

Response to Smith and Faig review of Holt et al (2014):

We appreciate Smith and Faig's very thoughtful and interesting discussion of our findings and the related area of study. Their ideas for future work were especially well considered. In particular, linking responses of this "near space monitoring" parietal-frontal network to the immediate experience of having one's personal space violated, using a behavioral task performed within the scanner, would be an excellent next step. In addition it would be of interest to consider the potentially confounding effects of motor responses to approaching stimuli, by including a requirement for an analogous motor response during the control condition of withdrawal.

One minor, additional point is worth clarifying. Smith and Faig's description of the correlations between parietal-frontal functional connectivity and personal space behavioral measures were opposite in sign, relative to those reported in the original study. Specifically, we found that a larger personal space size predicted weaker functional connectivity within the parietal-frontal network (a *negative* correlation; see Figures 6B and 6C). Conversely, the analogous correlation for the "permeability" of personal space (a measure of the ability to tolerate personal space intrusions; see Holt et al, Methods section and citations therein) was a *positive* one— i.e., the more permeable the subject's personal space, the greater the functional connectivity within the parietal-frontal network (see Figure 6D). This pattern of correlations suggests that the activity of the regions within this network are more highly coupled at rest in people who are more comfortable with objects, perhaps in particular, conspecifics, being physically near them, i.e., in their personal space.

Overall however, we fully agree with Smith and Faig that future studies which identify the basis for individual differences and experience-related changes in this network and personal space behaviors will shed further light on the network's precise role in spatial perception, sensory-motor coupling and social behavior.

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