

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.

**Response by the National Bioethics Committee of Jamaica (NBCJ) to NCOB's request for comments on Novel Neurotechnologies: intervening in the brain Consultation, March 2012**

The National Bioethics Committee of Jamaica (NBCJ) is pleased to take this opportunity of presenting the following comments on the above titled Consultation.

The NBCJ Whilst acknowledging that science, technology and the profit motive will continue to develop hand in hand; that medical science, as a humanitarian enterprise, must continue to be supported if a society is to continue to grow and advance shares significant concern for wrongful or unethical use of any such development therefore in considering the request for consultation the NBCJ:

1. Acknowledges that there is already a level of human programming that has created a receptivity to different types of auto suggestions especially from media sources utilising knowledge gained from previous work in the neurosciences;
2. Recognises that the medical application of novel neurological technologies have a vast potential for the possible improvement in diagnostic and restorative health care with the attendant potential to relieve human suffering;
3. Suggests that the use of such novel Neurotechnologies would need to be associated with a program for assisting in psycho social adjustments to assist in adaptation;
4. Identifies the following concerns:
  - a. A potential for manipulating / altering human behaviour
  - b. The potential for "control" through the creation of a "human robot"
  - c. The impact on our current concept of "human" resulting in a lessening of respect for the person
  - d. Control of the technology (Patents) could result in monopolies such as has overtaken that of the diagnostic tools for the BRCA1 and 2 genes for breast and ovarian cancer
  - e. Monopolies could significantly restrict availability especially in less developed societies
  - f. Wrongful or unethical use for possible "laudable" reasons from a Utilitarian perspective but trampling on individual rights for example in:
    - i. Political / military purposes
    - ii. Consumerism
    - iii. Crime fighting
  - g. The initiation of a "slippery slope" phenomenon allowing for abuse of such technologies

- h. Safety related to:
  - i. Installation, use and replacement
  - ii. Reliability in functioning generally and for task specific applications
  - iii. Life span equivalency
  - iv. Warning system prior to failure with time to correct / replace
  
- 5. Believes that the following ethical issues arise:
  - a. A conflict between the “individual” and the “society” – how do we work to derive benefit to one without harm to the other?
  - b. “Fear” vs. “Hope” – the fear of misapplication is real but the hope of restoration / renewal is also real – how do we mitigate the fear whilst building on the hope?
  - c. Advancement vs. Abuse – scientific research contributes to advancement for our society but the results can and have been abused often with devastating results (nuclear energy) – how do we work to enjoy the advancements whilst minimising / eliminating the potential for abuse?
  
- 6. Makes the following recommendations:
  - a. Any such developments are in compliance with the UNESCO Declaration on Human Rights and Bioethics
  - b. More effort be made to help developing world societies become more self reliant thus improving their chances of benefiting positively from such advances as could be associated with the development of these novel Neurotechnologies
  - c. Every attempt be made to identify how any advance in this field can be maximised for the benefit of all societies
  - d. Every attempt be made to establish the full risk profile of any such developments with a concomitant plan to minimise such risks
  - e. Serious consideration be given to defining the uses for which such novel neurotechnologies should be allowed
  - f. Once definition has occurred a monitoring system be established