Me and monotropism

Fergus Murray – science teacher, writer and ‘autist’ – on a theory with a family connection...

The most established psychological theories of autism leave vast swathes of autistic experience completely untouched, and tend to leave people with harmful misconceptions. The one theory I think comes anywhere close to explaining the whole shebang – monotropism – has been largely overlooked by psychologists.

This rankles with me as an autistic adult, as a science teacher and (full disclosure) as the offspring of the theory’s originator, Dinah Murray. As someone on the spectrum myself, I dislike the pathologising, deficit-based framing of the best-known theories of autism, and I hate the mistakes they lead to in practice: assuming we lack empathy and have no idea what’s going on in anyone else’s head; painting autistic cognition as inherently more ‘male’; expecting skills we’re slow to pick up as kids to be lacking throughout our lives.

It bothers me as a science teacher, almost as much as it troubles me as an autist, that psychologists settled for theories of autism which simply fail to provide any explanation for so much of autistic thinking. Granted, my background is in physics and philosophy rather than psychology, but I’ve always understood that when your theory only partially explains the phenomena being examined, you should keep looking for a better theory. When there are persistent threads left unexplained – such as the sensory differences so common among autistic people – you really need a more complete framework. Partial theories can be useful, but it’s all too easy to stretch them beyond their domain of applicability, and it can cause real problems, like assuming autistic adults have no theory of mind. Maybe it’s my autistic perfectionism, but I don’t like theories to leave too many loose ends.

Monotropism provides a far more comprehensive explanation for autistic cognition than any of its competitors, so it has been good to see it finally starting to get more recognition among psychologists (as in Sue Fletcher-Watson’s keynote talk at the 2018 Autistica conference). In a nutshell, monotropism...
is the tendency for our interests to pull us in more strongly than most people. It rests on a model of the mind as an ‘interest system’: we are all interested in many things, and our interests help direct our attention. Different interests are salient at different times. In a monotropic mind, fewer interests tend to be aroused at any time, and they attract more of our processing resources, making it harder to deal with things outside of our current attention tunnel.

The classic paper on this, ‘Attention, Monotropism and the Diagnostic Criteria for Autism’ largely focuses on how the theory provides convincing accounts of all the features of autism listed in diagnostic manuals, and ties them together in a way other theories fail to. The authors do a persuasive job of this, but I find the diagnostic criteria so lacking when it comes to accounting for the experience of autism that I’m not going to use that framing. Instead I will focus on some key features of autism as seen from the inside: autistic inertia; sensory differences; social differences; and focused interests. I close with some thoughts on implications for practice, the role of developmental perspectives, and potential research directions.

**Autistic inertia**

The bulk of what’s usually referred to as ‘executive dysfunction’ in autism – difficulties getting going with things, executing plans, and tearing ourselves away from things once we’ve started – are more informatively talked about as ‘autistic inertia’. That is, resistance to a change in state: difficulty starting, stopping or changing direction. This is central to many of the difficulties autistic people face in life, but it is also part of what makes autistic thinking distinctive and valuable.

I’m a little uncomfortable with ‘executive dysfunction’ as a label for this, because it makes it
Sensory differences
It is easier for autistic people to process one channel at a time. Distributing our attention between multiple streams takes effort, and sometimes just doesn’t work at all. Again, monotropicism is characterised by intensity wherever our focus is, at the cost of processing resources that might otherwise let us deal with other input, interests or filters. This is often a problem in social situations. Autism is occasionally mistaken for deafness, especially in small children: if we aren’t tuned in to it, auditory input might register as an unwelcome interruption we would much rather ignore, or it might not register at all.

Conversely, if we can’t tune an input out, it is often experienced as horribly intrusive. There is discomfort at our attention being constantly pulled away from where we want it to be; we tend to feel things strongly if they’re present in our awareness at all; and filtering takes energy. Our brains throw a lot of resources at whatever our focus is on, which accounts for both the intensity of conscious awareness and the pain of distracting stimuli we can’t filter out. There is likely a developmental aspect to this: neural pathways that receive a lot of stimulation grow stronger, so perhaps autistic people are prone to long-term hyper-sensitivity in senses receiving intense attention, and under-sensitivity in channels we regularly tune out.

Often, if we get overloaded, it helps to have controlled or predictable input. Stimming, flapping, rocking and humming provide something we can do and feel without having to think about it, and can make it much easier to filter, to focus on something else, or to deal with feelings of overwhelm.

Social differences
Many social differences are sensory differences at root. Being unable to process multiple channels of input most of the time makes the combination of spoken words, body language and eye contact tremendously challenging. Add autistic inertia to the mix, and we can also see why autistic people often need more processing time and can find the back-and-forth of neurotypical conversation difficult to keep up with.

