

Perceptual objects in the unimodal and multimodal settings

For a long time, the philosophy of perception has ignored questions bringing it into contact with the sciences of the mind and brain. This proposed research project aims to correct that tendency by directly approaching a topic where philosophical theorizing and empirical findings not only have some points of contact, but share a focused interest and clearly need one another for their progress. Based on empirical research on object processing in various sensory modalities, this project aims to develop a comprehensive account of perceptual objecthood by addressing questions of ‘objecthood’ from a sensory specific and multisensory perspective.

There is an intuitive sense in which we can see, hear, and smell some objects (the crackling campfire), whereas other objects of perception (rainbows) seem confined to a single modality. Perceptual objects are the events or entities that we perceive; they are those individuals to which perceptual mental states attribute properties. The most plausible candidates for perceptual objects presented through vision include ordinary, persistent material objects and/or spatiotemporal regions; those presented through audition include sounds and/or ordinary objects; and those presented through olfaction include odors and/or ordinary objects. Although the topic of perceived objects and properties is of great importance for philosophy and psychology, many issues remain puzzling. For instance: While listening to piano music, do we hear the instrument or its sounds? Or do we experience one by experiencing the other? This interdisciplinary project aims to explore whether – and if so, how – the issue of the range of properties represented in perceptual experience bears on the nature of perceptual objects. The main hypothesis is that considering the former issue may provide us with a new understanding of perceptual objecthood.

The project seeks to fit in with the recent explosion of interdisciplinary work between philosophy of perception, psychology, and cognitive neuroscience. Philosophical matters will be approached through the lens of empirical evidence in two stages. First, the application of the ‘admissible contents debate’ from the domain of vision will be widened to focus on the properties perceived in non-visual senses. Second, the investigation of the question of *what* exactly it is that is perceived will be extended to include more complex perceptual objects at the level of ordinary objects. The results of these analyses will determine whether we should think of sense perception as organized around perceptual properties or consider it rather as dealing with ordinary objects.

The project embraces four main subtasks devoted to analyses of the origin of object perception, the conceptual and methodological aspects underlying the investigation of unisensory and multisensory perceptual objects, the differences and similarities between perceptual objects in various senses, and the multisensory level of perceptual objecthood. The research team will classify the kinds of entities we can perceive through individual sense modalities, how they vary, and how the contributions made by different modalities are related to one another. The team will explore the concept of “object”, the structure, and characteristics of perceptual objects in various sensory modalities as well as the degree to which multiple sensory modalities can work together to construct a single, unified perceptual object. The project implements a novel approach of scrutinizing to what extent findings on visual perceptual objects can be useful for elucidating our knowledge about perceptual objects in other sense modalities. It goes beyond the traditional investigation of the visual and auditory senses to cover the whole field of research by integrating work on vision, audition, olfaction, taste, and touch. Another innovative aspect studied here will be how to understand the relation between multimodal and unimodal perceptual objects.

Recent scientific findings demonstrate that the brain is organized in a meta-modal way, realizing its tasks in a modality-independent manner, yet at the levels of sensory stimuli, perceived properties, brain activations, and generated perceptual experiences many processes can still be described in a modality-specific way. Thus, it is timely and ground-breaking to characterize modality-specific and multisensory processes. Philosophy of perception has just started to recognize the complexity of philosophical issues arising from the multimodality of perception. But we are still lacking theories explaining, for instance, how unimodal perceptual objects are combined with one another into the unified multimodal perceptual objects. These conceptual and at the same time empirically informed philosophical investigations proposed in this project will contribute to progress within the interdisciplinary field of sensory research. They will move forward the topic which is crucial for perception science and philosophy, the topic which deals with the foundations of perception, which should be a point of departure, but has remained under-researched to a large degree. In addition, advancing our knowledge of perceptual objects will stimulate rethinking various issues in the philosophy of perception, e.g., the individuation of the senses, sensory integration, and relations between objects of sense perception and those of mental imagery.