

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.

## **Deng Zhuo**

### **General questions**

#### **Question 1**

Never

#### **Question 2**

It depends.

I would not risk impleting a device in my brain, if I were not seriously with a debilitation such as syndrome for several reasons. The most important important one is that this kind of brain surgery can have a host of latent risks which is mentioned in the article. Because I am not sure if it would be safe enough to implant and be effective enough to work for a long time without problems, I would not try. Besides, I assume this high-tech surgery cannot be inexpensive. The average person really cannot afford the expensive technology. As a result, I would rather save some money for others and relieve families' burdens than implant the risky BCI.

However, I would utilize it when I suffered from diseases like locked-in syndrome. The precondition is that my doctor ensured my longevity which is worth all the hazard and expense.

#### **Question 3**

Why should I endure major surgery in order to play games? I would never put myself in the danger of surgical failure to gain some novel, exciting way of entertainment. Maybe I would more likely to use the energy of taking surgery to design a new game.

As for cognitive skills, there are many more methods to improve them, including prodigious reading, writing and taking classes. These basic ways of bettering cognitive skills may take a longer time but give people time to think, enjoy the process and afford more comprehensive understanding for everything. With BCI, everything would be too easy and direct to deprive people's natural abilities of meditation. The more ease the technology offers to us, the more lazy, simple and silly people's brains will be. Finally, people would be addicted to and dependent on the technology, never able to get rid of the BCI.

#### **Question 4**

Although BCI, a powerful tool, is initially well-intentioned, people are far more voracious. Terrorists could make remote, readily attack without sacrificing themselves; countries could make military attacks without taking responsibilities; hackers could invade computers or secret information base with less time and more security; thugs could kill people one thousand miles away without arrest... Easy to commit crimes, but hard to be traced, less criminals would be imprisoned while more crimes would be committed.

Even worse, once a war broke out, no soldier would appear on the battle field. As a result, there would be less soldiers' injuries and death. However, as the war became more intense, there would be more collateral damage.

**Question 5**

The technology should only be used in medical field, and only the neurosurgeon should be given the right to implant the BCI.