant model seems to be that there is a visualspacial-topological autistic centre that will ultimately be discovered.

This paints a picture of autism in which the behavioural symptoms of autism stem from what philosophers call a 'natural kind'. A kind is typically said to be natural if it is taken to reflect a structure of the world that is there anyway, regardless of how humans come to categorise reality, for instance, chemical kinds or biological species (Cooper, 2013). Such representations of autism also seem to be committed to neuro-centric essentialism about autism or perhaps subtypes of autism (Nadesan, 2005, pp.

19-20). This chimes with the scientific essentialist view of natural kinds, whereby essential properties are what is definitive of such kinds (see, e.g. Ellis, 2001).

Supporters of the scientific essentialist view of autism view can appeal to a good deal of research that indicates that autism stems largely from neurological and genetic factors (Coleman, 2005; Freitag et al., 2010). For example, reviews indicate general neurological tendencies among the autistic population such as larger overall brain size, a larger parieto-temporal lobe, and a larger cerebellar hemisphere than neurotypical controls (Brambilla et al., 2003). Nonetheless, despite its prominence, this scientific essentialist project has increasingly led to findings that undermine the assumptions driving it. When it comes to the genetic findings, Coleman and Betancur (Coleman & Betancur, 2005) explain: "there now exists evidence of both locus heterogeneity (mutations in completely different genes causing the same phenotype) and allelic heterogeneity (different mutations in the same gene causing different phenotypes)" (p. 15). In fact, recent research indicates that hundreds of different genes may contribute towards being autistic, with the combination being different in each case (Waterhouse, 2013, pp. 9-12). In line with this, according to Coleman (2005), neurological research increasingly indicates that "autistic symptoms reflect a great variety of underlying […] entities, each perhaps with a somewhat different neuropathological mechanism" (p. 30).

Other scientific essentialist attempts focus on psychological properties. The most influential seeks to explain autism as stemming from an empathy-deficit, making it hard to process the social world (Baron-Cohen et al, 1985; Baron-Cohen, 1995). Other more general cognitive theories seek to explain autism in reference to reduced context sensitivity in cognitive processing (Vermeulen 2013), detail-orientated processing (Frith & Happé, 2006), general executive dysfunction (Hill 2004), hyper-perception and hyper-emotionality (Makram et al. 2007), or hyper-mechanistic

thinking (Badcock 2009; Baron-Cohen 2011). Nonetheless, despite varying levels of success, the same issue remerges for these accounts. For no single cognitive property has been found that can explain all or even most traits associated with autism, and each autistic person seems to have a processing style that it different to all other autistic people (Happé et al. 2006; Timimi et al 2010). At least currently, then, as Cushing (2013) summarises, unless a more satisfactory account is developed, it seems hard to deny the possibility that "autism is not a unified [psychological] phenomenon, but in fact a bundle of distinct, often comorbid, but actually independent conditions" (p. 30).

The issue here has been referred to as the "problem of heterogeneity" (Timimi & McCabe, 2016, p. 16). In short, at every level of analysis (from genes to behaviour, neurology to lived experience), autism seems to be unique in each case, and not defined by any single shared trait. The heterogeneity problem has led some researchers to mention evidence of autism has an inherent natural structure at all. Indeed, Timimi et al. (2010, p. 139, original emphasis) for instance, claim that

> the most scientifically appropriate conclusion that we can draw from the evidence (or lack of it) so far is that *there is no characteristic genetic or biological brain-based abnormality that corresponds with our current definition of autism and the broader ASDs*

If we are looking for something like an essential biological or psychological trait, then this seems like a feasible conclusion. For even if autism is highly heritable and related to various biological or psychological tendencies—something none of the above authors deny—evidence nonetheless points towards there being a different causal pathway in each case.

