

“Segmentation and Binding in Perceptual Organization and Visual Aesthetics”

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Perceptual organization consists of a range of processes that create the basic units of our perceptual awareness such as groups of elements, bounded surfaces, figures against background, spatial relations in scenes, and so forth. They define the proto-objects that allow us to interact adaptively with the world and that can be recognized, categorized or named. Binding and segmentation are two of the basic processes involved in perceptual organization as they determine what becomes grouped together and separated from other things. Because binding is based on similarity and segmentation is based on dissimilarity, both processes go hand in hand.

In this keynote lecture, I will clarify the approach taken by Gestalt psychology in understanding perceptual organization. I will also point out that contemporary vision science and visual neuroscience fail to do justice to the richness of the phenomenology of perceptual organization, and miss several of the key ingredients. The notion of Gestalts is often misunderstood. There are many different kinds of perceptual grouping and Gestalts that need to be distinguished to be able to develop a refined theory of the underlying mechanisms. Finally, I will demonstrate how segmentation and binding also play a fundamental role in our perception and aesthetic appreciation of images and artworks.