Monotropic processing also explains the literal-mindedness that autistic people are notorious for. Polytropic minds have multiple interests aroused at any time, pulling in multiple strands of information, both external and internal. They are primed to be on the look-out for things like social implications, and effortlessly decode metaphors and indirect language. The monotropic mind tends to expect one thing to follow from another more directly than that. Most autistic people get the hang of metaphors eventually, but many still report the literal meaning of a saying tends to come to mind first, and it takes a moment's processing to substitute the metaphorical intent.

Autistic focus tends to mean we miss a lot of things that other people register, but other people probably miss just as many things — just different things. Psychologists like Peter Vermeulen talk about ‘context-blindness’: a useful concept, but we all construct our own contexts all the time, and a better way of thinking about this is probably as ‘a mismatch of salience’, to borrow the title of Damian Milton’s essay collection. I might miss your context, but don’t assume you understand mine without checking.

A lot of processing power goes into modelling other minds, something that can seem effortless but is never trivial. It becomes much harder when the minds in question are very different from your own. When autistic people fail to do this, it’s not so much that we’re unable — the idea of ‘mind-blindness’ is deeply misleading — but that we don’t always have the processing power left over to do it effectively, when our attention is being pulled strongly in another direction.

Focused interests
Interests are at the heart of the monotropic account, and have been present in characterisations of autism right from the start. Their near-absence from the more established theories of autism, and indeed the entire psychological literature on autism, is glaring. The diagnostic criteria talk about ‘restricted’ and ‘repetitive’ interests, but the main characteristic feature of autistic ‘special interests’ is really how much we focus on them (or they focus us), not how restricted or repetitive they are.

Everyone’s passions are repetitive; that’s just in the nature of strong interests. When people talk about ‘restricted interests’ what they mostly seem to mean is that they can’t fathom our failure to be interested in things that seem important to them. It is true that
we’re often powerfully interested in a few things for a relatively long time, but they do change over the years, and sometimes over much shorter time periods. For my part, I have many interests, some of them fascinations since childhood, most of them all-consuming when I get into them. Chatting with autistic adults about the things that interest them often makes the idea that their interests are ‘restricted’ seem preposterous.

What is true is that our interests pull us in very strongly and persistently, compared with most people. It can be hard to think about anything else when we’re particularly invested in a topic, and hard to imagine how little other people might care about it. That can be a huge asset in many fields – intense focus is indispensable in science, maths, technology, music, art and philosophy, among others. Obviously autistic people are not the only ones capable of hyperfocus and persistent interests, but it is a common feature of the autistic psyche, and one that is too often squandered when workplaces and schools are not set up to allow it.

**Implications for practice**

The biggest practical thing to take away from this is the importance of meeting the child, or adult, where they are. This is not an insight unique to the monotropism perspective, but nothing else I’ve seen demonstrates with such clarity why it’s so crucial. Treat interests as something to work with. Recognise what someone’s passionate about and learn how to become part of the attention tunnels which come with monotropic focus, rather than trying to just reach in and pull the person out of the flow states that are so important to us. Never pathologise ‘special interests’, and don’t assume that autistic interests are ‘restricted’ – there are plenty of ways to get us interested in new things, it’s just that they mostly involve taking existing interests and building on them.

Stability is a basic human need, and life as a monotropic person in a polytropic world is often unstable. It is deeply destabilising to be pulled out of an attention tunnel, to be regularly surprised by people’s actions, or to feel you are not being understood. Much of autistic behaviour can be seen as attempts to restore some kind of equilibrium.

‘Restricted, repetitive behaviours’ are a natural response to feelings of instability. They allow you to assert control over what is happening, and feel safer. This is probably a useful general rule, not something that’s only true in autism – we see restricted, repetitive behaviours in all sorts of contexts, it’s mostly just that autistic people’s ones stand out as particularly odd, to most people.

Helping autistic people to maintain a sense of stability should be a priority for those around them. It’s widely understood that routines can often help autistic people, but I’m not sure it’s widely understood why. A lot of it is about minimising mental load: taking out things that we have to think about, so that we can maintain focus. Another big part of it is that changing plans involves such a mental shift that it’s exhausting. The ability to feel in control is central to all of this, and externally imposed routines sometimes backfire for that reason. Frustrations and anxiety about control can manifest in demand avoidance, meltdowns and shutdowns at times.