Autism as a Mechanistic Property Cluster

Scientific essentialism isn't the only way of assessing the validity of autism as a psychiatric classification. In fact, Zachar (2015, p. 288) notes, there may be an unhelpful "essentialist bias" in traditional psychiatric taxonomy which assumes that an essential property is necessary for a classification to be valid. The reality of autism as a medical condition might be defended at this point by taking the issue to be this bias rather than psychiatric classification itself. In other words, the problem could be the assumption that we need to find an essential property that can explain all instances of autism (or perhaps some subcategories of autism), rather than autism's heterogeneity. In line with this, in recent years philosophers of psychiatry have proposed both softer naturalist as well as non-naturalist models for understanding psychiatric nosology.

The most influential softer naturalist alternative (Kendler et al. 2011) frames psychiatric classifications as Mechanistic Property Clusters. This notion indicates categories defined in light of a whole range of characteristic (although not singularly essential) factors that interact with each other *causally* and at varying levels (e.g. biological, psychological, behavioural) (Kendler et al., 2011). On this framing, at least some natural kinds that lack fixed essences, most notably species, can be thought of as complex sets of entities with "various degrees of causally supported resemblance" (Boyd, 1999, p. 144) insofar as they possess similar properties in light of related causal links. With psychiatric classifications, Kendler (2016, p. 9) notes how:

> [Mechanistic] property clusters can allow us to "soften" the unsustainable demand for true "essences" in realistic models for psychiatric disorders.

They give us a tractable kind of "emergent" pattern. What makes each psychiatric disorder unique are sets of causal interactions amongst a web of symptoms, signs and underlying pathophysiology across mind and brain systems.

It might then be argued that autism should be located at various levels—the genetic, neurological, psychological, and behavioural levels—but in light of a complex nexus of causal relations rather than a single essential trait (Verhoeff, 2015, p. 54; also see Chapman 2019b for a recent non-essentialist account of autism). The various implicated genes, neurological functioning tendencies, cognitive-perceptual traits, and the whole spectrum of behaviours associated with autism might then make up and express the coherence of this cluster, even if we cannot point to any single essential characteristic, or indeed any defining cluster at one particular level.

However, an issue pointed out by Verhoeff (2015) regards how the classification of autism isn't just fuzzy (which is compatible with the Mechanistic Property Cluster conception), but constantly fluctuating in relation to broader (non-medical) norms. In recent years historical analyses of autism have found that the concept expands and contracts in relation to: the drive for normalisation and the medicalisation of childhood (Nadasen 2005); shifting economic and gender norms (Timimi et al., 2010); the multitude of industries and economic need surrounding autism (Runswick-Cole & Mallett, 2012); and passing trends in medical and scientific thinking (Silverman 2011). For Verhoeff (2015, p. 21, my emphasis):

> [the boundaries of] autism can *only* be understood in relation to ideas about what kind of behavior is unacceptable, deviant, and in need of correction or support [at any given time]. Autism cannot avoid being related to a cultural norm of a social, empathic and engaged individual,

and any account of autism begins with a need to demarcate, locate and treat particular discontents and impairments that have appeared.

Verhoeff argues that this poses an issue for the Mechanistic Property Cluster conception of autism. For even whilst it "corrects an empirically flawed essentialist model [and] it is compatible with the multicausality, heterogeneity and fuzzy boundaries" surrounding autism, it nonetheless remains unconvincing as it "disregards the way in which [the shifting boundaries of] autism relates to ideas about what kind of behavior is inappropriate and in need of correction or support" (p. 61). The point here is that, even if we accept the notion that species are non-essentialist natural kinds in this sense, then the concept of autism still seems very different. What we count as, say, a horse at any given time does not regularly fluctuate in relation to social norms and ideological shifts, but rather remains relatively stable. That autism isn't like this indicates that it may be a social kind, in line with (on many accounts at least) 'female' or 'queer', the boundaries of which seem to shift in relation to norms as much as natural findings.

