STUFF AND NONSENSE: BERKELEY AND IMMATERIALISM

(Revised and extended version of paper presented at Kingston Philosophy Café on 15 May 2013)

1. INTRODUCTION

A conversation in a pub

1.1 You are drinking with friends in a pub having recently read and found beguiling the arguments of the Irish philosopher George Berkeley (1685-1753) for 'immaterialism'. Taking advantage of a lull in the conversation, you ask "how do you know that the stuff in your glasses really exists?" They look at you rather strangely but decide to humour you and say that of course they know it exists because they can see, touch, taste and smell it and, if it made a noise, could hear it. What more evidence do they need? "So does stuff cease to exist", you persevere, "when no-one is seeing, touching, tasting, smelling or hearing it?" They respond that of course it doesn't. It carries on existing independently of any sensory experience that anyone might have of it. "But if all we experience are looks, touches, tastes, smells and sounds - or sensory ideas as we might call them", you ask, "what do we know of the existence of anything else and so why not just describe our experience in terms of those ideas?" "But the ideas must come from *somewhere*", protests one of your friends. "It's not from *us* because we can't create or change them at will. Much as I might like to, I can't will my almost empty glass suddenly to appear full again. Anyway, if my glass of beer is just a collection of ideas then so is everything else that we sense including our own bodies". "Perhaps", you suggest, "we are disembodied finite spirits into which sensory ideas are being constantly fed by some supreme infinite spirit". At this point your friends complain that it's all getting a bit weird and that their brains are beginning to hurt. They remind you that it's your round and change the subject to last night's football match. You are tempted to raise the question of how all that goes on in football matches (including all the 'ideas' experienced by both footballers and spectators) might be represented in terms of Berkeley's ontology - but think better of it.

Berkeley's views reflect philosophical doubts about the nature of 'substance'.

1.2 Berkeley expounded his immaterialist doctrine in *A Treatise concerning the Principles of Human Knowledge* (1710), exploring it further in *The Three Dialogues between Hylas and Philonous* (1713). Although his rejection of the existence of material substance was dismissed by many at the time as simply mad, it reflects an uncertainty about the nature of 'substance' already expressed by the English philosopher John Locke (1632-1704). In his *Essay concerning Human Understanding* (1689) Locke argues that all ideas in the human mind are derived ultimately either from 'sensation' (i.e. sensory experience) or from 'reflection' upon its own operations. He accepts, however, that the idea of substance "we neither have, nor can have, by *sensation* or *reflection*" and, there being no innate ideas, can signify only "an uncertain supposition of we know not what ... which we take to be the substratum or support of those ideas we do know" [EHU 1.4.18]. "The mind being … furnished with a great number of the simple ideas conveyed in by the *senses* … takes notice also that a certain number of these simple ideas go constantly together; which being presumed to belong to one thing … are called, so united in one subject, by one name; which … we are apt afterward to talk of and consider as one simple idea, which indeed is a complication of many ideas together: because … not imagining how these simple ideas can subsist by themselves, we accustom ourselves to suppose some *substratum* wherein they do subsist and from which they do result; which therefore we call *substance* [EHU 2.23.1]. Doubts about the origin of our sensory ideas were also expressed by the Scottish philosopher David Hume (1711-76) when discussing 'scepticism with regard to the senses' in his *Treatise of Human Nature* (1739). "As to those impressions, which arise from the senses, their ultimate cause is, in my opinion, perfectly inexplicable to human reason, and it will always be impossible to decide with certainty, whether they arise immediately from the object, or are produced by the creative power of the mind, or are derived from the Author of our being" [THN 1.3.5].

Berkeley's philosophical influence has been deep and long-lasting. He is worth studying.

1.3 'Ontological' issues about the nature of 'reality' and 'epistemological' issues about how it can be known continue to trouble the field of philosophical enquiry. Berkeley was convinced that he had found 'the answer'. His arguments are certainly beguiling. If we find his conclusions bizarre, even nonsensical, the challenge is to show where he goes wrong. We should not expect to find this easy. Magee (1998) argues that, although non-religious thinkers might reject the role Berkeley finds for God, "the rest of his philosophical challenge remains disconcertingly difficult to answer". There is no question that his influence has persisted to the present day. The philosophical approach known as 'phenomenalism' that emerged during the 19th century has been characterised as 'Berkeley without God' and the argument of 20th century 'logical positivists' that we can meaningfully describe the objects of our experience in terms of 'sense-data' can be related to Berkeley's reduction of objects to 'collections of ideas'. Berkeley is also credited with anticipating the acceptance in modern science that 'models' of physical reality may serve as no more than 'useful fictions' that enable us to make correct predictions about observable phenomena. There are good reasons, therefore, for studying Berkeley. An added bonus is that, unlike many philosophers, he writes both elegantly and concisely (his *Principles* and *Dialogues* amounting to no more than about 100 pages each[1]).

Key aims of this paper

1.4 In this paper I attempt to do the following.

- Provide an outline and critical appraisal of the arguments by which Berkeley derives his immaterialist doctrine.
- Demonstrate, in the light of certain key objections, that Berkeley's ontology is essentially incoherent (containing, to use his own terminology, 'repugnancies').
- Argue that any attempt to represent and describe our sensory experience in terms of the perception of 'ideas', 'sense-data' or similar postulated 'entities' involves conceptual and verbal fallacy and simply 'does not work'.
- Show that the particular objects of which we are aware cannot be characterised meaningfully as combinations of actual or possible sensory experiences.
- Justify our pre-theoretical 'model' of physical reality (involving 'stuff' that exists independently of any perceptual experience we might have of it) as inescapable, workable, not contradicted by theoretical 'scientific' models and strengthened rather than weakened by the so-called 'argument from illusion'.
- Suggest an approach that helps resolve conceptual difficulties arising from the distinction between perceiving 'minds' and perceived 'stuff'.

A few ironies

1.5 Before embarking on the above, we might note a few things about Berkeley and his philosophy that possess a touch of irony.

- In the Introduction to his *Principles*, Berkeley argues that philosophical confusion and scepticism (especially with regard to the evidence of our senses) arises not from the inadequacy of our faculties but from our failure to use them properly. "Upon the whole, I am inclined to think that the far greater part, if not all, of these difficulties which have hitherto amused philosophers and blocked up our way to knowledge are entirely owing to ourselves - that we have first raised a dust and then complain we cannot see" [PHKi 3]. He then proceeds, in both the *Principles* and *Dialogues*, to raise a veritable dust-storm that, if not blinded, has seriously clouded the vision of many subsequent philosophers.

[1] Berkeley had intended the *Principles* to be a longer work but completed only Part 1. He claimed in later correspondence to have made good progress on Part 2 but lost the manuscript whilst travelling in Italy and "never had leisure since to do so disagreeable a thing as writing twice on the same subject".

- A source of philosophical error, Berkeley argues, is that we confuse ourselves with words and fail to attend sufficiently to the 'bare ideas' behind them. "Unless we take care to clear the First Principles of Knowledge from the embarras and delusion of words, we may make infinite reasonings upon them to no purpose; we may draw consequences from consequences and be never the wiser. The farther we go, we shall only lose ourselves the more irrecoverably and be the deeper entangled in difficulties and mistakes" [PHKi 25]. We shall see that it is Berkeley's own uncritical adoption of Locke's terminology of 'ideas' and his own ambiguous use of that terminology that lead him into confusion and ultimate incoherence.
- Berkeley is keen to present himself as a defender of the 'common sense' view that we perceive immediately by our senses 'things' as they really are (against philosophic and scientific postulation of a hidden reality inaccessible to our senses). His reduction of 'things' (including our own bodies) to 'combinations of sensible qualities' existing only whilst perceived, however, is a million miles away from any commonly held view of the way things are.
- To his credit, Berkeley identifies a wide range of objections to his 'principles' and tries to answer them. Had he tried harder (in relation, for example, to the question of 'human agency'), he might have recognised the incoherent consequences of his 'reasonings' and back-tracked to locate where he had gone wrong.
- An ardent admirer of Berkeley also proved an insightful critic. The American clergyman and philosopher Samuel Johnson (1698-1772)[2] wrote to Berkeley in 1729 claiming to be "almost convinced" by immaterialism but, at the same time, specified fundamental objections to it. Berkeley's attempt, in his letter of reply, to answer these is far from convincing.

2. BERKELEY IN CONTEXT

Berkeley was an Anglican cleric who led an active social life. He was widely travelled.

2.1 Berkeley was born near Kilkenny, Ireland in 1685 and died in Oxford, England in 1753 at the age of 67. Some details of his life and times are provided in Appendix A. He was by all accounts a gregarious and charming man, enjoyed London literary society, travelled extensively in Europe and lived for a time in America pursuing (unsuccessfully) his scheme to found a missionary college in Bermuda. He held strong Christian beliefs, was ordained an Anglican clergyman (a requirement for Fellows of Trinity College, Dublin at the time) and, although neglecting his post of Dean of Derry when promoting his Bermuda scheme, conscientiously performed his duties as Bishop of Cloyne for the last quarter or so of his life, taking a keen interest in Irish social and economic conditions. He married and had two sons. Berkeley had formulated his immaterialist doctrine (as spelt out in his *Principles* and *Dialogues*) by his mid-twenties and did not see fit to alter it subsequently. In his later years he took a keen interest in promoting the medicinal value of 'tar water' (without explaining why it should prove beneficial to 'immaterial human spirits').

The 17th century was a period of radical scientific advance.

2.2 Berkeley was born towards the end of a century that saw radical advances in scientific understanding through the use of *observation* and *experiment*. Key figures include Galileo Galilei (1564-1642), Johannes Kepler (1571-1630), William Harvey (1578-1657), Thomas Willis (1621-75), Robert Boyle (1627-91), Robert Hooke (1635-1703) and Isaac Newton (1642-1727). Their fields of enquiry embraced mechanics, optics, astronomy, microscopy, chemistry, physiology and neurology.

[2] Johnson's *Elementa Philosophica* (1752) was dedicated to Berkeley. In 1754 Johnson became the first President of King's College, New York (now Columbia University). He should *not* be confused with the English lexicographer Samuel Johnson (1709-84) who neither met nor corresponded with Berkeley but who is reported to have said of Berkeley's immaterialism, whilst kicking a stone, "I refute it *thus*" (thereby demonstrating a fundamental lack of understanding of the character of Berkeley's argument).

Seminal works[3] include Kepler's *New Astronomy* (1609), Harvey's *On the Motion of the Heart and Blood* (1628), Galileo's *Dialogue Concerning the Two Chief World Systems* (1632), Boyle's *The Sceptical Chemist* (1661), Willis' *Anatomy of the Brain* (1664), Hooke's '*Micrographia'* (1665) and Newton's *Mathematical Principles of Natural Philosophy* (1687).

Philosophy and science ('natural philosophy') were closely connected.

2.3 The beginning of the 17th century has been associated with the dawning of an 'Age of Reason' that "celebrated human achievement and potential" and "both drove and was driven by developments in science, technology, philosophy, political thought and the arts" (Rooney, 2011). There was substantial cross-fertilisation of ideas between philosophers and scientists (or 'natural philosophers' as they were then called). Locke and Boyle, for example, were close friends (both being members of the Royal Society founded in 1660) and Locke qualified and practised as a physician (whilst also being involved in politics). The Frenchman René Descartes (1596-1650) was both a philosopher and a mathematician (originating the system of 'Cartesian co-ordinates' used in three-dimensional geometry). Although a broad distinction can be made between '*rationalist*' philosophers such as Descartes who, following Plato, regarded knowledge of 'the world' as gained primarily through the exercise of *reason* and '*empiricist*' philosophers such as Locke who, following Aristotle, regarded it as gained essentially through *experience*, it is important to emphasise that the scientific method *combines* the two approaches, theoretical reasoning being linked to observation and experiment (e.g. Newton formulated and tested his 'three laws of motion' by observing phenomena such as the relative movement of celestial bodies). The English philosopher, statesman, scientist and essayist Francis Bacon (1561-1626) is generally credited with providing, in his philosophical work *The New Instrument of the Sciences* (1620), the first clear formulation of the modern scientific method based upon the application of inductive reasoning to observation and experiment, primacy being given to the evidence of the senses[4].

The universe came to be seen as a 'corpuscular machine' obeying deterministic laws.

2.4 During the 17th century the belief (traceable back to the Ancient Greeks) that physical 'stuff' is composed of minute particles or '*corpuscles*' became predominant, the main point of contention being whether these were infinitely divisible or comprised indivisible 'atoms' (from the Greek 'atomos' meaning uncuttable). The French philosopher Pierre Gassendi (1592-1655) described a world of atoms existing in a void and obeying natural laws that determine all observed phenomena. Boyle too saw the universe as composed of atoms and clusters of atoms, the motions and combinations of which determine the nature of substances including their chemical properties. Locke was strongly influenced by both Gassendi and Boyle (Gassendi's maxim that "there is nothing in the intellect which has not been in the senses" supporting Locke's empiricist view of the origin of human knowledge). The 'corpuscular' model of reality, combined with the mathematically derived 'laws' of Newton and others, suggested a universe operating as a gigantic deterministic 'machine'. The role of 'God' appeared to be confined to that of a creator who, having constructed the 'machine', left it to run by itself (perhaps performing the odd 'miracle' now and then to encourage the faithful). A few philosophers, most notably the Frenchman Nicolas Malebranche (1638-1715), although accepting the existence of material objects, denied that they possessed any *causative* power. They considered 'God' to be the *sole* causal agent in the universe making everything happen on every 'occasion'[5] (e.g. a billiard ball to move when struck by another or an arm to move when its owner decided to move it).

[3] English translations of Latin titles are given.

[4] Francis Bacon's namesake, the English Franciscan friar Roger Bacon (c1210-c1292), was an early proponent of scientific investigation through the *construction of hypotheses* to explain *observed phenomena* and the *testing* of those hypotheses through *experimentation*. He regarded experiments as crucial, arguing that "we learn more through artful vexation of nature than we do through patient observation".

[5] Hence they were known as 'occasionalists'.

Both 'dualism' and 'corpuscularianism' raise significant problems.

2.5 For the most part, philosophers and scientists in the 17th century were 'dualists'[6], believing in the existence of two distinct types of 'substance' i.e. physical and spiritual. Almost all held some form of religious belief and sub-divided spiritual beings into finite humans and an infinite 'God'. An obvious problem for dualism is how two distinct types of substance can possibly interact. The 'corpuscular' model of substance, moreover, raises the problem of how the inferred corpuscles give rise to observed sensory phenomena. Generally a *causative* process is assumed. Locke, for example, cannot "conceive how bodies without us can in any way affect our senses but by the immediate contact of the sensible bodies themselves, as in tasting and feeling, or the impulse of some insensible particles coming from them, as in seeing, hearing and smelling; by different impulse of which parts, caused by their different size, figure and motion, the variety of sensations is produced in us" [EHU 4.2.11]. Once our sensory receptors have been affected, "some motion must be thence continued by our nerves or animal spirits by some parts of our bodies to the brains or the seat of sensation, *there to produce in our minds the particular ideas we have of them*" [EHU 2.8.12]. Some of these ideas, Locke argues, relate to the '*primary*' qualities (solidity, extension, figure, motion, rest and number) of the things observed i.e. qualities regarded as intrinsic to and thus 'inseparable' from them. Others relate to their '*secondary*' qualities (such as colour, sound and taste) i.e. qualities that appear to arise simply from the power of their primary qualities to produce various sensations within us [see EHU 2.8.9-10].

Berkeley saw developments in science and philosophy as promoting scepticism and atheism.

2.6 Berkeley was widely read in the works of 17th century philosophers and scientists (including the works of Locke and Newton). Locke's *Essay Concerning Human Understanding* was already a standard text book at Trinity College, Dublin when Berkeley became a student there in 1700[7]. His reaction to 17th century developments in science and philosophy was one of profound disquiet. Holding deep religious beliefs, he feared that acceptance of a mechanistic universe operating without divine intervention was only one step away from denying *any* role for God, even as its creator. The postulation of corpuscular matter as the cause of our sensory experience, moreover, appeared to provide a field day for scepticism. If, as Locke claims, our immediate experience is of sensory ideas, what do we know of anything else? Ideas relating to primary qualities, Berkeley argues, are as much 'in the mind' as those relating to secondary qualities and therefore have no privileged status as indubitable representations of independently existent 'matter'. Berkeley's solution was ruthless and drastic. He rejected both the meaningfulness of, and the need for, 'material substance'. Malebranche had already postulated a universe in which 'matter' possessed no causative power and in which God was the sole and perpetual cause of everything. Why then not 'jettison' matter entirely and regard all our sensory experience as the product of an ever-present God? At a stroke, Berkeley believed, this confirmed God as an inescapable presence in the world and cut away the ground for scepticism. Significantly, the full title of his *Dialogues* has the added words "*in opposition to Sceptics and Atheists"*.

[6] A notable exception was the Jewish-Dutch philosopher Baruch/Benedict Spinoza (1632-77) who hypothesised that there exists but *one* 'substance' (he is thus a 'monist' rather than a 'dualist') possessing an infinity of 'attributes' (including 'thought' and 'extension') and of which all things are simply 'modes'. He equated 'God' and 'Nature' with this substance and can thus be considered a 'pantheist' ('pantheism' translating literally as 'all is God'). Berkeley dismissed Spinoza (along with Hobbes) as an atheist, referring in the *Dialogues* to their 'wild imaginations' [DHP2 P18].

[7] Locke's *Essay* was widely recognised as a work of major importance except in his own university, Oxford, where an attempt was even made to prohibit students from reading it. Locke studied and taught at Christ Church, Oxford (where Berkeley lies buried) but left the university in his mid thirties, finding its approach to philosophy stultifying and fixated with medieval 'scholasticism'. At the end of the 17th century Trinity College, Dublin was significantly more progressive than either Oxford or Cambridge.

Berkeley is an 'immaterialist', an 'idealist', a 'monist', an 'empiricist' *and* a bit of a 'rationalist'.

2.7 Berkeley's rejection of matter clearly makes him an 'immaterialist'. His identification of 'ideas' as the sole objects of human knowledge (see 3.1) makes him an 'idealist'. He defines that which knows or perceives 'ideas' as "mind, spirit, soul, or myself" [PHK2] and declares it "evident there is no other Substance than Spirit, or *that which perceives*" [PHK7]. This belief in a single type of 'substance' makes him a 'monist'. Berkeley is at pains to stress that rejecting the existence of material substance in no way alters the nature and content of our everyday experience. Indeed he claims that dualists, by postulating the existence of an underlying 'material' reality that our sensory ideas only imperfectly and sometimes misleadingly represent, reduce the world of our perceptual experience to a mere show. In the *Second Dialogue* Berkeley, in the guise of Philonous, waxes lyrical about the "natural beauties of the earth" and the "glorious luminaries that adorn the high arch of heaven" and asks "What treatment then do those philosophers deserve, who would deprive these noble and delightful scenes of all reality? How should those principles be entertained, that lead us to think all the visible beauty of the creation a false imaginary glare?" [DHP2 P14]. What we experience through our senses, he claims, *is* the only reality. What we experience are 'ideas' and things such as trees, rivers, mountains and stars are nothing other than 'collections of ideas'. His emphasis upon the evidence of our senses makes him an 'empiricist' (he is generally lumped together with Locke and Hume as one of the 'British Empiricists') but his form of empiricism is, to put it mildly, odd. The process of reasoning whereby he *deduces* the need for 'God' as the originator of sensory ideas makes him also something of a 'rationalist'.

Berkeley has retained an appeal for a variety of reasons.

2.8 For different reasons, Berkeley has had a lasting appeal for many people.

- The religiously inclined may find encouragement in the ever-present role he finds for God. For Berkeley, God is a *vital* presence who, applying consistent 'laws of nature', originates our sensory ideas, determines their grouping into 'collections of ideas' constituting 'things' and ensures the continued existence of 'things', when no-one is perceiving their constituent ideas, by always perceiving the ideas himself.
- Berkeley rejects 'materialist' causal explanations of observed phenomena and might thus appeal to people for whom 'reductive' scientific explanation appears to rob our perceived world of its majesty and wonder. This feeling is expressed by John Keats (1795-1821) in his poem *Lamia* (in which 'philosophy' can be interpreted as 'natural philosophy' i.e. science). "… Do not all charms fly / At the mere touch of cold philosophy? / There was an awful rainbow once in heaven: / We know her woof, her texture; she is given / In the dull catalogue of common things. / Philosophy will clip an Angel's wings, / Conquer all mysteries by rule and line, / Empty the haunted air, and gnomed mine - / Unweave a rainbow …"[8] It might be argued, however, that Berkeley is himself 'reductive', reducing a rainbow, for example, to a mere 'collection of ideas'.
- Much of Berkeley's continuing appeal, it has to be said, results from the superficial and sometimes quite erroneous interpretation of his philosophy. In his poem *Blood and the Moon*, for example, William Butler Yeats (1865-1939) writes: "And God-appointed Berkeley that proved all things a dream, /That this pragmatical, preposterous pig of a world, its farrow that so solid seem, /Must vanish on the instant if the mind but change its theme…" Berkeley did nothing of the sort. As we shall see, he clearly distinguishes between dreams and reality and it is our *inability* to change our sensory ideas at will that convinces him they must have a cause 'external' to, and independent of, our minds (the only possible cause, he argues, being God).

[8] The sentiment expressed by Keats echoes that of Philonous (quoted in 2.7). Interestingly, Keats' assertion in his poem *Ode on a Grecian Urn* that "Beauty is truth, truth is beauty" also appears to echo some words of Philonous. "Truth and beauty are in this alike, that the strictest survey sets them both off to advantage. While the false lustre of error and disguise cannot endure being reviewed or too nearly inspected" [DHP2 P2].

'Scientific understanding' presents as great a philosophical challenge now as in Berkeley's day.

2.9 Developments in scientific understanding and explanation often present major philosophical challenges. This is at true today as when Berkeley was alive. He was confronted with a relatively simple and simplistic 'corpuscular' model of 'matter'. Today we have the 'standard model' of particle physics[9] with its three broad types of elementary particle (leptons, quarks and bosons) and four types of 'force' (strong, electromagnetic, weak and gravity). The model postulates 'anti-particles' as well as particles (and thus 'anti-matter' as well as 'matter'). The concepts of 'particle' and 'force' (and the related ones of 'mass' and 'energy'[10]) are particularly challenging (the existence of 'forces' being evidenced and measured by the behaviour of 'particles' and the behaviour of 'particles' being explained by the existence of 'forces'). It has to be assumed that Berkeley, were he alive today, would be as dismissive of elementary sub-atomic particles as he was of 'corpuscles' although, as we will see, he might grudgingly accept them as 'useful fictions' if they enabled the accurate prediction of phenomena regarded by him as the product of God-inspired 'laws of nature'. In a similar way he would appear to consider a postulated 'force' such as gravity (or 'attraction' as he calls it) as merely a predictive 'construct' based on observed regularities in nature and not as an "*efficient cause* … for that can be no other than the *will of a spirit*" [PHK 105].

The crucial challenge remains to resolve the conceptual conflict between 'mind' and 'matter'.

2.10 Whilst accepting that scientific models provide useful predictive 'constructs', most people would regard them also as 'getting at' some underlying *reality*. Berkeley claims that by postulating the existence of 'stuff' inaccessible to our senses we relegate the world of our sensory experience to a "*false imaginary glare*". We might claim, conversely, that to confine ourselves to 'appearances' and seek explanations in terms of conceptually ambiguous 'minds', 'spirits' or 'gods' is to shut ourselves off from a reality that, however speculative our attempts to understand it might be, is genuinely 'out there'. The *crucial* challenge, which still confronts us, is to resolve the conceptual conflict inherent in the traditionally made distinction between 'mind' and 'matter'. Some of the conflict may be attributed to simple 'category errors' (e.g. the 'noun-proneness' that tempts us to conceive of 'minds' as container-like 'things' or 'places'). The fundamental challenge, however, is to incorporate the mental phenomena of which we are all aware into a unified 'model' of reality. This is not to *reduce* such phenomena to the product of 'mere matter' but rather to *elevate* 'matter' to something much more wonderful and exciting. The challenge is faced equally by 'scientists' and 'philosophers'. Indeed it is important to avoid the compartmentalisation of human intellectual endeavour. As in Berkeley's day, the *cross-fertilisation* of different approaches is most likely to lead to progress[11]. Ultimately we are just *humans* trying from a variety of perspectives to make sense of the 'world' we experience. Somewhere 'out there', quite possibly, intelligent *non-humans* exist who are well ahead of us.

