An Annotated Introductory Reading List for Neurodiversity

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Abstract

Since its inception, the concept of neurodiversity has been variably defined and widely discussed, which may cause confusion among those unfamiliar with the topic. Further, learning about neurodiversity is challenging given the lack of well-curated, appropriately contextualized information and the prevalence of misinformation on the topic. To address such barriers, we present an annotated reading list that was developed collaboratively by a neurodiverse research group. The 9 themes covered in the reading list span across the history of neurodiversity and contemporary understandings of it. Topics covered in the themes include: the importance of lived experiences, as well as specific research areas such as autism, ADHD, dyslexia, stuttering, traumatic brain injury, and mental health. The final themes are oriented towards ways of strengthening the area of neurodiversity, including considerations regarding anti-ableism, the need for robust research theory and methods, and integration with open, inclusive, and participatory work. We hope this resource can support readers in understanding some of the key ideas and topics within neurodiversity, and that it can further orient researchers towards more rigorous, destignatizing, accessible, and inclusive scientific practices.

Introduction

Neurodiversity can be seen as a paradigm shift in thinking that embraces the diversity of minds, brains, and neurocognition and affirms variation as natural and valuable (Pellicano & den Houting, 2022; Walker, 2014). Like other paradigm shifts, this change in perspective can be challenging to fully understand in the context of education, research, and social thinking. Here, the issue is further compounded as neurodiversity has broad scope. Neurodiversity is not limited to cognitive differences, nor to specific named neurotypes (i.e. commonalities in neurological makeup and functioning, Bottema-Beutel et al., 2021) though it does include named neurotypes like autism, attention deficit/hyperactivity disorder (ADHD; also referred to by some as attention dysregulation hyperactivity development, Dwyer e t al., 2024)) and dyslexia, among others. This breadth can pose a challenge for a more complete understanding of what neurodiversity entails. At the same time, neurodiversity is inherently interdisciplinary, and terminology used to describe it and key ideas can vary both between specific research areas and between research and activism. Further, research and activism can intersecting in areas such as disability rights, mental health advocacy, social justice, and equity, diversity and inclusion efforts in education and in the workforce (Clouder et al., 2020; Dwyer, 2022; Manalili et al., 2023).

Numerous definitions of neurodiversity, as a movement, research field, and framework or paradigm³ exist (Dwyer, 2022). We distinguish between these three aspects in the following way: the neurodiversity movement encompasses social, advocacy, and political movements advocating for the rights, inclusion, and acceptance of neurodivergent people; the neurodiversity research field is a largely academic field studying, for instance, psychological and social aspects of neurodiversity; the neurodiversity paradigm or framework is a conceptual framework that at its core challenges medical or deficit-based views of neurodiversity and instead asserts that neurocognitive differences should be seen as natural variations. These three aspects can overlap and intersect. Each of them contributes to a holistic understanding of neurodiversity. Unless specifically discussing one of these aspects, we generally adopt the term 'neurodiversity paradigm' as a broader idea, encompassing ways of thinking applicable to both the neurodiversity movement and research field.

Neurodivergent people typically exhibit neurocognitive variations outside the perceived norm (Walker, 2014). However, defining and interpreting neurodiversity remains complex. On the one hand, neurodiversity is viewed through a theoretical lens as a social ecology of mental functions (Chapman, 2021). On the other hand, researchers compare neurodiversity to biodiversity in nature (Silberman, 2015). As a result, people may consider neurodiversity to be a political label, as opposed to a biological label (Chapman, 2021; Ne'eman & Pellicano, 2022) or conversely, a biological impairment as opposed to "normal" or neurotypical behavior. Nevertheless, both arguments could undermine neurodivergent people, as neurodivergence can thus be seen as a fictitious identity or a condition defined only by limitations, overshadowing the unique traits of individuals. The debate continues to be contentious, and various definitions have been proposed and debated. Asasumasu (2015) coined the term neurodivergent and defined it as "neurologically divergent from typical". Asasumasu's definition was broad and inclusive, capturing *all* such forms of divergence, explicitly noting autism, epilepsy, post-traumatic stress disorder (PTSD), cluster headaches, Chiari malformation, ADHD, multiple sclerosis,

Parkinson's, apraxia, cerebral palsy, dyspraxia, various mental health conditions, and neurological differences for which no formal diagnosis has been defined (e.g. aphantasia). Other complementary work has similarly proposed or considered broad views including, for example, dementia (Silberman, 2023), as well as mental health conditions like depression and anxiety (Mellifont, 2019). Still, others, however, have insisted that neurodivergence primarily encompasses neurodevelopmental disabilities like autism, dyslexia, and dyspraxia (Walker, 2014) or limit consideration to neurocognitive functions (Shah, 2022), even while aware of Asasumasu's intentions (e.g., Monzel et al., 2023). This lack of consensus, driven by differing theoretical lenses and contexts, underscores the complexity of defining and interpreting neurodivergence within a social construct.