Autism as a Practical (Psychiatric) Kind

Autism does not, then, seem to be a natural kind. At this point, however, the defender of the medical conception of autism can still turn to standards of validity that focus on medical utility rather than whether there is natural grounding. For instance, Zachar (2000) has argued that we can conceptualise psychiatric classifications as 'practical kinds', indicating "entities having stable patterns that can be identified with varying levels of reliability and validity" (p. 167). On this view, we can justify the validity of psychiatric classifications because they are ultimately useful ways of carving the world up, regardless of whether they reflect something that's there anyway. For instance, it is at least conceivable that the classification 'major depressive disorder' is a practical kind even if it isn't a natural kind. This

would be, for instance, on the grounds that it could be a useful way of grouping together those individuals who would likely benefit from certain forms of medication or therapy, and so forth. In other words, it would seem to have medical utility, much like certain somatic disease classifications (e.g. cancer) that also are not obviously natural kinds, but which are still nonetheless medically useful.

This raises the question of whether autism does in fact have utility as a psychiatric kind. To have such utility, as Cooper (2005, pp. 49-52; 2013, pp. 960-962) points out, such a classification must allow us to make accurate predictions, and thus increase understanding and control, based on the similarities. It is true that the label of autism has been correlated with many factors, such as high unemployment (Baron-Cohen, 2008 p. 113) and mental health conditions such as anxiety disorders (Badcock, 2009 p. 19). So it may help us with some very general predictions, for instance, that a boy diagnosed with autism will be less likely to find long term employment than a neurotypical boy. But this alone does not seem enough to justify the claim that autism is a medical pathology. Specific races and genders may be correlated with things such as employment rates, but these are not thereby medical pathologies. We would need to be able to make more specific predictions for autism to be established as a pragmatic *psychiatric* kind, for instance, to predict that a particular medication or therapy should alter all or most autistic individuals in a similar and distinct way.

In fact, though, many have argued that autism decisively lacks utility as a medical classification (Collins, 2016; Latif, 2016; Timimi et al., 2010). Most obviously, there's no known treatment that's specific to autism, despite decades of attempts to develop one. As one recent review (Hassal, 2017, p. 11) found:

> neither autism nor ASD appear to have much value as explanatory concepts in science. They do not explain the pattern of symptoms in

individual cases, since the aetiology is unknown in most cases. In addition, the predictive and discriminative validity of ASD is very limited, since decisions about treatment and predictions about outcome are determined at least as much by other factors concerning the individual as by the diagnosis itself.

Notably too, as Virginia Bovell (2015) has pointed out, 'if it is hard enough agreeing precisely what autism is in conceptual terms, it is very hard to establish what it means in practical terms to prevent or cure autism' (p. 91). Given the underlying heterogeneity on the one hand, and the breadth of the spectrum on the other, it seems unlikely that any biomedical treatment will be developed for the thing we call autism. In other words, it isn't just that we don't have the current level of understanding or right technology; rather, the current evidence points toward autism not being the kind of thing that could be treated or cured. If this is so, then it is hard to see how it could be justified as a pragmatic kind in terms of framing it as a psychiatric condition. Indeed, some claim that the construct thus does more harm than good. For Timimi et al (2010), the term merely functions as a "catch-all metaphor" (p. 7) for people who fall outside the dominant norms of society, and is nothing more than a problematic distraction from individual "problems in living". And in the words of Cushing (2013): "If "autism" really is socially constructed, then I'm all in favor of its elimination. The people [diagnosed] will still be the same, but they won't be encumbered with a catch-all term weighted down with decades of bad theorizing" (p. 41).