[9] A lucid guide to particle physics is provided by Martin (2011). He states that "it is unsurprising that the earliest enquiries into the nature of matter were purely philosophical speculations. This quest continues today in particle physics. As in earlier times, it is driven by the twin aims of simplicity and the desire to understand and explain an increasing range of phenomena in terms of a decreasing number of assumptions. Particle physicists focus on deducing answers to basic questions such as 'What are the constituents of matter?' and 'How do particles interact?'". Appendix B shows the fundamental particles currently postulated by physicists.

[10] The American physicist Richard Feynman (1918-88) is quoted as saying "It is important to realize that in physics today, we have no knowledge of what energy *is*".

[11] Encouragingly, a significant number of cross-disciplinary courses (e.g. science degrees incorporating philosophy modules) do exist.

3. BERKELEY'S 'IDEAS' AND 'COLLECTIONS OF IDEAS'

Berkeley says all 'objects of human knowledge' are 'ideas' but this does not square with our common use of the word.

3.1 Berkeley starts his immaterialist 'reasonings' with the claim that "it is evident to anyone who takes a survey of the objects of human knowledge that they are either *ideas* actually imprinted on the senses; or else such as are perceived by attending to the passions and operations of the mind; or lastly, *ideas* formed by help of memory and imagination" [PHK 1]. An immediate and obvious objection is that this is *far* from evident. Through our senses we perceive *all sorts* of 'things' (e.g. trees, forests, houses, bricks, clouds, sky, wind, rain, water, rivers, hills, valleys, holes in the ground, waves on the sea, flashes of lightning, rumbles of thunder, images on TV screens, voices, music, rainbows, mists, shadows and stomach-aches) but call none of them 'ideas'. With regard to our emotions (or 'passions' as Berkeley terms them), we might talk of experiencing *feelings*, but not 'ideas', of love, hatred, anger, compassion or whatever. Our everyday use of the word 'idea' does bear some relationship to Berkeley's 'operations of the mind'. Having 'ideas' seems to involve some sort of thought process and in some contexts the words 'idea' and 'thought' can be used interchangeably (e.g. as in "have you any ideas/thoughts about future topics for discussion at the Kingston Philosophy Café?"). The word 'idea', however, is less obviously applied to the 'representations' we conjure up in our minds through memory and imagination. At a pinch we might say that we have 'within our minds' the idea of, for example, a remembered childhood toy or an imagined unicorn. Significantly, however, we do not refer to 'ideas' when using sensory verbs to describe what we remember or imagine. We might say, for example, that we see 'in our mind's eye' a remembered or imagined face but not that we 'see an idea' of the face[12].

Berkeley uses the word 'idea' in a *special* sense but problems remain.

3.2 Berkeley would dismiss the above objection on the grounds that he uses the word 'idea' in a *special* sense simply to denote *any* 'object of human knowledge', his stipulative definition bearing a close relationship to that of Locke i.e. "whatsoever is the object of the understanding when a man thinks ... or whatever it is which the mind can be employed about in thinking" [EHU 1.1.8][13]. There is a clear danger, however, that Berkeley's readers may overlook the special meaning he attaches to the word. At the very least their interpretation of the word 'idea' is likely to remain 'flavoured' by its common usage as relating to something essentially 'within the mind'. A linked problem is that applying the same word to disparate things suggests that they are all somehow of the same sort or type. However, if we look at the examples in paragraph 3.1 of 'things' that we perceive though our senses we can see that they include not only three-dimensionally bounded 'objects' (e.g. bricks) but also general 'stuff' (e.g. water), topographical features (e.g. valleys) and all sorts of 'phenomena' (e.g. rainbows). They clearly cover a much wider range of things than the "moderate-sized specimens of dry goods" (Austin, 1962) upon which so many philosophers appear fixated. It is certainly not the case that we regard them all as having existence only within our own or others' minds. Berkeley, however, *does* believe this and prepares the ground for his immaterialist doctrine by simply declaring it 'evident' that everything we can possibly know are 'ideas'.

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[12] Although we don't refer to 'hearing in our mind's ear', we do talk about hearing something such as a tune (but not an 'idea of a tune') 'in our heads'.

[13] Although they both use the word 'idea' to refer to any object of knowledge/understanding, Locke classifies 'ideas' in a much more detailed way (see Appendix C) than does Berkeley. In contrast to Locke and Berkeley, Hume [THN 1.1.1] refers to all that humans can know as *perceptions* (i.e. rather than *ideas*). He divides perceptions into *impressions* comprising "all our sensations, passions and emotions as they make their first appearance in the soul" and *ideas* comprising the "faint images of these in thinking and reasoning" (corresponding roughly to Berkeley's 'ideas' connected with the 'operations of the mind', memory and imagination).

Berkeley's 'sensory ideas' raise major conceptual issues.

3.3 Berkeley [in PHK 1] lists the 'ideas imprinted on the senses', or *sensations* as he labels them [in PHK 3], as follows.

Sense	**Sensations**
Sight	light, colours and shapes[14]
Touch	hard and soft, heat and cold, motion and resistance
Smelling	odours
Palate	tastes
Hearing	sounds ("in all their variety of tone and composition")

All of the above (which resemble Locke's 'simple ideas' entering the consciousness via one or more senses[15]) might be regarded as *features* of our sensory experience but do they comprise distinct '*objects*' that we somehow 'observe' and, if so, what are the 'units' involved? How, in particular, can we meaningfully divide spatial and temporal *continuums*[16] of sensory experience into separate 'ideas' or 'sensations'? Much of our visual experience, for example, does not involve solid blocks of uniform colour but continuously varying shades of colour that merge imperceptibly into one another. In such cases just how many separate visual ideas do we experience? To exist at all, any sensory experience requires *duration* and its content is liable to change over the period of time concerned. Such change is generally *continuous*. Our visual experience, for example, does not comprise a succession of 'snapshots' but changes *continuously* as we alter the direction and focus of our gaze, turn our heads and generally move about. *Continuous* change is similarly a feature of much of our aural experience e.g. hearing a glissando (a note changing *continuously* in pitch) played on a violin. Does the glissando comprise a *single* 'aural idea'? If not, how can it be sub-divided into identifiable constituent 'ideas'? The absence of any obvious answers to such questions should raise more than a suspicion that there is something fundamentally flawed about the 'reification' of ideas (e.g. characterising 'sensory ideas' as 'objects' or 'things' that we 'observe'). The 'things' or 'stuff' that we generally describe ourselves as seeing or touching are not 'sensations'. We would describe ourselves as seeing, for example, a red and yellow coloured beach-ball, not as seeing some 'redness' and 'yellowness' combined with some 'roundness' or 'sphericalness'.

Berkeley's characterisation of 'things' as 'collections of ideas' is ambiguous and his reference to their 'naming' suggests a confusion between *sorts* of things and *particular* things.

3.4 A key problem for Berkeley is how to relate his 'sensory ideas' to the 'things' (such as trees, tables and teaspoons) that we commonly describe ourselves as seeing, touching, etc. His answer is that they are 'collections of ideas'. He states that as several sensory ideas "are observed to accompany each other, they come to be marked by one name and so to be reputed as *one thing*. Thus, for example, a certain colour, taste, smell, figure, and consistence having been observed to go

[14] Shapes (or 'figures', as he calls them) are not included in Berkeley's initial list [PHK 1] but are referred to elsewhere e.g. Philonous asks Hylas "whether we immediately perceive by sight any thing beside light, colours, and figures" [DHP1 P24].

[15] Locke acknowledges that humans may possess more than five senses and countenances the existence elsewhere in the universe of non-humans possessing superior faculties unknown to us. "He that will not set himself proudly at the top of all things but will consider the immensity of this fabric and the great variety that is to be found in this little and inconsiderable part of it which he has to do with, may be apt to think that in other mansions of it there may be other and different intelligent beings of whose faculties he has as little knowledge or apprehension as a worm shut up in one drawer of a cabinet has of the senses or understanding of a man" [EHU 2.2.3].

[16] The French philosopher Nicholas of Autrecourt (c1298-1369) suggested that time is 'granular', being made up of individual and *indivisible* 'instants'. It is far from clear, however, how our sensory experience could be split into such 'atoms of time' (even if we accepted their existence).

together, are accounted one distinct thing, signified by the name apple; other collections of ideas constitute a stone, a tree, a book, and the like sensible things" [PHK 1]. Berkeley, unfortunately, is not consistent in his terminology and sometimes refers misleadingly to such 'things' simply as 'ideas' rather than as '*collections* of ideas', exemplifying the tendency, identified by Locke (see 1.2), to consider a 'thing' as "one simple idea" which really is "a complication of many ideas together" [ECHU 2.23.1]. Berkeley's reference to the *naming* of 'collections of ideas', moreover, suggests that he confuses the process by which we identify *particular* things (which, with a few exceptions such as people, pets and places, we do not usually 'mark' with their own particular names) with the process by which we identify and give *general* names (e.g. 'stone', 'book', 'apple', 'fruit') to *sorts* of things, such names being applicable to *any* particular instance of that sort. Berkeley's confusion may stem from an uncritical acceptance of Locke's assertion that the mind, having noticed that a certain number of simple ideas "go constantly together", presumes them to "belong to one thing" and calls them "so united in one subject, by *one name*" [ECHU 2.23.1]. Objects of the same *sort*, we should note, generally differ significantly in *detail* and display no *specific* sensory qualities that invariably 'go together'. The things we call 'apples', for example, vary widely in size, colouring, texture and taste, each one being *unique* in the *particular* combination of qualities it displays (as well as in its 'spatio-temporal location'). What Berkeley needs to explain is how a *particular* thing (e.g. a *particular* apple) is 'constituted' by a *particular* collection of sensory ideas that are "observed to accompany each other" and what that collection does or does not include. Does the collection of ideas comprising a particular apple include *all* the sensory ideas experienced by *all* those who perceive 'it'? Should we regard the collection of ideas in one person's mind as distinct from those in another's and, if so, in what sense can any two people be regarded as perceiving the *same* apple? Over what period of time does the collection of ideas accumulate? Does the 'collection of ideas' comprising a currently perceived apple include all *remembered* ideas accumulated over past minutes, hours, days, weeks or months (when perhaps the apple was still growing on the tree)? Indeed what do we mean by '*currently* perceived'? Any perception, as we have already noted, involves duration, however brief.

'Jones' apple' illustrates the confusion caused by characterising 'things' as 'collections of ideas'.

3.5 The confusion that Berkeley's formulation of 'things' as 'collections of ideas' can lead us into is illustrated by Jones (2009) when he states: "When I immediately perceive[17] part of the collection of ideas that constitutes an apple (such as the array of colours that constitutes the look of the apple) my mind will automatically recall other parts of this collection (such as the gustatory sensations that constitute the taste of the apple) on the basis of the habitual connection in my past experience between the ideas I'm immediately perceiving and the ideas I'm recalling". A number of questions arise, not least how Jones is able to experience visual sensations relating to an apple of which he has *previously* experienced 'gustatory sensations' (and has thus presumably already eaten)! When we look at an uncut apple we observe only its skin (or strictly speaking only *par*t of its skin). How, in that case, can the 'collection of ideas' constituting the observed apple include any relating to its flesh, core, pips or taste? We may have experienced and remembered visual, tactual, olfactory and gustatory 'ideas' relating to *other* apples (including ones we have eaten) but they cannot be included within the 'collection of ideas' *comprising* the observed apple without rendering meaningless the very notion of *particular* and *distinc*t things.

Berkeley could be interpreted as arguing that sensory perception involves first *experiencing* and then *sorting* 'arrays' of 'sensations'.

3.6 Jones, of course, is aware of the complexities involved in Berkeley's conception of things as 'collections of ideas' and bravely attempts to render it coherent. With regard to visual experience, he suggests "Berkeley has it that what we are aware of in the first instance when we look around us

[17] The language of 'perception' when used in relation to *ideas* (as opposed to *things*) can result in tautology. Hume (see footnote 13) classifies *all* ideas, including 'sensory ideas', as 'perceptions'. In such terminology, therefore, to say that we 'perceive ideas' is to say that we 'perceive perceptions'.

aren't material objects like tables and chairs. What we're aware of first up is simply an array of colours taking up our field of vision. According to Berkeley,[18] sorting the hotchpotch of colours we are aware of into distinct patches of colour of various shapes and sizes, and indeed into representations of distinct objects, is something the mind does automatically and (usually very shortly) *after* it has registered the initial hotchpotch of colour." Jones suggests a similar process for our other senses. "When we touch, hear, smell or taste something, according to Berkeley, what we're aware of in the first instance once again aren't material objects out there in the world beyond us. Rather, what we're given first up is a hotchpotch of sounds, smells and tastes and 'feels'". Presumably the 'hotchpotches' for the non-visual senses are also 'sorted' into 'patches' or 'representations of distinct objects'[19]. A further stage appears to be required when relevant 'representations' from each sense are 'combined' to form 'distinct objects'.

Our *awareness* is not one of arrays of sensations or of sorting them into anything. How long do we have to observe sensations 'accompanying each other' before 'blending or combining' them?

3.7 We are not obviously *aware* of 'arrays' or 'hotchpotches' of sensations. Our visual awareness of things such as tables and chairs is not preceded by *awareness* of, for example, 'arrays of colours'[20] and we are certainly not *aware* of 'sorting' these into 'representations of distinct objects'[21]. With our other senses, likewise, we have no obvious *awareness* of sensory 'arrays' nor of 'sorting' the sensations they contain. Jones' reference to 'sorting' as 'something the mind does automatically', indeed, suggests a *subconscious* process[22] i.e. something of which we are not *aware*. The nature of the 'representations of distinct objects', moreover, is obscure[23]. If we *perceive* them as *unitary* entities, and if all we perceive are 'ideas', then such entities must *themselves* constitute *single* ideas (i.e. not 'collections of ideas'). The same applies to the final 'objects' that are supposedly 'formed' by 'blending or combining together' sensations. If objects are the *end-product* of such blending and combining, moreover, there is no 'template' to guide the blending and combining process and nothing to ensure that different minds end up processing their generally very different sensory inputs into a single set of 'objects', about whose existence and nature they can all agree. A further problem is that Berkeley's assertion that as several sensations "are observed to accompany each other, they come to be marked by one name and so to be reputed as *one thing*" appears to imply that the process by which they are 'blended or combined together to compose objects' is not immediate but must continue over a long enough period of time for consistently repeated combinations of sensations to be identified. This would require amazing powers of observation, an eidetic memory capable of recalling which particular sensations always 'accompanied' which others (e.g. whether a particular blob of yellow has consistently appeared immediately to the right or left of

[18] Berkeley, it is important to emphasise, says nothing so explicit. It represents Jones' *own interpretation* of Berkeley's very brief and less than clear statements in PHK 1 (quoted in 3.4) and in PHK 3 where he refers to sensations being "blended or combined together" to compose "objects".

[19] What such 'patches' and their constituent sensations might possibly comprise is totally obscure. What, for example, constitutes an individual 'feel' and what does a 'patch of feels' involve? Jones, perhaps wisely, does not enter this conceptual minefield.

[20] Jones suggests an array of 'pixels' as an 'analogy' but either our visual *awareness* is one of tiny dots of colour or it is not, and clearly it is *not*. Our visual *experience* is essentially three-dimensional, not one of perceiving a two-dimensional 'canvas' of coloured dots, blobs or other shapes.

[21] Jones claims to have experienced the odd 'Berkeley moment' when he was aware of patches of colour unresolved into 'things' (but does not claim awareness of 'pixels' or of any 'sorting' process).

[22] Berkeley's concept of 'the mind', we will see later, appears to rule out (for him) the possibility of sub-conscious mental processes. To perceive sensations, as far as he is concerned, is to be *fully aware* of them.

[23] If an 'object' is *nothing but* a 'collection of ideas' then any 'representation' *of* it (formed from on-going sensory 'arrays') must be *part* of it i.e. a *subset* of all of its constituent 'ideas' (e.g. the subset of ideas comprising its visual appearance at a given moment from a given angle and distance). There will, of course, be a potential infinity of such sub-sets and thus 'representations'.

a particular patch of red), some basis for 'connecting' *intermittently* observed sensations (e.g. to be confident that they are still in some way the '*same'* blobs of yellow and patches of red) and the ability to differentiate 'significant' from 'chance' correlations. For just how long do repeated combinations of sensations have to be observed before they can, with confidence, be finally 'blended or combined together' to 'compose objects'? Crucially, if we encounter things for the first time how is it that we *immediately* see them as distinct objects even though we possess no 'history' of the concurrence of their 'constituent' sensations?

The coherence (or otherwise) of Berkeley's conception of 'things' as 'collections of ideas' can be explored by applying it to a practical example.

3.8 Although it is highly unlikely that he had in mind the process suggested by Jones (if, indeed, he had any *clear* process in mind at all), Berkeley undoubtedly regards 'things' as nothing other than collections of 'sensory ideas' or 'sensations' that have been subject to *some* process of mental observation, selection and grouping (i.e. of being somehow 'blended or combined together'). Whatever the process involved, it is instructive to consider what a particular resultant 'thing' might comprise. Let us consider a particular pig. It will comprise a particular sensory collection including variously sized and shaped patches of colour (pink, brown or whatever) experienced on different occasions and from different angles, miscellaneous sounds (e.g. today's 'oink' and yesterday's squeal), diverse textures (e.g. the roughness of the hairs on its back felt briefly last week) and a variety of smells encountered over the pig's life. If the pig is killed and eaten[24] then a number of taste experiences can be added to the sensory collection involved.[25] Is all this coherent? Let's look at an obvious objection.

The 'collection of ideas' will include 'ideas' that are mutually exclusive.

3.9 If the pig is *nothing other than* a collection of sensory ideas or sensations experienced and 'sorted' over time under varying conditions and from different perspectives then it will possess a wide range of characteristics many of which will be mutually exclusive. It will, for example, possess a range of sizes (experienced as the pig is seen to grow) and a virtual infinity of 'shapes' (experienced as the pig is viewed from varying distances and angles and as the pig lies down, stands up and generally moves around).The collection of ideas comprising the pig, in fact, appears alarmingly (especially for Berkeley) like one of Locke's 'abstract ideas' such as the abstract idea of a triangle which cannot be equilateral, isosceles or scalene but "all and none of these at once … something imperfect that cannot exist, an idea wherein some parts of several different and inconsistent ideas are put together" [EHU 4.7.9]. In the *Introduction* to his *Principles*, Berkeley rubbishes Locke's notion of 'abstract ideas', singling out the triangle example for particular scorn.[26]

Berkeley recognises and tries to tackle the problem of incompatible 'appearances'.

3.10 Berkeley clearly recognises the problem that a 'thing', as a 'collection of ideas', will include seemingly incompatible 'appearances'. In the *Third Dialogue* Hylas questions why something should appear different under a microscope than to the naked eye. In answer, Philonous makes the following extraordinary statement. "Strictly speaking, Hylas, we do not see the same object that we feel; neither is the same object perceived by the microscope which was by the naked eye. But, in case every variation was thought sufficient to constitute a new kind of individual, the endless

[24] Employing Berkeley's terminology of 'sensations', the phrase "if the pig is killed and eaten" translates into "if, in relation to the particular collection of sensations constituting this particular pig, we were to experience all the collections of sensations commonly described as 'killing and eating a pig'".

[25] If we regard the pig as possessing some sort of 'mind' we have the problem (as we do in the case of humans) of explaining the relationship between such a mind and the pig's 'manifestation' as a 'collection of ideas'. We consider the status of non-human animals later (see 4.23).

[26] It has been argued that much of Berkeley's criticism is based on a misinterpretation of Locke's meaning (which is undoubtedly ambiguous) but this need not concern us here.

number or confusion of names would render language impracticable. Therefore to avoid this as well as other inconveniences which are obvious upon a little thought, men combine together several ideas apprehended by diverse senses, or by the same sense at different times, or in different circumstances, but observed however to have some connection in nature, either with respect to co-existence or succession; all which they refer to one name[27], and consider as one thing" [DHP3 P51].

Berkeley's attempted explanation is incoherent and leads to absurdity.

3.11 Berkeley (through Philonous) appears to be suggesting that, *for each separate sense* and *at each separate moment*, collections of sensory ideas are formed which 'strictly speaking' constitute *separate 'objects'* which might be thought of as *distinct 'individuals'* meriting *distinct names*. It is only to avoid 'inconveniences' (including the proliferation of names), he argues, that we *combine them together*, on the basis of observed *'connections in nature'*, to form named *'things'* (which, we should note, makes such things not 'collections of ideas' but '*combinations* of collections of ideas'). On this basis, for example, the visual appearance of a table viewed by me from a given angle and distance is an 'object' comprising a particular collection of visual 'ideas' (extracted from the entire array of visual 'ideas' comprising my visual field at the time). The visual appearance of the table viewed by me the next 'moment' from a different angle and distance comprises a *new* collection of visual ideas and thus a *new* 'object' ... and so on. Supposedly, but for the 'inconvenience', I would be inclined to treat the countless number of 'objects' thus formed as distinct individuals and give them distinct names. This illustration should help expose the fundamental incoherence of Berkeley's argument and the sheer absurdity to which it leads[28]. It is simply and obviously untrue that we regard the deliverances of different senses at the same moment or of the same sense at different moments as distinct 'individuals', let alone feel inclined, but for the 'inconvenience', to give them distinct names. The *continuous* nature of our sensory experience (see 3.3) in any case renders impossible its division into distinct 'moments' or 'snapshots' each with their own set of distinct sensory 'objects'. Much of our sensory experience, moreover, is not of distinct 'objects' but of continuous '*stuff*' (e.g. water flowing from taps) which cannot be represented in terms of individual 'collections of ideas'. Even with distinct objects there are problems. If we cut an apple in half what is the existential status of the 'collection of ideas' it comprised? Are its constituent ideas somehow apportioned between two instantly created and newly existent 'half-apple' collections?

Can sensations belong to more than one 'collection' and what part is played by mental 'focus'?

3.12 An ambiguity inherent in Berkeley's conception of 'things' as 'collections of ideas' concerns the allocation of 'ideas' to different 'collections'. If, when looking at a rose bush, our visual field includes, amongst a myriad of sensations, a tiny fleck of pink does it 'belong' to the collection of ideas comprising an individual petal, an individual flower or the entire bush? Can the *same* 'idea' be a member simultaneously of many different 'collections'? The absence of an obvious answer again suggests a flaw in Berkeley's basic conception. Given his central concern with the nature of human perception, it is strange that he fails to consider some of the most obvious features of our everyday perceptual experience. These include, in particular, human *focus* and *attention*. What we experience through our senses is determined, at least in part, by what we *choose* to focus upon (singling out, for example, a petal rather than a flower, a finger rather than a hand or one voice out of a jumble of voices). Unless *attention* is paid, moreover, much sensory input simply passes 'unnoticed', although

[27] Yet again (see 3.4), Berkeley appears to confuse the function of a *general* name (e.g. 'dog'), which is applied to *anything* meeting relevant criteria, with that of a *proper* name (e.g. 'Fido'), which is applied to a *particular* thing (e.g. a *particular* dog). With some exceptions, we do not give particular things their own particular names.

[28] Jones (2009) suggests that Berkeley uses the word 'object', in Philonous' statement, "to refer to whatever it is that we are aware of *in the first instance* in perception" (i.e. to a complete sensory 'array' or 'hotchpotch'). This leads to even greater absurdity. Why would Berkeley or anyone else regard the entire content of, for example, their momentary visual field as an 'object' or 'individual' meriting its own name?

at *some* level, as we will discuss later (see 5.6), a process of 'recognition and response' may nevertheless be taking place. Berkeley, however, appears to regard the reception of sensations and their 'sorting' into 'collections' comprising 'things' as fundamentally passive (as does Jones when he suggests that the mind '*automatically*' sorts sensory 'arrays' into 'patches' and 'representations of distinct objects')[29].

We regard our sensory experience of the world as *caused by* but *distinct from* 'things' or 'stuff'.