Beyond the breadth and variability in definitional standpoints for neurodiversity, an additional challenge for researchers and educators wishing to learn and implement neurodiversity-affirming practices is the insufficient information and the presence of misinformation and misunderstandings about the topic (den Houting, 2019). Research studies may employ the rhetoric of the neurodiversity movement without a full understanding of its key assumptions (Neumeier, 2018), perhaps in part due to lack of well-curated accessible resources. Additionally, researchers might mistakenly believe that the neurodiversity movement only applies to neurodivergent people with lower support needs (often referred to as "high-functioning"), excluding those they consider "severe", "profound", "high support needs" or "low functioning" as "too disabled" (Jaarsma & Welin, 2012; note that uncritical use of some of these terms has also been critique as ableist within the neurodiversity movement, Bottema-Beutel et al., 2021; Natri et al., 2023). This can result in the exclusion of neurodivergent people from discussions, despite their valuable perspectives (see Silberman 2023 for an argument on how neurodiversity promotes listening). Such exclusion may stem from the assumption that certain groups lack the capacity for self-advocacy or are not given the opportunities needed to be heard. Alternatively, exclusion can result from the all-too-common disqualification through presumptions of low support needs on the basis that we can make our opinions known (Montgomery, 2005). In some cases, the same people have experienced exclusion or invalidation both for being presumed too disabled and for being presumed not disabled enough (Montgomery, 2001; Baggs, 2005). These challenges, combined with limited awareness of diverse neurodivergent groups and a lack of knowledge on implementation strategies, hinder the necessary identification and adoption of inclusive, robust practices in the behavioral, cognitive, and social sciences, as well as in educational and clinical work.

In order to foster interest in neurodiversity initiatives, as well as promote more robust research in the field, an understanding of key ideas and debates, how they've developed, and current perspectives is needed. To facilitate this, an accessible overview introducing the concept and research field of neurodiversity is crucial. Such an overview should move the field forward and ensure that neurodiversity is promoted and further develops as a paradigm (e.g., Cruwell et al., 2019; Kathawalla et al., 2021; Kalandadze & Hart, 2024).

To this end, we have created an introductory reading list. We developed this list collaboratively amongst a community of neurodivergent and neurotypical researchers, guided both by research expertise and lived experience. We first made an open call for reading recommendations on

neurodiversity, targeting thoughtful and impactful literature. Recommendations were welcomed from both academic and non-academic sources, with no exclusion criteria for specific topics or formats. Contributors were asked to explain the strengths of their suggestions, and each recommendation was independently verified by a second researcher. Three co-authors thematically analysed and categorised the papers, and the final thematic categorization and paper selection were refined through team discussion. The selection process aimed to prioritize materials that were educational, thoughtprovoking, and broadly relevant (see Supplement for more details on the methods). We provide key readings across a variety of topics necessary for a fundamental understanding of neurodiversity, including the history of neurodiversity and contemporary understanding of it, as well as themes relating to the importance of lived experience, and specific research areas such as those relating to autism, ADHD, dyslexia, dyspraxia, developmental language disorder, and stuttering. Our final themes are oriented towards the future directions of neurodiversity research, particularly around considerations regarding anti-ableism, the need for robust theory and methods, and integration with open scholarship and participatory work. These final themes are actionable steps for future work, and so we hope this resource can support readers in not only obtaining a fundamental and holistic understanding of neurodiversity, but also that it can further orient researchers towards applying more rigorous and destigmatizing scientific practices.

Themes

What is neurodiversity?

History of neurodiversity

Selection 1: Botha, M., Chapman, R., Giwa Onaiwu, M., Kapp, S. K., Stannard Ashley, A., & Walker, N. (2024). The neurodiversity concept was developed collectively: An overdue correction on the origins of neurodiversity theory. *Autism*, 28(6), 1591-1594. Selection 2: Sinclair, J. (1993). *Don't mourn for us. Our Voice*, 1(3).