Overall, when taken as a psychiatric classification, it is far from clear how autistics could be grouped together in a genuinely grounded way. And although the classification may be helpful in some non-medical ways (a point I'll explore below), it seems (at best) to have very limited utility as a medical classification. To be clear,

none of what I've argued so far rules out the possibility that there are various naturally-grounded traits grouped together by the concept of autism. So at this point, a defender of the notion that autism indicates genuine medical pathology might argue that autism should be broken up into much more specific kinds, as has recently been suggested as a general move with psychiatric classification by the National Institute of Mental Health (Cushing 2013 pp. 40-1). Perhaps this will turn out to be viable. But at the moment this remains somewhat speculative. More importantly, given our concern for the validity of the concept of *autism*, even if autism was eventually divided up into many different valid classifications, it is far from clear that the concept "autism" in anything like the way it is currently understood would survive this anyway. For the time being, then, it seems to me that the weight of the evidence militates against there being a genuinely grounded or practical concept of autism as a psychiatric classification. Either it should be abandoned, or we should look to the alternatives.

Autism as Political Identity

That autism is a social kind has been independently argued for elsewhere. Mostly notably, Hacking (1999; 2007; 2009), has argued that the label of autism has shifted over time due to complex interactions between autistic individuals, autism experts, related institutions, and autism knowledge-production. On this view, showing that a kind is constructed does not indicate that it is unreal, since such kinds can group or frame underlying naturally-occurring or otherwise real traits (Hacking 1999, p. 121; Nadasen 2005, p. 7). Notably too, neither does medical dis-utility imply that there can be no other kind of utility. Rather, as Bovell (2015, p. 87) notes

> Even if autism is no more than a social construct, we should not underestimate the power of social constructs. It confers a status that can open doors for particular types of support and state funding that impact on people's well-being and safety, as well as labelling them in a way that can be […] illuminating and liberating.

Similarly, neurodiversity proponents Woods et al. (2018) stress "the flourishing distinctive autistic culture and the importance of self-diagnosis to autistic persons' sense of well-being" (p. 977). When it comes to asking whether autism is real or not, these perspectives chime with certain strands in feminist theory that stress the relationship between (non-medical) constructed categories, real-world structures and practices, and political utility. Sally Haslanger (2012), for example, stresses how, when it comes to constructed human divisions in race and gender, it is crucial to not overlook "the reality of social structures and the political importance of recognizing this reality" (p. 30). Similarly, Caraway (cited in Young 1994), has argued that reclaiming classifications such as "woman" as political identities can, regardless of whether they are natural or not, help cultivate "a space for political action, praxis, justified by the critical positioning of the marginalized subjects [so classified] against hierarchies of power" (p. 722). Notably, all this is in line with the neurodiversity conception of autism as a political identity, which both takes autism to be real (in some sense or another), and seeks to reclaim autism to reposition it as a post-medical, primarily political grouping.[4]

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[4] As noted earlier, some neurodiversity proponents may retain essentialist and naturalist-reductionist understandings of autism, or at least rhetorically seem to do so, by using terms such as 'neurotype' or 'natural human variation' (Jaarsma and Welin 2012). This might be seen as a problem for the neurodiversity conception of autism. However, the majority of leading proponents of neurodiversity indicate that autism should be analysed primarily as a political classification, even if they take it to group together various traits that are naturally-occurring individually. For instance, Singer (1999), who coined the term 'neurodiversity', emphasised autism as "a new category of human difference" (p. 63) bringing the benefits "of a clear identity" (p. 62). For Nick Walker (2013), another leading neurodiversity proponent, key terms like "autism" and "neurotypical" are primarily political "tools" that can be instrumental in helping neurodivergent people live "better, more empowered lives" (n.p.). More explicitly, Damian Milton (2016), one of the leading autistic autism researchers,

Applying this to the nature of autism, the most obvious possibility worth considering is that autism simply *is* a shared political identity, and that this might both meaningfully account for its reality and provide an emancipatory justification for keeping the classification. On the shared identity view, autism would be to an extent fluid, since it is held in place by a shared mental identification with the construct, constituted by shared human imagination. In terms of its metaphysical feasibility, this would fit both with the heterogeneity of autism, and also with the concept being interactive and shifting, since different people would identify with (and hence interact with and change) the concept at different times. At the same time, it would also cohere with autistic individuals sharing a cluster of similar although not singularly essential traits (it would just not commit to the further claims that these traits are naturally grouped or a medical issue). For on the identity account, we would precisely expect those who identify with the concept to do so because they have similar traits to others who identify as autistic. Hence, the identity conception of autism seems to fit with the evidence that was problematic for the naturalist accounts, making it initially appealing as a metaphysical account.