3.13 The potential for allocating a 'sensory idea' to more than one 'collection of ideas' applies to many sounds. If we hear the scrunch of shoes on gravel, to which 'collection of ideas' does it 'belong' - the collection comprising the shoes, the gravel or both (and does each shoe, or perhaps the sole of each shoe, and each individual stone comprise a separate 'collection')? There are, of course, no answers to these questions because the whole notion of sounds forming *part* of anything is patently absurd. The sounds made by birds and musical instruments, for example, are not *part* of them. It would be an act of sheer madness to dissect a duck in search of its quack or to take a piano apart in search of the notes it plays. The relationship between such things and their sounds is essentially *causative* or *instrumental* (which is why things such as violins, pianos and trumpets are called musical *instruments*). Crucially, exactly the *same* principle applies to *all* of our sensory experience of the world around us. We commonly regard our visual, tactual, olfactory, gustatory and aural *experiences* of 'things' (or more generally 'stuff') as being *caused* by them, not *part* of them. Berkeley's conception of 'things' as assemblies of fleeting sensory events taking place in an assortment of minds is, to say the least, wholly counter-intuitive. An experience appears to us as something *distinct* from the 'thing' experienced. Russell (1912) makes this point when he accuses Berkeley of "confusing the thing apprehended with the act of apprehension. Either of these might be called an 'idea'; probably either would have been called an idea by Berkeley. The act is undoubtedly in the mind; hence, when we are thinking of the act, we readily assent to the view that ideas must be in the mind. Then, forgetting that this was only true when ideas were taken as acts of apprehension, we transfer the proposition that 'ideas are in the mind' to ideas in the other sense, i.e. to the things apprehended by our acts of apprehension. Thus, by an unconscious equivocation, we arrive at the conclusion that whatever we can apprehend must be in our minds. This seems to be the true analysis of Berkeley's argument, and the ultimate fallacy upon which it rests."[30]

Berkeley's '*non-sensory*' ideas are as problematic as his 'sensations'.

3.14 So far we have concentrated upon Berkeley's *sensory* ideas, or 'sensations' as he calls them. What about the other sorts of 'idea' that he distinguishes? We have already questioned the appropriateness of the word 'idea' in relation to the '*passions*' (see 3.1). If we regard feelings of love, hatred, fear, anger, anxiety, etc. as 'perceptions of ideas', what are the 'units' involved? What constitutes, for example, an 'idea of anger' and how many of these are 'perceived' when we feel angry for a minute or two?[31] Difficult conceptual issues are also raised by Berkeley's ideas perceived by attending to the '*operations of the mind*'. We can talk meaningfully about thinking, calculating,

[29] Locke regards the occurrence of sensory ideas in our minds as *generally* beyond our control. "For in bare naked perception the mind is, for the most part, only passive and what it perceives it cannot avoid perceiving" [EHU 2.9.1]. He accepts nevertheless that the mind must *take notice* of sensory input if any perception is to result. We may be unaware, for example, of sounds if our minds are otherwise occupied. The 'impulses' received by the ears "not being taken notice of in the understanding and so imprinting no idea on the mind, there follows no sensation" [EHU 2.9.4]. Simply having 'ears to hear' is not enough for hearing to take place. Everyday experience suggests that for *all* of our senses 'paying attention' or 'taking notice' is required if perceptual awareness (at a 'conscious' level at least) is to occur.

[30] We will see later that Russell creates his own problems by regarding the 'things apprehended' by our senses as 'sense-data'.

[31] The language of 'feelings' does not appear to raise such problems. If we say we feel angry (or even that we are experiencing 'feelings of anger') it is clear that we are referring to a *continuum* of on-going experience, not a succession of distinct 'angry instants' (notwithstanding that we might report feeling angry 'for an instant').

comparing, deducing, imagining, remembering, etc. but this is to report on-going processes, not a succession of identifiable perceived 'ideas'. Two of these processes, remembering and imagining, are regarded by Berkeley as vehicles for the generation of special sorts of ideas by "compounding, dividing or barely representing" ideas that were originally perceived by being "imprinted on the senses" or by "attending to the passions and operations of the mind" [PHK 1] [32]. With both *memory and imagination*, however, it could be argued that what we generate 'in our minds' are equally *continuums* of experience, not distinct 'ideas'. Although he does not say so explicitly, it has to be assumed that Berkeley regards *dreams* and *hallucinations* as composed of ideas formed by the imagination. We will see, however, that they pose particular problems for him as they are not obviously generated by, or under the conscious control of, the human 'will'.

How does memory relate to 'things' as 'collections of ideas'?

3.15 The role of 'memory' is particularly unclear in relation to Berkeley's conception of 'things' as 'collections of ideas'. Berkeley accepts that sensory ideas (and indeed *all* ideas) exist only as long as they are 'perceived'. "Their *esse* is *percipi*, nor is it possible that they should have any existence out of the minds or thinking things which perceive them" [PHK 3]. Once they cease to be perceived they cease to exist. They may be 'resurrected' through memory but only, in Berkeley's terminology, as 'bare representations' of the original ideas and such representations will themselves exist only whilst they are perceived. Any *individual* act of remembering an object, moreover, can do no more than 'barely represent' a *sub-set* of the vast 'collection of ideas' of which it, according to Berkeley, is comprised e.g. the sub-set relating to its visual appearance at a given moment from a given angle and distance (see footnote 23).[33] We should also note here that the 'things' that are supposedly composed of 'collections of ideas' are not brought back into *existence* by any act of remembering (e.g. I may currently remember all sorts of 'ideas' relating to the apple I ate yesterday but this does not make the apple exist *now*). For Berkeley, explaining the existence or non-existence of 'things' appears to require some notion of the current/future 'possibility' or 'impossibility' of sensations (the meaningfulness of which we examine in 5.1 and 5.2).

Berkeley's conceptual problems stem from his uncritical acceptance of Locke's doctrine of 'ideas'.

3.16 Berkeley, it is hard to escape the conclusion, lands himself in a conceptual mess largely as a result of his uncritical acceptance of Locke's doctrine that the objects of our awareness are 'ideas'. The point is put very clearly by Warnock (1962). "It will surely not do to assume at the very beginning, as Berkeley does, that this extraordinary doctrine can be simply stated as 'evident' - particularly, as … its acceptance leads us straight into philosophical perplexities. No doubt Berkeley felt that the principle that we perceive only ideas stood in need of no argument partly for the reason that, on this point at least, both he and Locke were in agreement; but may it not be just *because* they were in agreement on this that they appear to force on us a choice between alternative doctrines with *neither* of which we are really inclined to agree? In philosophy it is always good policy, when two theorists appear to offer a choice between two positions neither of which is acceptable, to consider whether, underlying the divergences between them, there may not be some dubious principle which they have in common. In this case we do not have to agree with either Locke or Berkeley *unless* we accept, as they both did, the initial supposition that in perception we are aware only of 'our own ideas'. But neither … actually produces any arguments sufficient to establish so strange a view".

[32] Thus potentially we can remember or imagine remembering or imagining.

[33] Any visual memory I have of, for example, a childhood toy will be of its appearance from a given angle/distance (I might, of course, generate a series of such images or, indeed, a moving image). It will not 'reproduce' *exactly* how the toy appeared to me at any *given moment* (from a given position, under particular lighting conditions, etc.) and my visualisation will lack most of the *detail* of original sensory experience i.e. will not include every originally perceived 'sensation' such as, perhaps, a small white line (a scratch) on the toy's surface. If a memory could *exactly* reproduce an original experience it would be *indistinguishable* from it.

4. BERKELEY'S 'IMMATERIALISM' AND THE PROBLEMS IT RAISES

Berkeley rejects the existence of 'matter'.

4.1 Having declared it 'evident' that we perceive nothing but 'ideas', Berkeley argues that there is no basis for believing they are caused by a hidden substratum of 'matter', which he characterises as a *supposed* "inert senseless substance in which extension, figure and motion do actually subsist" [PHK 9]. His basic argument is that ideas can exist only within the mind and that these cannot be "copies or resemblances" of things existing outside the mind in an "unthinking substance" because "an idea can be like nothing but an idea; a colour or a figure can be like nothing but another colour or figure" [PHK 8]. This applies as much to primary qualities ("extension, figure, motion, rest, solidarity, impenetrability and number") as to secondary qualities ("colours, sounds, tastes and so forth"). "Hence, it is plain that the very notion of what is called *Matter* or *corporeal substance* involves a contradiction in it" [PHK 9]. He further argues [PHK 18] that if "solid, figured, moveable *substances*" "corresponding to the ideas we have of bodies" *did* exist "without the mind" we could never know it. By *sense*, he states, we are aware only of "our sensations, ideas or those things that are perceived immediately by sense, call them what you will". By *reason* he can find no "necessary connection" between such substances and our ideas. "In dreams, frenzies and the like" we accept that "it is possible we might be affected with all the ideas we have now, though there were no bodies existing without resembling them. Hence it is evident the assumption of external bodies is not necessary for the producing our ideas; since it is granted they are produced sometimes, and might possibly be produced always, in the same order we see them in at present, without their occurrence". In any case, Berkeley asserts, those who maintain the existence of material substance "are unable to comprehend in what manner body can act upon spirit, or how it is possible it should imprint any idea in the mind" [PHK 19].

Berkeley claims that perception is a function of 'mind' or 'spirit', the only 'substance' that exists.

4.2 Berkeley, it is important to emphasise, does not reject the existence of 'substance', only '*material* substance'. He states that, "besides all that endless variety of ideas or objects of knowledge, there is likewise something which knows or perceives them; and exercises diverse operations, as willing, imagining, remembering, about them. This perceiving, active being is what I call *mind, spirit, soul* or *myself*. By which words I do not denote any one of my ideas, but a thing entirely distinct from them, wherein they exist, or, which is the same thing, whereby they are perceived - for the existence of an idea consists in being perceived" [PHK 2]. "That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind, is what everybody will allow" [PHK 3]. We may happily agree with Berkeley that if perception is to take place there must be 'something' that perceives. But what is the *nature* of this 'something'? Berkeley assumes that 'material substance', if it existed at all, would *necessarily* be inert and incapable of perception and, partly for that reason, rejects its existence. Perception, he therefore concludes, must be a function of a *non-material substance* which he identifies with 'mind' or 'spirit' claiming that "it is evident there is not any other Substance than *spirit*, or *that which perceives*" [PHK 7]. Again, an immediate and obvious objection is that this is *far* from evident. There are major problems with Berkeley's conception of 'mind' or 'spirit' but at this stage we may simply note that he regards it as a *substance* (i.e. a sort of 'stuff') existing in the form of individual 'spirits' capable of both *perceiving* and *producing* 'ideas'. "A Spirit is one simple, undivided, active being - as it *perceives* ideas it is called the *Understanding*, and as it *produces* or otherwise *operates* about them it is called the *Will*" [PHK 27].

Ideas, according to Berkeley, are passive and have no power to cause other ideas.

4.3 Berkeley asserts that all ideas are passive and incapable of causing other ideas. "All our ideas, sensations, notions, or the things we perceive, by whatsoever names they may be distinguished, are visibly inactive - there is nothing of Power or Agency included in them. So that one idea or object of

thought cannot produce or make any alteration in another … whoever shall attend to his ideas, whether of sense or reflection, will not perceive in them any power or activity … the very being of an idea implies passiveness and inertness in it … it is impossible for an idea to do anything or, strictly speaking, to be the cause of anything" [PHK 25]. An immediate objection is to accuse Berkeley of inconsistency. He has already referred to "collections of ideas … which as they are pleasing or disagreeable excite the passions of love, hatred, joy, grief, and so forth" [PHK 1], thus implying that 'sensory' ideas have the *power* to *cause* 'passionate' ideas. It is, in fact, an essential feature of Berkeley's ontology that 'ideas' should be entirely passive and wholly dependent for their existence upon some 'mind' or 'spirit'.

Sensations are not 'creatures' of our own wills. Some other Will must therefore produce them.

4.4 Of key significance, Berkeley argues, is the fact that our sensory ideas, unlike our ideas of memory or the imagination, cannot be created or changed at will. "I find I can excite ideas in my mind at pleasure and vary and shift the scene as often as I wish. It is no more than willing and straightway this or that idea arises in my fancy; and by the same power it is obliterated and makes way for another" [PHK 28]. "But whatever power I may have over my own thoughts, I find the ideas actually perceived by Sense have not the like dependence on my will. When in broad daylight I open my eyes, it is not in my power to choose whether I shall see or no, or to determine what particular objects shall present themselves to my view; and so likewise as to the hearing and other senses, the ideas imprinted on them are not creatures of my will. There is therefore some other Will or Spirit that produces them" [PHK 29]. A possible objection here is that our sensory experiences are not *unique* in this respect. It does not appear to be in our power, for example, to choose and control the contents of our *dreams*. Our *feelings* (e.g. of love, fear or anger) also appear to arise spontaneously rather than as matters of choice (although we may be able to exercise *some* conscious control over them once they have arisen). Non-uniqueness, however, does not remove the need for causal explanation[34]. Our inability to determine the content our sensory experience is a crucial fact for which reasons are required. The same applies to our inability, or at least limited ability, to control our dreams and feelings (although we should not assume that the *same* reason will necessarily apply in all three cases).

Berkeley's definitions of 'matter' and 'mind' determine his causal explanation of our sensory experiences, the strength and coherence of which, he claims, proves they are produced by 'God'.

4.5 We may accept that the 'involuntariness' of our sensory experiences requires *explanation* without agreeing with the one Berkeley provides i.e. that there is "some other Will or Spirit that produces them". He arrives at this conclusion by virtue of his own *definitions*. As we have seen, he *defines* 'matter' as a supposed "*inert, senseless substance*" [PHK 9], thereby denying it any causative power to trigger sensory experience and rendering it a redundant 'nothing'. He *defines* 'mind' or 'spirit' as a 'perceiving, active being' and asserts that the "*efficient cause*" of anything "can be no other than the *will of a spirit*" [PHK 105]. Only if these definitions are accepted (and there is good

[34] Hume (1739) rejects the 'involuntariness' of our sensory experience as evidence for 'the existence of body' because such involuntariness is not unique, applying also to 'pains, pleasures, passions and affections' which we do not regard as existing 'beyond our perception'. Instead he argues that belief in the continued existence of 'body' independent of our perceptions is something we simply cannot avoid. "Nature has … doubtless esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculations" [THN 1.4.2]. He limits himself to seeking a *psychological* explanation for the belief and finds it in the *constancy* of appearance of some things (e.g. mountains, houses and trees) and the *coherence* with which some others (e.g. fires) alter their appearances. There is much that is questionable about this but it need not concern us here. It is important to note, however, that finding a 'psychological' explanation for *why* we believe something does not mean that *what* we believe is thereby untrue. To assume so would be to commit what Searle (1999) calls the 'genitive fallacy'. My belief, for example, that nine eights make seventy-two could well be attributed to the fact that I learnt it by rote at primary school but that does not make it a false belief. Or, as the joke goes, 'just because you're paranoid doesn't mean they're not out to get you'!

reason not to) does his conclusion follow. Let us, however, continue his line of 'reasoning'. He argues that the ideas produced by human minds display a weakness and randomness that does not characterise our sensory experiences. The latter must, therefore, be produced not by human minds but by a *supreme* mind or spirit i.e. 'God'. "The ideas of Sense are more strong, lively, and distinct than those of the Imagination; they have likewise a steadiness, order, and coherence, and are not excited at random, as those which are the effects of human wills often are, but in a regular train or series - the admirable connection whereof sufficiently testifies the wisdom and benevolence of its Author. Now the set rules or established methods wherein the Mind we depend on excites in us the ideas of sense, are called the *laws of nature*; and these we learn by experience, which teaches us that such and such ideas are attended with such and such other ideas, in the ordinary course of things" [PHK 30]. In the *Second Dialogue*, in a similar way, Philonous concludes from the involuntariness, clarity and coherence of his sensory ideas that they represent '*real things*' and that "*there is a mind which affects me every moment with all the sensible impressions I perceive*. And from the variety, order, and manner of these, I conclude the author of them to be *wise, powerful and good, beyond comprehension*". He does not claim to perceive them in the same way as they are perceived by God, only that "the things perceived by me are known by the understanding, and produced by the will, of an infinite Spirit" [DHP2 P22].

Berkeley summarises his immaterialist ontology.

4.6 We have now arrived at Berkeley's full ontology which he summarises as follows. "There are spiritual substances, minds, or human souls which will or excite ideas in themselves at pleasure; but these are faint, weak, and unsteady in respect of others they perceive by Sense - which being impressed upon them according to certain Rules or Laws of Nature, speak themselves the effects of a Mind more powerful and wise than human spirits. These latter are said to have more reality in them than the former; by which is meant that they are more affecting, orderly, and distinct, and that they are not fictions of the mind perceiving them. And in this sense the sun that I see by day is the real sun, and that which I imagine by night is the idea of the former. In the sense here given of *reality*, it is evident that every vegetable, star, mineral, and in general each part of the mundane system, is as much a *real being* by our principles as by any other. Whether others mean anything by the term *reality* different from what I do, I entreat them to look into their own thoughts and see" [PHK 36].

Defining the *existence* of 'things' in terms of the momentary perception of some of their constituent 'ideas' or 'sensations' by finite spirits simply 'does not work'.

4.7 Crucial to Berkeley's ontology, as we have seen, is the claim that we perceive nothing besides our own 'ideas or sensations' *If* we accept this, it appears to follow that perceived 'things' (including our own bodies) comprise nothing other than collections of sensations existing only whilst perceived. "It is an opinion strangely prevailing amongst men that houses, mountains, rivers,[35] and in

[35] Problems raised by these examples of 'sensible objects' include the following.

1) A 'house' has walls, a roof, windows, etc. each one of which, for Berkeley, counts as a 'collection of ideas'. They, in turn, are composed of objects (such as bricks, tiles, and sheets of glass) each one of which *also* counts as a 'collection of ideas'. A house thus becomes not a 'collection of ideas' but a 'collection of collections of collections of ideas' (more 'layers' could, in practice, be identified).

2) If we define topographical features such as mountains and valleys as 'objects' *comprising* sensory ideas, a 'boundary problem' arises. Between the bottom of a valley and the top of a mountain, for example, at what point do experienced 'sensory ideas' cease to contribute to the 'collection of ideas' *comprising* the 'valley object' and start to contribute to the 'collection of ideas' *comprising* the 'mountain object'?

3) We typically regard a 'thing' (we would not normally call it an 'object') such as a 'river' as a topographical *feature* distinguishable from the ever-changing 'stuff' (mainly water) that happens to be flowing along its course at any moment (the essentially trite 'philosophical' poser "Can you step twice into the *same* river?" trading upon a confusion between the two). It is unclear how Berkeley's characterisation of 'things' as 'collections of ideas' can provide for such a distinction.

a word all sensible objects, have an existence … distinct from their being perceived … yet whoever shall find it in his heart to call it in question may … perceive it to involve a manifest contradiction. For what are the forementioned objects but the things we perceive by sense? And what do we perceive besides our own ideas or sensations? And is it not plainly repugnant that any one of *these*, or any combinations of them, should exist unperceived?" [PHK 4]. "All the choir of heaven and furniture of the earth … have not any subsistence without a mind … their being is to be *perceived or known* … consequently so long as they are not actually perceived by me, or do not exist in my mind or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some Eternal Spirit" [PHK 6]. Berkeley's representation of 'things' as 'collections of sensations' existing only whilst perceived raises all sorts of problems including the existential status of the unperceived parts of our own bodies. Most problematic is how a 'thing' can be said to exist if, as is bound to be the case, only a *tiny proportion*, at best, of its potential constituent sensations can be perceived at any moment[36]. For Berkeley a thing such as a tree, it is important to remind ourselves, does not comprise a *single* idea or sensation but a potential *infinity* of ideas or sensations. When we look at a tree we perceive, from a particular angle and distance, only *part* of its *surface area* (e.g. *part* of the *surfaces* of *some* of its leaves and branches) and nothing of its sub-surface or roots. In terms of Berkeley's ontology, therefore, in what sense, can the *whole* tree at any moment ever be said to exist? We have already (see 3.15) discounted any contribution by *remembered* ideas (if there are any) to the *current* existence of things. The contribution of 'potential' or 'possible' ideas to the existence of 'things' will be considered later (see 5.1 and 5.2) but we should note that Berkeley (in PHK 4 and 6) clearly relates such existence to *actual*, not possible, perception. It is hard to escape the conclusion that to define the existence of 'objects' in terms of the perception of their constituent ideas or sensations by "created spirits" (whether humans or other animals[37]) simply 'does not work'. For Berkeley, the existence of 'things' does seem to require an 'Eternal Spirit' that perceives at any moment the *entirety* of their constituent 'sensations' (the plausibility of which is considered in 4.15 and 4.16).

Berkeley's 'Master Argument' for immaterialism is less than convincing.

4.8 It is relevant, at this point, to consider Berkeley's so-called 'Master Argument' for immaterialism. Berkeley challenges us to "conceive it possible for one extended moveable substance or, in general, for any one idea, or anything like an idea, to exist otherwise than in a mind perceiving it" [PHK 22]. We may reply that we can *easily* imagine things (e.g. trees in a park or books in a cupboard) existing whilst unperceived[38] but Berkeley dismisses this on the basis that our very act of imagining involves the perception of ideas (albeit ones of imagination which can only 'barely

[36] Warnock (1953) interprets Berkeley as implying the following. "When we refer to any *object,* we are referring to a certain collection of ideas, perception of any of which suggests the existence and perceivability of all the others. Thus when I say what object it is that I perceive, I am referring to a collection of ideas not all of which I am at the time perceiving - most of them are merely *suggested* by the ideas that I actually perceive. But if I am to speak strictly, I ought not to refer in saying what I perceive to ideas which at the time I do not actually perceive; hence, I ought not to say that I perceive the object, but only those ideas from the object-constituting collection which I now actually perceive." Berkeley, we have seen, regards such 'sub-sets' of sensory ideas as the *immediate* 'objects' of perception. We have already questioned (see 3.10 and 3.11) the coherence of his assertion that "strictly speaking" we experience *different* 'objects' at each *different moment* for each *different sense* (such 'objects' also varying between people due to their *different perspectives*).

[37] In a rather woolly way, the question is sometimes raised as to whether a tree falling in a forest unobserved by any human makes a sound (assuming it can be said to exist at all if unobserved). Those who regard this as a meaningful 'issue' might stretch their imaginations by considering whether the presence at the time of the odd bird, squirrel or wood ant would make any difference to their answer.

[38] Indeed we conduct our whole lives on the basis that such things *do* so exist. *Just because they may be currently unperceived*, we do not doubt the on-going existence of our own internal organs, the cutlery in our kitchen drawers, or anything else for that matter.

represent' ones of 'sensation')[39]. All that is shown, he says, is that "you have the power of imagining or forming ideas in your mind; but it does not show that you can conceive it possible the objects of your thought may exist without the mind"[PHK 23]. He concludes that talk of "the *absolute* existence of sensible objects *in themselves, or without the mind*" involves "either a direct contradiction, or else nothing at all" [PHK 24]. Berkeley, in effect, challenges us to conceive of the existence of things *other than* in terms of the sensory experiences we associate with them. One response is to *agree* that this is impossible but to *disagree* that this *thereby* proves that such things can have no existence independent of such experience. Postulating the independent existence of things is not *inconsistent* with accepting that any awareness of them by sentient beings can be only through some form of sensory experience in terms of which they are bound to be conceived. An alternative response is to argue that we *can* conceive of the existence of things other than in terms of our sensory experience. 'With our scientific hats on', we might argue that we can imagine, for example, a table as an assemblage of vibrating atoms existing in fields of force. This invites the counter-argument that all we are imagining are, perhaps, tiny 'dots of light' and 'pushes and pulls' that mimic features of our everyday sensory experience (the same applying when we imagine light as either 'particles' or 'waves'). We might, nevertheless, maintain that non-sensory conceptualisation *is* possible (e.g. employing the *mathematical* constructs of particle physics and quantum mechanics). There are many concepts (e.g. 'democracy'), moreover, that we regard as *meaningful* regardless of the fact that they need not involve or 'conjure up' any specific sensory images. Berkeley himself argues that, whilst it is impossible to form any *idea* of 'souls' or 'spirits', it is nevertheless possible to have a meaningful *notion* of their existence (see 4.12). Why cannot we have an equally meaningful *notion* of the independent existence of 'things' or 'stuff'? Berkeley's 'Master Argument', it can be concluded, is less than convincing. It might, in fact, be seen as no more than a re-casting of his basic argument that the *sole objects* of our perception are 'ideas' and that 'things' are *nothing but* 'collections of ideas'. *If* this is accepted, it does appear to follow that the existence of 'objects' or 'things' can be conceived only in terms of their 'constituent' sensory ideas. As already discussed, however, there are good reasons *not* to accept Berkeley's basic formulation.