The neurodiversity movement emerged in the 1990s, following the influences of the autistic rights movement and earlier disability rights movements of the 1960s-70s (Botha et al., 2024; Kapp, 2020). Many have tried to pinpoint the exact moment when the term "neurodiversity" emerged. Botha and colleagues (2024) refer to recent archival examinations of extant texts from the 1990s, including forums, community email lists such as Independent Living (autism community), and records of community members and prominent activists of the time, including Tony Langdon in 1996 and Harvey Blume in 1997 and 1998. The authors highlight that many people throughout the 1990s discussed ideas about "neurological diversity", with the specific term "neurodivergent" later coined in the 2000s by Kassiane Asasumasu (2015). Considering this, Botha and colleagues argue that the idea of neurodiversity was collectively developed. This corrects a common erasure of neurodivergent people from their own history in misattributing the term singularly to Judy Singer's first academic use in her 1998 honors thesis and shows the neurodiversity movement has always had a strong community spirit.

For many, neurodivergent communities offer belonging, social connectedness, a way to share experiences and perspectives, and practical support and advice, including empowerment (Botha, Dibb & Frost, 2022). Empowerment is essential for wellbeing, self-efficacy, and acceptance, especially for neurodivergent people who face greater risks for isolation, stigmatization, negative stereotyping, and even victimization, with a recent meta-analysis showing that almost half of autistic people had experienced some form of victimization (Trundle et al., 2023). The early autistic self-advocacy movement of the 1990s was acutely aware of these risks faced by autistic and broader neurodivergent communities. One salient response can be found in Jim Sinclair's speech "Don't Mourn for Us" presented at the 1993 International Conference on Autism in Toronto (Sinclair, 1993). Sinclair's speech, primarily directed at parents of autistic children, underscores the importance of understanding autism - and indeed neurodiversity - not through a focus on perceived deficits, but by appreciating each person in their own right. These ideas still form part of critical debates around whether and how intervention practices could align with inclusive, participatory, and non-stigmatizing approaches to fostering neurodivergent wellbeing (Leadbitter, 2021).

How do we think about neurodiversity?

Selection 1: Dwyer, P. (2022). The neurodiversity approach(es): What are they and what do they mean for researchers?. *Human Development*, 66(2), 73-92.

Selection 2: Constantino, C. D. (2018). What can stutterers learn from the neurodiversity movement?. In *Seminars in Speech and Language* (Vol. 39, No. 04, pp. 382-396). Thieme Medical Publishers.

Collective understandings of neurodiversity have evolved significantly in the last 30 years and can be challenging to trace back and understand without context. Two key papers examine the history of neurodiversity and its key ideas (Dwyer, 2022; Constantinto, 2018). Both analyze how medical, social, and contemporary models of neurodiversity offer different tangible targets for research. Researchers, activists and laypeople increasingly refer to natural variation in human brains, behavior, and cognition as neurodiversity and consider neurocognitive variants like autism, ADHD, dyslexia, stuttering and others as part of this natural variation rather than only "disorders" that always need to be "cured" or "fixed". A growing body of socio-environmental research suggests the difficulties neurodivergent people face cannot fully be understood at the individual level, but rather societal barriers and their interactions with personal characteristics, abilities, and circumstances should also be examined. This paves the way for both environmental and societal support, including accommodations, increased accessibility, anti-discrimination protections, as well as individual-level support (e.g., learning adaptive skills). Building on these ideas, Dwyer recommends researchers interested in neurodiversity do not exclusively focus on studying perceived weaknesses, but instead balance such research with also studying neurodivergent people's strengths and how they can be leveraged to help neurodivergent people thrive and achieve their goals. In a similar light, Constantino argues therapy and interventions should focus on people's wellbeing rather than perceived "normalization" of particular behaviors. As an illustrative example, this could mean that when providers offer early interventions to young stutterers, the sole focus need not be placed on fluency but could entail assisting young people with their subjective experience of stuttering, affirming their emotions, and helping improve their wellbeing (Shenker et al., 2023).

Current topics

The importance of lived experience

Selection 1: Johnson, R. M. (2023). Dyslexia is not a gift, but it is not that simple. *Infant and Child Development*, 32(5).

Selection 2: van Gorp, R. (2022). My journey and the value of a community where neurodiversity is celebrated. *Scope Contemporary Research Topics: Learning and Teaching*, 11, 42-49.

The neurodiversity movement, with its focus on advocating for neurodivergent people, serves as a framework through which advocates, practitioners, and researchers challenge traditional assumptions about neurodivergent experiences. Prior to the emergence of neurodiversity as a paradigm, the dominant approach - rooted in biomedical psychiatry - categorized individuals into "mentally disordered" subgroups based on their symptoms (Chapman, 2021; Hunt & Procyshyn, 2024). This medical model has been critiqued as dismissive of people's experiences, by treating them as unreliable (and individual/anecdotal), and perhaps even limiting people's opportunities to independently understand their own thoughts, feelings, and behaviors (Cutler, 2019; Petty & Ellis, 2024). In the context of neurodiversity literature, lived experiences refer to the unique and subjective perceptions, narratives, and encounters of those who identify as neurodivergent. These accounts provide valuable insights into the day-to-day realities, triumphs, and challenges of neurodivergent minds (see Kidd, 2018 on traumatic brain injury). Through shared experiences, neurodivergent communities might gain empowerment, validation, improved self-efficacy and wellbeing, as well as increased social support, connectedness, and reduced feelings of isolation (Watts et al., 2024).

