

Summary of the paper. SOPHA 2009

The problem of the one and the many : integration and distinction of the senses.

The assumption that perception is divided into five separate domains of vision, hearing, touch, taste, and smell has been put under much pressure by recent work stressing the importance of inter-modal and cross-modal processes. By focusing on taste and smell integration, I review briefly the range of phenomena at stake, and the terminology that helps distinguishing among them between different *kinds* of processes.

Still, talks about ‘cross-modal’ effects remain vague on the revision to be made to the assumption of distinct – although integrated – modalities.

« Many modes » : from traditional isolation to current redundancy models.

Two straightforward arguments support the preservation of the « many-modes » hypothesis : first, the physical distinction of stimuli – to which differences of organs and sensorial modalities are supposed to respond, and second, what I call the « modal transparency » of experience, i.e. the idea that perceptions appear to be given to us under a certain sensorial *mode of presentation*, and that this given is not only *robust*, but *immediate* and *necessary*.

If these arguments can be used to support the traditional view of separate senses, working in absolute isolation, they have recently been adapted to integrate cross-modal phenomena and combined in what I call the « redundancy views » : although distinct, the modes combine when some information is redundant through two (or more) of them, usually to the benefit of one of the sensorial modalities. I discuss the right formulation of the model, and show that its plausibility comes from a special range of real examples.

Two « a-modal » hypotheses – and how one can challenge the many

Are redundancy views the only available models? Do they really take into account to whole range of perception ? I want to go back to the ‘a-modal’ hypotheses, whose generalogy and arguments I sketch in the presentation. These views tend to be largely ignored, and yet are also worthy of attention, although they come and challenge the arguments of physical distinction and modal transparency. These two hypotheses are :

1) the so-called « Global Array Hypothesis », recently exposed by T. Stoffregen and B. Bardy (Behavioral and Brain Sciences, 2001,24), inspired by Gibsonian theories of perception, defend the idea that perceptual field is « global », distinct from the physical reality and bearing an ambiguous relation to it.

2) the psychological construction of the sensorial modalities from an initial « a-modal » experience.

I will review these hypotheses, and the arguments than can be offered in their support.

To conclude, I question the fact that these two hypotheses must combine in order not to fall back into a « redundancy » view of some sort, and still want to sketch an « a-modal » friendly solution based only on the revision of the modal transparency assumption (thus just working from the hypothesis (2)).