THE BODY BEYOND THE BODY

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Objectives: More than 100 papers have been published on the rubber hand illusion since its discovery 14 years ago. The illusion has been proposed as a demonstration that the body is distinguished from other objects by its participation in specific forms of intermodal perceptual correlation. Here, we radically challenge this view by claiming that perceptual correlation is not necessary to produce the experience of this body as mine.

Methods: Each of 15 participants was seated with his/her right arm resting upon a table just below another smaller table. Thus, the real hand was hidden from the participant's view and a life-sized rubber model of a right hand was placed on the small table in front of the participant. The participant observed the experimenter's hand while approaching--without touching--the rubber hand. Phenomenology of the illusion was measured by means of skin conductance response and questionnaire.

Results: Both measures indicated that participants experienced the illusion that the experimenter's hand was about to touch their hidden hand rather than the rubber hand, as if the latter replaced their own hand. This did not occur when the rubber hand was rotated by 180° or replaced by a piece of wood.

Conclusions: This illusion indicates that our brain does not build a sense of self in a merely reactive way, via perceptual correlations; rather it generates predictions on what may or may not belong to itself.

Publications:

Keywords: Body ownership; Rubber Hand Illusion; Expectation; Bodily Self