

## **Using Hypnosis to distinguish between cognitive and metacognitive conscious experience**

### **ABSTRACT:**

Two studies were conducted to investigate the relationships between objective performance (type I) and subjective judgments (type II or metacognition) by manipulating metacognition through hypnosis and suggestion in an action-based paradigm (i.e., rubber hand illusion). In a first study, we have developed an improved version of the classic rubber hand in the form of a robotic hand. In our initial action paradigm project, the robotic hand would provide the opportunity of refining the modulation of the sense of agency (i.e., type II) through hypnosis. Overall results show that the robotic hand induces both a sense of ownership and a sense of agency. In a second study, we attempted to modulate implicit level of agency (i.e., intentional binding measure from the original Libet clock experiment) through hypnosis by using the robotic hand device. Participants who had previously been screened for hypnotizability passed four experimental conditions. In the two hypnosis conditions (i.e., active and passive), a post-hypnotic suggestion conveyed the information that the robotic hand and the tone were due to their own (participants) movement. In reality, the robotic hand controlled the action. In the two non-hypnotic conditions, no hypnosis or suggestion was induced. Overall, results revealed a main effect of Condition where the binding between action and tone was stronger in the active vs. the passive condition, thus replicating previous studies. However, neither a main effect of Hypnosis, nor the interaction between condition and hypnosis were observed. Several methodological issues can explain these null results therefore we cannot conclude that hypnotic modulation of agency (i.e., type II) has no effect on this paradigm.

### **Keywords**

Robotic hand, Agency, Ownership, Hypnosis, Suggestion

### **Published Work:**

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