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# Just a heartbeat away from one's body: interoceptive sensitivity and malleability of body-representations

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## Abstract

Body-awareness relies on the representation of both interoceptive and exteroceptive percepts coming from one's body. However, the exact relationship and possible interaction of interoceptive and exteroceptive systems for body-awareness remain unknown. Based on recent models of self-awareness that consider the insula as a convergence zone linked to the representation of the bodily self, we examined the interaction between interoceptive and exteroceptive awareness of the body. Across three experiments, we combined measures of interoceptive sensitivity with experimental manipulations of body representations. Consistent results suggest that interoceptive sensitivity predicts the malleability of body representations, that is, people with low interoceptive sensitivity experience stronger illusions of embodiment ("rubber hand illusion") and identification ("enfacement illusion"). In one final experiment, we manipulated interoceptive sensitivity by mirror self-observation. Overall these findings suggest that interoceptive sensitivity modulates the integration of multisensory information and predicts the strength and malleability of body-representations.

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