There's also evidence that the concept has political utility even if it has limited medical utility. For many autistic individuals—who, although they have no shared fixed essence, do face similar problems such as stigma and discrimination—have begun forming a political force to help cultivate the conditions for autistic thriving. Consider, for instance, how autistic communities have begun developing autistic specific vocabularies that help describe and constitute autistic experience (Hacking, 2009; McGeer, 2009). Or how autistic individuals often report feeling "at home"

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posits that the notion that autism is a "scientifically valid as a natural kind" (p. 1414) is deeply misguided, and that we are "unlikely ever to find […] a simplistic explanation of what autism 'is' at a biological level." (ibid.). Although not every neurodiversity proponent would agree with such statements, and whilst each differs on details, critics that target the neurodiversity view on the grounds that it retains naturalist-reductionist or scientific essentialist presuppositions thus miss the mark.

and finding a sense of "belonging" among other autistics (Sinclair 2010, para. 41); or how individuals who are diagnosed later in life find that this helps their self-understanding and acceptance (Wylie, 2014). It is also worth noting how neurodiversity proponents reject spreading autism "awareness" in favour of promoting autism "acceptance" (Robertson, 2010). Interestingly, recent empirical research has indicated that the practice of autism acceptance is beneficial for the wellbeing of both autistic individuals (Cage et al, 2017) and their families (Da Paz et al 2018). Notably too, a recent study (Parsloe 2015) of people diagnosed with Asperger's syndrome (a prior sub-category of autism)[5] found that reclaiming autism as an identity helped provide a sense of autistic agency and community. By contrast, it was found that "treating autism as a disease category prevents [a] focus on positive difference" (p. 352). What these preliminary studies seem to indicate is both that the concept of autism has political utility, and that if anything its utility increases precisely when the concept is reclaimed and de-medicalised.

It's true that autism has become a genuinely emancipatory political identity for many, and self-identifying as autistic has been particularly helpful for those who are unable to attain a medical diagnosis for whatever reason. Still, I'm wary of endorsing identity as the basis for an account of the *nature* of autism. This is because autism includes a small subset of individuals who have not (so far) been able to learn the level of language necessary to identify with other autistic individuals at all. This raises one conceptual issue and one ethical issue. First, a group identification definition of autism might exclude the subset of autistic individuals who currently lack linguistic ability to identify with abstract concepts at all. In other words, if

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[5] Some claim "Aspie" as an identity (Parsloe 2015). However, autistic neurodiversity proponents increasingly identify simply as "autistic" (covering the whole spectrum), in an effort to be more inclusive and avoid elitism (see, e.g. Baggs 2010). Although I certainly don't want to deny the validity of the former identification, I follow the latter tradition here. On this view, all those on the spectrum (including those diagnosed with Asperger's syndrome) are simply autistic; it is just that some (referred to on the dominant view as "severe" cases) also have other intersecting disabilities.

autism was *only* a political identity, then this would exclude those who clearly are, but are not currently able to identify as, autistic. Second, if autism is only a political identity, those with no voice or perhaps even capacity for identification could be overlooked, and even harmed, by their exclusion, and the direction in which the construct is taken. By partial analogy, my worry is similar to how various forms of feminism have overlooked, say, black women or working-class women due to white, middle-class women dominating discourse relating to feminist identity politics. This reflects a more general issue, which concerns how identity politics "frequently conflates or ignores intra group differences" (Krenshaw, 1991, p. 1242). Indeed, this is precisely the worry many have with the neurodiversity conception of autism, which may seem to overlook those less enabled to express themselves (Jaarsma and Welin 2012 pp. 27-8). So whilst it is important to recognise the positive significance of autism as a political identity, I am wary of reducing the *nature* of autism to a matter of group identification. For this may contribute to excluding those who need to be recognised as autistic, and access the support that come with this, the most.