Lived experiences also benefit researchers studying neurodivergent people. For example, Johnson (2023) argues that valuing these experiences is crucial for gaining a nuanced understanding of dyslexic perspectives. Researchers should actively seek partnerships with dyslexic people to incorporate their feedback and center their voices within dyslexia research. Furthermore, neurodivergent researchers themselves can contribute by sharing their personal experiences. Doing so not only reduces stigma but also spreads knowledge about coping mechanisms and tools and illuminates the intersections of neurodivergent experiences and professional careers. Rachel van Gorp (2022), for instance, shares her journey navigating educational spaces over time, both as a neurodivergent student and lecturer. She details her experiences with being diagnosed with Irlen syndrome and dyslexia, as well as her decision to disclose her diagnosis at a Neurodiversity Symposium, and the subsequent empowerment and community support she felt. Indeed, both van Gorp and Johnson emphasize that sharing lived experiences fosters empowerment, inclusion, and compassion, ultimately enriching our collective understanding of neurodiversity.

Autism

Selection 1: Pellicano, E. & den Houting, J. (2022). Annual Research Review: Shifting from 'normal science' to neurodiversity in autism science. *Journal of Child Psychology and Psychiatry*. 63(4), 381-396.

Selection 2: Botha, M., Hanlon, J., & Williams, G. L. (2023). Does language matter? Identity-first versus person-first language use in autism research: A response to Vivanti. *Journal of Autism and Developmental Disorders*, 53(2), 870–878.

The field of autism research has a long history predating the neurodiversity movement, and consequently, both scientific and social understandings of autism have developed over time. The two papers highlighted here poignantly argue for the need to move towards a neurodiversity paradigm for autism science (Pellicano & Houting, 2022), and engage more deeply with considerations around language use, particularly by centering the needs, autonomy and rights of autistic people (Botha, Hanlon, & Williams, 2023).

In their review, Pellicano and den Houting (2022) acknowledge that the conventional medical approach has advanced our understanding of autism, but this approach has been challenged due to the rise in autistic self-advocacy, the neurodiversity movement, and the relative absence of non-deficit based explanations regarding what autism is. The authors focus on big-picture ideas related to the neurodiversity paradigm and its vital application to autism science: 1) focusing on relational contexts, systemic contexts, and the interaction between contextual and individual factors rather than attributing all difficulties for all parties to deficits within one (autistic) party; 2) supporting autistic contributions to autism research, including through support for autistic researchers, collaborations involving autistic people (both lay community members and researchers), and the development of more robust participatory mechanisms for co-design and co-production; and 3) focusing on autistic community priorities, ensuring research-generated knowledge is translated into real-world applications targeting the challenges autistic people face.

The focus on the autistic community's priorities runs as a central theme in Botha, Hanlon and Williams' (2023) discussion on language use in autism research. Their work offers a rich discussion of the differences between person-first language and identity-first language, while acknowledging that there is currently no clear academic consensus regarding autistic people's preferred language, and arguing for the need to replicate and expand previous survey efforts. Crucially, they argue that language use is highly important, with tangible consequences including stigmatization and dehumanization. With this in mind, research and practice should center the needs and experiences of autistic people.

ADHD

Selection 1: Sonuga-Barke, E. J. (2023). Paradigm "flipping" to reinvigorate translational science: Outlining a neurodevelopmental science framework from a "neurodiversity" perspective. *Journal of Child Psychology and Psychiatry*, 64(10), 1405-1408.

Selection 2: Tamir, T. (2023). Being Neurodivergent in Academia: Working with my brain and not against it, *eLife*, 12, e95068.

ADHD is increasingly being explored via a neurodiversity lens through works that not only provide a rich understanding of ADHD but also aim to reshape practical applications in everyday and professional environments. One such example is Sonuga-Barke's (2023) opinion paper, which

critiques the traditional biomedical model that has long dominated ADHD research and therapy, proposing instead a neurodiversity-affirming model. It introduces an innovative intervention program designed not only with the neurodiversity paradigm in mind but also implemented by neurodivergent researchers. This approach not only challenges the existing ways of thinking but also actively involves neurodivergent people in the creation and execution of research, thereby ensuring that the interventions are genuinely reflective of and responsive to the needs of those with ADHD.

