# *Neurodiversity and the social model of disability*

Milo Migacz*
* Logopsycom

This article has been written as a part of the EntrEUth project, funded with support from the European Commission. This publication reflects the views only of the author, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.

## ABSTRACT

*The purpose of this paper is to provide definitions needed to understand different approaches towards dyslexia, ADHD, autism, and other forms of neurodivergence.*

Keywords: neurodiversity, disability, autism, dyslexia, ADHD

## INTRODUCTION

The human species is neurodiverse, which means that there are many different ways in which various people can process the same stimuli or information. When these differences diverge from common expectations so that it becomes difficult to function in certain environments, we can talk about neurodivergence as a form of disability. The common examples of neurodivergence are autism, ADHD, dyslexia, and dyspraxia. It is troublesome to assess the prevalence of neurodivergence as it is an umbrella term for various traits that are difficult to count properly. Nonetheless, various studies provide us with estimations. According to the combined data from multiple countries, about 1% of children worldwide are diagnosed as autistic and in some countries, this number can rise to 4% (Zeidan et al., 2022). The estimated prevalence rate of dyslexia diagnosis worldwide is 7.10% (Yang et al., 2022), and for ADHD that rate is 5.29% (Polanczyk et al., 2007). It is necessary to notice that these numbers cover only the people diagnosed and that they can be influenced by factors such as accessibility of medical care and diagnostic systems. Nonetheless, even with the limited data, it is possible to say that neurodivergence is not uncommon, and it is reasonable to expect several neurodivergent people in every school and most workplaces.

In the modern discourse around neurodivergence, there are many contradicting approaches, which in some cases leads to confusion and lack of understanding. This article provides the most basic information needed to interpret the different approaches towards disability and neurodivergence. It raises the topic of the differences between the medical and the social model of disability. It also

describes the neurodiversity paradigm and the practical implications of it.

# II. MODELS OF DISABILITY

## *A. Individual (or medical) model of disability*

Medical models of disability are based on the idea that there exists a normal human set of abilities and behaviours (LeFevre-Levy et al., 2023). The idea that it is possible to draw a line between people who match this set of characteristics and those who do not is central to the medical paradigm. While professionals operating within this model have diverse opinions on where exactly to draw this line, they generally agree that it is useful to differentiate between the individuals who match the norms and those who do not. In order to do that, various manuals such as DSM-5 and ICD-11 provide medical staff with the criteria to diagnose their patients and, therefore, specify in which ways they diverge from the theoretical norm.

According to the medical model, disability is defined as any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being (LeFevre-Levy et al., 2023). The medical model is also called the individual model because it categorises disability as something internal to the individual.

The medical model of disability has been the dominating model since the beginning of modern medicine. It stemmed directly from the medical way of thinking that focuses on identifying the disease and applying the cure. Indeed, the professionals operating within the medical model have been successful in developing various treatments to alleviate the suffering connected to certain disabilities. Nonetheless, the wide application of this model also had numerous negative consequences since it ignores the social aspects of disability and puts pressure on the individual who deviates from the norm.

## *B. Social model of disability*

The social model was constructed in direct opposition to the dominating medical model. It defines disability as a dynamic social construct based on what society, medical professionals, and institutions deem as normal and changing depending on the context (Marks, 1997; LeFevre-Levy et al., 2023).

Critics of the medical model notice that the ideas of ability and disability are deeply rooted in the social context and that it is impossible to draw a fully objective line between people who fit in the norm and those who do not. It emphasises that any norm is subjective at its core.

The social model recognises that the level of ability depends both on the individual and on their environment. A person with the same condition is able to do different things depending on factors such as their financial situation, social connections, and, last but not least, access to medical care and equipment. The situation of two different people with mobility issues can vary a lot depending on whether they have access to a wheelchair, an elevator in their building, and finally, friends and family willing to support them.

The disability, according to this approach, is a product of a relationship between individual predispositions and the environment. The pressure is, therefore, shifted from the individual to the community, which is why many activists and social workers find it useful for demanding systemic change.

# III. NEURODIVERSITY

## *A. Neurodiversity paradigm - basic information*

The neurodiversity paradigm stems from the social model of disability and applies it in the area of neurological functioning (Lee, 2024). The main assumption is that all neurological systems work in various ways and that a wide range of differences is natural for human beings. People using this paradigm, therefore, see dyslexia, autism, ADHD, and other forms of neurodivergence as manifestations of human diversity (Chapman, 2020).

The neurodiversity paradigm is the way of thinking that values this diversity and opposes the prejudices against neurodivergent people. The neurodiversity movement is, on the other hand, the social movement that applies these ideas in practice.

## *B. Neurodiversity politics*

This approach to neurodivergence has deep political implications. As one of the earliest advocates within the neurodiversity movement, Judy Singer writes: “The <<Neurologically Different>> represent a new addition to the familiar political categories of class/gender/race” (Judy Singer, 1998).

One of the most popular conceptions of neurodiversity is described by autistic advocate and academic Dr. Nick Walker, who defines the neurodiversity paradigm in the following way:

The neurodiversity paradigm is a specific perspective on neurodiversity – a perspective or approach that boils down to these fundamental principles:

1.) Neurodiversity is a natural and valuable form of human diversity.