Autism as a Serial Collective

My own suggestion is in line with the neurodiversity perspective and is compatible with recognising the significance of autism as a political identity, as well as the validity of those who identify as autistic without a medical diagnosis. But I posit that the reality of autism is better captured by Young's (1994) notion of a serial collective. Unlike group identities, which denote "self-consciously, mutually acknowledging collective[s]" (p. 724), serial collectives are defined in light of shared external material factors that mutually affect each member of the collective, regardless of whether they actually identify or not. For instance, all those waiting together for a late bus would form a serial collective, despite having no internal essence or shared

identification. That is, whilst the members of a serial may share various similarities (everyone waiting for the bus might perchance live in the same neighbourhood and start work at the same time), what makes them categorisable as a serial kind is the relationship of each to social reality (in this case to the bus, as well as the lateness of the bus, and their contrast to all those whose busses arrived on time).

Of course, being autistic isn't the same as waiting for a late bus. More relevantly, for our concerns, Young (1994) claims that social class and gender can both be understood as serial collectives (pp. 727-728), and so defined in light of social and material conditions regardless of shared identification or lack of essential trait. When it comes to the working class (p. 727), for instance

> Most of the time what it means to be a member of the working class or the capitalist class is to live in series with others in that class through a complex interlocking set of objects, structures, and practices in relation to work, exchange, and consumption […] the characteristics of the work that one will do or not do are already inscribed in machines, the physical structure of factories and offices, the geographic relations of city and suburb.

Similarly: "Gender, like class, is a vast, multifaceted, layered, complex, and overlapping set of structures and objects. Women are the individuals who are positioned as feminine by the activities surrounding those structures and objects." (p. 728). For instance, womanhood as a serial collective arises in light of, amongst other things, representations of gender ideals (e.g. gendered clothing), sexual divisions of labour, enforced monogamy, and so forth (pp. 727-9). For Young, what binds members of each is their shared relationship to material and social conditions,

rather than their shared identification with the classification: each serial collective is defined in relation to "a set of structural constraints and relations to practio-inert objects that condition action and its meaning" (p. 737). This allowed Young to conceptualise gender and class in an intersectional and anti-essentialist way that was useful for organising political resistance.

I propose that autism is a serial collective, and that this notion can capture the reality of autism without encountering the various issues noted above. To understand the utility of this proposal, it's first worth considering the social model of disability as applied to autism (Chapman, 2019a). Although I won't offer a detailed defence of the social model when applied to autism here, it will be helpful to give a few examples of wider factors, both physical and normative, that seem to have systematically contributed to autistic disablement. In this regard, it's worth considering autistic sensory sensitivity and sensory overload, which are central to autistic disablement and regularly experienced by the vast majority of those given the autism diagnosis (Bogdashina, 2003; Makram et al. 2007). While the perceptual-cognitive profile of each autistic person is unique, autistic people characteristically report certain common factors as leading to increasing disablement. Such factors include an increase in open plan offices and the overuse of bright lights in working environments (Booth, 2016, pp. 43-44), or neurotypical social practices such as clapping. Despite the biological and psychological uniqueness of each autistic individual, such environments tend to disable all autistic individuals in a way that we can identify as characteristically autistic, for instance, by making them experience 'sensory overload' or 'sensory fatigue', which can in turn hinder social understanding and participation (Booth, 2016, pp. 43-44).

