

A call for the demystification of neuroscience as a neuroethical imperative

For the past two decades neuroscience has been a highly hyped and generously funded field of scientific inquiry (1,2). Brain function and associated disorders understandably fascinate the public, challenging basic notions of self, addressing imminent fears and eliciting extraordinary theories and ideas. It is common and doubtfully reasonable to take advantage of this allure when applying for funding and selling magazines; less so however, when submitting clinical trial protocols for IRB approval, recruiting patients for research or reporting experimental findings.

It is important to consider the unique features of neuroscientific research in relation to other systemic properties affecting the validity of modern scientific research procedures such as scientific literacy, intellectual humility (3), researcher integrity (2) and other biasing factors (7). Although these are relevant to many health-related fields, their manifestation in neuroscience may be accentuated due to the discussed mediating factors. Further evidenced by widespread accounts of problematic methodology and irreproducible findings (5,6), it may be argued that the popularity of the field has allowed neuroscientific research to abide by lower scientific standards, with potential detrimental effects on public trust, resources and even health (1,2,4).

In this paper I will support these claims and suggest that ethical human brain research thus requires the demystification of neuroscience, an endeavor which should be considered central to neuroethical theory. It is timely and crucial to re-examine prominent neuroethical concerns while closely considering the caveats of neuroscientific research (6). It is furthermore crucial to address the ways in which the neuroscientific community can reaffirm the scientific rigor of neuroscience, for reviving public and professional trust (2). Combining these with the relative novelty of the field, its interdisciplinary nature and complexity of methods, I will claim that neuroscience findings require customized assessment procedures.

References

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