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Title: How using brain-machine interfaces influences the human sense of agency

Abstract: In our modern societies, the number of human-computer interactions has drastically increased, thus modifying the basic experience of performing an action through one's own body. This societal change implies that the human sense of agency, that is, the subjective feeling of control over one's own actions and their outcomes, might be impacted. Different theories on SoA indeed suggest that not receiving sensory cues from the limb may reduce SoA, either by diminishing the predictability of the final outcome, or by reducing the number of sources of information. During this talk, I will first give an overview on how brain-machine interfaces (BMIs) work. Then, I will present some studies which directly investigated how using BMIs influences the feelings of body-ownership and sense of agency.