Berkeley fails to account for the difference between dreams, hallucinations and 'real things'.

4.9 The occurrence of dreams and hallucinations (or 'frenzies' as he calls them) is used by Berkeley to argue that since we do not attribute *all* our involuntary perceptions to the existence of 'matter' we need not attribute *any* to such existence, not even our perceptions of supposed 'real things'. "But what reason can induce us to believe the existence of matter without the mind from what we perceive, since the very patrons of Matter themselves do not pretend there is any *necessary* connection betwixt them and our ideas? I say it is granted on all hands - and what happens in dreams, frenzies and the like, puts it beyond dispute - that it is possible we might be affected with all the ideas we have now, though there were no bodies existing without resembling them. Hence it is evident the supposition of external bodies is not necessary for the producing our ideas; since it is it is granted they are produced sometimes, and might possibly be produced always in the same order we see them in at present, without their concurrence" [PHK 18]. The absence of *necessity*, of course, does not make it *wrong* to attribute our 'real world' experience to the existence of 'things' or 'stuff' existing independently of our minds. In practice, moreover, we have no difficulty in distinguishing dreams and hallucinations from 'reality'. Berkeley, in arguing a different point, is keen to emphasise this fact. In the *Second Dialogue*, Hylas asks Philonous "what difference is there between real things and chimeras formed by the imagination or the visions of a dream, since they are all equally in the

[39] Berkeley, it is important to emphasise, is not arguing that any act of remembrance or imagination can bring objects into existence. For Berkeley (see 4.7), only the perception of *sensations* (i.e. of *sensory* ideas) counts towards their existence. I may, for example, imagine what the cake I previously put away in a cupboard *now* looks like. The sensations I experience on opening the cupboard door may be radically different from those I imagine. The cake may have gone mouldy, had a slice taken out of it or, indeed, have disappeared entirely because somebody else has eaten it all!

mind" [DHP3 H22]. In reply, Philonous argues that we can *easily* distinguish dreams and 'chimeras' (hallucinations) from realities. "The ideas formed by the imagination are faint and indistinct; they have besides an entire dependency on the will. But the ideas perceived by sense, that is, real things, are more vivid and clear, and being imprinted on the mind by a spirit distinct from us, have not a like dependence on our will. There is therefore no danger of confounding these with the foregoing: and there is little confounding them with the visions of a dream, which are dim, irregular, and confused. And though they should happen to be never so lively and natural, yet by their not being connected and of a piece with the preceding and subsequent transactions of our lives, they might easily be distinguished from realities" [DHP3 P23]. We may agree with Berkeley that dreams and hallucinations are easily distinguished from 'realities' *without* accepting his explanation of the cause of the difference (i.e. that the former are produced by the wills of human spirits and the latter by the will of a supreme spirit). It is a feature of dreams and hallucinations that they are *not* produced by any *conscious* act of human will. Berkeley, however, defines a 'spirit' or 'soul' as "one simple, undivided, active being" [PHK 27] that is "indivisible, incorporeal, unextended" [PHK 141], thus ruling out 'minds' that are complexly structured and capable of operating at different, including *sub-conscious*, levels. His immaterialist doctrine, therefore, fails to provide a satisfactory and coherent account of the nature and source of dreams and hallucinations.

Berkeley also struggles to account for 'illusions'.

4.10 A clear distinction must be made between a *hallucination* and an *illusion*. A hallucination involves sensing 'something' that we conclude is not 'really' there[40]. Most people go through life *never* experiencing a hallucination. It is significant that the standard examples trotted out by philosophers tend to be fictional (e.g. Macbeth's 'dagger') or mythologised (e.g. the 'pink rats' supposedly seen by sufferers of 'delirium tremens' during alcohol withdrawal). It is nevertheless true that some people *do* experience hallucinations[41]. Berkeley, as we have seen, cannot explain them satisfactorily as collections of ideas produced by 'indivisible, incorporeal, unextended' minds. All he can say is that, whatever they might be, they cannot be 'real' unless caused by the imprinting of sensations in human minds by God. He fares little better with illusions. We have all experienced illusions of one sort or another including optical illusions and the illusions performed on stage by conjurors. In such cases there is no suggestion that the things we perceive are 'not really there' (e.g. that a conjuror is somehow producing an 'unreal' rabbit from an 'unreal' hat). The key feature of illusions is that they lead us to 'misinterpret' our experience and draw conclusions that are invalidated by a wider range of experiences (e.g. we may try to take a bite out of an apple only to discover that it is a wax imitation). Berkeley does recognise that we may make incorrect inferences from the evidence of our senses. In the *Third Dialogue* Hylas asks Philonous "Since according to you, men judge of the reality of things by their senses, how can a man be mistaken in thinking the moon a plain lucid surface, about a foot in diameter; or a square tower, seen at a distance, round; or an oar, with one end in the water, crooked?" [DHP3 H27]. In reply Philonous explains that "He is not mistaken with regard to the ideas he actually perceives; but in the inferences he makes from his present perceptions. Thus in the case of the oar, what he immediately perceives by sight is certainly crooked; and so far he is in the right. But if he thence conclude, that upon taking the oar out of the water he shall perceive the same crookedness, or that it would affect his touch as crooked things are wont to do, in that he is mistaken" [DHP3 P28]. The problem for Berkeley is that, according to him, things such as oars are just collections of ideas experienced over time. The collection of ideas (or, strictly speaking, *combination* of collections of ideas - see 3.11) comprising the oar thus includes 'ideas' of both crookedness and straightness (compare this with the problem of the 'collection of

[40] An example is provided in Hughes Mearns' poem *Antigonish* (1899) based on the reported sightings of the 'ghost' of a man on the stairs of a 'haunted' house in the town of Antigonish, Nova Scotia. "Yesterday upon the stair / I met a man who wasn't there / He wasn't there again today / Oh, how I wish he'd go away".

[41] An extreme case is described by the neurologist Oliver Sacks in his book *The Man Who Mistook His Wife for a Hat and Other Clinical Tales* (1985).

ideas' comprising a pig, discussed in 3.8 and 3.9). The problem does not arise if we make a distinction between '*acts* of apprehension' and the '*things* apprehended' (see 3.13) but Berkeley, as we have seen, regards 'things' as *nothing other than* combinations of the sensations involved in such 'acts'. His only 'solution' (see 3.10), is to say that '*strictly speaking*' the round tower we see from a distance is a *different* object from the square tower we see when nearby and, likewise, the crooked oar we see with its end in water is a *different* object from the straight oar we see out of water. At the same time, however, he clearly envisages a *single* tower (which we approach) and a *single* oar (which we take out of the water). The only justification he can offer for this is that the 'round tower object' and the 'square tower object' (and likewise the 'crooked oar object' and the 'straight oar object') have "some connection in nature, either with respect to coexistence or succession" [DHP3 P51]. The coherence of this formulation has already been challenged and found wanting (see 3.11).

Can Berkeley legitimately drag God into his explanations?

4.11 To explain the 'involuntary' nature of our sensory experience, Berkeley literally calls in a 'deus ex machina'. Can we reject this move out of hand? Jones (2009) rightly cautions us against doing so just because we 'don't believe in God'. An appropriate *philosophical* response is to question the legitimacy of introducing into an argument equivocal and unexplained terms such as 'Deity', 'God', 'Supreme Spirit' or 'Author of Nature'. Berkeley himself clearly identifies 'God' with the one worshipped by Christians or, perhaps more specifically, by Anglicans.[42] If we already find meaningful, and are prepared to accept, the existence of some *all powerful* being capable of *anything* (including putting sensory ideas into our minds) then Berkeley is simply preaching to the converted. However, he regards himself as presenting an *argument*[43] as to *why* such a being *must* exist i.e. on the grounds that there is simply no other explanation for the nature of our perceptual experience. "It is evident to everyone that those things which are called the Works of Nature … are not produced by, or dependent on, the wills of men. There is therefore some other Spirit that causes them; since it is repugnant that they should subsist by themselves. If we attentively consider … the surprising magnificence, beauty and perfection of the larger, and the exquisite contrivance of the smaller, parts of the creation … and at the same time attend to the meaning and import of the attributes One, Eternal, Infinitely Wise, Good and Perfect, we shall perceive that they belong to the aforesaid Spirit 'who works all in all' and 'by whom all things consist'" [PHK 146]. Berkeley thus happily 'proves' the existence of something in which he already believes[44]. As pointed out in 4.5, however, we can accept that most of the things we experience in the world are not produced by or dependent upon ourselves *without* concluding that they must therefore be the work of 'God' (whatever that word might signify).

Berkeley claims *intuitive* knowledge of himself and *inferential* knowledge of God and other spirits.

4.12 A problem for Berkeley is that if nothing exists but 'spirits' and their perceived 'ideas' then spirits can have no ideas of *themselves*. As a substance, 'mind' or 'spirit' appears as inaccessible to our senses as Locke's postulated 'substratum' of 'material substance'. Berkeley accepts that "there can be no *idea* formed of a soul or spirit; for, all ideas whatever, being passive and inert, cannot represent to us, by way of image or likeness, that which acts … Such is the nature of Spirit, or that which acts, that it cannot be of itself perceived, but only by the effects which it produces". At the

[42] Berkeley's long dialogue *Alciphron* (1732) is described by Warnock (1962) as "an elegant, able, once popular, but inevitably somewhat faded and dated defence of the Anglican form of Christianity against the attacks of various types of Deist and 'free-thinker'".

[43] Berkeley's argument can be seen as an addition to the three traditional arguments (teleological, cosmological and ontological) for the existence of 'God'.

[44] Berkeley would argue that his 'proof' of the existence of God does not rely upon any existing belief that he might have. Through Philonous he says: "Men commonly believe that all things are known or perceived by God, because they believe in the being of a God, whereas I, on the other side, immediately and necessarily conclude the being of a God, because all sensible things must be perceived by him" [DHP2 P17].

same time, he suggests, we have "some *notion* of the soul, spirit, and the operations of the mind; such as willing, loving, hating - in as much as we know or understand the meaning of these words" [PHK 27]. Berkeley claims *intuitive* knowledge of 'himself' as a spirit and *inferentia*l knowledge (by 'reflection' and 'reasoning') of the existence of God and other spirits. Through Philonous he says "I own I have properly no idea either of God or any other spirit; for these being active, cannot be represented by things perfectly inert as ideas are. I do nevertheless know that I, who am a spirit or thinking substance, exist as certainly as I know my ideas exist.[45] Further, I know what I mean by the terms *I* and *myself*; and I know this immediately and intuitively. … The entire notion I have of God is obtained by reflecting on my own soul, heightening its powers, and removing its imperfections. I have therefore … some sort of an active thinking image of the Deity. And though I perceive him[46] not by sense, yet I have a notion of him, or know him by reflection or reasoning. My own mind and my own ideas I have immediate knowledge of; and by the help of these do mediately apprehend the possibility of the existence of other spirits and ideas. Further, from my own being, and from the dependency I find in myself and my ideas, I do by an act of reason necessarily infer the existence of a God, and of all created things in the mind of God" [DHP3 P17]. He argues that, by contrast, the existence of 'matter' can be neither 'intuited' nor inferred by reasoning from the evidence of our senses.

Berkeley is right to find the notion of 'self' meaningful but this does not force us to accept the existence of immaterial 'minds', 'souls' or 'spirits' comprising distinct 'entities' or 'things'.

4.13 It is possible to contest Berkeley's claim that we have immediate and intuitive knowledge of our own 'selves'. Hume argues that all we detect in our own minds are successive perceptions that "pass, re-pass, glide away, and mingle in an infinite variety of postures and situations. …. I never catch *myself* at any time without a perception, and never can observe anything but a perception. When my perceptions are removed at any time, as by sound sleep, so long am I insensible of *myself*, and may truly be said not to exist" [THN 1.4.6]. Nevertheless, it is hard to deny that we *do* possess a notion of 'self' as something distinct from our transient thoughts and feelings and to which they in some way 'belong'. One person's thoughts *are* regarded as distinct from those of another and words such as 'I' and 'you' *are* used meaningfully. We *do* regard ourselves as separate 'beings' that interact with one another and with our experienced 'world' and that possess 'intentionality'. As suggested in 4.2, we may readily agree with Berkeley that perception requires a perceiver i.e. *something* that perceives. However, it is only if we *also* agree with him that 'material substance' (were it to exist) must *necessarily* be incapable in *any configuration* of perceiving, thinking or feeling (and possessing a notion of 'self') that we may feel the need for a postulated 'non-material substance' composing 'minds', 'souls' or 'spirits' conceived of as distinct 'entities' or 'things'. The commendably non-dogmatic Locke does at one point countenance the possibility that 'matter', if suitably configured, might have the power 'to perceive and think'. "We have the ideas of *matter* and *thinking* but possibly shall never be able to know whether any mere material being thinks or no; it being impossible for us, by the contemplation of our own ideas, without revelation, to discover whether Omnipotency has not given to some systems of matter fitly disposed, a power to perceive and think, or else joined and fixed to matter so disposed a thinking immaterial substance: it being, in respect of our notions, not much more remote from our comprehension to conceive that God can, if he pleases, superadd to matter a faculty of thinking, than that he should superadd it to another substance with the faculty of thinking[47] …" [EHU 4.3.6]

[45] This bears a resemblance to Descartes' claim "je pense donc je suis", translated into Latin as 'cogito ergo sum' and English as "I think, therefore I am" (perhaps better rendered as "I am thinking, therefore I exist").

[46] Berkeley, as a Christian, regards God as essentially 'male'. It is a mystery, of course, how gender, whether male or female, can be attributed to a hypothesised *non-physical* entity possessing, it must be assumed, neither sexual organs nor chromosomes.

[47] Although essentially a 'dualist', Locke struggles with the conceptual problems inherent in explaining how two totally different postulated 'substances' are connected and interact. He feels bound, for example, to

The nature of 'immaterial substance' is obscure. What do minds consist of apart from the ideas they perceive? Do minds cease to exist if they stop perceiving or thinking?

4.14 If minds, souls or spirits are composed of 'immaterial substance', what is its nature? This is far from clear in Berkeley's ontology. What does a mind consist of apart from the ideas it perceives? If it stops perceiving ideas, what remains? Does it cease to exist until it starts perceiving again?[48] A particular problem for Berkeley is that he relates the notion of *time* to the succession of ideas in our minds. If we stop having ideas, time then appears to stop. He has to conclude that we are somehow always thinking. "Time therefore being *nothing*, abstracted from the succession of ideas in our minds, it follows that the duration of any finite spirit must be estimated by the number of ideas or actions succeeding each other in that same spirit or mind. Hence, it is a plain consequence that the soul always thinks; and in truth whoever shall go about to divide in his thoughts, or abstract the existence of a spirit from its cogitation, will, I believe, find it no easy task" [PHK 98]. Not surprisingly, Johnson (1729) finds all this highly confusing. In his letter to Berkeley he writes: "These ideas of ours, what are they? Is the substance of the mind the *substratum* to its ideas? Is it proper to call them modifications of our minds? Or impressions on them? Or what? Truly I can't tell what to make of them any more than of matter itself. What is the *esse* of spirits? You seem to think it impossible to abstract their existence from their thinking. Is then the *esse* of minds nothing else but *percipere*, as the *esse* of ideas is *percipi*? … Can actions be the *esse* of anything? Can they exist or be exerted without some being who is the agent? And may not that being be easily imagined to exist without acting e.g. without thinking? And consequently … may not he be said … to persist in being, though thinking was intermitted for a while?" In questioning the nature of perceived 'ideas' and their relationship to perceiving 'minds', Johnson raises fundamental conceptual issues. Characterising 'ideas' as "*objects* of human knowledge" [PHK 1] presents them as 'entities' that are *distinct* from the 'minds' that perceive them. Berkeley, we should remind ourselves, defines a mind as "a thing entirely distinct from [ideas], wherein they exist" [PHK 2] and as "one simple, undivided, active being" [PHK 27] that is "indivisible, incorporeal, unextended" [PHK 141]. The ontological status of both ideas and minds thus appears at least as problematic as that of 'matter'[49]. *By what means* do minds perceive sensory ideas? What are minds failing to do when they fail to take notice of, and thus to 'perceive', such ideas (see footnote 29)? How do minds convert fleeting *sensory* ideas into ideas of *memory* and *store* these for subsequent retrieval (given that, according to Berkeley, *all* ideas exist only when perceived)? Do ideas of memory 'copy' *individual* sensations as well as the results of their 'blending or combining together'? What binds such ideas together in the mind as 'collections' comprising distinct objects? Are the stored 'sets' and 'sub-sets' of ideas comprising distinct objects and their 'appearances' (see footnote 23) perceived as *unitary* entities (see 3.7)? What happens to minds to cause them to forget details, or lose their entire memory, of experienced sensory events?

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attribute 'mobility' to 'spirits' since these clearly share the movements of the 'bodies' to which they are tied. "Spirits as well as bodies cannot operate but where they are ... Everyone finds in himself that his soul can think, will and operate on his body in the place where that is; but cannot operate on a body or in a place an hundred miles distant from it. Nobody can imagine that his soul can think or move an object at Oxford whilst he is in London; and cannot but know that, being united to his body, it constantly changes place all the whole journey between Oxford and London, as the coach or horse does that carries him" [EHU 2.23.19-20].

[48] Descartes has the same problem. In his *Principles of Philosophy* (1644) he states that "thought constitutes the nature of thinking substance". The implication is that unless the mind (or 'intelligent substance', as he calls it) is thinking, it does not exist. For this reason Descartes, like Berkeley, regards the mind as somehow always active.

[49] Locke regards the nature of *both* 'mind' and 'matter' as essentially mysterious. When he says he finds the notion of 'spirit' as clear as that of 'body' he means that he finds them equally *unclear*. "By supposing a substance wherein thinking, knowing, doubting, and a power of moving etc. do subsist we have as clear a notion of the substance of spirit as we have of body; the one being supposed to be (without knowing what it is) the *substratum* to those simple ideas we have from without; and the other supposed (with a like ignorance of what it is) to be the *substratum* of those operations which we [experience] in ourselves within" [EHU 2.23.5].

In the case of ideas of imagination, by what means do minds 'create' and then 'perceive' the ideas involved? Do minds perceive ideas through the medium of *other* ideas and, if so, how can the problem of 'infinite regress' be avoided? Berkeley's letter of reply fails to provide any clear answers to Johnson's highly pertinent questions.

By invoking God, can Berkeley resolve problems arising from his representation of 'things' as 'collections of ideas'?

4.15 On the face of it, the existence of God might help resolve four major problems associated with regarding 'things' as nothing other than 'collections' of perceived 'ideas'.

- If none of the 'ideas' comprising a particular 'thing' are perceived at the present moment in what sense can it be said to currently exist? In what sense, for example, can I say that there is at the moment a handkerchief in my pocket if neither I nor anyone else currently perceives any of its constituent 'ideas'?
- What is the status of 'things' in respect of which sensory ideas have *never been* and probably *never will be* experienced by anyone (e.g. most of the rocks within the earth's crust or, closer to home, most of the internal bits and pieces that comprise our own bodies)?
- What is the basis, at each moment, for *grouping* raw sensory arrays into 'objects' and then *combining* the potential infinity of such 'groups' into 'things'?[50]
- How can 'collections of ideas' in one person's mind relate to the same 'things' as the 'collections' in someone else's?

Berkeley's answer to these problems appears to be that God perceives all sensory ideas at all times (whether or not we perceive them ourselves), thereby ensuring the continued existence of 'things'. On this basis, for example, the handkerchief in my pocket exists at least as a multiplicity of sensory ideas in the mind of God. God, moreover, has 'rules' (which Berkeley calls the 'laws of nature'[51]) determining the arrays of sensations experienced at any moment by any mind and the way in which these are to be 'grouped' and 'combined' to form 'things'. On this basis two people perceive the same 'thing' if the 'collections of ideas' in their respective minds derive from the same vast set of sensations that God 'associates' with that particular thing[52].

Berkeley's explanation involving 'ideas' in God's 'mind' is literally incredible.

4.16 A moment's reflection should expose the incredible nature of what Berkeley suggests. At all times God would have to perceive simultaneously a virtual *infinity* of sensory ideas[53] *and* actively 'imprint' selected ones in accordance with his chosen 'laws'. He would have to ensure that the sensations imprinted *differ* from one mind to another (of which there are currently over seven billion) in order to give each its own unique perspective on the 'world' (e.g. to allow for differences in apparent location, angle and distance of view, ambient conditions, sensory acuity, etc.). Such imprinting would be subject to *continuous* change to give each mind its own personal experience of acting within, and interacting with, its experienced environment of 'things' or 'stuff'. To achieve this

[50] It is important to remember that Berkeley's amplification in the *Third Dialogue* (see 3.10) implies that 'things' are '*combinations* of collections of ideas', not simply 'collections of ideas' (see 3.11).

[51] Berkeley 'explains' that 'Nature' is not something distinct from God but simply "the visible series of effects of sensations imprinted on our minds, according to certain fixed and general laws" [PHK 150].

[52] Although his use of the word is ambiguous, Berkeley appears to regard such ideas as related in some way to '*archetypes*' in the mind of God. In the *Third Dialogue*, Philonous acknowledges "a two-fold state of things, the one ectypal or natural, the other archetypal and eternal", saying "the former was created in time; the latter existed from everlasting in the mind of God" [DHP3 P75]. If you find this obscure you are not alone. Johnson (1729) wrote in his letter to Berkeley "Some of us are at a loss to understand your meaning when you speak of archetypes".

[53] The mental state involved would be like nothing experienced by humans and quite impossible to imagine. Warnock (1953) points out that "there is something very strange in the notion of perception of everything simultaneously, from every point of view; but this is what Berkeley attributes to God".

God would have to detect every individual *decision* affecting sensory experience (e.g. to open/close eyes or change the direction/focus of gaze) and instantaneously imprint the appropriate sensations. To give people the experience of ageing (e.g. of deteriorating eyesight and hearing) the sensations imprinted on their minds would have to be gradually altered. To give them the experience of going blind, the imprinting of visual sensations would have to be cut off entirely. If all this seems preposterous, it is. But it is precisely what Berkeley's 'explanation' entails. Johnson (1729), moreover, suggests that such a convoluted and burdensome process is not what we would expect from a supreme being (just as we would not think much of the maker of a clock who has to stand by and constantly move its parts in order to keep it going). "That all the phenomena of nature must ultimately be referred to the will of the Infinite Spirit is what must be allowed; but to suppose his immediate energy in the production of every effect does not seem to impress so lively and great a sense of his power and wisdom upon our minds …" Berkeley, of course, having ruled out the existence of 'matter' with the potential to both *cause* and, if appropriately configured, *experience* sensations, can suggest no alternative.

Berkeley struggles to explain the existence of 'miseries' in a world continuously 'activated' by God.

4.17 A problem for deists is to explain how a benevolent God can possibly allow all the evil things that happen in the world. This is difficult enough for those who see God as the creator of a 'machine' that is then left to run by itself. If bad things happen it suggests the machine is defective and hardly the work of an infallible being. It is even more difficult for those such as Berkeley for whom God is a *constant* presence, determining at all times the 'reality' we experience. Berkeley at least recognises the problem. "It will, I doubt not, be objected that the slow, gradual, and roundabout methods observed in the production of natural things do not seem to have for their cause the immediate hand of an Almighty Agent. Besides, monsters, untimely births, fruits blasted in the blossom, rains falling in desert places, miseries incident to human life, and the like, are so many arguments that the whole frame of nature is not immediately actuated and superintended by a Spirit of infinite wisdom and goodness" [PHK 151]. His response to the problem, however, is not convincing and would hardly impress anyone on the receiving end of serious misfortune and suffering. He suggests that "the defects of Nature are not without their use, in that they make an agreeable sort of variety, and augment the beauty of the rest of the creation" [PHK 152]. "As for the mixture of pain and pleasure which is in the world, pursuant to the general Laws of Nature, and the actions of finite, imperfect spirits, this, in the state we are in at present, is indispensably necessary to our well-being" [PHK 153]. He further suggests that if only we were able to take a wider view we would see everything to be for the best and "acknowledge that those particular things which, considered in themselves appear to be evil, have the nature of good, when considered as linked with the whole system of beings" [PHK 153]. Berkeley's conviction that everything in the world, being the work of "a Spirit of infinite wisdom and goodness", must therefore be 'for the best' makes him very much a 'Pangloss'[54].