Another compelling exploration of ADHD is presented by Tamir (2023). It highlights the personal journey of an academic who initially received a diagnosis of depression during their PhD studies. Years later, an ADHD diagnosis clarified the root of their ongoing struggles with mental health, spurred by the rigorous demands of academia. This narrative underscores the often-misunderstood manifestations of ADHD, such as hyperfocus and impulsivity, which, while sometimes beneficial in a research setting, frequently lead to burnout. The author not only shares a personal story but also discusses strategies that can be adapted to harness ADHD traits beneficially.

Both papers advocate for a shift away from viewing ADHD through a deficit lens to recognizing it as part of the broader spectrum of human neurocognitive diversity. They call for educational and professional systems that do not merely accommodate but actively embrace and adapt to neurodivergent ways of thinking and learning, promoting a more inclusive environment.

Beyond Autism & ADHD

Selection 1: Green, A., [Zisk,] Alyssa [H.], Dura, L., Harris, P., Heilig, L., Kirby, B., McClintick, J., ... & Carrasco, R. (2020). Teaching and researching with a mental health diagnosis: Practices and perspectives on academic ableism. *Rhetoric of Health & Medicine*, 3(2), 1.

Selection 2: Elsherif, M. M., Wheeldon, L. R., & Frisson, S. (2021). Do dyslexia and stuttering share a processing deficit? *Journal of Fluency Disorders*, 67, Article 105827.

Historically, neurodiversity work has focused on autism and ADHD, though our understanding of neurodiversity is broader (Asasumasu, 2015) and includes mental health and language-based disabilities, which we highlight here. Green and colleagues (2020) explored the experiences of nine people who navigate their mental health diagnoses within academia. Through a dialogue format, they discuss various challenges, including around getting a diagnosis, decisions regarding disclosure, managing the limitations and affordances of their disabilities, seeking reasonable adjustments, and advocating for themselves. They also argue that while disability laws in their country acknowledge these needs, those with mental disabilities are still seeking access to education, care, appropriate accommodations, among others. Their work highlights the need to improve inclusivity by promoting conversations about mental health within academic environments.

Elsherif and colleagues (2021) assessed the potential language processing link between dyslexia and stuttering through a prevalence study in a British sample of 164 adults. They found that 43% of dyslexics stuttered during childhood, and 50% of stutterers were identified as dyslexic. Considering their use of medical model language (e.g., deficit), we can strengthen the merits of their contribution

by reframing their findings through a neurodiversity-affirming lens: (1) They provide evidence that dyslexia and stuttering co-occur. (2) They carve paths so future research can rigorously investigate whether dyslexia and stuttering have similar phonological profiles. (3) Their findings may help dyslexics and stutterers be better understood and supported within academia and society. Such reframings align with the push for inclusivity in research concerning dyslexia, stuttering (Constantino et al., 2018; Taylor et al., 2023), and the broader field of speech/language pathology (Manalili, 2022). We also caution against oversimplification when studying neurodiversity. Dyslexia, stuttering, and other forms of neurodivergence need not be seen as gifts to be valued; as others have argued, even 'positive' stereotypes could be harmful (Odegard & Dye, 2024). Instead, it is important to recognize various forms of neurodivergence inherently as variations that contribute to the richness of neurodiversity (Johnson, 2023).

Improving the field

Anti-ableism

Selection 1: Natri, H. M., Abubakare, O., Asasumasu, K., Basargekar, A., Beaud, F., Botha, M., ... & Zisk, A. H. (2023). Anti-ableist language is fully compatible with high-quality autism research: Response to Singer et al.(2023). *Autism Research*, 16(4), 673-676.

Selection 2: Hamilton, L. G., & Petty, S. (2023). Compassionate pedagogy for neurodiversity in higher education: A conceptual analysis. *Frontiers in psychology*, 14, 1093290.

Anti-ableism and anti-ableist language go far beyond the framework of neurodiversity. Anti-ableism is part of the broader disability rights movement, a social movement against discrimination and bias toward disabled people. Specific forms of ableism include psychophobia or sanism, referring to discrimination against people with mental health problems and who, as a result, are "psychiatrized" (i.e., caught in the medical world and sometimes locked in psychiatric institutions; Chamberlin, 1978). Language can play a role in shaping perceptions and attitudes towards people with disabilities, including those with mental disabilities or other forms of neurodivergence. Many studies on neurodivergence are conducted within an exclusively medical and psychiatric framework, which can sometimes reflect implicit biases (Bottema-Beutel et al., 2023). These studies are often carried out by neurotypical researchers, which may inadvertently influence the way neurodivergent individuals are represented. This highlights the importance of adopting more inclusive practices in research, particularly when it comes to language.

