

Review

Robert Schwartz. *Visual Versions*.
Cambridge, MA: MIT Press, 2006. 277 pp.

Robert Schwartz's *Visual Versions* is a collection of essays on vision. It is organized in four main sections: the Berkeleian view of vision, perceptual inference, picture representation, and realist/non-realist commitments in visual perception studies. Most of the essays are already published but not easily accessible.

In this review I will concentrate on the first of the above mentioned sections. As in his *Vision: Variations on some Berkeleian Themes* (Oxford, Blackwell, 1994), the author uses elements of Berkeley's theory of vision to clarify contemporary theories and, conversely, contemporary theories to explain some problematic points of Berkeley's theory.

The first two essays are excerpted from chapters 1 and 2 of *Vision* and they serve to introduce the main themes of Berkeley's theory of visual perception of space.

The first essay deals with problems opened mainly by Berkeley's *New Theory of Vision* (hereafter *NTV*), sect. 2 where Berkeley writes "It is, I think, agreed by all that distance, of itself and immediately, cannot be seen. For distance being a line directed endwise to the eye, it projects only one point in the fund of the eye, which point remains invariably the same, whether the distance is larger or smaller." Discussing this section, Schwartz distinguishes three issues that it is important not to confound: (1) Berkeley's notion of distance; (2) the claim that visual perception of distance is not immediate; (3) the claim that in and of itself distance is imperceptible by sight. The author explains that "immediate" is here (as throughout the *NTV*) any perception which does not involve mental processing of any kind and which is a purely physiological process. According to the author, Berkeley thinks that distance cannot be immediately perceived by sight because of the one point argument. He then compares this thesis with some 20th century research results in the field (more precisely with experiences on retinal disparity) and asks if Berkeley was right or wrong. He concludes that information derived from retinal disparity is not enough to know the distance location of an object and, therefore, that Berkeley's stress on visual motor correlation is of great relevance.

The second essay deals with Berkeley's criticism of computational theories of visual perception of size. The author maintains that Berkeley's criticisms are still valid against contemporary computational models of visual perception of size.

The third essay is an explanation of Berkeley's notion of "minimum sensible" and a defense of its coherence. Understanding of this notion is achieved by introducing the main concepts involved in studies on phenomenal sense orders. In his *Notebooks* (hereafter NB), Berkeley characterizes the *minimum visibile* as the "simplest constituent or element" of visual extension, "wherein there are not contain'd distinguishable sensible parts" (NB 70, 439). In the essay, many puzzles about *minima visibilia* (arising mainly from propositions in NB) are discussed and explained. For example, take the case of whether *minima sensibilia* are extended or unextended. Schwartz distinguishes two different notions of "being extended." According to the first, something is extended if it has some phenomenal size; and since *minima sensibilia*, being uncomposed, have a phenomenal size of one unit, they have extension in this sense. According to the second, something is extended if it has parts; so since they are simple, *minima sensibilia* are, in this sense of the term *extension*, unextended.

The fourth essay is about Berkeley's heterogeneity thesis. According to this thesis: "The extension, figures and motion perceived by sight are specifically distinct from the ideas of touch, called by the same name; nor is there any such thing as one idea or kind of idea, common to both" (NTV 127). The explanation of the thesis is put forward with regard to number, distance, size and, most critically, figure. The author claims that visible figures and tangible figures share some basic definition without, however, being ideas of the same sort. According to the author, visual figures and tangible figures are of two different sorts because the phenomenal experiences of the two modalities do not resemble each other. The author proposes to solve the puzzle of ideas of figure sharing the same definition while and being at the same time of two different sorts by referring to Berkeley's distinction between general and abstract ideas. Visual and tangible ideas of, for example, a triangle could then be subsumed by the same general idea of a triangle and still be heterogeneous. In my opinion, the difficulty with this view is that, in Berkeley's definition, when two things can be ranged under the same general idea (which is not an abstract one), they are of the same sort and so they cannot be heterogeneous (cf. *Principles* 12).

The fifth essay treats again the question opened by the heterogeneity thesis by discussing "What Berkeley Sees in the Man Born Blind" (the title of the essay). Schwartz remarks that in the NTV, Berkeley tends to associate two different claims and to pass indifferently from one to the other. More specifically, Berkeley seems to think that if a connection between ideas is not necessary, it must be learned and vice versa. This association is responsible for the fact that from Berkeley on, discussions on heterogeneity are often indistinguishable from discussion on innateness. In this essay, Schwartz explains the heterogeneity between visible and tangible figures by maintaining that the visual field has a spatial structure, even if we do not always see this array as being of a certain figure: for example, we see "a circular array, although we do not *see it as* being circular" (75). The man born blind who recovers his sight does see some visual ideas of figure, but he does not see them as the same ideas he learned to perceive by touch. Visual extension and tangible extension are, in fact, incommensurable because both of them are based on a relation of "adjacency," but the

“next to” in visual space is not the same as in physical, tangible space. That is why visual figures and tangibles figures can be said to be heterogeneous even if in some cases a visible figure can be fitter than another in order to represent a tangible figure.

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