



Neurodiversity –

A societal question-

Does it matter and are there unintentional risks?

Can we be doing more to screen, identify, support include and plan?



Neurodiversity, a topic difficult to cover, as many people do not understand it and many feel uncomfortable with it. Many don't understand the world of mental health and like those within that world need a label to give them a peg. That peg can be round or square. Square pegs do not always fit into round holes and vice versa. Pegs or labels can be right wrong or completely misleading. With society's obsession with labelling in a modern complex world, and, the [United Nations 2030 Agenda for Autism, Inclusion and Neurodiversity](#), which most, if not all countries have signed up to. It's time we had a meaningful grown up societal discussion on what this means.

In September 2015, the UN General Assembly adopted the new 2030 Agenda for Sustainable Development, which includes [17 Sustainable Development Goals \(SDGs\)](#) and 169 targets that promise to "leave no one behind." In 2016 the World Autism Awareness Day focused on Inclusion and Neurodiversity.

A discussion, not just about those with minimal support needs, but those with high levels of support. Does neurodiversity directly correlate in the modern world to a neurodevelopment condition? Does diagnostic context mirror clinical treatments, (drugs or psychology) and do either genuinely fit into a societal context?

Neurodevelopmental conditions, for example Autism, ADHD, Learning Disability, are not in a societal context a mental health disorder, yet currently in diagnostic and clinical terms they are. Globally are they not out of sync and kilter? Not perhaps surprising, given that we live in exciting times with for example – 'The current diagnostic paradigm is coming under pressure. Scientists are making discoveries that are striking at its core assumptions revealing a fundamental disconnect between these assumptions and the true nature of mental disorders. At the same time, there is growing concern that it is not delivering translatable science that can lead to therapeutic innovation to the benefit of patients, probably because it is some degree misrepresenting nature of disorder' ([Edmund J.S. Sonuga-Barke, Developmental Psychology, Psychiatry & Neuroscience, Kings College London, London UK – Journal of Child Psychology and Psychiatry 61:1\(2020\), pp1-3](#)). Neurodevelopment conditions are conditions not disorders.

Already one is getting a sense of the challenge and complexities of this topic.

Speak to parents, and you will find that the patient pathway through paediatrics and CAMHS is often complex and convoluted. Children and young people will often be diagnosed with one disorder only to be subsequently diagnosed with another several years later. Whilst the current nosology of disorder may be disputed, it is currently the only way to secure support and services, and yet 'complexity is the norm', so why do we continue to paint simplistic pictures at a critical time when key decisions are being made about the requirements of those most susceptible to error?

As an advocating parent, professional, and strategist, for me it's all about how individuals have inclusion and opportunities within society equal to their abilities, capabilities and their peers. In this sense neurodiversity does matter.

There has been an exponential increase in recent years in the use of the following words or labels if you prefer - Neurotypical, Neurodivergent or Neurodivergence, and Neurodiversity. In the interests of clarity, let's broadly define each as perceived by a collective knowledge base of society.

