Cyborging Human Control: Supplementing or Supplanting Human Agency?

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Many experimental trials are currently merging medical Brain-Computer Interfaces (BCI) with the central nervous system in human (Ezzyat et al 2018; Reardon 2017; Bouton et al 2016). While the cyborgisation of some human neural and cognitive capacities is becoming a reality, ethical concern is growing about the potential effects of implantable BCIs on patients' sense of agency and control (Brown et al. 2016; Kellmeyer et al. 2016; Goering et al 2017; Klein 2015; Gilbert et al 2017). BCI implants offer effective control at the level of neural circuits, but the extent to which this grasp on neuronal function affects the patient's sense of control at the psychological level is still uncharted territory (Glannon and Ineichen 2016). One of the core concerns about cyborging human neural and cognitive capacities is that BCIs may end up supplanting agency rather than supplementing it (Gilbert et al 2018). What happens to a person's sense of control when they voluntarily initiate an action, but a computer then steps in to complete the action? In what ways might using BCIs to increase the level of physical control for implanted individuals actually be taking away from their capacities for agency? What if an artificially intelligent BCI bypasses the agent's intention or overwrites agential capacities? Who should be held responsible for the resulting behaviours? The purpose of this presentation is to examine new ethical issues raised by cyborging human control with BCIs. We analyse some of the data we have obtained from an ongoing first-in-human clinical trial testing implantable BCIs meant to restore bodily movement for paralysed individuals (Bouton et al 2016).

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