However, recommendations for more inclusive and neutral language can often be controversial (see Singer et al., 2023 and Natri et al., 2023). While Singer and colleagues argue more neutral language would hinder scientifically precise descriptions, those promoting anti-ableist language argue ableist terminology is often *both* irrelevant and pejorative. For example, to replace the words "risk" and "comorbidity", they propose the terms "likelihood" and "co-occurring". Similarly, the terms "profound autism", "severe" or "challenging behavior" can be dehumanizing (Natri et al., 2023); at the same time, they are vague: linear divisions of severity may constitute inappropriate dimensionality reduction (Zisk, 2019).

While ableism can be reflected in language, it is not limited to linguistic expression alone, and so antiableism efforts should extend beyond language alone. In the context of anti-ableism in education, Hamilton and Petty (2023) propose establishing a compassionate educational paradigm that emphasizes empathy, inclusiveness, and care. The goals of such efforts are to provide more flexibility in how students access course content and demonstrate their learning, as well as to encourage neurodivergent students to build positive schemas for themselves in an educational context.

The need for robust theory and methods

Selection 1: Gernsbacher, M. A., & Yergeau, M. (2019). Empirical failures of the claim that autistic people lack a theory of mind. *Archives of scientific psychology*, 7(1), 102.

Selection 2: Cheng, Y., Tekola, B., Balasubramanian, A., Crane, L., & Leadbitter, K. (2023). Neurodiversity and community-led rights-based movements: Barriers and opportunities for global research partnerships. *Autism*, 27(3), 573–577.

To advance the scientific study of neurodiversity, robust theory and methods are essential. We highlight two papers with useful insights regarding how such efforts can be advanced (Gernsbacher & Yergeau, 2019; Cheng et al., 2023). Gernsbacher & Yergeau critique a large body of work that erroneously claimed that autistic people lack theory of mind, ultimately finding that the evidence base is "empirically questionable and societally harmful". They do this by pointing out failures in the literature regarding specificity, universality, replication, convergent validity, and predictive validity thus also offering benchmarks of standards that future research should meet. The authors offer many examples of specific research tasks that were either inappropriate to test for theory of mind, too "narrow" in focus, or lacking in convergence between each other (e.g. tasks whose results do not correlate). Overall, their review powerfully illustrates how poor research practices can perpetuate harmful stereotypes and how critical engagement with more rigorous and robust research standards can help course-correct.

Further important aspects for developing robust methods for studying neurodiversity include asking useful research questions with relevance to neurodivergent people's lives and needs (see next theme), and understanding neurodiversity as a global, rather than solely Western area of research and activism. Drawing on their collective experiences in Ethiopia, India, and Hong Kong, Cheng and colleagues (2023) can help readers think about what good research questions are and how they can be addressed. the authors state that the neurodiversity movement shares fundamental goals with decolonization agendas such as dismantling what, at times, to some may have seemed as "objective" scientific efforts that ultimately disparage the truths, knowledge, and priorities of lived experiences (e.g., claims that autistic people lack theory of mind). In this light, decolonizing knowledge production, respecting local theoretical frameworks, and fostering community-led science could be important tools for a more robust study of neurodiversity that does not dehumanize neurodivergent people.

Integration with open and participatory work

Selection 1: Gourdon-Kanhukamwe, A., Kalandadze, T., Yeung, S. K., Azevedo, F., Iley, B., Phan, J. M., ... & Elsherif, M. M. (2023). Opening up understanding of neurodiversity: a call for applying participatory and open scholarship practices. *The Cognitive Psychology Bulletin*, 8.

Selection 2: Heraty, S., Lautarescu, A., Belton, D., Boyle, A., Cirrincione, P., Doherty, M., ... & Jones, E. J. (2023). Bridge-building between communities: Imagining the future of biomedical autism research. *Cell*, 186(18), 3747-3752.

From its inception, the neurodiversity movement has advanced through collective action and conversation (see History of neurodiversity theme). Gourdon-Kanahukamwe and colleagues (2023) consider the power of inclusive collective work as important as ever, with concrete opportunities to catalyze and inspire such efforts within the frameworks of participatory and open scholarship (Elsherif et al., 2022). Large "big team science" initiatives within the open scholarship movement, such as ABRIR (Advancing Big-team Reproducible science through Increased Representation) and FORRT (Framework for Open and Reproducible Research Training) have successfully enabled a variety of projects designed by more diverse communities of researchers, including in the field of neurodiversity (e.g., Elsherif et al., 2022). Other groups, such as the Feminist WonderLab (Hartmann et al., 2024) or newly emerging NeurodiversiTea journal clubs strive to make academia a better place for underrepresented people. To foster productive participatory work with mutual trust and without tokenism, the importance of purposeful involvement at all stages of the research process is important, including deciding the subject and purpose of the research, developing a study's design and protocols, and interpreting and disseminating findings (Heraty et al., 2023). Both Heraty and colleagues (2023) and Gourdon-Kanhukamwe and colleagues (2023) highlight many of the benefits of involving neurodivergent people in co-production and mutuality practices of research, including the promotion of wider epistemic justice, equality in knowledge production, greater relevance of research to lived experience, and greater translational potential of research findings.

