

Berkeley's Lasting Legacy

Berkeley's Lasting Legacy:
300 Years Later

Edited by

Timo Airaksinen and Bertil Belfrage

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P U B L I S H I N G

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This book first published 2011

Cambridge Scholars Publishing

12 Back Chapman Street, Newcastle upon Tyne, NE6 2XX, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

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ISBN (10): 1-4438-2726-6, ISBN (13): 978-1-4438-2726-3

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ABBREVIATIONS

| | |
|--|---|
| <i>Alciphron</i> (Alc) <i>Analyst</i> | <i>Alciphron; or, the Minute Philosopher</i> (1732) <i>The Analyst; or, a Discourse Addressed to an Infidel Mathematician</i> (1734) |
| <i>De Motu</i> (DM) | <i>De Motu; sive, De Motus Principio & Natura, & de Causa Communicationis Motuum</i> (1721) |
| <i>Notebooks</i> (NB) | Two notebooks (A and B) published as <i>Philosophical Commentaries</i> . |
| <i>Principles</i> (P) | <i>A Treatise concerning the Principles of Human</i> |
| PI | Published Introduction to the <i>Principles</i> . |
| MI | Manuscript Introduction to the <i>Principles</i> . |
| <i>Theory of Vision</i> (TV) | <i>An Essay towards a New Theory of Vision</i> (1709) |
| <i>The Theory of Vision Vindicated</i> (TVV) | <i>The Theory of Vision ... Vindicated and Explained</i> (1732) |
| <i>Three Dialogues</i> (3D) | <i>Three Dialogues between Hylas and Philonous</i> |
| <i>Siris</i> | <i>Siris: A Chain of Philosophical Reflexions</i> (1744) |
| <i>The Querist</i> (Q) | <i>The Querist, containing Several Queries, Proposed to the Consideration of the Public</i> (1735-1737, 1750) |
| <i>Works</i> | <i>The Works of George Berkeley</i> , 9 vols, A. A. Luce and T. E. Jessop (eds), London, Nelson (1948-1957). |

INTRODUCTION

George Berkeley (1685-1753) contributed to a wide range of academic disciplines; from philosophy to mathematics and empirical psychology; from theology to political economy and monetary policy. Today, he is almost exclusively known for his immaterialism, his challenging denial of matter (as this term was defined in those days). But in Berkeley's own days, his metaphysical works were either neglected or disregarded. Early on, he was famous for his contributions to moral and social philosophy. As late as the mid 1800's his psychology dominated the field. John Stuart Mill referred to it as "the Science of Man" or "the received [Berkeleyian] modes of studying mental phenomena." At the same time, metaphysicians of the realist school attacked Berkeley's psychology as nothing but a vulnerable defence of idealistic metaphysics.

The result was a change of focus some 150 years ago towards either attacking or defending Berkeley's earlier forgotten immaterialism. For more than a century, Berkeley's metaphysics attracted almost all the attention, but today there is a growing interest in "the unknown Berkeley." The present volume of essays intends to meet the new interest in all of Berkeley's works, including such for a long time neglected contributions as his pioneering work of empirical psychology in the *Theory of Vision*, his contribution to economic theory in *The Querist* that inspired David Hume, Adam Smith and John Maynard Keynes, his Latin tract *De Motu* in which he anticipates modern theories in the philosophy of science, his *Passive Obedience* that has been interpreted as the first version of a utilitarian doctrine of morality, his mathematical inquiry in *The Analyst*, in which he among other things observes a slip in Isaac Newton's *Principia*, book 2, lemma 2, his *Alciphron* in which he anticipates aspects on pragmatism in moral and social philosophy, and of course the infamous *Siris*. After John Wild's *George Berkeley: A Study of His Life and Philosophy* (1936) no one has attempted to create a similar synthesis from the *Notebooks* to *Siris* along with an account of Berkeley's life and career.

In *Siris* Berkeley recommends Tar Water as a panacea and speculates about divine Trinities. He recommended tar-water because it was cheap, easy to prepare, widely available and efficient. It cools the patient down and soothes him. But most of all, it replaces strong alcohol which heats up the body and mind and destroys the person as well as the whole society.

But *Siris* is also a scientific treatise which comments on Newton, aether theory, and the nature of light. He mixes ancient philosophy, theology, physiology, physics and medicine in an intriguing manner. The renewed interest in *Siris* and also in *Alciphron*, which is evident in this volume, may well be a sign of things to come in Berkeley research.

But we also need to remember that Berkeley was a moralist who aimed at the education and eternal salvation of man. He visited America as part of his Bermuda Project and intended to build a college in Bermuda, but the British Parliament did not pay the grant as promised. The project failed. When in America 1729-1731 he stayed in Newport (now Middletown), Rhode Island, where he wrote the *Alciphron*. Through his gifts of books to Harvard and Yale and his acquaintance with (the American) Samuel Johnson he left a lasting impression on cultural life in America. In this volume, the reader will find several references to the interesting discussions between Berkeley and Johnson. Johnson later became the first president of the Anglican King's College in New York which later became Columbia University, New York. The city of Berkeley, California, was named after Berkeley.

