

**Report: 'Spatial interactions across vision, audition, and touch: searching for a taxonomy' Workshop
Rethinking the Senses, Institute of Philosophy, 30 May 2014
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The diverse nature of the crossmodal interactions involving spatial properties that occur between vision, touch and audition gave the incentive for the workshop. One important question, given this diversity, is whether the mechanisms responsible for the integration of spatial information in different kinds of case are the same. The diversity also provokes a further question about why these different interactions take place: what is the function of each of these different kind of spatial interaction? Are our explanations of spatial interactions specific to particular combinations of sensory modality: should we expect the same kinds of mechanisms to link vision and touch as link touch and audition? Differences in the way in which space is encoded across sensory modalities also raises questions about crossmodal interactions: for example, the differences in the ways in which spatial information is encoded in vision and audition might lead us to question whether auditory processes depend on visual spatial representations.

The meeting was organised by Matt Nudds and Charles Spence. Four of the six talks were followed by a commentary, as well as discussion. To close there was a roundtable discussion to draw out the issues raised during the meeting with Craig French and Andy Bremner, chaired by Matt Nudds.

In the first session Giandomenico Ianetti and Alisa Mandrigin discussed evidence in favour of the non-pain-specific nature of what has been labelled the pain matrix and studies suggesting that there is a defensive representation of peripersonal space.

In the second session Laurence Harris and James Stazicker discussed the contribution of the vestibular system to our capacity to balance, in controlling eye movement, and to perceptual experience, including it's contribution to the orienting the visual field and the perception of self-motion.

In the third talk Adrian Alsmith looked at the philosophical significance of sensory spatial integration, concentrating on different notions of unification.

In the fourth session Charles Spence and Nick Shea reviewed evidence for and against the spatial rule to assess whether spatial coincidence is as important for multisensory integration as has been supposed.

In his talk Nathan van der Stoep stressed that the spatial location of stimuli can be identified in a more specific way than simply as being located in the right or left hemifield, and contrasted multisensory interactions across differences in depth.

In the final presentations Elena Azañón and Ian Phillips reviewed recent studies that investigate the mapping of bodily locations into representations of extra-bodily space.