

Interoceptive Variation and Embodied (Neuro?)Diversity

We readily recognise that people with significant exteroceptive sensory differences experience the world in profoundly different ways. For individuals with “normal” sight or hearing, it is hard to imagine the experiences of the congenitally blind or deaf. We also acknowledge less drastic differences, such as the difference in experiences for short-sighted or colour-blind individuals. Given this variation in exteroceptive sensory capacities, one would expect there to also be variation when it comes to interoception, and findings from psychology and neuroscience validate this (Murphy et al. 2019; Suksasilp & Garfinkel 2022). Moreover, this interoceptive variation has been associated with neurodivergences and mental disorders, such as anxiety disorders, mood disorders, eating disorders, addiction (Garfinkel et al. 2015; Khalsa et al. 2018). Aside from these more extreme manifestations, one would expect that interoceptive variation might also partly account for other, more mundane differences in how people think, feel, reason, perceive, and experience themselves (e.g. Barrett 2004).

When we think about variation in terms of exteroceptive senses, it's appreciated that this can either be the result of neurological or extra-neural morphological issues, e.g. blindness can be the result of problems with one's visual cortex or with one's eyes. However, when it comes to the kinds of neurodivergence, mental disorders, and natural mental variation that are associated with interoceptive variation, we tend to characterize these in purely neurological terms. This neglects that many of the differences in how people think, feel, reason, perceive, and experience themselves may be result of bodily differences beyond the brain. One interesting example of this is the case of hypermobility (affecting 10-30% of the population), which has been associated with differences in interoception, as well as neurodivergences and psychiatric disorders (Eccles et al. 2024, 2025). To paraphrase Eccles (2025): bendy body, bendy mind.

These considerations give rise to two insights. On one hand, although we recognise that people's embodiment can influence how they think, feel, reason, perceive, and experience themselves (often in culturally inflected ways and with the influence also going in the other direction), we tend to focus on visible external bodily features, when less visible internal differences may be just as significant. On the other hand, when we can't explain someone's differences in visible bodily terms, we tend to characterise these as neural differences or neurodivergences. Instead, we should appreciate that much of our natural mental variation may be due to the vast range of different (often less visible) ways of being embodied and sensing our own bodies, which go beyond just differences among brains.

This has important implications for the political aspects of the neurodiversity movement. While progress in neurodiversity recognition is to be welcomed, the focus on the “neuro-“ casts neurodiversity as a uniquely different form of diversity, when it might be better to simply acknowledge that we all have different bodies and different life histories that influence how we think and who we are.