2.) The idea that there is one “normal” or “healthy” type of brain or mind, or one “right” style of neurocognitive functioning, is a culturally constructed fiction, no more valid (and no more conducive to a healthy society or to the overall well-being of humanity) than the idea that there is one “normal” or “right” ethnicity, gender, or culture.

3.) The social dynamics that manifest in regard to neurodiversity are similar to the social dynamics that manifest in regard to other forms of human diversity (e.g., diversity of ethnicity, gender, or culture). These dynamics include the dynamics of social power inequalities and also the dynamics by which diversity, when embraced, acts as a source of creative potential (Walker, 2020).

Similarly to the propagators of the broader social disability model, people working within the neurodiversity paradigm put pressure on the necessity to transform communities, families, schools,

and workplaces to make them more inclusive. The main idea is that various ways of thinking and processing information are and will always be common. The goal of a functioning society should, therefore, be to coexist successfully and not to dispose of those differences.

While those working within the neurodiversity model endorse treatments to minimise the suffering of neurodiverse people, they also emphasise that the efforts to make disabled lives better should go beyond that. A wide societal change is necessary to accommodate the needs of those with all neurotypes. This includes changes in workplaces, schools, and all kinds of institutions.

## CONCLUSION

The neurodiversity paradigm and the social disability model have a big potential for facilitating social change, promoting the vision of a society in which everyone can participate and where diversity is viewed as a source of strength.

Some examples of the tools that can bring the society closer to that goal are:

- Adapting schools and universities to make access to education easier for the neurodivergent minority and creating alternative learning methods to better accommodate the needs of neurodivergent (i.e. dyslexic) people (Benmarrakchi et al., 2019; Cano et al., 2021);
- Changing the way of thinking around treatment and rehabilitation to focus more on serving disabled people and less on making them conform to the norm (Marks, 1997);
- Adapting existing workplaces to hire a more diverse group of workers and to respond to the needs of neurodivergent employees (Hagan, Brian, 2004; Bruyère, Colella, 2024);
- Supporting the creation of new initiatives led by neurodiverse people, enabling them to build spaces where they are in charge.

Moreover, the paradigm shift brought by the growing prevalence of the neurodiversity movement can catalyse human innovation and bring to life new solutions that were not yet considered and may revolutionise how we think of diversity and inclusion.

## REFERENCES

Benmarrakchi, F., Ouherrou, N., Elhammoumi, O., & El Kafi, J. (2019). An Innovative Approach to Involve Students with Learning Disabilities in Intelligent Learning Systems. In M. Ezziyyani (Ed.), *Advanced Intelligent Systems for Sustainable Development (AI2SD'2018)* (Vol. 914, pp. 39–50). Springer International Publishing. https://doi.org/10.1007/978-3-030-11884-6_4

Bertilsdotter Rosqvist, H., Chown, N., & Stenning, A. (2020). *Neurodiversity studies: a new critical paradigm*. Routledge, Taylor & Francis Group

Bruyère, S. M., & Colella, A. (2024). Workplace Accommodations and Neurodiversity. In E. Patton & A. M. Santuzzi (Eds.), *Neurodiversity and Work* (pp. 181–205). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-55072-0_9

Cano, S. R., Alonso, P. S., Benito, V. D., & Villaverde, V. A. (2021). Evaluation of Motivational Learning Strategies for Children with Dyslexia: A FORDYSVAR Proposal for Education and Sustainable Innovation. *Sustainability*, *13*(5), 2666. https://doi.org/10.3390/su13052666

Hagan, B. (2004). *Dyslexia in the Workplace: A Guide for Unions*. https://www.academia.edu/74127455/Dyslexia_in_the_Workplace_A_Guide_for_Unions

Lee, J. (2024). The Neurodiversity Movement: Why did it emerge in Autism Communities, though not in Mild Cognitive Impairment Communities? *Revue de La Neurodiversité*, *2*(1). https://hal.science/hal-04695954

LeFevre-Levy, R., Melson-Silimon, A., Harmata, R., Hulett, A. L., & Carter, N. T. (2023). Neurodiversity in the workplace: Considering neuroatypicality as a form of diversity. *Industrial and Organizational Psychology*, *16*(1), 1–19. https://doi.org/10.1017/iop.2022.86

Marks, D. (1997). Models of disability. *Disability and Rehabilitation*, *19*(3), 85–91. https://doi.org/10.3109/09638289709166831

Polanczyk, G., De Lima, M. S., Horta, B. L., Biederman, J., & Rohde, L. A. (2007). The Worldwide Prevalence of ADHD: A Systematic Review and Metaregression Analysis. *American Journal of Psychiatry*, *164*(6), 942–948. https://doi.org/10.1176/ajp.2007.164.6.942

Singer, J. (1998) p64. Disability Discourse, Open University Press, UK

Walker N., Neuroqueer Heresies: Notes on the Neurodiversity Paradigm, Autistic Empowerment, and Postnormal Possibilities, Autonomous Press, 2021

Yang, L., Li, C., Li, X., Zhai, M., An, Q., Zhang, Y., Zhao, J., & Weng, X. (2022). Prevalence of Developmental Dyslexia in Primary School Children: A Systematic Review and Meta-Analysis. *Brain Sciences*, *12*(2), 240. https://doi.org/10.3390/brainsci12020240

Zeidan, J., Fombonne, E., Scorah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research*, *15*(5), 778–790. https://doi.org/10.1002/aur.2696