Conclusion

This paper aims to be an accessible resource for researchers, educators and students to better understand neurodiversity and support neurodivergent people. It is important to develop neurodiversity, both as a paradigm and social movement, and in rigorous and inclusive ways. Past research, carried out with poor theoretical and methodological approaches, has likely reinforced harmful stereotypes (e.g., erroneous claims that autistic people lack theory of mind; Gernsbacher, & Yergeau, 2019). The eradication of such harmful stereotyping and discrimination will remain challenging as long as existing barriers, including a lack of awareness and knowledge about neurodiversity and its heterogeneity, persist. To address these challenges, we have curated and presented different key papers that contribute and advance our understanding of neurodiversity. We hope researchers, educators, scholars, activists and neurodiversity allies build on this effort and further promote a positive and productive neurodiversity field.

We hope the provided themes - covering the history and more contemporary understandings of neurodiversity, various current topics including the importance of lived experience and anti-ableism,

specific research areas, the need for robust theory and methods, and integration with open and participatory work - offer a solid foundation. For further exploration, we direct readers who are interested in engaging more with neurodiversity to the Framework for Open and Reproducible Research Training (FORRT) <u>Team Neurodiversity initiative</u>. Team Neurodiversity within FORRT has provided several projects including a position statement (Elsherif et al., 2022), a neurodivergent database (see <u>Neurodivergent Authors Database</u>), and projects on participatory research and open scholarship (Gourdon-Kanahukamwe et al., 2023).

This reading list focused not only on what neurodiversity is or has been historically (e.g., medical classifications of disorders), but what it can be. We envision a future where everyone is welcomed, valued, and listened to, where weaknesses are acknowledged without pathologization and strengths are celebrated, leading to continual improvement and positive growth.

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Conflicts of interest

The authors declare no competing interests.

Funding statement

ME is supported by funding from the Leverhulme Early Career Trust. RMR is supported by the John Templeton Foundation (grant ID: 62631). VA is supported by funding from NWO Veni. TC-M is supported by funding from the Spanish Ministry of Economy and Competitiveness (MCIN/AEI/10.13039/501100011033) research project PID2020-114790GB-I00 and the University of Granada (Contrato Puente-Plan Propio UGR).

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Supplemental Materials

Methods

In August 2023, we published an open call for contributions via the Framework for Open and Reproducible Research Training (FORRT) community channels and personal contacts (available on OSF: https://osf.io/c98sk/). Our approach broadly entailed collecting reading recommendations and then double-checking and categorizing all recommended materials.

We were interested in finding thoughtful and robust literature that could provoke discussion, reflection and interest in the field of neurodiversity. We asked people suggesting materials to prioritize articles they were particularly impressed by, that had changed or challenged their thinking, or considered to be fundamental contributions to the field. We did not apply any exclusion criteria regarding the specific field, topic, research method, design, or population studied. We welcomed both empirical (e.g., original research) and theoretical (e.g., position statements) pieces of work. We anticipated that the majority of articles included would be peer-reviewed manuscripts. This was not a formal inclusion criterion, as discussions on neurodiversity also originate outside the academic sphere and continue to be a vibrant topic of conversation beyond formal research settings (Zisk, 2023). We aimed to be as inclusive as possible in order to not miss any potentially relevant content (e.g., working papers, viewpoints, newspaper articles, blogs, manifestos, letters and correspondence). This was done with the particular consideration that position statements, co-produced work, or work with embedded mutuality practices may not always be presented in "traditional" academic formats.

Contributors who submitted reading materials for consideration for the annotated reading list were asked to provide an explanation for their suggestions, describing the strengths or contributions of the specific papers or materials they recommended. People could suggest work that they authored or contributed to. However, to reduce conflict of interest and bias, authors were required to disclose this information. Each paper suggestion was double-checked by a second, independent researcher, who verified citations, content explanations, and optionally provided further comments or personal reflection about the importance of the proposed reading material.