If minds or spirits have neither dimension nor position why do they experience an extended three-dimensional world by virtue of the sensations imprinted upon them by God?

4.18 Berkeley states that "the soul is indivisible, incorporeal, unextended and … consequently incorruptible" [PHK 141]. Minds or spirits are, for him, essentially without dimension or position. The sensations imprinted upon minds, however, cause them to experience a three-dimensional world of 'things' that include the bodies to which they find themselves 'tied'. In other words, the sensations imprinted on minds give them a *false* picture of their true nature and God might be seen as a great *deceiver*. Johnson (1729) argues that if we have ideas of space, extension, motion, distance, etc., there must be 'archetypes' of such ideas in God's mind and therefore they must have some reality.

[54] In his satire *Candide* (1759), the French writer 'Voltaire' (1694-1778) includes a character called Pangloss, a philosopher who, however appalling are the things that happen to himself and his companions, always insists that "all is for the best in this best of all possible worlds", parodying the optimistic world view of the German philosopher Gottfried Leibnitz (1646-1716) who maintained that "God assuredly always chooses the best".

He cannot understand how spirits can be considered distinct and separate unless they are somehow spatially separated. Writing to Berkeley he says "You allow spirits to have a real existence external to one another. Methinks, if so, there must be distance between them, and space wherein they exist, or else they must all exist in one individual spot or point … I can't see how external space and duration are any more abstract ideas than spirits".

How can death be accounted for in Berkeley's ontology?

4.19 If incorporeal minds or spirits, at some stage of their 'lives', are to be given the experience of 'dying', an appropriate succession of sensations will have to be imprinted upon them by God in accordance with his self-determined and self-imposed 'laws of nature'. These will vary in duration and degree of unpleasantness and pain depending upon the cause of death dictated by such 'laws'. Actual death, presumably, will involve the complete cessation of all sensory imprinting (as opposed to its temporary cessation during 'sleep'). But what then? If a mind is an 'immaterial substance' it continues to exist. It remains capable, presumably, of still generating its own ideas (e.g. through memory and imagination). Does God also terminate this capacity and thus render a spirit non-existent by virtue of the absence of *all* thought (see 4.14)? Alternatively does God, after a suitable pause, resume the implanting of sensations, but now ones consistent with a 'heavenly', or perhaps 'infernal', existence? And what would such sensations be like? Johnson (1729) is quick to spot the problem. "There are some who say that if our sensations don't depend on any bodily organs - they don't see how death can be supposed to make any alteration in the manner of our perception, or indeed how there should be (properly speaking) any separate state of the soul at all." In his letter of reply, Berkeley claims to "see no difficulty in conceiving a change of state such as is vulgarly called Death, as well without as with extended substance" and that "it seems very easy to conceive the soul to exist in a separate state (i.e. divested from those limits and laws of motion and perception with which she is embarrassed here), and to exercise herself on new ideas, without the intervention of these tangible things we call bodies". Anyone inclined to agree that it is possible, let alone easy, to imagine what it would be like to live in a 'world' where we have no perception of either our own or each other's bodies (or, presumably, of any other 'tangible things') should just try. According to Berkeley, of course, the "tangible things we call bodies" are just passive 'collections of ideas' lacking any power of causative "intervention". If God nevertheless deems it appropriate to implant their constituent sensations in our minds whilst we are 'alive' what purpose is served by discontinuing such implanting when we are 'dead'?

The nature of 'birth' and human mentality is even more obscure.

4.20 Although Berkeley, as a Christian, believes that human souls continue to exist after 'death', he calls them *finite* spirits on the basis, presumably, that they do not exist until created by God. He is not explicit, however, about how they are brought into being through the process of procreation. Problems connected with 'human agency' are considered shortly. For our present purposes we may simply note that for two *immaterial* human spirits to have a child they have to be imprinted with all the sensations necessary to give them the experience of sexual activity, pregnancy and giving birth. At some stage between conception and birth, God must create a new human spirit and start to imprint upon it sensations relating to its 'body' and the 'world' at large. For some reason the 'laws of nature', which God devises and imposes upon himself, are cruel and arbitrary enough to decree that the sensations imprinted upon some less fortunate new spirits give them the experience of being born blind, lame, disfigured or otherwise afflicted with "miseries incident to human life"(see 4.17). As new spirits are imprinted with further sensations they acquire more 'material' upon which their minds can 'operate'. Development from infancy to adulthood, however, involves not just an accumulation of 'ideas' but a growth in mental *faculty.* How does an "indivisible, incorporeal and unextended" mind (i.e. something without form or structure) change in order to provide this? How, moreover, does the spiritual substance comprising individual minds vary in such a way as to explain their often very different 'mentalities' (e.g. their different emotional and aesthetic responses to the

same or similar sensory inputs)? How does the spiritual substance comprising the minds of people we classify as mentally impaired differ from those of others? Why, to take up an earlier example (see footnote 41), should one man's mind 'blend and combine together' the imprinted sensations relating to his wife into an object such as a hat? Berkeley, unfortunately, does not explore such intriguing issues.

If all things are mere 'collections of ideas', what is the *functional* purpose of human physiology (e.g. of our brains, hearts, eyes and ears) and the structures of other life forms?

4.21 Berkeley's reduction of human bodies and their various parts to mere collections of imprinted sensations renders them all, including sensory organs such as eyes and ears, *functionless*. Johnson (1729) finds this deeply disturbing. "It is … something shocking to many to think that there should be nothing but a mere show in all the art and contrivance appearing in the structure (for instance) of the human body, particularly the organs of sense. The curious structure of the eye, what can it be more than merely a fine show, if there be no connection … between that and vision? It seems from the make of it to be designed for an instrument or means of conveying the images of external things to the perceptive faculty within; and if it be not so, if it be really of no use in conveying visible objects to our minds, and if our visible ideas are immediately created in them by the will of the Almighty, why should it be made to seem to be an instrument or medium as much as if indeed it really were so?" Berkeley recognises this as an issue in relation to non-human forms of life but it clearly applies equally to human physiology. "It will be demanded to what purpose serves that curious organisation of plants, and the animal mechanism in the parts of animals; might not vegetables grow, and shoot forth leaves and blossoms, and animals perform all their motions as well without as with all that variety of internal parts so elegantly contrived and put together; which, being ideas, have nothing powerful or operative about them, nor have any necessary connection with the effects ascribed to them? If it be a Spirit that immediately produces every effect by a *fiat* or act of his will, we must think all that is fine and artificial in the works, whether of man or nature, to be made in vain"[PHK 60]. Berkeley confesses that he cannot solve "the difficulties relating to the administration of Providence, and the uses assigned to the several parts of nature" [PHK 61] within the framework of his 'principles' (but argues that the latter are indubitable because they "may be proved *a priori*, with the utmost rigour and demonstration"). The best he can suggest is that "though the fabrication of all those parts and organs be not absolutely necessary to the producing any effect, yet it is necessary to the producing of things *in a constant regular way according to the laws of nature*" [PHK 62]. God, he appears to suggest, imprints ideas in our minds in a structured and predictable way in order that we may be able to anticipate their future pattern of occurrence and thereby adjust our behaviour accordingly (e.g. planting the 'collections of ideas' we call crops at the right time of year).

Berkeley regards scientific explanations as no more than useful fictions.

4.22 Issues about 'functional purpose' apply not only to 'life forms' but to *everything* in the world. By reducing all things to 'collections of ideas', Berkeley denies them any *causative* powers and thus any function. At the same time he is well aware that 'scientific' models of reality (such as those of Boyle and Newton) which assume the existence of 'matter' and 'forces' with causative powers and effects, are successful in predicting observed phenomena. Berkeley's answer is that such models, although mere fictions, are useful if based on observation of the regular, ordered and coherent succession of sensory ideas produced by God. Such ideas have no powers in themselves but provide '*signs*' of God's purpose and how his 'laws of nature' operate. "The connection of ideas does not imply the relation of cause and effect, but only of a mark or sign with the thing signified" [PHK 65]. In his tract *De Motu* (1721), Berkeley develops this argument more fully in relation to scientific understanding. He claims that the role of scientists is to formulate, by observing phenomena, general rules that enable the accurate prediction of their future occurrence. In the words of Warnock (1953), Berkeley argues that "the scientist in fact has two concerns - the actual observed

behaviour of things, and the formulation of theories to 'account for' this, that is, to subsume it under the simplest and most general rules. Metaphorical terms like 'force' and 'attraction' should be used only in order to facilitate this work. Nothing but confusion can result from the idea that they name mysterious 'agents' or 'entities". On this basis, atoms, protons, electrons, photons, electro-magnetic forces, etc., are simply theoretical constructs that enable us to predict observable phenomena. Such a view would not be rejected out of hand by modern physicists (although most would insist that their 'constructs' relate to a 'reality' that exists independently of our perceptual experience and, if 'metaphorical', have to be metaphors for *something*). Whilst Berkeley might be credited with an insight ahead of his time, we should note that it was inspired by the need to resolve a problem of his own making (i.e. his reduction of 'things' to passive 'collections of ideas' incapable of function).

Berkeley appears to believe *all* sentient creatures have minds in which God imprints sensations.

4.23 Although less than explicit on the subject, Berkeley (unlike, for example, Descartes) appears to consider that sentient life forms other than humans possess 'minds'. In the *First Dialogue* Philonous says "it is not only possible but manifest, that there actually are animals, whose eyes are by nature framed to perceive those things, which by reason of their minuteness escape our sight. What think you of those inconceivably small animals perceived by glasses? Must we suppose they are all stark blind? Or, in case they see, can it be imagined their sight hath not the same use in preserving their bodies from injuries, which appears in that of all other animals?" [DHP1 P110] Philonous later asks Hylas "Think you the senses were bestowed upon all animals for their preservation and well-being in life? Or were they given to men alone for this end?" [DHP1 P123] Hylas agrees that they have the same use in all animals. Berkeley's ontology requires that anything with sensory awareness (even the merest mite) must possess some sort of mind or spirit in which God can imprint sensory ideas appropriate to its position in the world. If the role of God described in 4.16 wasn't already incredible enough we must add to it the task of continuously imprinting a virtual infinity of sensations upon the minds of a countless number of sentient beings from whales and elephants right down to ants, mites and yet smaller creatures.

Berkeley's inability to account for human 'agency' is *fatal* to his immaterialist doctrine.

4.24 By now the 'repugnancies' inherent in Berkeley's immaterialist doctrine should be more than apparent. There is a further objection, however, that arguably proves *fatal*. Berkeley is unable to provide a *coherent* account of human '*agency*' (or indeed the 'agency' of other sentient creatures). If our entire experience of the world results from God's imprinting of sensations upon our minds how do we operate as 'agents' who make choices and whose actions affect the sensory experiences of others? It is important to remind ourselves that according to Berkeley we are *disembodied* spirits. Our bodies and their various parts are just 'collections of ideas' with neither power nor agency to cause ideas to arise in our minds. What then is happening when we speak to one another? Our vocal chords, as 'collections of ideas', have no power to generate and 'mentally imprint' sounds. What happens when we move our bodies? How do we imprint the visual sensations involved onto both our own and other people's minds? It is amazing but true that Berkeley never *seriously* considers the fundamental problems raised by such obvious questions, let alone suggest any *coherent* answers. In trying to argue that we have as clear, if not clearer, a notion of God as we have of our own or other minds, he says the following. "It is evident that God is known as certainly and immediately as any other mind or spirit whatsoever distinct from ourselves. We may even assert that the existence of God is far more evidently perceived than the existence of men; because the effects of Nature are infinitely more numerous and considerable than those ascribed to human agents. There is not any one mark that denotes a man, or effect produced by him, which does not more strongly evince the being of that Spirit who is the Author of Nature. For it is evident that in affecting other persons the will of man has no other object than barely the motions of the limbs of his body; but that such a motion should be attended by, or excite any idea in the mind of another, depends wholly on the will of the Creator. He alone it is who 'upholding all things by the word of his power' maintains that

intercourse between spirits whereby they are able to perceive the existence of each other" [PHK 147]. It is strange that Berkeley mentions only the bare movement of our limbs as the vehicle for 'affecting other persons', ignoring the obvious fact of human intercommunication through speech. More important, however, is that Berkeley regards 'the will of the Creator' as the sole means whereby the decisions of human agents (to move their limbs, utter sounds, or whatever) get translated into the relevant sensations within their own and others' minds. God thus becomes a sort of *intermediary* between human spirits and, as we are about to see, a potential *accomplice*.

If God is the 'author' of everything, he is responsible for *bad* as well as good things.

4.25 Berkeley was well aware that humans can do very nasty things to each other. During his lifetime three major European wars were fought in which thousands of people were injured, maimed or killed. In the society of his times, assaults, murder and public executions were commonplace. If the world we experience is created from sensations imprinted on our minds by God, is he not then implicated in *everything* that happens, bad as well as good? Hylas makes this very point when Philonous asserts that God is the sole cause of our perceptions. "You are not aware, Philonous, that in making God the immediate author of all the motions in nature, you make him the author of murder, sacrilege, adultery, and the like heinous crimes" [DHP3 H25]. In response Philonous claims "I have nowhere said that God is the only agent who produces all the motions in bodies. It is true, I have denied there are any other agents besides spirits: but this is very consistent with allowing to thinking, rational beings, in the production of motions, the use of limited powers, ultimately indeed derived from God, but immediately under the direction of their own wills, which is sufficient to entitle them to all the guilt of their actions" [DHP3 P26]. This is simply incoherent. According to Berkeley, the motions of bodies comprise *nothing but* sensations and these can be imprinted on our minds *only* by God. Nowhere has Berkeley suggested that human spirits are capable of imprinting sensations on their own or other people's minds. It would be necessary, indeed, to do *both* simultaneously. I could not, for example, give myself the perception of moving my arm without others present having the same perception at the same time. The imprinting by God of the relevant sensations in other people's minds would have to occur at the same instant as my decision to move my arm. Berkeley, as we have seen, has already asserted that for any motion "to be attended by, or excite any idea in the mind of another, depends wholly on the will of the Creator" [PHK 147]. Thus if I raise my arm and hit you, God must somehow detect my intention and translate it into the relevant sets of sensations in both my and your mind (ignoring, perhaps, the intention in your mind to successfully dodge the blow). God *does* become an accomplice to the assault. In desperation, Berkeley might argue that God is simply acting in accordance with the 'laws of nature' but we must not forget that these are simply rules he *chooses* to impose upon himself, fully aware of their consequences. Philonous tries to deflect Hylas' objection by pointing out that 'sin' lies in the intention not the act, but this only heightens the problem of why God should be complicit in turning sinful intentions into realities. The problem is equally one for 'occasionalists', such as Malebranche, who accept the existence of 'matter' but regard God as the sole causative agent who translates human intentions into 'material' events. It is only slightly less problematic for those who see God as the creator of a system, combining 'mind' and 'matter', which operates without divine intervention and in which humans can exercise a degree of 'free will'. If prominent features of the system turn out to include wars, murder, torture, plagues, disease, starvation and painful death, what does this say about the wisdom, foresight and, indeed, sanity of its 'designer'?

Does God act as a divine 'referee' favouring one 'side' against another?

4.26 It is interesting to speculate what Berkeley's world of disembodied finite spirits would be like if we *did* possess the power to 'imprint sensations' on each other's minds. What happens in football matches[55], for example, would depend on the ability of the 'spirits' involved (both players and

[55] For 'football matches' you can substitute any other happening involving human interaction (whether in love, war, politics, philosophical discussion, or whatever).

spectators) to imprint upon themselves and others the sets of sensations associated with their own intentions and desires. In order to successfully pass the ball or score a goal, a player would have to imprint the appropriate set of sensations on the minds of both himself and everyone else. At the same time opposing players and spectators would seek to imprint an entirely *different* set of sensations upon all present. Football matches would thus become *literally* battles of competing wills. However, unless different players and spectators are to come away from a match with different recollections of what took place (including who won) only *one mutually coherent and consistent* set of sensations can be implanted. So we do appear to require God as a sort of divine 'referee' determining which intentions and desires get translated into which set of sensations. Football fans with religious beliefs may well be convinced that God is on the side of their team - but they can't all be right. Does God currently support Manchester United and which national side will he steer to victory (by imprinting the appropriate sets of sensations upon us all) in the next World Cup? Was the Argentinean footballer Diego Maradona more right than he realised when he claimed 'the hand of God' as responsible for his 'header' against England in the 1986 World Cup and should we, therefore, see God as the willing accomplice of a footballing cheat?[56]

5. IN SEARCH OF A *COHERENT* ALTERNATIVE TO BERKELEY'S IMMATERIALISM

Can we eliminate God from Berkeley's ontology and retain anything workable?

5.1 If we find Berkeley's immaterialist doctrine not just ambiguous but incoherent, can we salvage anything workable from it? If, for example, we are uncomfortable with its reliance upon a divine presence can we 'do Berkeley without God'? One of the reasons Berkeley requires God is to enable 'things' to carry on existing when unperceived by ourselves or by other sentient creatures[57]. Unless God continues to perceive their constituent 'ideas', 'things' would be at "every moment annihilated and created anew … Upon shutting my eyes all the furniture in the room [would be] reduced to nothing, and barely upon opening them [would be] again created" [PHK 45]. But as long as we experience things as we do when we do, why worry about their continued existence when unperceived, especially if this is essentially unknowable? Why not simply define their existence in terms of the sensory experience with which they *would* be associated in different *possible* circumstances? Berkeley, unwittingly, suggests such an approach when clarifying "what is meant by the term 'exist' when applied to sensible things … The table I write on I say exists, that is I see and feel it; and if I were out of my study I should say it existed - meaning thereby that if I were in my study I might perceive it, or that some other spirit actually does perceive it" [PHK 3]. On this basis, 'things' such as trees, tables and teaspoons may be regarded as just sets of 'sensory possibilities'. The description, by the English philosopher John Stuart Mill (1806-73), of 'matter' as the "permanent possibility of sensation" encapsulates this approach. The broad philosophical movement known as 'phenomenalism' (with which Mill, amongst others, is associated) maintains that 'objects' *comprise* both *actual* and *possible* sensory experiences (i.e. sensory *phenomena*), in terms of which they can be meaningfully described.

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[56] If so, he was not a very effective one, as he failed to implant in *everyone* a set of sensations consistent with a legitimate goal (certainly not in the mind of England goalkeeper Peter Shilton, nor in the mind of anyone who subsequently viewed the action replay - albeit too late for the goal to be disallowed and Maradona at least 'yellow-carded').

[57] Thomas Gray's *Elegy Written in a Country Churchyard* (1751) includes the lines: "Full many a gem of purest ray serene, / The dark unfathomed caves of ocean bear: / Full many a flower is born to blush unseen, / And waste its sweetness on the desert air." Berkeley might well have read the poem and, if he did, would presumably have considered that such gems and flowers, although never perceived by humans, exist as 'collections of ideas' in the 'mind' of God.

Phenomenalism is silent on *what determines* the possibility or impossibility of 'things' and whether/when possibilities become actualities.

5.2 Berkeley suggests that *all* he means when he says there is a table in his study is either that he (or some other 'spirit') is now in his study perceiving the table or that he *would* perceive the table *if* he were in his study. What meaning, however, can be attached to the conditional 'if'? Berkeley, in terms of his own ontology, is a disembodied spirit. His body and his study are as much 'collections of ideas' as his table. His statement thus translates into "*if* I were to experience all the 'collections of ideas' subsumed under the general description 'being in my study', these would *include* the 'collection of ideas' I call my table". This, of course, is to say *nothing* about what determines the 'actualisation' or 'non-actualisation' of *any* of the possible sensory events nor, indeed, what renders them 'possible' in the first place. The same fundamental objection applies to Mill's representation of 'things' or 'stuff' as 'possibilities of sensation'. It entirely begs the question *what* determines the possibility or, indeed, *impossibility* of sensory experience and *what* determines, at any moment, whether or not a mere possibility becomes an actuality. Berkeley's answer is 'God'. Phenomenalists (who together with Berkeley reject the meaningfulness of, or need for, 'matter') have *no* answer.

'Sense-data' pose the same conceptual problems as Berkeley's 'sensations'.

5.3 From the early 20th century the term 'sense-data' became popular with some philosophers (most notably the so-called 'logical positivists') as a substitute for 'sensations', perhaps because they have a pseudo-scientific feel about them. Ironically 'sense-data' are not meaningful according to the rules of logical positivism as their existence is neither verifiable nor falsifiable. Our sensory experience remains exactly what it is regardless of whether or not 'they' (whatever they might be) exist. Their nature is every bit as obscure and problematic as Berkeley's 'sensory ideas' and 'collections of ideas' discussed in Section 3. Proponents of 'sense-data' appear strangely reluctant to provide specific examples. What are the 'units' involved? What might an individual 'sense datum' comprise? How can our *continuums* of sensory experience be divided spatially and temporally into such units? Advocates of 'sense data', it is important to emphasise, do not necessarily *deny* the existence of 'matter' but do maintain that its existence can be at best *inferred* from the evidence that such 'data' provide. Russell (1912) argues that "Berkeley retains the merit of having shown that the existence of matter is capable of being denied without absurdity, and that if there are any things that exist independently of us they cannot be the immediate objects of our sensations." For him the *immediate objects* of sensation are *sense data*. This leads him to make statements as absurd as any made by philosophers who characterise our sensory experience as one of 'perceiving our own perceptions'. In giving an example of the relationship between perceiver and perceived he makes the following statement. "When I am acquainted with 'my seeing the sun', it seems plain to me that I am acquainted with two different things in relation to each other. On the one hand there is the sense-datum which represents the sun to me, on the other hand there is that which sees this sense-datum." He thus describes himself as experiencing a single 'sense datum' (why just the one is unclear, although Berkeley is equally careless in his terminology, sometimes referring to a thing as a *single* idea rather than a *collection* of ideas) and ludicrously describes it as something he 'sees'.[58] Berkeley, of course, would argue that if all we experience are 'sense data' we have no basis for supposing the existence of a hidden 'sub-stratum' of material 'things' or 'stuff' that such data somehow 'represent'.

We do not have to accept that the objects of our sensory experience are 'ideas' or 'sense data'.

5.4 Is there any alternative to the characterisation of our sensory experience as the perception of 'ideas', 'sensations' or 'sense-data', thus avoiding the conceptual mess into which they appear to land us? Perhaps it can be found by simply rejecting the assumptions upon which they are predicated. Perhaps we should attribute the "difficulties and mistakes" in which Berkeley becomes

[58] Why this is ludicrous should be obvious. If we define 'seeing' as 'experiencing visual sense data' then to 'see' visual sense data we would have to experience visual sense data of visual sense data.

"entangled" primarily to his *failure* from the outset to "clear the First Principles of Knowledge from the embarras and delusion of words" [PHKi 25], and in particular to his uncritical adoption of Locke's terminology of 'ideas' upon which his subsequent 'reasonings' are based. Warnock (1962) provides a cogent argument along these lines. "It was one of Berkeley's main criticisms of Locke that he, absurdly, *duplicated* the world: he supposed that all we could ever be aware of was the ideas in our own minds, and then postulated *behind* these ideas a necessarily inaccessible 'external world'. Berkeley's solution consisted in deleting half of this duplication: the perplexities of Locke's position, he argued, must vanish, if we simply deny that his 'external world' exists. However, if we do this, we are left with Berkeley's 'immaterial' world of spirits and their ideas: and this … is distressingly insubstantial. Should we not ask, then, whether we might not be better advised to delete the other half of Locke's duplication - to reject, that is, not his world of external objects, but the supposedly impenetrable screen of 'our own ideas'? Should we not argue that there are indeed external objects, but that these are not, as Locke supposed, inaccessible to us - that it is *objects*, not our own ideas, that we are aware of in perception, and that we know to exist because we actually observe that they do? It is true, though astonishing, that Berkeley never even considered this possibility."