George Berkeley has many interesting radical and challenging logical, epistemological, metaphysical and scientific ideas. Some of these have been studied very carefully and thoroughly like his immaterialism, but the full picture is still emerging and evolving. We hope that the present collection of new and previously unpublished articles by leading international scholars will mark a path towards a more adequate understanding of Berkeley and his place in intellectual history.

This new collection is published to celebrate the 300th anniversary of George Berkeley's *Principles* (1710).

The Editors are grateful to Heta Gylling, Roy Holcombe, Satu Ilta, and Birgit Strömgård for all their help.

—Timo Airaksinen and Bertil Belfrage

PART ONE:
BERKELEY'S PHILOSOPHY OF PERCEPTION

BERKELEY'S WAY TOWARDS CONSTRUCTIVISM, 1707-1709¹

BERTIL BELFRAGE

Abstract

George Berkeley opens the *Principles* (Part I) with “a Survey of the Objects of Human Knowledge” including such ideas “as are perceiv’d by attending to the Passions and Operations of the Mind.” Scholars have rejected this passage as being “philosophically impossible,” not seriously meant, just a reference to John Locke’s ideas of reflection, or not at all about “ideas.” It is true, in a few unpublished manuscripts Berkeley used the term “ideas” for image-pictures of particular things (the Old Paradigm). But, I argue, in the *Theory of Vision* he develops a New Paradigm; and, if we follow Berkeley’s advice to read his books “in the order wherein [he] published them,” then his “Survey of the Objects of Human Knowledge” makes perfect sense in the light of this New Paradigm.

The Old Paradigm

Berkeley’s view on perception in some of his early manuscripts is very simple.² God, the only active being in the world, produces perceptions in us; we are totally passive in perceiving. No matter, if we perceive *all* of an object or *part* of it, no matter by *what sense* or from *what perspective* we observe it; we nonetheless perceive *it*; we are certainly *not* referring to our

¹ A paper called “A Paradigm Shift in Berkeley’s Philosophy 1707-1709” was published in the *Revue Philosophique* no. 1, 2010, 71-82. By arbitrary alterations the editors, Yvon Brès and Dominique Merllié, changed central passages into nonsense. Although I forbade publication, they published their version. To rectify this copyright infringement, I now publish this paper for the first time, though with a new title and without the Brès-Merllié contributions.

² *Notebook A* (first three fifths) (NB), “Of Infinities” and the *Manuscript Introduction* (MI).

sensations or *perceptions* of it. The relation between “real” objects and our image-pictures of them can be illustrated as follows (MI 20):³

(1) Objects → Perceptions (= “Copies & Images” of these objects).

According to the tradition to which I oppose, “Berkeley always means by ‘idea’ a sensory object,” and “sensory objects are essentially concrete, particular, picturable”; and he never changed his mind.⁴

Towards a New Science of Vision

I start with a general overview of Berkeley's steps towards what I take to be his new doctrine. The first step can be illustrated by an optical experiment named after Isaac Barrow. It was intended to show how we perceive distance, but it failed in a way that caught Berkeley's interest. In the experiment, an object was projected onto the subject in such a way that it looked fuzzy. Berkeley asked: How do people interpret fuzziness, when they judge about distance? In his version of the experiment, I call it “Berkeley's Experiment,” he used two subjects, the one with normal eyesight, the other nearsighted. The normal-sighted person said “It is near,” the nearsighted “It is not near; it is far away.” I shall use the term “sensation” for what *both* of them saw (a fuzzy-looking object), and the term “perception” for what they saw, when the *one* said “I see a near-by object,” the *other* “I see a far-away object.” Thus in this case we have:

(2) The *same* sensations in two persons → *different* perceptions.

As a non-deceiving god could not inform the one that the object is near, the other that it is *not* near in exactly the same situation, the outcome of the experiment called for an explanation. Berkeley explains it by their different experience of fuzziness: to a person with normal eyesight, an object appears fuzzy if we bring it very close to his eyes; but to a nearsighted person, distant objects look fuzzy (TV 36, 37, 39). This indicates a process, in which the perceiver interprets or judges incoming god-given data against earlier experience:

³ I use clumsy arrows “→” non-technically to illustrate what happens over a period of time. It does *not* stand either for equivalence or material implication, as Yvon Brès and Dominique Merlié insist.

⁴ Editorial comment in *Works*, vol. 2, 8-9, 41n.

(3) Sensation → [- - Process - -] → Perception

How, then, does the human soul perceive? William Molyneux, for one, regarded this question “*by us unsearchable*”;⁵ but Berkeley had found a ticket to the field of empirical psychology, and that was the concept of mind that he developed in the early part of *Notebook A*. As known to us, he argued, “the soul” is nothing but a succession of ideas. This thesis has nothing to say about the nature of the soul, but it supplied him with a method for studying mental phenomena. I prefer to call it a Black Box Theory of Mind. We do not know what there is in the box; *all* we know is what enters the box and what comes out of it:

(4) Input (sensations) → [Black Box] → Output (perceptions)

To identify what is given, and to establish laws, by which we can predict how a person is likely to perceive an object in a given situation, Berkeley studied the causal chain from rays of light to visual perception. To carry out this task, he based his enquiry on three scientific disciplines, in modern terms: optics, physiology and psychology (TVV 37):

(5) Rays of light → Retina → Sensation → Process → Perception

⏟
Optics
⏟
Physiology
⏟
Black Box
⏟
Psychology

In Berkeley’s Experiment, for instance, the optician observed that the rays of light did not focus on the retina, which made the physiologist predict “Confusedness of Appearance.” The psychologist could then forecast that the near-sighted person would perceive a far-away object, the normal-sighted one a close-by object.