Beyond the central issue of sensory environments, it's equally important to consider the importance of shifting neurotypical norms and social practices. For instance,

Timimi et al. (2010) and Timimi & McCabe (2016) draw attention to how the rise of the neo-liberal market system, particularly in service economies, increasingly requires individuals to both continually merge into new roles and to constantly sell one's "self". Those who find it difficult to meet these demands are increasingly seen as a problem to be either eradicated or altered. The historical effect of this, as Haydon-Laurelut (2016, p. 222) summarises, is that

> Bodies now labelled as autistic were perhaps closer to the norms of the late nineteenth and the early to mid-twentieth century. These bodies and their characteristics are increasingly distinct from the kinds of humans – those of the "agile" or "flexed" workforce, narcissistic, hypersocial, and so on – demanded from the second half of the twentieth century to the present day by the changing socio-economic conditions of neoliberal capitalist cultures and a service economy.

In other words, whereas modernist ideals tended to celebrate autistic traits such a being single-minded, rational, and independent, neoliberal economic ideology and the social structures that they are tied to mean that those who are not naturally adept to such practices are increasingly taken to be pathological—contributing to an increasingly greater percentage of the population finds themselves *actually* disabled (for instance, being unable to work) in a specifically autistic manner. So shifting social norms are equally important when it comes to who ends up being blocked from typical social functioning, emotionally relating, and so forth, at any given time.

With these examples in mind, the key difference between the neurotypical and the autistic seems to be this. Certain social developments are geared towards supporting clusters of psychological characteristics that have no natural unity, but which are unified with respect to their contingently perceived positive economic or social

utility, and their relationship to external structures and norms. Individuals who exhibit such clusters of perceived socially useful psychological/behavioural characteristics belong to one serial. Since this serial is of contingent social utility, we arrange environments to support and further enable individuals who exhibit such characteristics. This serial collective is the comparatively enabled neurotypical. Other clusters of psychological characteristics, in contrast, may (again, for contingent social, historical reasons) be perceived as relatively useless or undesirable. As with the clusters of 'positive' characteristics, the explanation of the unity of such 'negative' clusters is largely given by their perceived economic or social disutility (which is socially and historically contingent), rather than in a natural grouping. Moreover, far fewer social resources are invested in supporting individuals with such characteristics, in as far as society is not structured around their needs, thus reinforcing their initial marginalisation (Milton 2016; Robertson 2010). They are, thus, comparatively disabled by their environments. 'Autism' is a label we give to one such cluster of (purportedly) socio-economical dis-utilitarian psychological and behavioural characteristics, but these traits are grouped in light of collectively being disabled by the same norms and structures. And, whilst it's true that autistic individuals do tend to share such a cluster, what allows this collective to emerge, expand, and retract, is a shared relationship to the social and material conditions that produce this specific form of disablement.

Benefits of the Serialised Account

I've argued that the coherence and reality of autism lies in how autistic people share a specific relationship to current social and political conditions—those that continually produce and reproduce autistic disablement. Importantly, as a metaphysical claim, this avoids all the problems noted with the above accounts. First, whether one is autistic or not on the serialised account is so regardless of

whether or not any given individual actually identifies as autistic or not. So this doesn't encounter the problems noted with the political identity conception of autism (even though it still has room for, and if anything supports the legitimacy of, there being an autistic political identity). Second, it isn't an issue for this account that the concept of autism has no medical utility, since it doesn't claim that autism is a medical pathology in the first place (although it doesn't deny that autistic people often do encounter medical issues, for example, epilepsy). Third, it's also not an issue that autism's boundaries are shifting and fuzzy, or indeed that it has no essence. For the serialised account would precisely predict that who is disabled in this way would be highly complex, and would change in relation to shifting social practices and material conditions. Hence, the serialised account has no problem accounting for the various factors that are problems for the previous accounts. This makes it the most metaphysically viable account of all those surveyed.