Our sensory experience is essentially one of 'things' or 'stuff' located in three-dimensional space.

5.5 If we are to describe as simply and accurately as possible what we are *aware* of through our senses (ignoring any philosophic or scientific theorising) we can do so only in the language of 'things' or 'stuff'.[59] To describe it in terms of the perception of 'sensations' or 'sense data' is to provide not just an inadequate but an *inaccurate* description. Our visual *awareness*, for example, is one of 'things' or 'stuff' located, relative to ourselves, in three-dimensional space, not 'arrays' of dots or patches of colour. The analogy used by some philosophers of 'looking at a picture' is a false one. *Both* the experience of looking at an apple *and* the very different experiences of looking at a picture or a photograph of an apple are of three-dimensionally located *'things'.* Neither is *experienced* as just an 'array' of colours and to describe it as such would be a *false* description of what we *experience*. Awareness of our surroundings in terms of 'things' or 'stuff' is a *primitive fact* about us and is *immediate*. We are not *aware* of any process whereby we come to 'repute' as "*one thing*" a set of 'sensory ideas' which, over some unspecified period of time, have been "observed to accompany each other" [PHK 1]. We can, of course, describe the *qualities of* perceived objects or stuff (e.g. their sizes, shapes, colours, textures and tastes) but this makes sense only if such qualities are *distinct from* the objects or stuff to which they relate. If they *comprise* the objects or stuff we are in the nonsensical position of seeking to describe the qualities of qualities.[60]

Our minds function, and recognise objects/substances, at more than one 'level' of consciousness.

5.6 Awareness of much of our surroundings is patchy and unfocused, not obviously involving any *conscious* process of 'object identification'. We often interact with our environment in an apparently unthinking way. When leaving a room, for example, we are not generally aware of any *conscious*

[59] Some philosophers, such as A.J. Ayer in *The Foundations of Empirical Knowledge* (1940), have claimed that the language of 'sense-data' allows us to describe more *precisely* what we 'immediately' experience and without drawing inferences about external causes. Austin (1962) rightly questions how a statement such as "It seems to me as if I were seeing something sort of pinkish" is more precise (let alone accurate) than simply saying "Here are three pigs". By the time he wrote *The Problem of Knowledge* (1956), Ayer had revised his views and concludes that "the phenomenalist's programme cannot be carried through. Statements about physical objects are not formally translatable into statements about sense-data".

[60] Scottish philosopher Thomas Reid (1710-96) argues, in his *Essays on the Intellectual Powers of Man* (1785), that "qualities must necessarily be in something that is figured, coloured, hard or soft, that moves or resists. It is not to these qualities, but to that which is the subject of them, that we give the name body. If any man should think fit to deny that these things are qualities, or that they require any subject, I leave him to enjoy his opinion as a man who denies first principles, and is not fit to be reasoned with." Reid is regarded as a proponent of 'direct' or 'commonsense' realism. He was a friend and admirer of Hume (at the time being generally considered the greater philosopher) but was critical of Hume's 'scepticism with regard to the senses'.

process of identifying the door or its handle (and subsequently may lack any memory of either). It is often only if a problem arises (e.g. the door handle sticks) that we are liable to *focus* upon something as an 'object in the world' requiring our *attention* (see 3.12)[61]. However, the fact that we generally negotiate our environment successfully (e.g. do not, whilst thinking about something else, bump continually into walls, unopened doors, fellow pavement/road users or other 'objects') suggests that, at *some* level of consciousness, *some* process of 'recognition and response' (including 'object/substance'[62] recognition) must be taking place. That our minds 'multi-process' at more than one 'level' of consciousness is clearly evidenced by our everyday experience. Strangely, many philosophers (including Berkeley) fail to acknowledge the importance of this obvious fact or to explore its implications.

Meaningful human communication about the contents of our perceived environment 'points' to *publicly* observable objects or stuff, not to fleeting sensory experience occurring privately in our own or other's minds.

5.7 We can draw the attention of other people in a variety of ways (e.g. using words, noises, facial expression, direction of gaze, pointing or general physical demeanour/behaviour) to the existence and nature of the 'objects' or 'stuff' that we recognise. For example, when visiting a zoo I might, with a look of terror on my face, utter a scream, point with my finger, shout "that tiger's on the loose" and run rapidly in the opposite direction. In this scenario, what is the *subject* of my intended communication? To *what* am I pointing? Is it to a fragmentary 'collection of ideas' in my mind (which, assuming I have never seen the tiger before, can include no remembered ideas)? If I'm not the only one to have spotted the tiger, am I *also* 'pointing' to similar collections of ideas in other people's minds and thus to more than one 'object'. Am I referring (see footnote 36) to "a collection of ideas not all of which I am at the time perceiving - most of them [being] merely *suggested* by the ideas that I actually perceive" i.e. potential ideas in my own or other people's minds such as those associated with being killed and eaten by a tiger? Or, more plausibly, am I referring to what I clearly regard as a *thing* which, whilst publicly observable, exists independently of any such observation? The fact that my *categorisation of*, and *reaction to*, the thing is affected by previous and anticipated sensory experience does not mean that it *consists* of such experience. Previous sensory experience relating to *other* tigers will undoubtedly affect my categorisation of the escaped animal but cannot comprise *part* of *it*. Anticipated sensory experience, by definition, has yet to happen (and may never

[61] German philosopher Martin Heidegger (1889-1976) emphasises the 'being in the world' nature of our existence, giving the example of a carpenter hammering nails unaware of either the hammer or the nails as 'objects' of his perception. Such awareness might be triggered only if a problem arises (e.g. the hammer head works loose). French philosopher Henri Bergson (1859-1941) also recognises that humans, amongst other animals, are essentially 'beings in the world'. He argues, in the words of Magee (1998), that "the function of the senses in living organisms has been not to provide the organism with 'representations' of its surroundings but to stimulate reactions of a life preserving character. First sensory organs, then central nervous systems, then minds, developed across countless ages as part of the organism's equipment for survival, and always as adjuncts to behaviour; and what they provide us with to this day are not objective pictures of our surroundings but messages that cause us to behave in certain ways". This is not to say, however, that 'object/substance recognition', *at some level of consciousness*, is not an essential component of our behavioural response to sensory stimuli. Consciousness, we argue later (see 5.13), is not ontologically reducible to mere 'behaviour'.

[62] An 'object' might be defined as 'bounded stuff' (e.g. a brick) and 'substance' as 'sort of stuff' (e.g. clay). The distinction is *reflected* in our use of 'count nouns' and 'mass nouns' but this does not mean that it is linguistically *determined*. Pinker (2007) refers to psychological research which has demonstrated the ability of two-year olds ("an age at which children show no signs of distinguishing count nouns and mass nouns in their speech") to differentiate objects from substances. *What* objects or substances we differentiate depends upon our level of focus and the boundaries that we recognise (e.g. we may focus upon a blade, a patch or an entire field of grass). Pinker suggests that "the count-mass distinction … is best thought of as a cognitive lens or attitude by which the mind can construe almost anything as a bounded, countable item or as a boundariless, continuous medium".

happen) and equally cannot form part of any 'sensory collection' that might be claimed to *comprise* the tiger *now*. The point has already been made that we must distinguish between '*acts* of apprehension' and the '*things* apprehended' (see 3.13). Such a distinction is embodied in our use of language. Describing, as we can and do, our sensory experience *of* 'something' (such as a tiger) is *meaningful* only if the thing experienced is *distinct* from the experience. If it *comprises* the experience then we are in the nonsensical position of describing sensory experience of sensory experience (or, in Hume's terminology, describing perceptions of perceptions). It could be argued, indeed, that language has evolved essentially as a means of communication between humans about *publicly* recognised entities (distinct from any fleeting sensory experience that anyone might have of them).[63] If I talk, for example, of 'that tiger' or 'this apple' I 'point' to *public* objects, not to *private* experiences occurring in my, your or anyone else's mind. Viewing our surroundings in terms of independently existing 'things' or 'stuff' is not just meaningful, it appears inescapable.

There is no good reason to abandon our 'default positions' regarding our perceptual access to an independently existing world in favour of Berkeley's immaterialism.

5.8 Searle (1999) argues that on most major philosophical issues there are 'default positions' that we hold 'pre-reflectively' and to depart from which "requires a conscious effort and a convincing argument". Berkeley's attempted "refutation of the view that a material world exists independently of our perceptions of it" contradicts our pre-reflective default positions that "there is a real world that exists independently of us, independently of our experiences, our thoughts, our language" and that "we have direct perceptual access to that world through our senses, especially touch and vision". These default positions "have survived the rough and tumble of human history for centuries" and there seems no good reason to give them up for Berkeley's immaterialist doctrine with all its conceptual problems. So-called 'arguments from illusion' that purport to show that we do not have direct perceptual access to the world through our senses, moreover, tend to confuse 'illusion' with 'delusion' and misrepresent everyday features of our perceptual experience (e.g. that things appear differently from different angles) as 'illusory' whereas they are precisely what we expect and in no way 'misleading' (see Austin, 1962). Any argument from illusion, in any case, involves the premise that there *is* a way things *really* are. Our 'scientific' models of reality, it can be argued, *support* rather than contradict our default positions regarding the world of our everyday perceptual experience. The postulation of infinitesimally small 'particles' separated by expanses of 'nothingness' and connected by different 'forces', for example, does not *contradict* our descriptions of 'things' or 'stuff' as 'solid', liquid' or 'gaseous' (these are wholly *accurate* descriptions of what we *perceive*) but rather seeks to explain the underlying causes of such experienced characteristics.

Default positions involving the 'dual' existence of 'mind' and 'matter' are not sustainable.

5.9 Searle (1999) emphasises that not all default positions can be accepted as 'true'. In particular he rejects the widely held 'dualist' position that "each of us consists of two separate entities, a body on the one hand, and a mind or soul on the other, and that these are joined together during our lifetimes but are independent to the extent that our minds or souls can become detached from our bodies and continue to exist as conscious entities even after our bodies are totally annihilated". Berkeley's description, through Hylas, of the dualist approach to perceptual experience is probably as true of its modern, as its early 18th century, adherents. "It is supposed that the soul makes her residence in some part of the brain, from which the nerves take their rise, and are thence extended to all parts of the body; and that outward objects, by the differing impressions they make on the organs of sense, communicate certain vibrative motions to the nerves; and that these being filled with spirits, propagate them to the brain or seat of the soul, which according to the various

[63] As described by Magee (1998), the Austrian philosopher Ludwig Wittgenstein (1889-1951) maintains that "words derive their meanings from the intentions of their users … Language is public … We learn it, and how to use it, in social situations. There could be no such thing as a private language: it would contradict the very nature of language".

impressions or traces thereby made in the brain, is variously affected with ideas" [DHP2 H5]. Berkeley, of course, rejects the existence of 'material substance', the brain for him, being as much an 'idea' or 'collection of ideas' in 'the mind' as any other part of the human body.[64] He is left with 'spiritual substance' existing in the form of distinct and separate 'minds', together with all the conceptual problems (highlighted in section 4) thereby entailed.

Flows of consciousness are experienced separately and uniquely by each mind and constitute *real world phenomena* possessing *subjective, first person ontology*.

5.10 Berkeley rightly alerts us to the 'delusion of words' (whilst failing to heed his own warning). There is much scope for conceptual confusion, if not delusion, in the word 'mind'. It can operate both as a mass-noun and a count-noun (see footnote 62). When used as a *mass*-noun (e.g. when we ask 'what is mind?'), it can suggest a kind of 'substance' or 'stuff'. When used as a *count*-noun (e.g. when we refer to '*a* mind' or 'minds')[65], it suggests distinct entities or 'things'. Combining the two, we might be tempted (with Berkeley) to regard individual minds as *bounded* 'mind-stuff'. However, the notion of 'minds' as dimensionless and positionless 'chunks' of 'mind-stuff' possessing 'non-spatial' boundaries (whatever they might be) is incoherent. An arguably *coherent* mass-noun use of the word 'mind' is simply to refer to 'consciousness' (i.e. the on-going *experience*, familiar to us all, of perceiving, thinking, feeling, etc.). When talking about '*a* mind' or 'minds' (i.e. use the word as a *count*-noun), however, we appear to 'have in mind' not any transient flow of perceptions, thoughts or feelings but *that which experiences, generates or possesses* such a flow. Perception requires a *perceiver*, thought a *thinker* and feelings *something* that feels. As argued by Searle (2004), an intrinsic feature of human consciousness is its *subjective first person ontology*. Consciousness has 'ownership'. My toothaches, for example, are *mine*, not yours or anyone else's. The same applies to my thought processes, memories, emotional states, etc. They exist as a *real world phenomena* pertaining specifically and exclusively to *my* consciousness. Specificity and exclusivity are crucial features of each person's conscious states. As already suggested (4.13), notions of 'mind' and 'self' are closely related. Talk of 'my mind', your mind', 'her mind', 'his mind', 'myself', 'yourself', 'herself', 'himself', etc. is both meaningful and commonplace in our daily discourse.

Consciousness appears to be the product of processes occurring within the brain.

5.11 If we reject as incoherent the notion that the possessors of human consciousness are dimensionless and positionless 'chunks' of 'mind-stuff', the obvious alternative candidates are people or, more specifically, their *brains*[66]. As stated by Searle (2004), "we know for a fact that all of our mental processes are caused by neurobiological processes and we also know that they are going on in the brain and perhaps in the rest of the central nervous system". A molecular biologist's view is provided by Gibb (2012). "Today, most scientists and philosophers agree that, rather than being an essentially separate entity tethered to the brain via a small structure such as the pineal gland,[67] consciousness is an emergent property of the brain as a whole, a natural consequence of millions of neurons processing information in parallel. It may seem astounding that something so 'physical' as electro-biological processes within the brain could produce something so intangible as consciousness, but that is what happens. We just don't yet understand how" (Gibb, 2012). Modern

[64] In the *Second Dialogue* Philonous says to Hylas: "Besides spirits, all that we know or conceive are our own ideas. When therefore you say all ideas are occasioned by impressions in the brain, do you conceive this brain or no? If you do, then you talk of ideas imprinted in an idea, causing the same idea, which is absurd" [DHP2 P11].

[65] The 'noun-status' of '*the* mind' is ambiguous, having both mass and count connotations.

[66] The cognitive functions of the brain have been only slowly recognised and explored. The ancient Egyptians regarded the heart as the centre of intelligence and emotion, as did the Geek philosopher Aristotle (384-322BC). Thomas Willis (1621-75) was the first to examine the brain with any real scientific rigour.

[67] Descartes believed that the pineal gland, as a single structure located centrally within the brain, provides the 'point of contact' between 'body' and 'soul'.

physics countenances, amongst many weird and wonderful things, the equivalence of 'mass' and 'energy', the spontaneous creation and annihilation of 'matter' and 'anti-matter' and the feasibility of the entire universe emerging from, and perhaps returning to, a 'singularity'. It is arguably no big deal to include amongst such wonders the ability of 'stuff', when put together the right way, to generate what we know of, and directly experience as, consciousness,[68] although the somewhat 'mind-blowing' thought occurs that this entails the ability of 'stuff', in the form of 'brains', to think about the nature of 'stuff' and 'brains' (and of 'thought' and 'consciousness') - as we are now doing.

Consciousness is not *ontologically* reducible to brain processing.

5.12 Evidence of the link between our mental experiences and brain processes (e.g. the parallel impact upon *both* of various legal and illegal drugs) appears incontrovertible and it is difficult to conceive of the relationship other than as *causative*. This is not to say, however, that consciousness can be *equated* with brain functioning. Searle (2004) makes a crucial distinction between *causal* and *ontological* reduction. The fact that conscious experiences may be generated by, and thus *causally* reducible to, neurobiological processes does not mean that they are similarly *ontologically* reducible. A crucial test is whether a description of the one can be substituted, without loss of meaning and reference, for a description of the other. As already argued (5.10), an intrinsic feature of human consciousness is its *subjective first person* ontology. My 'first person' description of what I experience when, for example, I eat an apple or watch a football match cannot be substituted by a 'third person' description of the concomitant electro-biological activity within my brain (assuming that such a description were even possible given the billions of neuronal connections and the amazing complexity of the 'parallel-processing' involved). To describe such brain activity is to say *nothing* about my *experience* of eating the apple or watching the match i.e. about what it is actually *like*.[69]

Nor is consciousness ontologically reducible to anything else.

5.13 Although suspicious of 'isms', Searle (2004) names his approach to resolving the 'mind-body' problem '*biological naturalism*'.[70] He emphasises that conscious states are *higher level* features of the brain system (i.e. that "individual neurons are not conscious, but portions of the brain system composed of neurons are") and that conscious states, being "real features of the real world", can *themselves* function causally (e.g. my decision to take a drink causes the arm movement that raises a glass to my lips). Searle goes on to examine the nature of such mental causation and the question of 'free will' - although a discussion of these is beyond the scope of this paper. We may note that, just as conscious states are ontologically irreducible to brain states, they are similarly irreducible to

[68] Locke, as we have seen (4.13), is at least prepared to consider the possibility that 'matter', if 'fitly disposed', might *itself* possess the 'faculty of thinking' rather than having to be 'joined' to an 'immaterial substance' with such a faculty.

[69] The term *qualia* (singular *quale*) was coined by the American philosopher Clarence Irving Lewis (1883-1964) to refer to the "recognisable qualitative characters" (Lewis, 1929) of our sensory experience (e.g. what the redness of a sunset, the smell of a rose or the pain of a toothache are actually *like* to experience). He emphasised the essentially *subjective* nature of such features and their recognised recurrence from one sensory experience to another. The introduction of jargon to denote supposedly familiar features of our everyday experience has its dangers and different philosophers have construed *qualia* in different ways. In the visual field, for example, Ayer (1973) adds "to the qualia of colour, not only qualia of size and shape, but also a set of patterns … a visual chair pattern, a visual leaf pattern, a visual cat pattern, and so forth", construing these terms "as applying to any members of the range of visual patterns which would typically lead the observer to think that he was seeing the corresponding physical object".

[70] Searle argues that such a resolution is possible only if we escape from our traditional categorisations of 'mind' and 'matter' (e.g. Berkeley's categorisation of 'matter' as something, if it existed at all, necessarily inert and senseless - see 4.5). Searle states: "I write out of the conviction that the philosophy of mind is the most important subject in contemporary philosophy and that the standard views - dualism, materialism, behaviourism, functionalism, computationalism, eliminativism, epiphenomenalism - are false."

anything else. 'Behaviourist' attempts, for example, to *equate* conscious experiences (e.g. feelings of pain or pleasure) with outwards forms of behaviour (e.g. saying 'ouch' or smiling) are misconceived. 'Third person' descriptions of such behaviour (assuming any is displayed at all) say nothing about the 'first person' experiences involved.[71] Equally misconceived are attempts (e.g. so-called 'Strong AI') to *equate* the operations of the brain with those of a computer (suggesting the brain as analogous to its 'hardware', and the mind to its 'software'). As illustrated by the 'Chinese Room example' devised by Searle (1984), just because a computer might pass the so-called 'Turing Test' by *mimicking* certain operations of the human brain (e.g. outputting correct answers to input questions), this does not mean that what is 'going on' is of the same nature. Crucially it does not mean that computers experience what we experience as *consciousness*. Factually, all the evidence is that 'stuff' in the form of silicon-based digitally-operating machines (unlike stuff in the form of brains) is incapable of generating and experiencing thoughts and feelings or of possessing a notion of 'self'. Indeed, if this is not the case we are in big trouble. The ethical implications would be appalling. If computers *are* conscious beings, then every time we scrap a computer we commit a form of murder and humans have been collectively responsible over the years for computer genocide on a massive scale.

'Mind' can be used as a count-noun (as in 'my mind' or 'your mind') *without* implying any 'ghost in the machine'. 'A mind' can be defined as a '*cognitive system*' realised within a brain.

5.14 We have suggested that, as a *mass*-noun, 'mind' can be used simply to refer to 'consciousness' i.e. to the product of brain activity. Using the word as a *count*-noun (e.g. when talking about what is 'in our minds'), however, has the potential for conceptual confusion suggesting, as it does, a 'location' or 'container'. Ryle (1949) argues that "the phrase 'in the mind' can and should always be dispensed with. Its use habituates its employers to the view that minds are queer 'places', the occupants of which are special-status phantasms".[72] Rejecting, with Ryle, the concept of the mind as a 'ghost in the machine', however, does not mean that we can or should abandon *any* count-noun use of the word. Phrases such as 'in the mind' are, after all, commonplace in our everyday speech (and, indeed, feature extensively in this paper) and cannot be readily substituted by 'in the brain' or 'in the head' without change or loss of meaning. Arguably we need a word to distinguish the *cognitive system* realised within a brain from both the brain itself and from any particular on-going mental activity. Included within this system are perceptual and intellectual abilities, opinions and beliefs, stored information and memories, personality traits and behavioural tendencies. Defining 'a mind' in this way appears to square with our general count-noun use of the word.[73] Consistent with it are everyday references, for example, to people 'changing their minds', 'bearing something in mind', or even 'losing their minds'.[74] Conceptualising the mind as a *cognitive system* realised within a complex, compartmentalised but interconnected and largely integrated, parallel-processing neurobiological structure such as the brain is consistent with our everyday experience as thinking, feeling, conscious beings. It is consistent, for example, with our experience of different 'levels' of

[71] The point is well made by the story of two behaviourists who make love, following which one says to the other "that was great for you, how was it for me?"

[72] The English philosopher Gilbert Ryle (1900-76) is generally regarded as a proponent (along with Wittgenstein, Austin and others) of 'ordinary language philosophy'. In his highly influential work *The Concept of Mind* (1949) he de-bunks the notion of the mind as some ethereal entity tethered to the brain (in his words, as a '*ghost in the machine'*). As a behaviourist, however, he can be accused of 'throwing the baby out with the bathwater' i.e. of attempting an eliminative reduction of 'first person' consciousness to bodily actions amenable to 'third person' observation and description (see 5.13).

[73] A relevant example of the use of the word 'mind' is provided by Ron Howard's 2001 film *A Beautiful Mind* starring Russell Crowe and based on the life of mathematician and schizophrenia sufferer John Nash (winner of the 1994 Nobel Memorial Prize for Economics for his work on game theory).

[74] In such phrases the word 'brain' cannot be substituted for 'mind' i.e. we do not talk about 'changing our brains', 'keeping something in brain' or 'losing our brains' (although, colloquially at least, we can talk about 'losing our heads', as in Rudyard Kipling's 1895 poem *If* i.e. "If you can keep your head when all about you / Are losing theirs and blaming it on you …").

consciousness (including dreaming), awareness of 'self', fluctuating emotional states and evolving personalities. It also helps to explain how 'malfunctions of the system' can occur including lapses of attention, losses of memory and, in extreme cases, the *dis*integration of the system and personality as a result of different parts of the brain failing to interconnect. Such phenomena, as we have already noted, are inexplicable in terms of Berkeley's concept of the mind as "one simple, undivided, active being" [PHK 27] that is "indivisible, incorporeal, unextended" [PHK 141].

The modern 'scientific' model of the perceptual process differs radically from Berkeley's.

5.15 The modern 'scientific' view of the way in which brains connect with their environment is articulated by Gibb (2012). "Our senses are the gateways between our brains and the outside world. Receiving signals from skin, eyes, nose, tongue and ears, the brain seeks out patterns in order to create a representation of the world. This representation is so intrinsic to the human experience that, as far as we're concerned, it *is* the world. But in reality hearing, vision and other sensory impressions occur *inside* the brain, created from variations in the chemicals, light, air and physical forces we're exposed to." This 'model' of the perceptual process resembles in many ways that of Locke (see 2.5). Superficially, Gibb's reference to 'sensory impressions' that occur inside the brain and from which 'a representation of the world' is created might appear similar to Berkeley's reference to 'sensations' that are perceived by the mind and which are then 'blended or combined together' to 'compose objects'. Gibb, however, clearly envisages a world of 'stuff' or 'things' existing independently of any sensory 'signals' that might be received and processed by our brains (themselves *part* of that world). Berkeley, on the other hand, envisages a world of 'minds' composed of 'spiritual stuff' into which a 'master-mind' (God) implants 'sensory ideas' which, appropriately 'blended or combined together', *constitute* rather than *represent* 'things' (including brains). For Berkeley, 'things' have no existence independent of the perception by 'minds' of their constituent 'ideas' and are devoid of causative powers. Berkeley's and Gibb's models are thus radically different.