In line with the Black Box Theory of Mind, Berkeley’s search for significant regularities between input and output made him adopt an empiricist concept of causation in the *Theory of Vision*. Contrary to the *Principles*, the term “cause” is always used in its empirical sense in the *Theory of Vision*, never in its metaphysical sense. Accordingly, we read about such links of a causal chain as particles of the air causing effects on the rays of light, which cause effects on the retina, which cause a faint-looking sensation, and we have a psychological law saying that these kinds of events are likely to cause “an object to be thought greater” (TV 68-73). In Berkeley’s psychology, the physiologist identifies the first link of

⁵ Molyneux 1692, p. 106. Italics original.

unconditioned responses, such as sensations of sounds, light-and-colour, tastes, et cetera, which are not (yet) taken as sounds, colours, or tastes *of* anything. The psychologist is then supposed to investigate, by observing the last link of the chain, how these raw data are processed in the Black Box. Thus he investigates these stages of the act of perceiving:

(6) Unconditioned responses → [Processes] → Intelligible perceptions

One of the striking differences between the early view in (1) and the approach illustrated in (5) and (6) is that the two entities in (1), the “physical objects” and the god-given “pictures” of them, do not appear at all in (5) or (6). Ontological assumptions, he argues, are totally irrelevant to the psychology of perception:

The Beings, ... which exist without, may indeed concern a Treatise on some *other* Science, and may *there* become a proper Subject of Inquiry. But, why they should be considered as Objects of the visive Faculty in a Treatise of Optics, I do not comprehend (TVV 19, my emphasis)

To the absolute Nature, therefore, of outward Causes or Powers, we have nothing to say. (TVV 12)

He actually maintains that, even if his metaphysical doctrine is mistaken, then this would in no way affect his theory of vision (TVV 20). But how can a Black Box Theory of Mind help us to investigate mental states in another person's mind?

Investigating Mental States in Another Person's Mind

In the *Theory of Vision*, Berkeley returns again and again to the statement that we *can* have what he describes as an “*Idea* of [a] Passion” in another person's mind (TV 9, 10, 23, 41, 65, 94):⁶

we see Shame or Anger, in the Looks of a Man ... for no other Reason, than barely because [certain Colours, and alterations of Countenance, which are the immediate *Object* of *Vision*] have been observ'd to accompany [Shame or Anger]: Without which Experience, we shou'd no more have taken Blushing for a Sign of Shame, than of Gladness.

This example illustrates the crucial pre-behaviouristic idea in Berkeley's Black Box Theory of Mind that we know mental states *only* by observing

⁶ In this quotation from TV 65, “certain” in “certain Colours” is my gloss.

a person's voluntary or involuntary behaviour (TV 9-10).⁷ What we see, when looking at a face turning red, is certainly no copy or image of the mental state in that person's mind; there is *no resemblance* between a red face and a passion. Yet, we do perceive passions, according to Berkeley, but not by sense but by a primitive form of induction.

Once we have noted the connection between red faces and a certain behaviour, the sensation of a face turning red begins to raise expectations in us (TV 23); we begin to take "Blushing for a Sign of Shame." This relation between a sign and what it signifies makes Berkeley distinguish between "two sorts of Objects apprehended by the Eye: The one, primarily and immediately, the other, secondarily and by intervention of the former" (TV 50, 54). I have referred to these two kinds of "objects" as "sensations" and "perceptions."

"Sign," as a technical term in the *Theory of Vision*, is closely connected with the concepts of "coexistence" and "suggestion." When different ideas have been "observed to go together," or to "coexist," we expect them to appear together even in the future.⁸ In Berkeley's words: "Ideas, which are observed to be connected with other Ideas, come to be considered as Signs, by means whereof Things, not actually perceived by Sense, are signified or suggested to the Imagination."⁹

(7) Sensation → [- - Induction/expectation - -] → Perception

Berkeley illustrates this situation in one of his most quoted examples:

Sitting in my Study I hear a Coach drive along the Streets. I look through the Casement and see it. I walk out and enter into it. Thus, common Speech wou'd incline one to think, I heard, saw, and touch'd the same Thing, viz. the Coach. It is, nevertheless, certain, the Ideas intromitted by each Sense are widely different, and distinct from each other; but having been observed constantly to go together, they are spoken of as one and the same thing. (TV 46)

When I hear a coach the sensation, that I am actually aware of, is nothing but a sound. It is my earlier experience that makes me think about those other data which normally coexist with it. But these other data are *not perceived by sense*; it is, Berkeley says, "*the Imagination*, whose Objects

⁷ Even when Berkeley, later on, became convinced that there is a spirit in the box, he said: "Such is the Nature of *Spirit*, or that which Acts, that it cannot be of it self Perceived, but only by the Effects which it produceth" (P 27).

