

This response was submitted to the consultation held by the Nuffield Council on Bioethics on *Novel neurotechnologies: intervening in the brain* between 1 March 2012 and 23 April 2012. The views expressed are solely those of the respondent(s) and not those of the Council.



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Novel Neurotechnologies

The British Neuroscience Association welcomes the forthcoming and timely report by the Nuffield Council on Bioethics on Novel Neurotechnologies. The prospects for neurotechnology are very exciting and could eventually be medically useful to treat countless people with neurological disorders and mental illness. Deep brain stimulation, for example, has already transformed the lives of many people with Parkinson's disease, whilst the use of this technique to manipulate cognitive processes associated with psychiatric conditions such as depression is being actively pursued.

At all key stages – and indeed, in anticipation of major developments in neurotechnology - there needs to be open and public discussion about their applications. Should these developments be proven to be useful therapeutically, it would be necessary to establish how would they be made available, to whom, and how they would be regulated. This is particularly important to avoid patients and their families out of desperation paying large sums of money to unregulated practitioners who may perform false and potentially dangerous treatments.

We must pre-empt the possible dual-use of some technologies, for example, the use of brain-computer-interface (BCI) being used in warfare. Scientists are often unaware of how their research might be taken up and used in harmful ways, as was highlighted in the Royal Society Brainwaves report on Neuroscience, Conflict and Security. It would be a tragedy if research and development in BCI that promises to enable paralysed people to communicate is stifled because of the threat of the destructive application of BCI.

The Nuffield Council on Bioethics' report should set in motion a national procedure whereby scientists, doctors, politicians, lawyers, patients and other relevant interest groups regularly debate the pros and cons of neurotechnology with a view to informing health and related policy decisions. Such discussions will require these people to think laterally and futuristically about how else the emphasis of research in neurotechnology to overcome one particular health issue could also subsequently be taken up and used in other ways, for good or harm.

The BNA has around 1600 members who are neuroscientists, mostly in the UK, whose research focuses on the brain and nervous system. We cannot, therefore, represent individual members' views in this response which may differ to the above statement.

Yours sincerely

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