Gibb's model, unlike Berkeley's, is consistent with different levels of consciousness.

5.16 A key difference between Gibb's and Berkeley's models of the perceptual process concerns the role attributed to the mind and the brain. Although describing the mind as an 'active being', Berkeley appears to envisage a largely *passive* and *automatic* role for it when 'blending or combining together' the sensations 'imprinted' by God (see 3.7). Gibb, by contrast, represents the brain as an *active* agent that "*seeks out* patterns in order to create a representation of the world". Both models appear to suggest a largely, if not entirely, *subconscious* process. This is a problem for Berkeley with his 'simple, undivided' minds (see footnote 22 and 3.12) but is consistent with parallel-processing, multi-functioning brains that operate at different 'levels' of consciousness. It is also consistent with our occasional experiences of 'catching ourselves' trying to make sense of our sensory inputs (e.g. when glimpsing an uncertain shape in the gloom).[75] Such experiences appear to arise when 'lower-level' processes of 'object-substance' recognition fail, activating processes that operate at 'higher' levels of consciousness (see 5.6). Similar situations appear to arise when we examine optical illusions, switch between alternative interpretations of ambiguous drawings (a well-known one being viewable as either a duck or a rabbit) or study mind-challenging depictions of 'impossibilities' (e.g. Escher's *Waterfall*).

Commonly held views regarding human and animal perception/cognition contradict Berkeley's.

5.17 Our common, as well as 'scientific', approach to the perceptual and cognitive experience of humans and other sentient life forms differs from that of Berkeley in crucial respects.

- We commonly regard the existence and condition of our sensory 'equipment' as *crucial* to our perceptual experience (e.g. without eyes we cannot see and ocular defects impair our vision).

[75] This is probably the sort of experience that Jones (2009) has in mind when he refers to experiencing the odd 'Berkeley moment' (see footnote 21).

For Berkeley, by contrast, our sensory organs comprise passive, functionless 'collections of ideas' and are thus *irrelevant* to our sensory experience (see 4.21), this being determined solely by the implanting of sensations in our minds by God.

- We commonly accept that differences between species in their sensory equipment must affect the nature of their perceptual experience (e.g. the range of colours they can see or sounds they can hear). For Berkeley, this is determined solely by the type of sensations God chooses to implant in their 'minds' (presumably, for example, implanting 'aural' rather than 'visual' sensations in the minds of bats to give them the experience of flying around trees, buildings and other 'obstacles' comprising 'collections' of such 'aural ideas').
- We commonly believe that differences between species in the structure of their brains determine the way in which they process sensory inputs, their ability (if any) to memorise and 'reason' and the general nature of their 'consciousness'.[76] The *evolution* of brain structures is evidenced in the human brain, its component parts ranging from the primitive to the most advanced.[77] Had Berkeley been aware of these structures he would have written them off, as he wrote off entire brains, as passive, functionless 'collections of ideas'. As we have seen, he regards 'minds' or 'spirits' as *structureless* i.e. as 'simple and undivided'.

The nature of perception depends upon the nature of the perceiver.

5.18 The dependence of perceptual experience upon the sensory/cognitive 'equipment' of the perceiver is generally accepted (although not by Berkeley). Dogs, for example, react to high-pitched sounds that humans are incapable of hearing. What the brains of different animals 'do' with the same sensory inputs, moreover, must surely vary. The nature of the perceptual experience of a cat and a human looking at the same scene (i.e. receiving identical photons of light on the retinas of their eyes) seems bound to differ. Indeed, two humans viewing the same scene from the same angle and distance will have their own *unique* perceptual experience depending not only upon the quality of their eyesight but also upon their mental focus and attention, the processes of object-substance recognition taking place within their brains and the triggering, via neuronal networks, of memories and emotional responses.[78] An extreme case, to re-use a previous example (see footnote 41), is where one person sees a man's wife whilst the man himself sees a hat! More commonly, about one in a hundred people experience some form of synaesthesia (i.e. the 'mixing of the senses' where, for example, sounds or smells are experienced as colours). In *all* cases the nature of perceptual

[76] The way in which we behave towards other sentient life forms is very much determined by our assumptions about what types of conscious experience their sensory/brain structures are capable of producing. We happily throw a cabbage into boiling water but may hesitate to do the same with a live lobster. People who find it acceptable to kill and eat animals such as pigs, sheep and cattle are generally concerned, nevertheless, that their killing should be painless and distress-free (although people who, like Descartes, regard animals as mere 'machines' would presumably consider organisations such as the RSPCA to be pointless). Ethical concerns are particularly acute in respect of mammals which, along with humans, possess cerebral cortexes. The extent to which this might enable some (e.g. chimpanzees and dolphins) to have a notion of 'self', is the subject of on-going investigation. We can only speculate whether humans might eventually evolve brain structures with capabilities superior to those now provided by our cerebral cortexes or, as Locke speculates (see footnote 15), whether non-humans possessing such faculties already exist elsewhere in the universe.

[77] As described by Gibb (2012), they include the brain stem or 'reptilian brain', (responsible for governing some of the body's vital functions), cerebellum (its main function being movement and balance), thalamus (involved in the 'gating', processing and transfer of sensory information), hypothalamus (a regulator of hormone release and essential to motivation), basal ganglia (associated with the coordination of fine movement), amygdala (involved in generating emotional responses such as fear and desire), hippocampus (associated with memory) and the cerebral cortex (described by Gibb as "the crowning achievement of brain evolution, both literally and figuratively" and associated with the 'highest' brain functions including thinking and reasoning).

[78] The triggering of emotional response is something that Berkeley (see 4.3), contradicting his representation of sensations and all other 'ideas' as totally passive and inert, appears to recognise when he asserts that such ideas, "as they are pleasing or disagreeable excite the passions of love, hatred, joy, grief, and so forth" [PHK 1].

experience will be strongly influenced, if not entirely determined, by the nature of the perceiver. The German philosopher Immanuel Kant (1724-1804) argues that the nature of human perceivers is such that we can interpret our sensory experience of the world only in terms of subjective '*a priori*' (i.e. existing *prior* to such experience) forms of perception, specifically the forms of '*space*' and '*time*' (Kant, 1781).[79] These, he argues, are not learnt '*a posteriori*' (i.e. *after* and *out of* such experience) but are somehow already 'built into' us. This is not inconsistent with the view that there is something about the structure and constitution of brains that causes them to process their sensory inputs in certain ways and, in the case of human brains at least, to perceive their environment in terms of 'things' or 'stuff' located in time and three-dimensional space. Locke, we should note, does not rule out this possibility, only the possibility that we might possess innate *ideas* (on the basis that the mind starts out as "white paper, void of all characters" [EHU 2.1.2] and that all 'ideas' are derived ultimately from sensory experience). Berkeley, as we have seen, provides no explanation of what determines the way in which his 'simple, undivided', structureless, immaterial minds 'blend or combine together' sensations imprinted by God to 'compose objects' and why this might vary between individual humans or the members of different species.

Space and time might be *real* features of the world, not merely 'forms of perception'.

5.19 Kant posits a '*noumenal*' world of 'things' or 'stuff' existing independently of any sensory experience that any sentient being might have of it and lying forever hidden behind the '*phenomenal*' world of that experience. As Körner (1955) explains, "if space and time are subjective forms of perception then we must distinguish between things as they are in themselves and the world of appearances, a world moulded by the apprehending, i.e. the perceiving and thinking, subject".[80] This parallels Locke's distinction between a hidden substratum of 'matter' and the world as presented by the 'simple ideas' of our senses. Berkeley, by contrast, rejects as incoherent the postulation of a world inherently inaccessible to our senses. Körner states: "For Berkeley the assumption of an unperceived existent is a contradiction in terms. Not so for Kant. What for him is a contradiction in terms is merely the assumption that an existent can be perceived as it is". Does Kant then, as much as Locke, confront us with an 'impenetrable screen' of appearances leaving us, if we reject the existence of an intrinsically unknowable 'noumenal' world hidden behind it, with nothing but the 'distressingly insubstantial' world of Berkeley's spirits and their ideas (see 5.4)? Körner makes the point that, even if we cannot but perceive the world except in terms of the forms of time and space, this does not *necessarily* make them *subjective* i.e. not real features of the world 'as it is in itself'. "One can agree with Kant's view that the matter and form of perception are distinct, without sharing his view that the form is subjective. Thus even a realist, who believes that the thing he perceives exists just as he perceives it, could adopt the Kantian distinction without inconsistency. Moreover, he could hold with Kant that the matter cannot be perceived except under the form, because the separation of perceptions from their situation in space and time is only possible (as is, for example, the separation of the shape and colours of perceived patches) in thought, but not in fact".[81]

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[79] Kant revered Newton and, like him, maintains that space and time are to be conceived in 'absolute' terms i.e. not purely in terms of the relationship between identifiable 'things' or 'events'. Leibnitz took an opposing view and argues that "space … is something *merely relative*, as time is" and that space is "an *order of coexistences* as time is an *order of successions*".

[80] For Kant, space and time are '*empirically real*' (i.e. exist as *real* features of things *as we perceive them*) but '*transcendentally ideal*' (i.e. exist otherwise only as *a priori* concepts, not as real features of things *as they are in themselves*). With regard to time, for example, he says "once we abstract from the subjective conditions of perception, it is nothing at all and cannot be attributed to the things in themselves" [Kant, 1781].

[81] Searle (1999) regards Kant as essentially an 'idealist', albeit a more subtle one that Berkeley or Hegel. "I believe the most sophisticated version of the idealist position is found in the philosophy of Kant, who thought that what he called the 'phenomenal world' (the world of chairs, tables, trees, planets, and so on) consisted entirely in our representations. He also thought that there actually is another world, a world of 'things in themselves', but that this world is totally inaccessible to us; we cannot even talk about it meaningfully. The

We can be 'realists' without being 'naïve' ones.

5.20 Körner characterises a 'realist' as someone "who believes that the thing he perceives exists just as he perceives it". The people to whom such a belief is attributed are sometimes labelled '*naïve* realists',[82] presumably to distinguish them from rather more *subtle* realists. If we accept Körner's definition then *nobody* is a *naïve* realist. We all accept that:

- The things or stuff we perceive appear differently from different angles and distances and under different ambient conditions.
- We are mostly aware, through our senses, only of *surface* appearances.
- How things or stuff appear is affected by the nature of our senses (e.g. the quality of our eyesight), the focus of our attention and possibly our mood.
- Generally, differences of appearance are mutually consistent, explainable and exactly what we would expect. We do not normally single out some as 'veridical' (representing things or stuff as they 'really' are) and others as 'non-veridical' (providing 'false' representations of their 'true' nature).
- *None* of the appearances of things or stuff tells us everything about them.[83]
- We sometimes, although *rarely*, mistake the nature of things or stuff.
- Most mistakes occur due to 'adverse conditions' (e.g. viewing things from a distance or when the light is poor) and often concern only matters of 'detail' (e.g. from a distance we might readily identify something as a tree but mistake its type).

I can, to use an example of Austin's (1962), quite happily say "that white dot in the distance is my house" *without* implying that I believe I live in a 'white dot'. I can, to use an example of Berkeley's (see 4.10), claim to see a round tower in the distance only to find on approaching it that it is, *in fact*, square. In neither case can it be said that I am not 'really' seeing something or that I am seeing something 'unreal'. Such descriptions of what we perceive are wholly consistent with a world of things (including houses and towers) that exist independently of our perceptual experience and that such experience only partially, and occasionally misleadingly, 'represents'.

Descriptions that confine themselves to our 'immediate perception' and make no 'inferences' might appear to avoid the possibility of error.

5.21 A recurrent philosophical obsession has been the search for the indubitable. It has been suggested that, in describing what we perceive, we can avoid the possibility of error by referring only to our 'immediate' perceptual experience, making no claim about its link, causative or otherwise, to something existing independently of that experience. For Lewis (1929), qualia appear to fit the bill. "The quale is directly intuited, given, and is not the subject of any possible error because it is purely subjective." For philosophers such as Russell, we cannot be mistaken if we describe only perceived 'sense data'. Berkeley claims, rephrasing him slightly, that 'we cannot be mistaken with regard to the

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empirical world (that is, the world we all experience and live in) is in fact a world of systematic appearance, a world of how things appear to us. So, on Kant's view, as on other forms of idealism, the world of tables, chairs, mountains, and meteors, as well as of space, time, and causation, is in fact a world of mere appearances. The difference between Kant and other idealists such as Berkeley is that the others thought that appearances (or, as Berkeley calls them 'ideas') are the only reality, whereas Kant thought that in addition to the world of appearances, there is a reality of things in themselves behind the appearances, of which we can have no knowledge whatever."

[82] The labelling is generally done by people calling themselves 'philosophers' who set up a 'straw man' (sometimes characterised disparagingly as the 'common' or 'ordinary' man) to whom they attribute a supposedly 'naïve' opinion and over whom they then claim superiority of insight, in the process often revealing considerable naivety on their own part.

[83] Angled views are often the most informative. The view of a round table from above, for example, tells us nothing about the thickness of its top or the number and shape of its legs. From an angle we can generally tell not only this but also, given the *three-dimensional* and *perspectival* nature of our vision, that the table top is *round*. Contrary to the apparent belief of some philosophers, a round object viewed at an angle does *not* look the same, from a reasonably close distance at least, as an oval object viewed square on.

ideas we actually perceive; but only in the inferences we makes from our present perceptions' (see 4.10). Warnock (1953) interprets a Berkeley-type statement of 'immediate perception' as one where we 'make no inferences' (i.e. take nothing for granted and make no assumptions that might be invalidated by the outcome of any further investigation) and suggests it can be expressed in the form 'it seems to me now as if …' For example, if I say at one moment "it seems to me now as if I am seeing a round tower" and the next moment "it seems to me now as if I am seeing a square tower" I cannot be proved mistaken or inconsistent. Even if I make the *separate* judgement that the statements refer to the *same* tower (and that the tower is *actually* square) I can say that *both* statements, in themselves, are *strictly* correct as they describe only my visual *experience* at each respective moment, express no expectations about any other visual experience and do not assert that anything exists independently of, or 'external to', such experience. Even if it subsequently turns out that in one or both cases I was experiencing a hallucination, I can say that all I claimed was that it *seemed* to me *as if* I was seeing a tower. I did not claim that I was *actually* seeing a tower.

It is simply untrue that we can isolate and describe the content of our 'immediate perception'.

5.22 Philosophical approaches that suggest we cannot be mistaken if we confine ourselves to inference-free descriptions of 'immediate perception' might be superficially attractive but are misconceived. Crucially they all make the assumption, without justification, that there is a component of our perceptual experience which constitutes 'immediate perception', that this is distinguishable from any other (particularly any that might involve the making of 'inferences') and that it can be separately described.[84] Berkeley (through Hylas) asserts that "the senses perceive nothing which they do not perceive immediately, for they make no inferences" [DHP1 H23], his key concern being to deny that our sensory experience provides any 'mediate' evidence for the existence of 'matter'. What we perceive immediately, he claims, are 'sensations' and these comprise light, colours, figures, sounds, tastes, odours and tangible qualities [DHP1 P24]. On this basis, a description of our 'immediate perception' at a given 'moment' (assuming we could 'freeze' the *continuum* of our experience in order to isolate such a moment) would involve identifying and listing all the sensations perceived, of which there could be a vast number (including all sorts of visual sensations comprising coloured dots, squiggles and other shapes). Crucially, such a description, even if feasible, would be a *false* description of what we *actually* experience. As already argued (see 3.7 and 5.5), our visual experience is *not* one of perceiving a two-dimensional 'canvas' of coloured shapes. Exactly the same objection applies in respect of 'sense data', the equivalent of Berkeley's 'sensations'. Berkeley, of course, claims that we 'blend or combine together' sensations to form 'objects' and that, 'strictly speaking', we form different objects for each sense and for each different moment (see 3.10). Could we, therefore, regard *these* as the objects of 'immediate perception'? The problem is that, if what we *immediately* perceive are such 'objects' (which, as suggested in 3.7, makes them '*unitary* ideas' rather than '*collections* of ideas'), we have at best only *mediate* evidence for the existence of 'sensations' (i.e. we are just *hypothesising* their existence) and, even if they do exist, no way of knowing that our 'blending or combining' of them together has been consistent and error-free. For Berkeley, of course, unless sensations are *perceived* (i.e. unless there is *awareness* of them) they simply do not exist!

Warnock argues that Berkeley fails to provide a clear distinction between what *seems* and what *is*.

5.23 Warnock (1953) 'translates' Berkeley's characterisation of 'things' as 'collections of ideas' into the language of 'seeming'. He suggests that "any statement about any material thing is really (can be analysed into) an indefinitely large set of statements about what it seems, or in suitable conditions would seem, as if the speaker and other people and God were hearing, seeing, feeling, tasting, smelling - that is, into an indefinitely large set of statements describing the ideas of which any material object is a collection". He goes on to suggest that the distinction Berkeley makes between

[84] Locke appears to have some such notion when he refers to "bare naked perception" in which "the mind is, for the most part, only passive and what it perceives it cannot avoid perceiving" [EHU 2.9.1].

reality and *appearance* is encompassed by the difference between *consistent* and *inconsistent* seeming but then argues that no amount of consistent seeming (e.g. that there consistently seems to be an orange on the sideboard) can render *contradictory* the assertion that what seems to exist does *not*, in fact, exist. He points out that asserting that something exists is *logically different* from asserting that it seems, or under various conditions would seem, to exist (i.e. that no series of statements, of the form S_1, S_2, S_3 … S_n, about what *seems* to be the case can amount to the same as a statement M about what *is* the case, as it is always logically possible to accept S_1, S_2, S_3 … S_n whilst denying M). He likens the distinction to that made in a court of law between the accumulation of evidence *suggestive* of guilt and an actual guilty *verdict*. Warnock concludes that "the common suspicion that Berkeley is somehow neglecting the distinction between what *seems* and what *is* turns out to be justified. Not in the crudest and most blatant sense - he provides us with a version of this distinction in the form of a distinction between 'consistent seeming' and *mere*, irregular, 'incoherent seeming'. But this distinction is *not enough*. For even 'It consistently seems so' does not mean the same as 'It really is so'; one could say 'It consistently seems so but it is not'. In the course of translation into Berkeley's terms 'the distinction between realities and chimeras' has not quite vanished, but it does not 'retain its full force'".

Warnock's 'translation' of Berkeley into the language of 'seeming' only confuses matters.

5.24 In trying to make sense of Berkeley's identification of 'ideas' as the 'immediate objects of perception' and of 'things' as 'collections of ideas', Warnock (1953) appears to go along, if only for the purposes of his argument, with much that is not just questionable but plain *wrong*.

- In arguing that '*seeming now as if*' statements provide the equivalent of Berkeley-type descriptions of 'immediate perception', Warnock appears to accept that such a form of perception actually exists and can be distinguished from inference-laden 'mediate perception'. He suggests, for example, that when we claim to see a book "there is still in this situation something (not the book) which is *immediately* seen". He identifies what is 'immediately seen' as Berkeley-type sensations (e.g. in the case of 'seeing a book' as visual sensations comprising "a certain shape or pattern of colours").[85]
- Warnock points out that, for lack of an adequate range of adjectives, some perceptions can be described only by referring to the inferred objects with which they are associated (e.g. we can describe the sound of an oboe only by referring *to* an oboe). Where a choice *is* available, however, he suggests that it is merely "a matter of taste and convenience" whether such statements refer to 'objects' or 'sensations'. As an example, he says that "it would often be simpler to characterise my 'visual impressions' by saying 'it seems to me as if I were seeing boats on a lake', than by saying what shapes and colours seem to be in my visual field". He thus appears to consider that a particular perceptual experience might be described with equal validity by using *either* 'object language' (referring to 'things' or 'stuff') *or* 'sensation language' (e.g. listing perhaps thousands of different shapes and colours).
- In discussing Berkeley's distinction between appearance and reality, Warnock claims that "we speak of 'appearance', mere seeming, when how things seem at first is not consistent with how they seem at other times, to others, or in other conditions". This is simply untrue. When we speak of how something appears, usually *no* problem of consistency with other appearances arises. As pointed out in 5.20, it is an accepted *reality* that things present different appearances from different angles and distances, under different conditions and to different observers. Only if they *didn't* so differ would a problem arise. Warnock's contradistinction of 'appearance' and 'reality' is thus misconceived.

[85] Compare this with Russell's claim to *see* "the sense-datum which represents the sun" to him (see 5.3 and footnote 58).

- In referring to Berkeley's distinction between 'consistent' and 'inconsistent' seeming[86], Warnock could, but doesn't, question why the issue of consistency or inconsistency should arise, and by what criteria it might be settled, *in the absence of any notion of independently existing things or stuff*. Consistent or inconsistent with *what*? In a world of mere 'seemings', appearances can be 'consistent' or 'inconsistent' only with *each other*? But how then can we distinguish the 'consistent' from the 'inconsistent' ones e.g. the status of 'round tower appearances' compared with 'square tower appearances'? Indeed, in a world of mere 'seemings', what's the problem if at one moment a tower appears round and at another square or at one moment there seems to be an orange on the sideboard and at another there doesn't? Presumably we could just accept that we inhabit a 'now we perceive it, now we don't' world of 'seemings'. Even if we do manage somehow to 'write off' certain appearances as 'inconsistent' we are still faced with the problem of explaining their occurrence, given that they are not obviously of our own creation or choosing.
- Warnock's 'seeming now as if' statements make reference to, and thus appear to accept the existence of, the very perceptual states (i.e. of *actually* perceiving something) to which they purport to avoid any claim. If I say "it seems to me now as if I am seeing an apple" I am saying that my present perceptual state is *like* one where I *actually* see an apple. But when do I have *that* sort of experience and how would I distinguish it from one of mere 'seeming'? To avoid the making of inferences and the possibility of error I presumably have to describe *all* my perceptual experiences in the language of 'seeming'; in which case there are none that I can confidently regard as 'actual' and with which I can compare 'seeming-type' experiences.
- As Austin (1962) points out, Warnock's 'seeming now as if' formula "is already heavily loaded with the ideas of passing judgement, assessing evidence, reaching tentative verdicts". It thus *misrepresents* the nature of our everyday perceptual experience which ordinarily is just one of perceiving (seeing, touching, etc.) things and stuff. If I see an escaped tiger, I do not 'suspend judgement' about its existence until I have accumulated enough 'seeming-type' experiences to allow me to come to the verdict that "there, 'beyond all reasonable doubt' or 'on the balance of probabilities', is an escaped tiger". As Austin argues, "Warnock's picture of the situation gets it upside-down as well as distorted. His statements of 'immediate perception' so far from being those from which we *advance* to more ordinary statements, are actually arrived at, and are arrived at on his own account, by *retreating from* more ordinary statements, by progressive hedging. (There's a tiger → there *seems* to be a tiger → it seems *to me* that there's a tiger → it seems to me *now* that there's a tiger → it seems to me now *as if there were* a tiger).[87] It seems extraordinarily perverse to represent, as that on which ordinary statements are based, a form of words which, starting from and moreover incorporating an ordinary statement, qualifies it and hedges it in various ways. You've got to get something on your plate before you can start

[86] Berkeley's supposed distinction between 'consistent' and 'inconsistent' seeming (and between 'reality' and 'appearance') is, in fact, far from clear or straightforward. In trying to explain the difference between realities and 'chimeras', Berkeley argues that "the ideas of Sense … have a steadiness, order, and coherence, and are not excited at random … but in a regular train or series …" [PHK 30]. However, he clearly regards both the perception of a round tower 'seen from a distance' and the perception of a square tower 'seen close to' (see 4.10) as involving 'ideas of Sense' and thus both are equally 'real' (i.e. neither is a 'hallucination' or 'illusion'). He copes with this only by arguing (see 3.10) that, 'strictly speaking', they comprise *different* objects. The round tower 'seen from a distance' is thus a *different* object from the square tower 'seen close to'. Neither, according to Berkeley, relates to anything existing independently of perceived 'ideas of Sense' and so the difference requires no explanation and we are not wrong in describing one as round and the other as square. We are prone to error only if we assume from our experience of the round tower object that we will necessarily *still* experience a round tower object at another moment. The *realist* position, of course, is that the square tower exists independently of any perceptions we might have of it and if we see it from a distance as round we are simply mistaken (and can correct our mistake through closer observation).