⁸ TV 25, 55, 66, 72, 103, 110, 145.

⁹ TVV 39. TV 25, 26, 28, 36, 37, 47, 50, 51, 53, 57.

they are, and which alone *perceives them*" (TVV 10, 39; TV 138-148, my emphasis). And this transition from the sensation of a sound to the perception of a coach is "So swift, and sudden, and unperceiv'd," so we are likely to make the vulgar mistake of identifying the sensation of a sound with the perception of a coach or identifying what we are actually aware of with what we expect to experience under proper circumstances. (TV 126, 145, 157)

These observations indicate that perceiving requires memory and imagination and is a mental act, which includes both induction and expectation. It can be illustrated as follows:

(8) Object(s) of sense → [Mental act] → Object of the imagination

The result is a surprisingly modern psychology of perception.

Berkeley's Constructivist Approach to Perception

Berkeley uses the Law of Specific Sense Responses to identify *what kind* of objects is given. It states that,

(9) If properly stimulated, each sense provides us with responses that are unique to this sense. (TV 46, 54, 129-130)

I call these sense-specific elements *pure sensibles*. They are pure in being sensations of no more than one sense. Thus by a "pure visual" I mean a sensation of *nothing but* light-and-colour, just as isolated sensations of sounds, smells or tactile experiences are "pure" audibles, olfactories, or tactuals. These basic raw data are given at time zero, "at our first Entrance into the World." At that time, "they were *not* connected in our Minds," but later on we learn to combine them into more complex units "by the slow Steps of Experience" (TV 144, my emphasis). In negative terms, the Law of Specific Sense Responses states that "the *Ideas* intromitted by each Sense are widely different, and distinct from each other" (TV 46). In other words:

(9') Responses from different senses are intrinsically different (Berkeley's term is "heterogeneous").

I refer to such more complex units, which include sensations of different senses, as *mixed sensibles* or heterogeneous units. Berkeley regarded it the main issue of his psychology to explain, how *different* raw data, or pure

sensibles, become interpreted as qualities of more complex units of mixed sensibles, which are “considered *as one* thing” and “marked by *one* name” (TV 14, 35, 41, 42, 52, my emphasis). “The Solution of this Problem, in its full Extent, doth comprehend the whole Theory of Vision,” he says, and adds optimistically: “Thus stating of the Matter placeth it on a new Foot, and in a different Light from all preceding Theories” (TVV 42). In (7) and (8), I illustrated the steps from sensation to perception, and in (9) I mentioned those pure sensibles that are “given,” according to Berkeley. But by what laws does the mind combine these raw data into more complex units?

In *Principles* 146, we read about the “Laws of Pain and Pleasure, and the Instincts or natural Inclinations, Appetites, and Passions of Animals.”¹⁰ In the *Theory of Vision*, this law takes the form of a *Preservation Principle*:

We regard the Objects that environ us, in proportion as they are adapted to benefit, or injure our own Bodies, and thereby, produce in our Minds the Sensations of Pleasure, or Pain ... Which Foresight, how necessary it is to the preservation of an Animal, every ones Experience can inform him. (TV 59)

This explains the direction of the process from sensation to perception. It says that,

(10) If a person P considers a mixed sensible “as one thing,” say T, in the situation S, then P expects that at least one element in T can be potentially useful (pleasant or painful) in S.

This should be understood in a very broad sense. If we run into a solid thing in full speed, such as a tree or a wall, for instance, we will be painfully aware of how useful it is to observe such things in the future. This pragmatic approach is further emphasized in the *Constructivist Thesis*:

Every Combination of *Ideas* is consider'd as one thing by the Mind, and in token thereof, is mark'd by one Name. Now, this Naming and Combining together of *Ideas* is perfectly Arbitrary, and done by the Mind in such sort, as Experience shews it to be most convenient. Without which, our *Ideas* had never been collected into such sundry, distinct Combinations as they now are. (TV 109, 147, 153ff)

¹⁰ In the *Principles*, Berkeley refers to these “never enough admir'd Laws” in an argument from design for the existence of a wise and good creator.

This is an important theme in the *Theory of Vision*. Without “the slow Steps of Experience,” pure sensibles “were not connected in our Minds.” And when we have learnt to use pure sensibles as signs for creating useful “Combinations of *Ideas*,” then Berkeley asks us to “observe that Signs are variable and of Human Institution” (TV 144). As we read in the quotation above, the result of this “Combining together of *Ideas* is perfectly Arbitrary” in the sense that it is not necessary, which means not god-given (TV 109).¹¹ One important consequence is what I call the *Heterogeneity Principle*:

(HP) If x is a mixed sensible, i.e. a unity of heterogeneous elements, then x is *not* given, but a “Combination of *Ideas*” made by the mind.