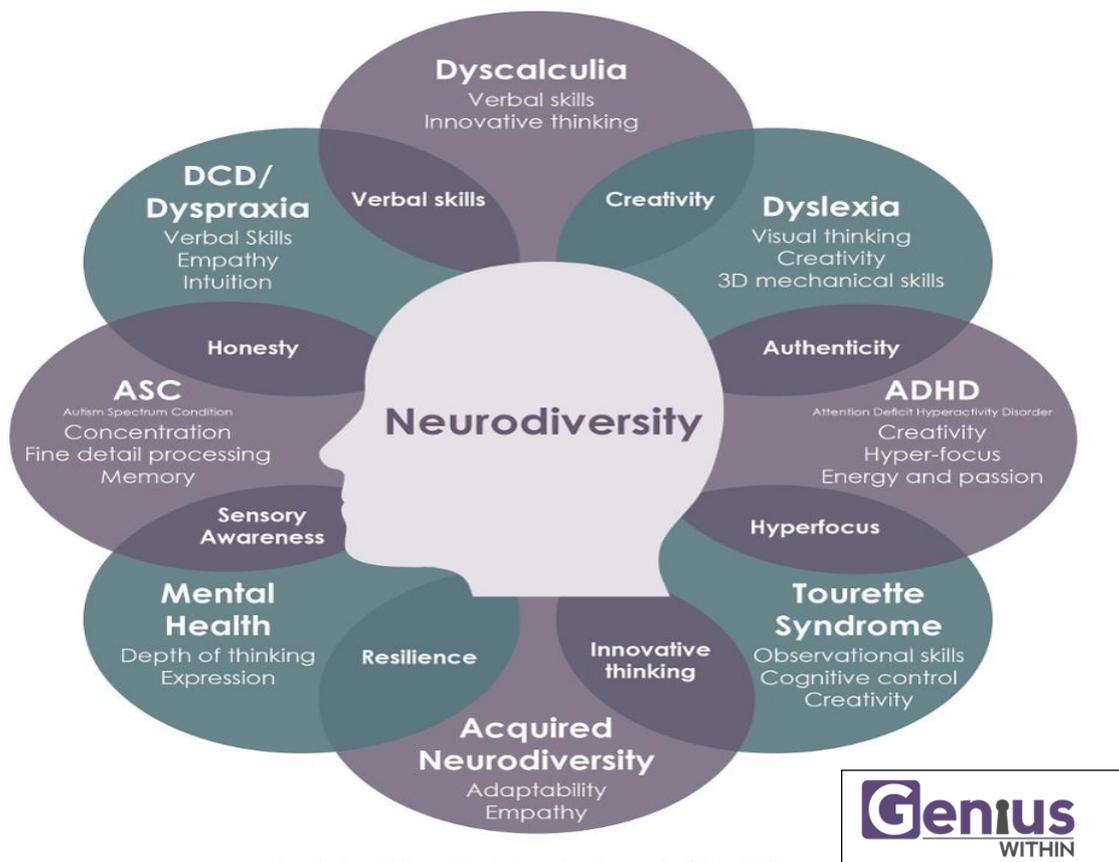
Neurotypical, is the newest of these words and is used to describe individuals of typical development, intellectual and cognitive abilities.

Neurodivergent or Neurodivergence is a word that is used to describe the experience of having neurological variations that are seen as outside the cognitive norm.

Both these labels have for far too long, been positioned as opposites. As oppose to, for example being complimentary to one another, which in a modern world within society and business, we know they can be.

Neurodiversity is the viewpoint that brain differences are normal, rather than deficits. Neurodiverse people are wired differently from their neurotypical peers, and for that reason, have different experiences of the world they inhabit, and their relationships with others.

See Venn diagram below explaining neurodiversity associated conditions, and their contributing assets. [Created by Dr Nancy Doyle, based on the work of Mary Colley, incorporated into a piece within Forbes –'Richard Branson Opening Doors to Bigger Thinking'](#)



Does neurodiversity matter?

You can draw one's own conclusions, however pose a couple of thought based on the above diagram.

How much of the population and electorate is represented within the above diagram? Almost half?

How many of your colleagues have one of these conditions, but haven't disclosed?

In a societal context does neurodiversity matter? In my mind it does. Big caveat, as a society we must not use 'umbrella labelling' for the sake of short-termism in either policy or political sense, nor for the sake of the variances within neurodevelopment conditions.

In a Scottish context alone, Autism has an economic cost of £2.2bn annual costs, ([The Scottish Government Microsegmentation of the Autism Spectrum Economic and Research Implications for Scotland March 2018](#)), add or subtract other costs comorbidity or directly associated to the other components in the above diagram and we can draw a realism that costs are greater.

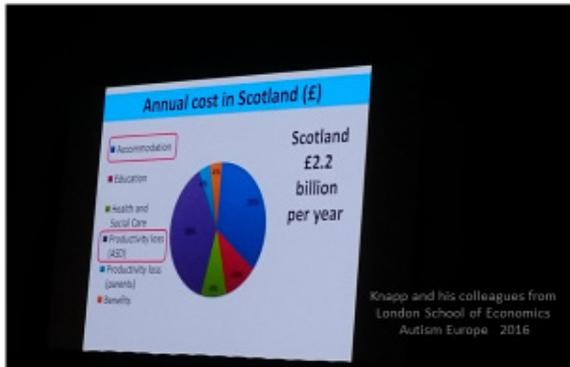
According to a published report in 2014, the autism cost for the UK, were at least £32bn a year in terms of treatment, lost earnings, care and support for children and adults with ASD, found the study, published in the *Journal of the American Medical Association Paediatrics*.

For the benefits of societal discussion drawing a simple parallel based on these numbers above provides a global estimate.