Three of our co-authors (MZ, ME, AZ) then examined all papers, as well as the reasons for recommendations, and any comments, and provided a first thematic categorization of all papers. This categorization was discussed with the entire team. After feedback and discussion with all collaborators, the themes were finalized. Then, we discussed as a group which two papers to highlight per theme. Given the existing varying research specialties in our groups, team members who had research expertise, lived experience, and/or interests relevant to each theme volunteered to finalize the selection of papers and draft a statement of the importance of the reading materials for the corresponding theme. We had on average 2-3 volunteers who worked on drafting each theme directly. Overall, we prioritized papers that we, as a group, considered were fundamentally important, educational, and thought-provoking. Although such criteria can be subjective, we hope that the

plurality of research interests and lived experiences in our group have minimized potential individual level biases.

For the purposes of this annotated reading list, we collected and double-checked 54 items. We categorized a final selection of 18 papers, chosen based on their subjective importance, in three broad themes: 1) What is neurodiversity?, 2) Current topics in neurodiversity, and 3) Improving the field. Within these broad themes, we cover a total of nine more granular subthemes: 1.1) History of neurodiversity?, 1.2) How do we think about neurodiversity?, 2.1) The importance of lived experience, 2.2) Autism, 2.3) ADHD, 2.4) Neurodiversity beyond Autism & ADHD, 3.1). Anti-ableism, 3.2) The need for robust methods, and 3.3) Integration with open and participatory work.

Positionality

We are a diverse group of both neurodivergent and neurotypical researchers, working in and outside of academia in different countries around the world and at different career stages. We are united by our shared interest in neurodiversity on personal and/or scientific levels. Most of our team members form part of the FORRT community. This is an open group for all, where we strive to promote open scholarship, as well as values of social justice, diversity, inclusion, belongingness and equity. The current manuscript was written as a joint, collaborative work, where anyone interested in contributing could do so. The core criteria for authorship entailed suggesting at least two items and checking at least two items. Additional tasks such as theme and paper selection, drafting, editing, analysis, and administrative support contributed to author order and in a small number of cases substituted for material suggestions and/or checking. This led to five groups of authors of varying size, with equal contributions within each group.

As we come from different academic, professional, educational, and personal backgrounds, and similarly have different degrees of privilege, different abilities and skills in different domains, we hold different views on what constitutes "neurodiversity" and how it or its different facets should be most appropriately described and positioned. We view this plurality and divergence of viewpoints as positive and productive, allowing a greater inclusion and consideration of varying perspectives. Our core aim with this annotated list is not to be prescriptive about neurodiversity, but rather to introduce readers to important views on critical topics in the field, such as key historical and current trends, as well as open discussion about how to strengthen the field.

Notes on language and ideas captured in the reading list

We note that the reading materials captured in our list are varied in terms of their topics, publication time and cultural context. With this in mind, the materials thus vary regarding their own positionality, language use, and viewpoints regarding neurodiversity. On the whole, we have strived to highlight important and productive ideas about neurodiversity, while rejecting stigmatizing and ableist views.

Our collective social and research understanding of how stigma and ableism work advances over time, so we therefore wish to acknowledge that research standards and views around what constitutes (in)appropriate positionality and language also change. This is especially important in the context of neurodiversity; as neurodiversity is not a "monolith", different areas of study or social activism have their own current standards.

In the present paper, we have leveraged both the research expertise and lived experiences in our team to come to a general agreement about how to highlight important work, while minimizing harm. We have done this both by open general discussion, where all members from the team were welcome to feedback on all papers, at any time, as well as by more targeted reading. Specifically, all highlighted papers were independently read by at least three people (most by five, all of these independent readers were not involved in recommending, double-checking or summarizing the corresponding papers) to ensure that at a broad level, the core ideas were not stigmatizing, ableist, or harmful. Further to this end, for the more widely studied topics within neurodiversity, such as autism and ADHD, we also required that academic papers do not consider autism or ADHD through an exclusive deficit-based view (for instance, treating autism or ADHD as disorders or separating individuals into "high" or "low" functioning based on arbitrary statistical cut-offs). We did not impose such restrictions on language for areas of neurodiversity that have been historically understudied, such as Developmental Language Disorder, stuttering or dyspraxia, where we worried that further exclusion of these bodies of work may decrease their recognition as important fields within neurodiversity. Lastly, we acknowledge that despite our quality assurance procedures, it is possible that some of the more granular ideas expressed within the selected papers can still be controversial and debated - for instance, we note in passing, that some papers included brief generalizing statements or phrases that could be negatively charged (e.g., communication impairments instead of communication differences). In this regard, the fact that we have highlighted a certain paper does not mean we agree with all of its ideas or language used. We nevertheless strived to only include papers if their core ideas were, in our joint opinion, not stigmatizing or ableist.

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