Several interesting consequences follow from the thesis that the mind combines ideas into units “as best suits it’s own Ends and Purposes.” If we “never” regard a “Combination of *Ideas*” as “one thing,” unless we regard it “most convenient” in the present situation, then one consequence is the *Relativity Principle*, which says that:

(11) If P and Q live under different conditions, with radically different background-knowledge, and P perceives x as “one thing” in S, then Q could very well be quite unable to perceive x as “one thing” in S.

Psychologists and zoologists will not be surprised at this standpoint, but philosophers will probably ask whether the faculty of perceiving is supposed to serve pragmatic purposes rather than to get at the truth? This question illustrates a fundamental difference between Berkeley’s early metaphysics and his “Science of Vision.” To the *Early* Berkeley, there was an immediate connection between “reality” and “truth,” and the connecting link was god-given perceptions. So, at that early stage, our perceptions did provide him with indubitable “truths.” But his “Science of Vision” is not about ontological truths; it is about the selective process in which animals tend to pay attention to some things, neglecting others, in the light of certain, probably inborn, pragmatic criteria. (TV 147, cp. TV 85, 87, P 146)

¹¹ For this sense of “arbitrariness,” see also TV 143: “It is indeed Arbitrary that, in general, Letters of any Language represent Sounds at all; but when that is once agreed, it is not Arbitrary what Combination of Letters shall represent this or that particular Sound.”

The Paradigm Shift

The Early Berkeley, on the one hand, spoke about “objects” as (1) “real” things, which (2) we are acquainted with by virtue of god-given perceptions; (3) and these perceptions represent “real” objects by resemblance.

In the *Theory of Vision*, on the other hand, (1) he is not talking about “objects” in the everyday sense of “real” things (ontological issues are irrelevant to his “Science of Vision”); (2) only such “objects” as pure sensibles are “given,” whereas perceptions are end products of mental processes; (3) and these perceptions do *not* represent what they signify by likeness.

When the term “object” is used as a technical term in the one of these two contexts, its meaning is incommensurable with its use in the other context: a thesis formulated in the one cannot be translated into the language of the other.

Berkeley admits, however, that he does not always use “object” in a technical sense,¹² and that he was “betrayed thereby to say things, strictly speaking, neither true nor consistent.” On the other hand, it is quite easy to follow his arguments, if we observe his method to proceed step by step, or “by degrees,” as he puts it; first to formulate the problems in non-technical terms, or *outside the theory*, “gradually correcting our Judgment, and reducing it to a Philosophical Exactness” towards the end, when all entities have been properly analysed, defined, and brought *within the theory*. (TVV 35)

If a paradigm shift of the kind I have outlined can be established, then it explains the classical difficulty in understanding the opening section of the *Principles*.

The Survey of the Objects of Human Knowledge

Berkeley opens the *Principles* (Part I) as follows:

It is evident to any one who takes a Survey of the Objects of Human Knowle[d]ge, that they are either Ideas [1] actually imprinted on the

¹² We read, for example, in the opening section that his design is “to shew the manner, wherein we perceive by Sight the Distance ... of *Objects*” and, accordingly, he mentions “An *Object* placed at a certain Distance from the Eye” (21); but then we read that “things placed at a Distance are not, strictly speaking, the *Object* of Sight” (46), that a “proper and immediate *Object* of Sight” is “not without the Mind” (43), and that people are prejudiced “in thinking what they see to be at a distance from them” (43).

Senses, or else such as are [2] perceiv'd by attending to the Passions and Operations of the Mind, or lastly Ideas [3] formed by help of Memory and Imagination; either compounding, dividing, or barely representing those originally perceiv'd in the aforesaid ways. (P 1, additions in square brackets are mine.)

From the assumption that Berkeley never changed his mind it is natural to argue, as most scholars do, that the second kind of "ideas" [2] are "impossible."¹³ Others maintain that he did not have his own but John Locke's "ideas of reflection" in mind.¹⁴ The most extreme view is that "attending to the Passions and Operations of the Mind" requires looking into the Black Box to see the passions themselves and to look at the soul operating about its ideas.¹⁵ The *only* way to "see" the passions in another person's mind is however, according to the *Theory of Vision*, by means of a systematic observation of that person's voluntary and involuntary behaviour (TV 9, 10, 23, 41, 65, 94); and "attending to" refers in this book to what we observe as empiricist psychologists, not as metaphysicians.

From a constructivist point of view, the opening sentence of the *Principles* makes perfect sense. That problem which, "in its full Extent, doth comprehend the whole Theory of Vision," is how [1] isolated, disparate pure sensibles become connected with other actual or potential sensations in the act of perceiving (TVV 42). Investigating this problem Berkeley observes, how our instinct to approach pleasure, avoiding pain, makes us [2] select and combine pure sensibles into momentary impressions, which we use as tools or principles of interacting with the surroundings.