Country	Scotland	United Kingdom	
No of Autistics	46000	700000	
Costs	£ 2,200,000,000.00	£ 32,000,000,000.00	
Global No. Autistics	7700000000	7700000000	
Global Costs Est	£ 368,260,869,565,217.00	£ 352,000,000,000,000.00	£ 360,130,434,782,609.00
			USD 463,299,316,472,699
Cost Per Ind. Scotland	£ 47,826.09		
Cost Per Ind. UK	£ 45,714.29		
Cost Per Ind. Globally Est			£ 46,770.19
			USD 60,168.74

We know from the breakdown of the Microsegmentation report 42% combined (autistic individuals and parents) overall costs is lost productivity.

Should we be working together to address the challenges?



Total Cost Scotland	100%	£2,200,000,000.00
Accommodation	35%	£770,000,000.00
Education	10%	£220,000,000.00
Health and Social Care	9%	£198,000,000.00
Productivity Loss		
ASD	38%	£836,000,000.00
Parent	4%	£88,000,000.00
Benefits	4%	£88,000,000.00
Productivity Loss Over all	42%	£924,000,000.00

£2,200,000,000.00

Formally within Micro-segmentation of Autism in Scotland Report McKay Et al, 2018

Positive Partnerships Thom Kirkwood May 2017

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For the benefit of discussion purposes once again look at numbers.

Lost Productivity Scotland	£	924,000,000.00
Lost Productivity United Kingdom Est	£	13,440,000,000.00
Lost Productivity Globally Est	£	151,254,782,608,696.00
	USD	194,585,712,918,533.00

Neurodiversity in the workplace

The UN Agenda committed to 'leaving no one behind' with one the goals being Autism, Inclusion and Neurodiversity with opportunity and employment being a positive step forward in addressing this.

Within the last decade, or so we have heard, lots about diversity and inclusion, gender balance, religious and cultural differences and so on but sadly little in reality about neurodiversity. Why?

[McKinsey's research](#) show that gender-diverse companies are 15% more likely to outperform their peers and ethnically diverse companies are 35% more likely to do the same.

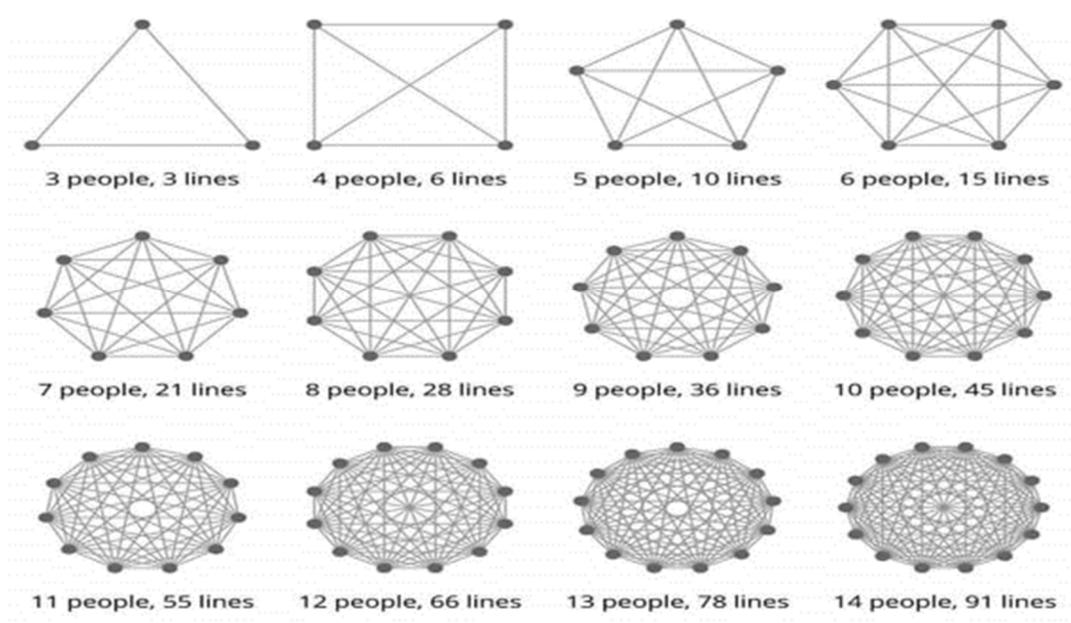
[Catalyst Research](#) show organisations with more women on their boards over a long period of time outperform their peers.

[Deloitte research \(Australia\)](#) tells us that in team based assessments, inclusive teams outperform their peers by 80%

It is very evident that McKinsey, Catalyst and Deloitte (Australia) found very clear evidence that diversity and inclusion doesn't only matter but has a significant impact on performance.

