Guest editorial essay

**Berkeley’s confused vision**

“The Object speaks with Words that the Eye is well acquainted with, *viz.*, Confusions of Appearance.” (Berkeley 1709, XXXII)\(^{(1)}\)

In *An Essay towards a New Theory of Vision* George Berkeley (figure 1) used the confusion or blurredness of vision as an explanatory principle in the perception of distance and magnitude. Immediate vision was restricted to light and colours and the perception of space required mediation by tactile or muscular cues. Vision and touch were considered to be independent of one another but common occurrences could become associated (see Wade 2009).

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**Figure 1.** [In colour online, see http://dx.doi.org/10.1068/p3804ed] *Berkeley’s New Theory* by Nicholas Wade. The portrait of Berkeley is derived from a detail of a painting photographed in the Staff Club at Trinity College Dublin, and it is combined with the title page of Berkeley’s *Essay*.

Berkeley’s second statement in his *Essay* was: “It is, I think, agreed by all that *Distance* of it self, and immediately cannot be seen. For *Distance* being a Line directed end-wise to the Eye, it projects only one Point in the Fund of the Eye, Which Point remains invariably the same, whether the *Distance* be longer or shorter” (Berkeley 1709, II). It was by no means controversial as it was paraphrased from *Dioptrica Nova* which had been published a few years earlier by his fellow Ulsterman, William Molyneux (1692).

\(^{(1)}\) The quotations from Berkeley’s *Essay* refer to the sections numbered in the first edition. All *italics* are as in the original.
While it was ‘agreed by all’, the conclusions Berkeley drew from it were hotly debated then and now. Moreover, he did not make the proviso, present in Molyneux’s text, that this applied to distant objects or with monocular viewing. Berkeley’s portrait in figure 2 is embedded in a pattern of points, representing extended lines, only one of which is directed to the fund of his left eye, the others would be seen as lines. His argument about the projection of an extended line to the eye is restricted to monocular vision: with both eyes open, the line would be a point for only one eye and extended for the other.

If optics cannot be enlisted to account for the visual perception of distance, what can? Berkeley’s answer was confusion: “Thus greater Confusion having been constantly attended with nearer Distance, no sooner is the former Idea perceiv’d, but it suggests the latter to our Thoughts” (XXVI). There has been much confusion about Berkeley’s idealism in the 300 years since the appearance of his New Theory of Vision. Indeed, confusion lies at the heart of Berkeley’s vision, as is evident from the quotation above. Visual confusion played a major part in his analysis of visual distance. That is, Berkeley considered that the blurredness of appearances provided vital knowledge about the distance and magnitude of objects.

The superior resolution around the region of fixation was then well known, and was referred to by Berkeley; the reduction in such distinct vision in the periphery was seen as a defect: “The Visive Faculty consider’d, with reference to it’s immediate Objects, may be found to Labour of two Defects. First, In respect of the Extent or Number of visible Points that are at once perceivable by it, which is narrow and limited to a certain Degree. It can take in at one View but a certain, determinate Number of Minima Visibilia,
beyond which it cannot extend its Prospect. Secondly, Our Sight is defective in that its View is not only narrow, but also, for the most part, confus’d” (LXXXIII). The perceived dimensions of objects were determined by the number of minima visibilia, but these were not constant throughout the visual view: distinct vision was restricted to a small region around the centre of vision (figure 3).

His Essay is perhaps best seen as laying the ground for his esse: his famous phrase “esse est percipi”—to be is to be perceived (figure 4)—which was published in his Principles (Berkeley 1710). That is, the matter from which materialism is constructed is itself open to question. If all we have are our perceptions, how can we prove the existence of an external world? A problem with this position is that if perceptions are transitory so is existence. Does an object cease to exist when the eyes are closed? Berkeley sought to salvage this slide into solipsism (that nothing other than one’s own ideas exists) by arguing that God alone perceived an external reality.

Figure 3. [In colour online.] Berkeley’s Distinct Vision by Nicholas Wade. Berkeley’s portrait is derived from a painting by John Smibert; Berkeley’s right eye is sharply defined but his face gets more blurred with distance away from the eye.

It might be expected that a book entitled A New Theory of Vision would add to our knowledge of vision. However, with Berkeley it was much more evident what he was opposed to than what he would use as evidence for his new theory. A case could be made for the title being changed to a new theory of touch, since this sense was posited as having a closer contact with space than was the case for vision. In his Essay Berkeley stated his bitter opposition to analyses of vision in optical terms, but it is less clear what he wished to replace it with, other than confusion or visual blur. This was aptly summarised in the assessment of his great compilers: “The Essay is an account
of the manner of vision, a psychological study of certain critical features in visual perception. It is not a treatise on the eye, or on light and colour, or on optics generally; and though it is mentioned still in works on vision, its contribution to purely scientific theory is not outstanding. It is a work on the *philosophy* of vision*” (Luce and Jessop 1949, page 147, original italics).

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**Figure 4.** Berkeley’s *Esse* by Nicholas Wade. The portrait of Berkeley, which exists if it can be perceived, was derived from a frontispiece illustration in Luce (1949).