Assessing the physiological consequences of bodily illusions

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In this talk, I will review the latest evidence from studies demonstrating that the distortion of the visual image of a limb (typically the hand and arm) has not only psychological but also physiological consequences (see Makin, Holmes, & Ehrsson, 2008; Moseley, Gallace, & Spence, 2008, for reviews). In particular, I will describe recent studies showing that the rubber hand illusion results in a small but reliable drop in the temperature of the limb in which the illusion is induced (Moseley Olthof, Venema, Don, Wijers, Gallace, & Spence, 2008). I will also highlight research demonstrating that the pain and swelling evoked by movement in patients with chronic regional pain syndrome (CRPS) can be ameliorated by the use of a minifying lens (Moseley, Parsons, & Spence, 2008). Finally, I will report on the neglect exhibited by these patients (as assessed by their performance on a tactile temporal order judgment task) and its relation to bodily temperature in the affected limb (Moseley, Gallace, & Spence, 2009). Taken together, these results converge in demonstrating the profound physiological consequences of bodily distortions in both health and disease.

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