

The age of brain science

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Credit: AI-generated image ([disclaimer](#))

When it comes to developing ways to enhance human beings, we are increasingly fascinated by all things neurological. If the 20th century was all about the gene, the 21st is shaping up to be the century of the brain. This fascination has even produced a dedicated discipline of neuroethics, which includes the study of the moral case for using medicine to make changes to our personalities, feelings and beliefs.

Society is already used to the idea of mood-altering drugs, both in the form of prescription medicines such as anti-depressants and illicit substances such as MDMA (ecstasy). Using both human and non-human subjects, researchers are now beginning to sketch a neurological picture of the brain's electrochemical functions.

For example, [studies](#) using [functional magnetic resonance imaging](#) (fMRI) have revealed that particular areas of the brain are associated with particular cognitive events such as [our moral emotions and ethical reasoning](#). Other research has shown that particular chemicals in the brain play an important role in [forming relationships](#) and [building trust](#). As a result, scientists and philosophers have begun to imagine ways in which our brains could be altered and perceptions or actions changed as a result.

Research suggests we may be able to maintain our [intimate relationships](#) through the use of so-called [love drugs](#). We could use substances that predispose us towards feelings, [judgements](#) and [behaviours](#) that make us more social. We might even improve our [ethical thinking](#) by taking drugs that enhance our cognitive abilities [more generally](#).

Political implications

For the most part, the academic debate suggests that, if neuroscientific research proceeds as imagined, then it would be ethical for us to pursue and embrace this kind of neurotechnological enhancement. But most neuroethicists have neglected to fully consider the political, as opposed to simply individual ethical, implications of such future technologies.

For example, [some have argued](#) that morally enhancing humanity is not just welcome but required if we are to survive [global challenges](#) such as warfare, climate change and over-population that potentially threaten our existence.

More recently, scientists have been experimenting with a technology that creates an explicitly political use for neurological technologies.

Researchers from Leiden University in the Netherlands showed that electrically stimulating a certain part of the brain can be used to [reduce an individual's feelings of prejudice](#). The authors even suggest that [brain stimulation](#) could help us achieve Martin Luther King's dream of a society in which people will not be judged by the colour of their skin but by the content of their character.

While I do not wish to argue that racism, sexism, homophobia or any other form of prejudice should be accommodated, it is not clear that its neurotechnological "suppression" would, in fact, bring about the society Martin Luther King dreamt of.

After all, how should we judge the character, [or even actions](#), of individuals whose behaviour and perspectives result from interventions in their neurological makeup? Indeed, how should we judge a society whose citizens are not so much subjects as they are "neuro-subjects" - individuals who understand themselves and each other in neurological terms rather than as moral agents?

A broader view

Efforts to enhance human beings tend to focus on the [benefits to the individuals](#) concerned. But, whether or not specific neurotechnologies are designed to alter our social behaviour, their introduction and use will certainly have a social impact. In this light, a purely ethical assessment of potential neurotechnologies that change the way we think and feel seems critically incomplete. Any neurotechnology that purports to alter our subjective point of view is essentially political in nature.

For example, debates about love drugs almost entirely ignore sociological research into the changing nature of intimacy under the

current capitalist system. Some believe that relationships are now more about the benefits they bring, such as a stable environment for child-raising, mutual development and social belonging, than [romantic love](#). Because it treats love and intimacy as a means to an end, the idea of love drugs could further this social change.

What is required is a more acutely socio-political understanding of not only the neurosciences and what they have to offer but also of neuroethics more generally. Human beings are not simply neurological, or even biological phenomena. We are made up of socio-cultural and historical elements and, like [psychological discourses](#) before it, the neurosciences are now [part of this realm](#).

There needs to be a greater level of dialogue and engagement between [neuroscience and social science](#) if we are to use the knowledge and technologies that emerge from this domain in a politically, and not just ethically, responsible manner.

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