¹³ From the assumption that "Berkeley always means by 'idea' a sensory object," and "sensory objects are essentially concrete, particular, picturable" *Works* (2:8-9, 41n), it appears impossible to have an "idea" of "Passions and Operations of the Mind." Some scholars even argue that "such as" in Berkeley's "survey" refers to "objects" not to "ideas" (Johnston 1923, 144), but according to Alfred Klemmt "such as" does refer to "ideas" (Klemmt 1957, 122). Following Klemmt, E. J. Furlong argues that the sentence ends in a reference to "ideas ... perceived in the aforesaid ways" and, as "ways" is in the plural, it "must refer to the two previous classes specified, namely (i) 'ideas actually imprinted on the senses', and (ii) 'such as are perceived by attending to the passions and operations of the mind'." But, Furlong adds, "philosophically" Berkeley must have meant "objects," not "ideas" (Furlong 1964, 335).

¹⁴ See A. C. Fraser (Fraser's edition of the *Works*, Oxford 1901, vol. 1, 257); Klemmt (1957, 122) and Flage (2006, 7-13).

¹⁵ "It is clear to me that the objects we perceive 'by attending to the passions and operations of the mind' are ourselves, other finite spirits, and God," according to A. A. Luce, who concluded that "Ideas perceived by attending to the operations of the mind do not exist for Berkeley" (Luce 1945, 39f).

We use these momentary “objects of sense” as [3] signs of what we expect to perceive if we move, or if the situation changes. Thus, an “object of sense” signifies a series of potential impressions, which we consider “*as one thing*,” perceive by “the Imagination,” and mark “by one name” (TV 109, 147, 153ff, TVV 10, 39, my emphasis).

To sum up. At first, Berkeley regarded our perceptions as god-given pictures of “real” things:

(a) “Reality” → Perceptions

In the next place, he investigated how perceptions emerge from sensations or pure sensibles:

(b) Sensations → [- - ? - -] → Perceptions

What we perceive as “one thing” is, according to this analysis, a “Combination of *Ideas*” created by us in a perceptual process for pragmatic purposes. Starting from this result, his new question was in the *Principles*: How do our perceptions relate to “reality”? It can be illustrated,

(c) Perceptions → [- - ? - -]

but this problem falls outside the scope of the present paper.¹⁶

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¹⁶ I wish to express my gratitude the *Hultengrens Fond*, Lund University, for a grant that made it possible to write this paper.

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BERKELEY'S NEW THEORY OF VISION: SCIENCE OR METAPHYSICS?

LUC PETERSCHMITT

Abstract

Bertil Belfrage has recently given a “new interpretation” of Berkeley’s *Theory of Vision*. He opposes the view that it is a contribution to metaphysics; it is, he argues, a scientific theory comparable with physics and mechanics. I shall argue that both alternatives are mistaken: Berkeley does not present any definite theory at all in his essay on vision; it is not a contribution either to science or to metaphysics but an essay *towards* a theory that would include both scientific and metaphysical aspects. Even if the *Theory of Vision* is not a treatise on ontology or theology, and it is no doubt an empirical work, it is not a contribution exclusively to empirical psychology. Berkeley wanted to show the need for a new theory of vision. This explains why he seems to deal with both scientific and metaphysical themes at the same time.

The Principle of Autonomous Fields of Discourse¹

Most of the time, commentators read Berkeley’s *Theory of Vision* as a treatise on metaphysics: its object, its conceptual context and its consequences would be metaphysical – as A. A. Luce says, some commentators consider that it is an introduction to immaterialism.² Opposing this kind of reading, Bertil Belfrage has recently proposed a “new interpretation” of Berkeley’s theory of vision (Belfrage 2003). He opposes the idea that Berkeley’s work about vision is a contribution to metaphysics. However, at the same time, and in the same book, Margaret Atherton defends the thesis that Berkeley’s theory belongs to metaphysics.

¹ Belfrage 2003, 159.

² See Luce, Introduction to the *Theory of Vision* (TV), in Berkeley, *Works*, vol. 1, 149-150.

According to her, Berkeley's intentions when he wrote his *Theory of Vision* were systematic and metaphysical, so that the *Theory of Vision* is not a piece of research about the perception of space (Atherton 2003, 137-138). Thus the question whether Berkeley's *Theory of Vision* is a part of "science" or a part of "metaphysics" arises. In this paper, my aim is to show that even if Belfrage's criticism against what he terms the "traditional interpretation" holds, it does not follow as a consequence of it that Berkeley's theory is not "metaphysical" at all. However, it does require a new interpretation of the meaning of "metaphysics" (it cannot be the sense criticised by Belfrage).

The conditions of the question have to be clarified. It can be asked only if it is possible to distinguish clearly between "science" and "metaphysics" – provided that such a distinction does not entail that the latter is not a form of knowledge. Berkeley proposes this distinction in the last sections of his *De Motu*. Belfrage terms this distinction the "principle of autonomous fields of discourse" (Belfrage 2003, 159-160; see DM 71-72). Berkeley clearly distinguishes three levels of discourse: physics, mechanics and metaphysics. The objects of physics are observed regularities; mechanics exists at a more theoretical level (explaining the regularities by reducing phenomena to mathematical laws); and metaphysics deals with the existence and the true nature of things. According to this principle, the question that I ask in this paper is: is the theory of vision on the same level as physics (viz. is it comparable or analogous to physics?) or is it on the same level as metaphysics? In order to answer these questions, it will be necessary to examine both the object and the method of the theory of vision.

