

**Response** by Prof. Joseph Classen, MD ([Joseph.Classen@medizin.uni-leipzig.de](mailto:Joseph.Classen@medizin.uni-leipzig.de)) and Daniel Zeller, MD

We thank Bekrater-Bodmann and colleagues for their interest in our work and their insightful and stimulating comments. Bekrater-Bodmann and colleagues suggest that lesion-induced rubber hand illusion failure (RHIF) in stroke patients has been overestimated in our study, because RHI may be absent in a large proportion of healthy controls. Indeed, some previous studies found RHIF in up to 32 % of healthy subjects. However, as spatial position of the rubber hand, distance from the real hand, angular differences relative to the shoulder and attention are critical to the occurrence of the RHI (Lloyd, 2007; Makin et al., 2008), increased prevalence of RHIF in several previous studies may be due to suboptimal experimental conditions for subjects lying in a scanner (e.g., Ehrsson et al., 2004; Tsakiris et al., 2007). Based on these considerations and our own extensive observations in a sample of 120 subjects where we found only 13.3 % of RHIF in older subjects (Gross, 2010), we remain confident that the enhanced frequency of RHIF in stroke patients relative to controls likely reflects interaction of stroke pathology with mechanisms involved in RHI. Bekrater-Bodmann and colleagues also suggest that our methodological approach of assessing asomatognosia may have been insensitive to reveal the association with canonical cortical regions, such as the parietal cortex. As pointed out in our article, asomatognosia was associated with voxels affecting fibre tracts targeting the parietal cortex. The low frequency of patients with circumscribed parietal cortical lesions may explain failure to identify a more direct association with parietal cortex.

#### References:

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