

## Cognitive Agency and Neurotechnology

In a variety of ways, neurotechnology enables the direct monitoring and manipulation and manipulation of neural states. In so doing it can be seen to alter the relationship that a person has to their affective and cognitive states. In particular, neurotechnology can be seen to modify the epistemic relationship. Neuroadaptive technologies (NT's) are passive brain-computer interface systems (pBCI's) that can detect and evaluate the mental and emotional states of users through the analysis of brain activity. NT's have been developed to monitor the physiological responses of drivers, the attention level of students, threat assessment, and group learning (Kroll and Zander 2016; Baker, Pawling, and Fairclough 2020; Arico et al. 2018; Cinel, Valeriani, and Poli 2019). NT's have the potential to reduce the cognitive workload and enhance cognition by bringing to the user's attention information that is stored in memory but which the user is unaware, and by providing a richer information source. As illustrative of this potential, it is useful to consider the following case:

Smith is out on patrol in a dangerous conflict zone. Their equipment includes a pBCI device that monitors cognitive and affective brain activity, and a camera connected to a computer that scans the environment.

Smith's mission is to identify and capture a local warlord. As they approach a group of villagers, they do not initially recognise the warlord; however, Smith's camera identifies a face and the pBCI detects subconscious increased cognitive and affective activity in their brain in response to a face. The pBCI alerts them to the likelihood of the warlord's presence and the increased threat of danger.

An important question to ask regarding the above case is whether Smith is justified in their belief that the warlord is present. This paper argues that Smith's belief is justified because it is the product of a reliable belief-forming process, but this process can be viewed as external since it provides information that cannot be directly accessed, and it is a process that is realised by external (i.e., non-biological) devices.

### References/Bibliography

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