This provides us with evidence that most businesses are at least aware of the importance of diversity regards to ethnicity, gender, race, and religion, and taking appropriate action. Where is 'neuro'? What about the different ways individuals encompassed under the 'Neurodiversity' umbrella learn, process, differentiate, and fundamentally communicate?

Pausing for a second, the diagram below illustrates many things, for example it can be about barriers, communication pathways, access pathways, cross policy connectivity and complexities. I am sure many of you could add to this list from your own experiences, irrespective of your own 'neuro'.



Permit me to highlight a challenge in addressing a broad strategic factor. In a Scottish context, there are at least 10 organisations within the public/private sector at national level that have to take the 'collective lead' to change here. From the image above change people to organisations and suddenly the challenges become visual.

We must also lose the stigma, that the perception of neurodevelopmental differences is a lack of ability or capability, as well as endorse the opportunity neurodiversity brings especially when it comes to opportunity and employment, both are about societal inclusion.

I have had the pleasure of engaging with many neurodivergent individuals some of whom, are in employment in social media, I.T., finance and manufacturing, with many having a significant aptitude for the STEM sector, Science, Technology, Engineering and Mathematics, a sector which brings huge opportunity and potential as the global business environment changes.

We know from the United States EY's (formerly Ernst and Young) collaboration with Microsoft, SAP, AT &T, Ford, Hewlett-Packard, and JP Morgan Chase, which includes sharing best practice, and challenges, as well as creating a pool of appropriate candidates has helped bridge that GAP.

I have to agree with an article by Karyn Twaronite, EY Global Vice-Chair – Diversity and Inclusiveness, May 2019, - ['How neurodiversity is driving innovation from unexpected places'](#).

We know, many very capable autistics fail to get past a psychometric test, because these tests are based on neurotypical psychological thinking, often very general and do not have a specific focus on the job function itself.

Can we together use reflective learning from the work place help us address the unfair imbalance and give business an opportunity to access a wider potential workforce that can meet job specific opportunities more appropriately?

Together of course we can!

Focusing once again on autism for illustrative purposes when one employs an autistic they get



Images Courtesy of Autism Shifts

Unfortunately, across the UK as a whole and I suspect in other parts of the world also, not just Scotland. There is no cross policy cohesion that is connected in a way with good pathways which ultimately drives or supports such innovation, with inclusive and reasonable adjustment or beyond, that are sufficient to establish a broad policy of practice and delivery. One that doesn't impact on one's financial ability to survive within a society whose public policies and laws are geared around Human Rights.

Does society have a responsibility to address such imbalances? **As a collective of course we do.**

Can we prove it? How?

Can we alleviate and support some of the challenges by earlier actions? **Of course we can.**

Can we illustrate, measure and quantify? What are our objectives aims and outcomes?

Can we invest to save? **Of course we can.**

Can we illustrate, measure and quantify? What are our objectives aims and outcomes?

Can we provide data to support medium to longer term planning? **Of course we can.**

Yes, providing we do the baseline study as well as the comparable studies with measurable outcomes?

There is one caveat neurodiversity must not just about the more able, but the less able as they too have ability, yes this does raise questions over support.

Can we evidence the differentials and benefits of early intervention across the board?

It could be argued there are positives and negatives associated the neurodiversity agenda. That said, supporting all, is always beneficial when it starts as early as possible. This takes me back to the big 7

big 'What if?' from June 2019 in a meeting with key players across education, health and social care, mental health, Scottish Government and Local Government. They were -

1. What if I told you there was an accurate, cost effective, pre-diagnostic screening process available that supports the identification of various neuro-development conditions and psychiatric disorders, would you welcome it?
2. What if I told you that a comprehensive assessment could be achieved within 5 working days rather than 1-2 years, would you welcome it?
3. What if this enables early identification of both potential condition and early intervention supporting the individual, their parents and practitioners, would you welcome it?
4. What if, of equal societal importance this provides accurate data for medium to long-term service planning within education and broader children and young people's services, would you use it?
5. What if I also told that this was designed by British university team, was the diagnostic tool used by the NHS in their survey of mental health in schoolchildren in England and Wales (2017), is used in various countries and is highly recommended by NIMH in the U.S. yet in the UK is under-utilised? Would you be surprised?
6. What if I told you it provided diagnostic profiles that aligned with those of experienced clinicians and tended to capture complex profiles better, would you be surprised?
7. What if as service managers and planners you were given this, you would snap it up and use it, would you not?