However, it is possible to object that this principle is not that important. Indeed, Berkeley proposes it in what seems to be an occasional tract, written eleven years after he wrote the *Theory of Vision*. Reading the *Theory of Vision* in the light of this principle would be a retrospective reading. After all, it could be that Berkeley did not have this principle in mind in 1709. And this reading would give too much importance to this principle.

In fact this principle is a crucial aspect of Berkeley's thought. Even if Berkeley stated it explicitly no earlier than in 1720, it corresponds to his early thought on the relation between the sciences and metaphysics. There are notes in the *Notebooks* that show an early reflection on the relations between the sciences and philosophy (or metaphysics). Berkeley was deeply concerned about this topic from the starting point of his philosophical career. I do not intend to prove that everything is in the *Notebooks*. I just want to underline that the principle of autonomous fields

of discourse is the final expression of early thoughts. If this is true, then it makes sense to read the *Theory of Vision* in the light of this principle: it was important enough to Berkeley (since he thought about it very early), and the light that it sheds on the *Theory of Vision* is not anachronistic. In his *Notebooks*, Berkeley is concerned about the relation between physics and philosophy: the former exists and the philosopher has to consider this reality³. He may propose new interpretations of scientific results; but his task is not and cannot be to modify these results. Berkeley declares: “My end is not to deliver *Metaphysiques* altogether in a *General Scholastique* way but in some measure to accommodate them to the *Sciences*, & shew how they may be usefull in *Optiques*, *Geometry* &c.” (NB 207)

What does “to accommodate” mean? First, it entails that the philosopher has to prove the innocuousness of philosophy in relation to the natural sciences – “philosophy” here is to be understood in a quite broad sense. For example, Berkeley writes: “N.B. my *Abstract* & *general Doctrines* ought not to be condemn’d by the *Royall Society* Tis wt Their Meeting did ultimately intend. v. *Sprat’s History S.R.*” (NB 506)

There is no need for other examples. This is enough to prove that “science” exists before “philosophy.” Thus, if the philosopher intends to struggle against scepticism, then he has to make sure that his philosophy is compatible with the existing science (if it is not, then this proves that the sceptics were right when they affirmed that our knowledge is not sound). However, the fact that philosophy is “accommodated” to the sciences also means that it has to be useful. This may mean: “Mem: To be eternally banishing *Metaphysics* &c & recalling *Men to Common Sense.*” (NB 751)

There is something that is found in the sciences and that has nothing to do with them: a kind of metaphysics opposed to commonsense. In the context of the *Notebooks*, it is extremely difficult to assess with certainty what Berkeley meant thereby. However, one may guess that it concerns all that seems to be incredible – that is to say, all that contradicts the doctrine that Berkeley begins to elaborate in his notes. What this doctrine was

³ Of course, this is true of natural sciences but not of mathematics: Berkeley does not hesitate to say that parts of mathematics, or even theorems are false – see for example NB 258: “*Diagonal of particular square commensurable wth its side they both containing a certain number of M. V.,*” NB 263: Mem: To Enquire most diligently Concerning the *Incommensurability of Diagonal & side*. whether it Does not go on the supposition of unit being divisible ad infinitum, i.e of the extended thing spoken of being divisible ad infinitum (unit being nothing also V. Barrow Lect. Geom.). & so the infinite indivisibility deduc’d therefrom is a *petitio principii.*”; and NB 264: “*The Diagonal is commensurable with the Side.*” One may also add all the notes bearing on the calculus.

exactly does not matter here: it is enough to admit that it is a philosophical doctrine. It means that the sciences do not deal explicitly with metaphysical themes (such as existence, causes and so on). In addition, it seems quite evident that the method that the philosopher may use to banish metaphysics is a kind of analysis of language, since "Words have ruin'd & over run all the Sciences, Law Physique Chymistry, Astrology. etc." (NB 702). This last item suggests that the metaphysics that is to be banished is conveyed by the delusion of words.

This short view⁴ of Berkeley's notes tends to show that his early reflections structurally correspond to what he does in the *De Motu*. In particular, it seems that he considered that science (that is physics) is in a sense independent from metaphysics (even if the latter may be useful to the former). At least it is possible to say that there is something analogous to the principle of autonomous fields of discourse going on in the *Notebooks*. Thus, it makes sense to read the *Theory of Vision* in the light of this principle.

Moreover, this principle is a consequence of Berkeley's worry about the natural sciences. And he presents it as the received view in the *De Motu*:

To treat of the good and great God, creator and preserver of all things, and to show how all things depend on supreme and true being, although it is the most excellent part of human knowledge, is, however, rather the province of first philosophy or metaphysics and theology than of natural philosophy which to-day is almost entirely confined to experiments and mechanics. (DM 34)

Berkeley notes that natural philosophy is limited to a certain kind of enquiry, leaving aside the theological (viz. the metaphysical) questions. This presentation is not altogether false. At least, it is a part of the programme of the Royal Academy of Sciences of Paris and of the Royal Society of London. The fellows of the Royal Society could not deal with God and human soul:

"These two subjects, god, and the Soul, being onely forborne: In all the rest, they wander, at their pleasure."⁵

In the Royal Academy of Sciences, these subjects were not explicitly forbidden. However, they were not mentioned in the description of the tasks of the fellows: "Although each fellow has to deal mainly with all that

⁴ For a complete study of this question, see Peterschmitt 2007, Chap. I and II.

