Title: Motor responses inflate perceptual confidence

Presenting Author: Marta Siedlecka

Author(s): Marta Siedlecka, Consciousness Lab, Institute of Psychology, Jagiellonian University, Krakow, Poland, Marcin Koculak, Consciousness Lab, Institute of Psychology, Jagiellonian University, Krakow, Poland, Borysław Paulewicz, University of Social Science and Humanities, Katowice, Poland, Alicja Krzyżowska, Consciousness Lab, Institute of Psychology, Jagiellonian University, Krakow, Poland

Abstract:

Recently there has been growing interest in how the motor system contributes to perceptual awareness and confidence. We present a series of experiments that test how response and motor preparation influence confidence in perceptual decision. We used a perceptual discrimination task in which participants were presented with a motor cue after stimuli presentation but prior to discrimination response and confidence rating. The cue was irrelevant to the main task but could be congruent or incongruent with the correct discrimination response. Additionally, it could require the same or a different response set as the discrimination response. In the first experiment we observed that participants were more confident in their decisions when the confidence rating was preceded by a cued response that overlapped with the task-related response set, regardless of whether it was congruent with the correct discrimination response. This suggests that a motor response that overlaps with a potential response to a stimulus provides substitute information about the characteristics of decisional and motor processes and inflates confidence level. In the second experiment the cue did not require action but induced preparation of response that could be congruent, incongruent or neutral with respect to the correct discrimination response (the data are being collected). The results will be discussed in the context of consciousness theories and models of metacognition that assign a crucial role to action.