Whatever your role in society, The Development and Wellbeing Assessment, ([DAWBA](#)) enables us to identify earlier and quicker, provide early supportive interventions, plan more effectively, for both mainstreaming and specialism, as well the overlap and much more.

It has to be equally noted that by identifying some of the issues earlier, addressing with appropriate interventions we will increase the number of in-school pupils becoming engaged, included and involved. Thus reducing the number [Not Included, Not Engaged, Not Involved](#).

One must pose further question, Would we by undertaking the above, increase an individual's chances of

- a) Gaining improved exam outcomes?
- b) Accessing appropriate work activity via developing the young workforce?
- c) Enhancing ability to access more opportunities within the STEM Sector?
- d) Utilising reflective learning to produce a suitable psychometric test for autistic supporting a more even playing field in access to work?

Above all it is cost effective!

I conclude as I think we have as a society the opportunity for a progressive much needed societal discussion. A discussion with a joint focus on

- a) Improving the positives and skillsets of individuals of all abilities, as we know early intervention brings benefits, and

b) A balance that ensures specialism are not reduced, merged, or removed as they are critical for diagnosis and support more so for those in need of greater support.

I am with my colleagues proposing a two pronged approach to take some components of this paper forward

- 1) Inviting the private sector and the key partner organisations to help shape a more inclusive way forward re opportunity and inclusion
- 2) Seeking to develop a pilot re DAWBA in a Scottish context as I believe this provide an overall potential cost and outcome benefit directly associated to my big 7 questions.

Reference Links

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Profile Thom Kirkwood

Engagement and Participation Officer, Autism Network Scotland

Thom is educated with Ph.D. Community Development, with professional and societal memberships MAPM, Fint.APA, FRSA, and a highly experienced, motivational and high-performing professional. Thom served our communities well over 40 years in various positions up to and including board/trustee chair and vice chair positions over the years within various third sector and community organisations. Key area of service was as a trustee and Scotland director of the Patients Association pre Holyrood. In a paid professional environment I have held various positions from survey through project management to community inclusion director on major public projects delivered via the private sector. My approach reflects my broad varied experience across both third and private sectors.

Experience spanning 40 years and more, and a knowledge of autism spanning more than 30 years, couple to project, business and strategic management at individual, group, corporate and national level, with a focus on corporate, social responsibility and sustainability.

Thom has served on many policy review forums in areas of Education, Economic Development, Health, Mental Health, Housing and Social Care, where my skillset with a meaningful advocating, mitigating, opportunity and inclusive approach has been constructively objective and balanced, encompassing both productive and beneficial input which is outcome focused.

Thom is a former member of the Scottish Strategy for Autism Governance Group, Chair of the former parent carer sub group and former member of the wider engagement group. As well as facilitating contributor to the NES NHS Training review group. At local level I was a contributory member of Families and Carers, Employment and Wider Opportunities, and Transitions work groups within Stirling Clackmannanshire Council Autism Development Plan.

Thom also undertakes associate input to other key policy areas of Advocacy, GIRFEC, Social Care, Social Security and Travel.

He is a currently member of Scottish Strategy for Autism Review Group and an Adviser to the Independent Review of Mental Health Legislation. He has also provided advocacy support to families in relation the Independent Review The New School Butterstone.

Within Autism Network Scotland I leads projects on

- Autism and Advocacy
 - ✓ Roundtable Policy and Practice
 - ✓ Parental Advocacy Training
- Assisted Travel
- Positive Partnerships
 - ✓ Positive Partnership Workshops
 - ✓ By Community for Community Information Leaflets
- Development of a Single Information Access Portal

Thom is also leads our network interface with Support Groups across Scotland and our network interface in supporting improvement across the following geographical areas

- Angus
- City of Dundee
- North Lanarkshire
- Perth and Kinross
- Renfrewshire
- South Lanarkshire

He networks regularly with the

- ❖ Department for Work and Pensions
- ❖ Social Security Scotland
- ❖ City and Growth Deals
- ❖ Globally with over 900 professionals across public, private and third sectors

Out with the professional environment, Thom is a single parent of 24 year old autistic daughter, diagnosed just before he 3rd birthday. He enjoys rugby, formula 1, all kinds of music, and has recently taken up the clarinet. Thom is also a specialist for Brain In Hand.

Thom also sits on boards of grass roots frontline third sector community focussed service providers

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