**The dynamically developing mind**

No theory about minds is complete unless it’s dynamic and developmental: we are all changing all the time, and big parts of what make autistic people different have to do with heading down different development paths. Whatever the cause, a failure to connect with the people around you, especially parents, is going to have long-term implications for a person and how they relate to those around them. Perhaps even bigger than that is the disorientation faced regularly by so many autistic children, coupled with wrenching dislocations as they are forced to change tracks again and again to suit other people's schedules. High levels of stress and anxiety have far-reaching effects on a person’s long term mental and physical health, and it can be difficult to disentangle some of these from the traits that follow directly from autistic ways of thinking.

*Fergus Murray (aka Oolong) is a science teacher and writer based in Edinburgh; formally assessed as autistic in 2010, at the age of 32. The photos on the previous spread are his own, ‘illustrating the idea of degrees of branching’.*
The developmental perspective is particularly crucial because we go on learning throughout our lives, and some of the things that are impossibly difficult when we are young get much easier over time once we start focusing on them and practising. This does not mean we stop being autistic – all signs are that a monotropic brain is for life – but it does mean that many of the traits which are considered telltale signs of autism in children are only sometimes seen in autistic adults.

Different experiences in youth and throughout life, and particularly the different choices we make about where to focus our attention, are likely to account for a good chunk of the diversity of ways that autism can present. Growing up in a household where eccentricity was embraced and hyperfocus understood probably helped me to grow into a relatively confident adult, and not an especially anxious one. Neither myself nor my mother grew up thinking of ourselves as autistic, but we were allowed to be weird, and that makes a big difference.

Part of the variation in autism is also likely to be due to different degrees of monotropism: it has been suggested that the trait might follow a normal distribution, with some people being very monotropic, while others (perhaps the world’s natural multitaskers and people-wranglers) are unusually polytropic. However the trait is distributed, the implication is that some people are closer to having autistic minds than others without qualifying as autistic themselves, and some autistic people have more atypical minds than others in terms of monotropism. This doesn’t make the spectrum linear: there are so many different ways for autism to manifest, and so many co-occurring conditions, that no one variable can come close to capturing them all.

**Implications for research**

If, as I’ve argued, monotropism provides a common underlying explanation for all the main features of autistic psychology, then autism is not nearly as mysterious as people tend to think. We do not need to rely on theories which explain only a few aspects of autistic cognition, with no convincing explanation for sensory hyper- and hypo-sensitivity, or the intensity of autistic interests.

Why then is monotropism not already better known, despite a flourishing of attention in recent years? I believe the reasons are more sociological than psychological. When ‘Attention, Monotropism...’ was published in 2005, none of the three authors were professional psychologists, although one has a PhD in psycholinguistics, and had worked extensively with people on the autistic spectrum; another, Wenn Lawson, received a PhD later for further work on this theory, with their thesis on ‘Single Attention and Cognition in Autism’ since turned into the book A **Passionate Mind**. Lawson had an official diagnosis of autism, which should be an asset for anyone working in autism, but is still seen by some to undermine credibility instead. The other two were undiagnosed.

None were enmeshed in the world of professional psychology, and despite Lawson’s book pointing to several possible tests, they do not seem to have known which strings to pull to make sure psychologists conducted the empirical work needed to rigorously test monotropism. Autism deserves good, well-evidenced theories, and while it is easy to point out major flaws in autism theories that psychologists have largely accepted, it makes sense that they would be reluctant to accept a newer theory from relative outsiders, however much it explains. Sue Fletcher-Watson, a psychologist in the field, points out that ‘often in psychology a new theory is built on top of an empirical finding—this is what happened certainly with Theory of Mind which was rooted in a 1985 experimental study by Simon Baron-Cohen, Alan Leslie and Uta Frith. For non-autistic psychologists, there is no lived experience of autism out of which to build a theoretical model and so experimental data have to come first. This could be another reason why autistic-led theories, drawn at least in part from internal observations, struggle to make a big impact in mainstream research.’

This could be about to change. More researchers in recent years have started listening seriously to autistic perspectives on our own experiences and the theories used to describe us, and this is undoubtedly part of the reason monotropism has been gaining more attention. As psychologists dig deeper into aspects of autistic experience they have tended to overlook, including perceptual processing and the nature of autistic interests, there is great appeal in a framework that ties together these seemingly disparate strands (while deepening explanations of things like executive function and social problems). Perhaps it can also provide some helpful hints for neuroscientists. Meanwhile, insight into the monotropic mind is already helpful for anyone living and working with autistic people; I would love to see more practice-based research, looking at the impact of being able to make better sense of autistic behaviour and perspectives.

My hope is that in a few years psychologists will look back at the fragmentary accounts they have been working with, and wonder why it all seemed such a puzzle for so long. But I’m not a psychologist, I’m just an autistic schoolteacher; perhaps you should take what I say with a grain of salt.

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**Key sources**


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