

This is an excerpt from a report on The Unity of Consciousness and Sensory Integration conference at Brown University in November of 2011, written by Kevin Connolly, Craig French, David M. Gray, and Adrienne Prettyman, and available at http://networksensoryresearch.utoronto.ca/Network_for_Sensory_Research.html

5. How Should We Study Experience, Given Unity Relations?

In the conference's final panel discussion, Casey O'Callaghan outlined one major idea motivating the traditional approach to studying experience. According to proponents of the traditional approach, we can tell a story about vision (in a bottom-up way) which does not appeal to processes in any other sensory modality (see, for example, work by David Marr). According to this view, we can give an account of vision by paying attention to what happens when you stimulate the eyes. The visual system, on this account, is informationally encapsulated with respect to the other sensory systems, and the same can be said for each of the other sense modalities. The claim then is that our story about perceiving is just the sum of the stories for each individual sense modality.

O'Callaghan went on to argue that crossmodal cases seem to suggest that this traditional approach to perception fails. Such cases seem to show that perceptual systems are not informationally encapsulated with respect to one another, and that in order to fully understand each sense modality, we need to understand how that modality relates to other sense modalities.

In the ensuing discussion, Ned Block pointed out that there is still a question as to how much we need to modify the traditional approach. Even if we acknowledge (as perhaps all vision scientists do) that in order to understand visual processes, we need to know all sorts of things about the body (including about other sensory systems), it could still be that multisensory phenomena exist at the margins. This is not to deny that instances of multisensory phenomena are pervasive. It is to say that an account of multisensory phenomena might not be essential for explaining how individual perceptual systems work. If this is right, then perhaps the best way to

study multisensory phenomena is to examine sensory systems by themselves, understanding how they work in isolation, and then to merge that account with an explanation of multisensory phenomena. Such an approach, Block pointed out, has worked extremely well so far.

But even if an account of multi-sensory phenomena is not essential for explaining each sense modality (and that remains to be seen), it still seems right that an exhaustive explanation of each sense modality needs to take into account multi-modal phenomena. Plausibly, cross-modal cases show that we can understand a part of experience fully (say, the visual contribution to an experience) only if we understand how that part relates to a greater whole (say, a total auditory-visual experience). This marks a departure from the traditional approach, according to which we can understand each sense modality in isolation from the others. It also raises the following question: how should we best study such phenomena in which an understanding of the parts requires an understanding of the whole? This question is even more pressing if it turns out that an account of multi-sensory phenomena is essential for explaining each sense modality. If that is the case, then it is essential for us to understand the whole in order to understand its parts.

The same sorts of considerations apply beyond cross-modal cases. Cases of synchronic phenomenal unity can be taken to show that in order to understand the parts of a multi-modal experience, we need to understand how those parts contribute to a single synchronic phenomenal unity. Arguably, the same sort of claim applies to at least some cases of diachronic phenomenal unity. Take the case of listening to a melody (see Shoemaker, 2001, p. 65). One view is that we need to understand the diachronic phenomenal unity in such a case in order to understand the synchronic unity of each moment in an experience of a melody. But if this is right, then it goes against the natural inclination to study a phenomenon by breaking it up into its component parts,

and then analyzing each of them. But then for such phenomena, what sort of a method should we use to study them?

References

Shoemaker, Sydney (2001). "Consciousness and Co-consciousness." In *The Unity of Consciousness: Binding, Integration, Dissociation*. Ed. by A. Cleeremans. Oxford: Oxford University Press.