⁵ Sprat 1958, p. 83.

concerns the particular science on which he works, however all of them will be exhorted to extend their research to all that may be useful or curious in the diverse parts of Mathematics, in the diverse ways of Arts and in all that may concern anything in Natural History or belong in some sense to Physics.”⁶

Implicitly the fellows of the Academy had to avoid theological questions⁷. Indeed, they did: the mentions of God are quite rare in the published memoirs. However, it is true that both Bernard le Bovier de Fontenelle and Thomas Sprat mention the possibility of dealing with natural theology. Just before the passage quoted, Sprat writes that “as to [God] they [viz. the fellows of the Royal Society] meddle no otherwise with divine things, than onely as the Power, and Wisdom and Goodness of the Creator, is display’d in the admirable order, and workmanship of the Creatures” (Sprat 1958, 82). And Fontenelle declares that “the fact that Physics leads us to some sublime thoughts about the Author of Nature is not something that should be taken as a pure curiosity of Physics [...] The true Physics rises to the point where it becomes a kind of theology” (Fontenelle 1732, XIV-XV). Both seem to admit a close link between physics and natural theology. However, it is necessary to remember that their writings had to justify the existence of the Royal Society and the Royal Academy of Sciences. Because of this apologetical aim, it is necessary to take such declarations cautiously. Indeed, the fellows of the Royal Society were charged with atheism⁸; and finally, the themes of usefulness (including the theological usefulness of physics) developed by Fontenelle are no more than *clichés* that may please the political power-

⁶ “Règlement ordonné par le Roy pour l’Académie des Sciences,” § 22, in *Histoire de l’Académie Royale des Sciences année M.DC.XCIC avec les Mémoires de Mathématiques et de Physique pour la même Année*, Paris, 1732, p. 6 (all translations from French into English are mine).

⁷ This is confirmed by Bernard le Bovier de Fontenelle in his *Eloge de Malebranche*: Fontenelle emphasizes that the fact that Nicolas Malebranche was a theologian and a metaphysician was not a reason to accept him as an academician. As Fontenelle writes, as a metaphysician and as a theologian “he would have been at odds with the Académie des Sciences, which would trespass its limit recklessly in tackling theology, and which forbear metaphysics since this latter seems too much uncertain and too much disputed or at least whose usefulness does not appear clearly” (Fontenelle 1741, 108).

⁸ As J. Cope and H. Whitmore note, for example, Henry Stubbes “makes the accusation that the Society is fostering a hidden atheism, basing his charge on their general sympathy with Descartes and the “mechanick” philosophy, which was popularly besmirched by its association with the terrible name of Hobbes” (Sprat 1958, Appendix B, p. 71).

that-be⁹.

Then the principle set by Berkeley may be considered as descriptive of the practice in the Royal Society and the Royal Academy of Sciences. This implies that one has to take it seriously, since one of Berkeley's main aims is to secure science against the assaults of scepticism. Thus it makes sense to read the *Theory of Vision* in its light. And the question raised by Belfrage's new interpretation makes sense in its turn.

Belfrage's New Interpretation

First, I will give a short account of Belfrage's interpretation. According to him, Berkeley presents in the *Theory of Vision* an "experimental psychology" which is not a contribution to metaphysics. Belfrage gives three strong arguments in favour of his interpretation. I take these arguments to be correct, even if the conclusion drawn by Belfrage does not necessarily follow.

First, the *Theory of Vision* is not a contribution to metaphysics since Berkeley explicitly refuses ontological and theological considerations (Belfrage 2003, 173-175). He is quite clear about that point in the *The Theory of Vision Vindicated*. Berkeley restricts his discourse to the sensations whatever their cause may be. As Berkeley sees it, the problem is not to understand what the world is made of. He considers only our own ideas. In that sense, the question of the true nature of things is left aside, as well as the question of their existence¹⁰.

This leads us to the second main argument, bearing on the conception of causality (Belfrage 2003, 175-183). Belfrage is the first to notice that in the *Theory of Vision* Berkeley uses an empirical concept of causality, as opposed to the metaphysical one (the opposition is summarized in the final sections of the *De Motu*). Berkeley always uses the notion of causality in its empirical sense in the *Theory of Vision*, whereas this is never the case in the *Principles*. The context is not the same: as the *Principles* constitutes a metaphysical book, it seems then that the *Theory of Vision* is a "scientific" one.

Last, Berkeley did not reject science, that is to say the geometrical theory of light. He contests only one point: the theory of vision is not geometrical. However, this does not mean that he criticized the whole of optics. Indeed, he uses optics several times in his theory. Even more

⁹ See the analysis of such themes in Fontenelle's Preface to the *Histoire de l'Académie Royale des Sciences* (1699) (Mazauric 2007, 146-149).

¹⁰ See for example TVV 20.