Beyond its metaphysical plausibility, it's also worth saying a little more about the political utility of this framing. Young (1994) herself proposed the notion of womanhood as a serial collective to find a balance between legitimising the political voice of women, and avoiding the normalising and essentialist tendencies of identity based conceptions that may overlook intersections or trans women. Similarly, framing autism as a serial collective allows us to recognise the legitimacy of the autistic voice, and account for all the political benefits that come with the identity account of autism—yet without the automatic exclusion of those who do not or cannot identify as autistic. Recognising the reality of autism as a serial collective may also help bring about important social change. Consider, for instance, how, based on the neurodiversity conception of autism, organisations such as Specialisterne aim to solve "the social challenge of unemployment through a business model that creates environments where autistic people can excel" (Sonne,

2019, para. 8). Or how the UK Labour Party has recently been developing a "neurodiversity manifesto" in order to develop a more enabling society for autistic and otherwise neurodivergent individuals (https://neurodiversitymanifesto.com/2018/09/18/labour-party-autism-neurodiversity-manifesto-final-draft-version-2018/). Such efforts are likely to help the autistic population in a number of ways, and yet none of this requires holding autism to be a natural kind, or to have biomedical utility, or to be reducible to a political identity: they are focused on barrier removal and challenging social norms. All we need here is the serialised account of autism, allowing the focus to be shifted to the material and social conditions that brought the need to classify and then expand the autism in the first place. If anything, the emphasis of the serialised account would be more helpful for these kinds of pursuits than any previous framing, since it precisely draws attention to the centrality of current material and social conditions as being a core part of the reality (and disability) of autism.

Potential Objections

I've argued that there's good reason to think of autism as something real. I've also suggested a coherent way to understand the reality of autism, by drawing on Young's notion of serial collectives. If my arguments have been convincing, this is the most metaphysically feasible account of the nature of autism proposed so far. I'll finish off by defending my proposal against three potential worries.

How does this account square with all the evidence pointing towards autism being highly heritable and related to neurological tendencies?

To say that autism is a serial collective isn't to deny that certain genetic or neurological differences may make some individuals more or less perceptually sensitive, and so forth. Indeed, it precisely presupposes this. It's just that whether any given individual develops in the way we call autistic will rely on the nature of the society at any given time. The unity of the concept of autism, then, is to be explained in terms of the dominant material structures and practices at any given time, rather than by reference to a natural or medically-useful kind. Nonetheless, the view I've defended doesn't deny that autistic individuals will often exhibit rough clusters of characteristics, or that many of these traits will be heritable; my point is that whether the exhibition of such characteristics *manifests as autistic* is dependent on contingent factors.

Isn't this way of framing autism just as susceptible to the criticism of being overly fuzzy and shifting as those accounts dismissed above?

In my view, the concept of 'autism' certainly is fuzzy and shifting. This shows, however, a strength of my account. As we've seen, this way of being disabled has emerged and grown in a wide range of social factors, and the concept has thereby been hard to define, and constantly shifted in scope and focus. While this is a problem for naturalist, and especially essentialist, accounts, the notion of autism as a serial collective in fact *predicts* that the concept of autism would shift and change in line with social developments. Thus, my account allows us both to acknowledge that biology can be, to some extent, relevant to understanding why some people are

autistic and others are not[6] *and* to acknowledge the fuzziness of the concept of 'autism' in relation to shifting norms, practices, and structures.

How will this account of autism help, especially considering how dangerous certain conceptions of autism can be?

In short, I've argued that framing autism as a serial collective may help to foster solidarity and cooperation in aid of autistic thriving, and recognition of autistic disablement, while avoiding potentially harmful forms of reductionism on all fronts. On the serialised account of autism, we can recognise characteristically autistic needs, and the complexity of autism, in such a way that would be both more coherent and far better for the autistic population than any previous model. Of course, those who want to maintain that autism is a medical condition will disagree. But if they want to justify this disagreement, they will have to answer the problems with the medical accounts that I've noted above. For currently, as I see it, there's no viable medical account of the nature of autism: the concept is much better supported by the neurodiversity view.

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[6] Biology can be *relevant* to understanding why some people are more likely to fall within the boundary at any given time, even if it is not essential or definitive. By analogy, I don't think Young would deny that biology might be relevant, to some extent, for understanding why some people are positioned as women and some people are not, even though she strongly denies that this is what constitutes womanhood.

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