Prospects of Military Application of Brain-Machine Interface Technology

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Rapid advances in neuroscience offer new prospects of military enhancement. Experiments with animals and humans proved that it is not only feasible to read brain signals, decode them and use for simple control of devices, but also to extract from human brain information about the environment which remains 'hidden' and subconscious. Technologies of mapping human brain activity have potential military applications of a new kind of merging brain and computer in a close and empowering interaction. The paper discusses some research projects carried out in the United States mostly by the Defense Advanced Projects Agency and their potential military use. These are, for example, *Neuroscience for Intelligence Analysis* and *Cognitive Technology Threat Warning System* (CT2WS) which are based on the idea of extracting unconsciouss information from the brain which has crucial military application for enhancing the ability to analyse sattelite images and to accurately recognise threats in the battlefield environment. Also presented is research on brain-machine interfaces to control machines such as drones with brain singal, as well as experients with brain-to-bain interfaces which open prospects for direct bain-to-brain military communication (*Silent Talk* and 'thought helmets'). Interfacing technology with human brain raises some ethical concerns which are important to discuss not only in the context of the military realm but also civilian setting as these technologies are dual use and similar applications would sooner or later be used in the civilian world. Will members of a society with superhuman abilities to see what normally remains unseen, recognise what normally remains unrecognised and interact with devices by mind-controling them become true cyborgs?