[87] The ultimate retreat would presumably be into 'sensation language' e.g. "it seems to me now as if in my visual field there is this yellow stripe, this black stripe, this yellow stripe, this black stripe, etc., etc."

messing it around. It is not, as Warnock's language suggests, that we can stop hedging if there is a good case for coming right out with it; the fact is that we don't *begin* to hedge unless there is some special reason for doing so, something a bit strange and off-colour about the particular situation."

Austin expresses agreement with much of Warnock's book on Berkeley, the focus of his criticism being Warnock's attempt to "explain what Berkeley meant, or at least what he should have meant, by the dictum that only 'our own ideas' are 'immediately perceived'". Austin concludes that "what is generally, and most importantly, wrong with Warnock's argument is simply that he has got into (perhaps Berkeley has led him into) the position of swallowing the two-language doctrine, temporarily, at least, appearing to swallow the two-entities doctrine on the way. And the resulting question about how the evidence-language ('idea'-language) is related to material-object-language, which he tries to answer, is a question that *has* no answer, it's a quite unreal question. The main thing is not to get bamboozled into asking it at all".

Our everyday sensory experience of things/stuff is, in any meaningful sense, *direct*.

5.25 In spite of the arguments presented above, it might seem that a distinction between 'immediate' and 'mediate', or between 'direct' and indirect', perception remains valid. The 'scientific model' of perception, after all, represents sensory experience as occurring essentially *within* the brain (Gibb, for example, states that "in reality hearing, vision and other sensory impressions occur *inside* the brain") and thus appears to imply that we have 'direct' perceptual access only to such 'internal' experience and can only *infer* the 'external' existence of things or stuff. However, this follows only if we conceive of ourselves as 'spectators' inside our own brains, observing and interpreting a sort of internal 'sensory show'. Dennett (1991) characterises this as the view of the brain as a 'Cartesian Theatre' inhabited by a distinct and separate 'self' and rejects it on the same basis as Ryle (1949) rejects the notion of the self as a 'ghost in the machine'.[88] An alternative is to accept that our sensory experience of things or stuff is just an intrinsic feature of brain activity. What I experience when, for example, I see, pick up and eat an apple is generated by neurobiological processes. There is no 'mini-me' inside my head/brain separately observing these processes or the experiences to which they give rise.[89] The experiences involved are, in any meaningful sense of the word, *direct*. Through our senses we *directly* observe a world of things or stuff located relative to ourselves in time and three-dimensional space. Indeed, what might constitute 'indirect' observation is far from clear. If I tell my friends that I saw the replay of a football match on television last night and they respond "So you saw it only *indirectly*", I would wonder what point they were trying to make. So what if I didn't observe the match from a seat in the stadium or 'in real time'? The 'route' by which sensory stimuli reach our brains can be quite complex (including transmission via electronic media) without it being considered 'indirect'. The key requirement for perceptual experience is that there should be some flow of 'sensory information' from observed to observer. How else could things/stuff (in the form of brains) 'observe' other things/stuff if not by generating 'intentional' states about them on the basis of such flows? If my experience of seeing, picking up and eating an apple is not 'direct' and 'immediate' what *more* is needed to make it so?[90] Perceptual experience as

[88] Although Berkeley rejects the existence of 'machines' (i.e. of material bodies/brains) he retains the notion of independently existing 'ghosts' (or 'spirits' as he calls them) who observe, process and draw inferences from 'sensory shows' laid on by God.

[89] This is *not* to say that such phenomena are *ontologically* reducible to such processes (see 5.12). It is important to emphasise that sensory experiences are *real* outcomes of neurobiological processes (see 5.10). Any attempted 'theory of everything' has to explain their occurrence (i.e. the ability of 'stuff', when appropriately configured, to generate everything we know of as perception, thought and feeling).

[90] For Berkeley, stuff in the form of brains cannot have sensory experience (whether 'direct' or 'indirect') of other stuff because, in his ontology, *all* stuff (including brains) consists of God-implanted *sensations* and these are all that immaterial spirits 'directly' or 'immediately' perceive. Some philosophers, whilst prepared to accept that our brains generate our perceptual experience, wrongly conclude that this means that such perception is thereby 'indirect' rather than 'direct'. Austin (1962) points out that their "use of 'directly

an intrinsic feature of brain activity triggered by external stimuli is surely as 'direct' and 'immediate' (if we need to use those words at all) as it gets. It is only if we (falsely) represent our perceptual experience as one in which an independently existing entity called 'the self' observes and interprets an 'internal' sensory show (whether laid on by the brain or by God) that any suggestion of 'indirectness' arises and we end up implying that we somehow 'perceive our own perceptions'. The sensory experience of, for example, seeing an apple just *is* an intrinsic feature of the brain processes involved.

For our everyday perceptual experience, a *realist* stance 'works'. 'Sceptical', 'immaterialist' and 'idealist' approaches tend to be *parasitic* upon it.

5.26 At this stage, a not too naïve 'realist' position might be stated as follows.

- We are directly aware through our senses of the existence of 'stuff' (for want of a better word).
- Such stuff exhibits a wide variety of characteristics and forms.
- Stuff is structured in such a way as to be divisible into hierarchies of distinguishable 'things'.
- Some of these are 'living' things (animal and vegetable) which:
    - maintain their structural identity whilst changing the stuff of which they are composed;
    - respond in some way to stimuli provided by other things/stuff;
    - replicate themselves;
    - eventually cease to function and 'die'.
- Some living things have 'brains' that can process, and trigger reactions to, sensory stimuli.
- In more complex brains such processing may generate 'representations' of things/stuff that help to guide responses to experienced stimuli.
- The most complex brains have cerebral cortexes and the most complex of these (as far as we are aware) are possessed by humans.
- Our brains generate 'intentional' states constituting perceptual experience of things and stuff. All stuff, however, exists independently of any such experience and most is *never* perceived.
- Our brains produce all that we know of as thought and feeling. Our thought processes enable us to examine the nature of things and stuff and of ourselves as perceiving, thinking and feeling beings. They enable, for example, me to write and you to read this paper.

It does not take a genius to spot circularity in the above list which starts by referring to the sensory experience of the very beings (ourselves) with which it concludes. It could be argued, however, that such circularity is inherent in *any* attempt (including Berkeley's) to explicate the nature of perception and existence. Inevitably, any such an attempt has to be conducted from within an existing experiential and conceptual framework. We can, nevertheless, test any 'model of reality' for *internal coherence and consistency* (i.e. whether it 'hangs together' on its own terms). We have already argued that Berkeley's ontology is essentially incoherent (in relation, for example, to the notion of 'things' as 'collections of ideas' and to the issue of 'human agency'). The notion of 'stuff' located in time and space, on the other hand, does appear both coherent and consistent with the 'world' of our everyday sensory experience. Indeed, it appears *contained* within such experience which is essentially one of things/stuff to which we have perceptual access through our senses but that exist independently of our perceptions (the 'default position' described in 5.8). It is significant that philosophers who profess 'scepticism with regard to the senses' or who, like Berkeley, argue that nothing exists but 'spirits' and their perceived 'ideas', appear to find it impossible to expound their views without using the language of things and stuff or engaging in 'paradigm-hopping'. Berkeley, as we have seen (5.2), tries to explain the existence of his 'table' in terms of the sensations he would experience *if* 'he' were in his 'study'. He thus hops from the paradigm of a thing (his table) as a

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perceive', whatever it may be, is not the ordinary, or any familiar, use; for in *that* use it is not only false but simply absurd to say that such objects as pens or cigarettes are never perceived directly. But we are given no explanation or definition of this new use; on the contrary, it is glibly trotted out as if we were all quite familiar with it already … moreover it seems that what we are to be said to perceive indirectly is *never (* is not the kind of thing which ever *could* be) perceived directly."

'collection of ideas' to the paradigm of things (including his own body, the rooms of his house and all their contents) as independently existing entities positioned relative to each other in three-dimensional space. Generally, it can be argued, 'sceptical', immaterialist' and 'idealist' approaches are *parasitic* upon 'realist' default positions.[91]

Major conceptual issues arise, nevertheless, when we try to *comprehend* the world as represented by our everyday sensory experience.

5.27 Although a broadly 'realist' approach appears to 'work' with regard to our everyday sensory experience, major conceptual issues arise when we seek to comprehend the 'reality' involved. The more we formulate and test alternative 'models of reality' the more we encounter propositions that appear counter-intuitive. Through our senses, we are as much aware of 'forces' as of 'stuff' but the concept of the equivalence of 'mass' and 'energy' is far from intuitive. The nature of space and time, and whether they should be conceived in 'absolute' or 'relative' terms, has long been the subject of philosophic and scientific speculation (see footnote 79). The concept of 'time' (usually treated as a 'fourth dimension' on a par with the dimensions of space but meaningful and measurable only in terms of identifiable *change*) remains especially challenging. At least as conceptually challenging are the divergent postulates (yet to be reconciled) of relativity theory and quantum mechanics. Atoms are no longer regarded as indivisible but the notion of indivisible elementary particles persists. Whilst recognising the problematic nature of the concept of 'infinite divisibility', it still seems legitimate, from the perspective of our 'macro level' experience, to question what 'particles' such as quarks and electrons are actually 'made from' and why they can't be sub-divided, like atoms, into yet smaller particles. Perhaps most counter-intuitive are the postulates of 'string theory' and the notion of 'parallel universes'. Much theorising involves, and appears meaningful only in terms of, mathematical abstraction. However, whilst the postulates of, for example, the standard model of particle physics, quantum mechanics and relativity theory may be fully expressible and understandable only in mathematical terms it does not seem that the 'reality' being described can c*onsist* of mathematical abstractions which exist only as the product of brain activity (and brains seem to be a very recent development in the history of the universe). A crucial problem is how to conceptualise 'entities' which are intrinsically inaccessible to our 'direct' perception[92]. *All* our perception of the 'outside world' is via the senses but all we can sense in the case of postulated entities such as quarks and neutrinos are their assumed effects (perceived, perhaps, as sets of numbers on computer screens). It is tempting to try to apply concepts and categories meaningful at the level of our everyday sensory experience to hypothesised features lying beyond the direct reach of our senses. To do so, however, may serve only to confuse. In our everyday experience, for example, the existence of 'waves' appears to require *something* to 'do the waving' (hence the belief until the early 20th century in the existence of an 'ether' as a medium for the transmission of light). Counter-intuitively, however, we are asked to accept that 'particles' and 'waves' are simply alternative *forms* in which certain 'phenomena', such as light, can be manifested.

The 'scientific' approach, with all its conceptual problems, is preferable to simplistic alternatives including the notion that we somehow 'create our own reality'.

5.28 It might seem that our current scientific understanding displays as much conceptual confusion as Berkeley's 'immaterialism'. It represents, nevertheless, an attempt to identify 'how things really are', not just a 'useful fiction' that provides a 'predictive metaphor' for a totally different reality (e.g.

[91] This is true, for example, of the so-called 'argument from illusion' which purports to show that we can *never* trust the evidence of our senses. The fact that we sometimes, albeit rarely, mistake things (e.g. at a distance and in the dark might mistake a bush for a person) supposedly means that since *some* perceptual experience turns out to be 'illusory' we have to assume *all* might be. The argument hoists itself with its own petard. How do we judge, in the first place, that some perceptions are 'illusory' other than by accepting that a) there *is* a way things 'really are' and b) we can and do identify this through the generality of our sensory experience?

[92] In this context a distinction between 'direct' and 'indirect' perception *does* appear meaningful.

one involving god-implanted 'sensations'). It is subject, moreover, to empirical testing in a way that Berkeley's immaterialism is not. He offers only a 'rational' argument for the existence of 'God' of whom, he says, we can have no sensory experience (see 4.12). The conceptually challenging nature of our scientific understanding, however, may heighten the attraction of simplistic alternatives. One such is the notion that we somehow 'create our own reality'. How we experience the world is, of course, mediated by a wide range of factors including our sensory and cognitive 'equipment', relative position and mental focus (see 5.18). How we categorise and describe things is affected by the conceptual and linguistic framework within which we operate. To accept that our view of reality is 'perspectival', however, does *not* mean that we *create* such reality, that it has no existence independent of our perceptual experience or that it is determined by our use of language. Searle (1999) puts the point very clearly. "Just as it does not follow from the fact that I see reality always from a point of view and under certain aspects that I never directly perceive reality, so from the fact that I must have a vocabulary in order to state the facts, or a language to identify and describe the facts, it simply does not follow that the facts I am describing or identifying have no independent existence. The fact that there is saltwater in the Atlantic Ocean is a fact that existed long before there was anyone to identify the body of water as the Atlantic Ocean, to identify the stuff in it as water, or to identify one of its chemical components as salt. Of course, in order for us to make all these identifications, we must have a language, but so what? The facts exist utterly independent of language… It is a use-mention fallacy to suppose that the linguistic or conceptual nature of the *identification* of a fact requires that the *fact identified* be itself linguistic in nature. Facts are conditions that make statements true, but they are not identical with their linguistic descriptions. We invent words to state facts and to name things, but it does not follow that we invent the facts or the things."

Berkeley does not claim that we create what we perceive. Those philosophers who do, confuse our ability to *focus* on different things with an ability to *create* them.

5.29 Berkeley emphasises the involuntary nature of our 'sensations' (see 4.4) and attributes this to their god-implanted origin (see 4.5). Although less than specific on the subject, he presumably regards each mind's blending or combining together of 'sensations' to compose 'objects' as *determined* by the sensations involved (which must vary from one mind to another to give each its own unique perspective on a *common* world of objects). Berkeley thus rejects, if for the wrong reason, any notion that 'we create what we perceive' and would certainly not agree with Yeats (see 2.8) that this "preposterous pig of a world … must vanish on the instant if the mind but change its theme". If, in any meaningful sense, we *could* create our perceived world, our glasses would be permanently full, the football teams we support would always win, we would never suffer illness or pain and we would live forever. Because we do not all want the same things, however, we would have to create our own *separate* realities. To *share* the same world, our 'creative' efforts would have to be restricted and mediated by some sort of 'divine referee' (see 4.26). Although patently absurd, the notion of 'creating what we perceive' is espoused by some philosophers. Searle (1999) quotes the American philosopher Nelson Goodman (1906-98) as arguing that "as we make constellations by picking out and putting together certain stars rather than others, so we make stars by drawing certain boundaries rather than others". The comparison between constellations and stars is wholly spurious. We do not regard constellations as anything but trivial patterns picked out from observable stars. We are free to make whatever patterns we like (e.g. to pick out a group of stars to represent 'a plough' or combine them with a larger group to represent 'a bear'). The stars, on the other hand are 'givens'. Only if we could add, remove or shift them (perhaps to make more interesting patterns) could we be said to "make stars". We can't. Goodman's suggestion that where we happen draw boundaries around stars, or anything else, is a simply a matter of choice is equally spurious. A clear constraint is provided by the *content* of our sensory experience. We do not include millions of miles of empty space around a star as *part* of it because that is not what we see. Similarly, the 'boundaries' of the everyday objects that we encounter are *recognised* (rather than 'created') on

the basis of what we see and touch. The fact that, within strict limits, we can influence the content of our *sensory experience* (e.g. by altering the focus of our attention) does *not* mean that we thereby create the things or stuff we perceive. Our minds may be able to "construe almost anything as a bounded, countable item or as a boundariless, continuous medium" (see footnote 62) but *how* we so construe anything is tightly constrained by the perceptual content involved. The fact that we can focus upon a blade, a patch or an entire field of grass, for example, does not mean that they are in any way *created* by us. To assume so is to confuse our "acts of apprehension" with "the things apprehended" (see 3.13). It would represent supreme arrogance on the part of us humans, who comprise a vanishingly small fraction of all the stuff in the universe, to presume that we somehow determine the existence and nature of all other stuff (including, for example, stars that have existed for billions of years before we, or any other sentient beings, emerged). If humans are the product of some evolutionary process, and *if* the existence of anything depends upon it being perceived, we would have to question the existential status of the *unperceived* primordial slime to which we trace back our ancestry, and thus question our own *current* existential status. For Berkeley, of course, humans (and any other creatures that 'perceive ideas') are essentially 'immaterial spirits' brought into existence by God so the question of their 'evolution' does not arise. He would presumably dismiss Charles Darwin's *On the Origin of Species* (1859) as a work of fiction, useful or otherwise.

Attacks on 'external realism' appear to be motivated by an 'urge to power'.

5.30 Searle (1999) considers the basic claim of 'external realism'[93] (i.e. "that there exists a real world that is totally and absolutely independent of all of our representations, all of our thoughts, feelings, opinions, language, discourse, texts, and so on") as "so obvious and such an essential condition of rationality and even of intelligibility" that it is hard to understand why anybody in their right mind should wish to attack it. It *has*, however, come under attack from modern versions of idealism, "each typically more obscure than the last … under such labels as 'deconstruction', 'ethnomethodology', 'pragmatism' and 'social constructionism'". Searle considers "that as a matter of contemporary and cultural history, the attacks on realism are not driven by arguments, because the arguments are more or less obviously feeble" (just how feeble has been illustrated above). The deeper reason for the persistent appeal of antirealism is that "it satisfies a basic urge to power. It just seems too disgusting, somehow, that we should have to be at the mercy of the 'real world'. It seems too awful that our representations should have to be answerable to anything but us… In universities, most notably in various humanities disciplines, it is assumed that, if there is no real world, then science is on the same footing as the humanities. They both deal with social constructs, not with independent realities. From this assumption forms of postmodernism, deconstruction, and so on, are easily developed, having been completely turned loose from the tiresome moorings and constraints of having to confront the real world. If the real world is just an invention … then let's get rid of the real world and construct the world we want. That, I think, is the real driving psychological force behind antirealism at the end of the twentieth century." Searle recognises, of course, that identifying a motive for a belief does not invalidate the belief (to suggest so would be to commit the 'genitive fallacy' - see footnote 34). The forms of antirealism against which Searle argues are absurd because they *are* absurd, not because there may be psychological motivations for espousing them.

Our perceptual experience is *continuous* and subject to on-going *revision*. The role of *time, memory* and *expectation* is crucial to an understanding of the nature of consciousness.

5.31 From the foregoing, we can conclude that our brains do *not* create the world of 'stuff' around us, only consciousness *of* it. For Berkeley 'perceived ideas' *constitute*, rather than represent, that world. Although failing to clarify how we perceive, blend and combine together god-implanted sensations to compose objects, he appears to envisage a largely passive process (see 3.12) focused

[93] The word *'external'* is ambiguous and invites the question: 'external to *what*?' In the sense used by Searle, 'external reality' refers to 'that which exists *independently of being perceived'*. It *includes* the stuff of which our *bodies* and *brains* are composed as this exists as independently of perceptual experience as any other stuff.

on successive *static* 'sensory displays'. However, as emphasised early in this paper (see 3.3), our sensory experience is essentially *continuous* in nature. The multi-processing of sensory inputs by our brains is *dynamic* and subject to *constant revision*. Dennett (1991) encapsulates this in his 'Multiple Drafts' model of consciousness. "All varieties of perception - indeed all varieties of thought or mental activity - are accomplished in the brain by parallel, multi-track processes of interpretation and elaboration of sensory inputs. Information entering the nervous system is under continuous 'editorial revision'… These yield, over the course of time, something rather like a narrative stream or sequence, which can be thought of as subject to continual editing by many processes distributed around the brain". *Time*, for all its conceptual problems, cannot be ignored in any understanding of consciousness, both being comparable to 'an ever rolling stream'.[94] Crucial to consciousness is *memory*, without which we would be unable to 'do anything' with fleeting sensory experience.[95] How, for example, could we understand speech or appreciate music if our awareness at any moment was only of immediately experienced syllables, words or notes? Involved in the interpretation of sensory input must be the triggering, via neuronal networks, of memories and emotional responses (see 5.18) together with object/substance recognition linked to stored 'patterns' within the brain (see 5.16). *Expectation* plays a key role in determining the content of our consciousness. To interpret our sensory input (relating not only to things/stuff but also to language and music) we have to anticipate, to an extent, what follows. This opens us up to the possibility of error (e.g. finding the tower we saw as round from a distance to be, on closer inspection, square) and demonstrates the need for continuous review and revision.[96] The cognitive sciences have contributed significantly to our understanding of the highly complex processes involved but much remains obscure. This might tempt us to seek simplistic alternative 'explanations' (including variants of 'idealism') but the temptation is be resisted if we are not to lapse into metaphysical speculation divorced from reality.

The 'self' is the product of brain activity and self-images generated by the brain at different times (together with emotional and behavioural responses) may vary significantly.

5.32 It might seem that by exorcising 'the ghost in the machine' (see 5.25) we 'spirit away' the 'self' and that this invalidates what we have said about the meaningfulness of the notion of selfhood (see 4.13 and 5.10). The basic answer to such an objection has already been given (see 5.14). The mind can be defined as a cognitive system realised within a brain and each such 'system' constitutes a separate 'self'. If "all varieties of perception … are accomplished in the brain" (Dennett, 1991), it follows that consciousness of 'self' is as much the product of brain activity as representations of the external world and this raises the possibility that such activity will generate different 'selves' at different times. On first consideration this might seem objectionable but it is, after all, a reality of our everyday experience. It squares with the *varying* 'images' we have of ourselves and the *varying* ways in which we behave/react depending upon the physical/social settings in which we find ourselves. It is strange that Berkeley, who led an active social life, does not question how such everyday facts of behaviour and personality can be accounted for in terms of "indivisible, incorporeal and unextended" human spirits. The functioning of complexly structured brains provides a coherent explanation of all sorts of features including sleep, dreams, subconscious behaviour, hallucinations, mental disorders, memory loss and personality change (which can be catastrophic when linked to brain injury or disease). These realities are *inexplicable* in terms of 'immaterial spirits' conceived by Berkeley as "simple, undivided, active beings".

[94] The quote is from the 1719 lyrics written by the poet Isaac Watts (1674-1748) for the hymn *Our God, Our Help in Ages Past* (with which Berkeley would have been familiar). "Time, like an ever rolling stream, / Bears all its sons away; / They fly, forgotten, as a dream / Dies at the opening day".

[95] The concept of the 'present moment' is, of course, problematic. If such a moment possesses duration (analogous to a spatial dimension), it can be sub-divided again and again until it vanishes into nothingness.

[96] Much humour, we may note, derives from the confounding of expectations.

'Idealists' assume the existence of 'idea-generating' minds but fail to explain their nature.

5.33 The inability of Berkeley, with his 'simple, undivided active beings', to account for the aspects of 'self' outlined above (most of which he does not mention let alone explore) is shared by those 'idealists' who suggest that 'we' somehow create what we perceive (including our own bodies) by virtue of our own ideas[97]. They seem to take the existence of 'idea-generating minds' simply as 'givens' without questioning their existential status. What do such minds consist of? Can they themselves consist of ideas? Can ideas generate other ideas or be somehow self-generating? 'Goodman-type' idealists might well be asked a re-worked version of the question Berkeley puts into the mouth of Philonous [DHP2 P11]. "When you say all things are ideas conceived by minds do you conceive these minds or no? If you do, then you talk of ideas conceived by ideas, causing the same ideas, which is absurd?" With regard to the sensory experience of humans and other sentient beings, Berkeley at least recognises that perceivers (for him, 'finite spirits') cannot determine what they perceive (for him, 'ideas') and this, therefore, must be determined by something *else* (for him, an 'infinite spirit' or 'God'). The 'realist' position, of course, is that perceiving stuff (brains) process sensory stimuli received from perceived stuff (the existence of which does *not* depend upon being perceived). The content and character of the resulting perceptual *experience* will be determined by the nature of *both* the stimuli and the processing involved.

Human minds have a tendency to 'externalise' their own imaginative creations.

5.34 Perhaps the most important feature of human minds is their capacity for *imagination*. Berkeley considers "the ideas formed by imagination are faint and indistinct [having] an entire dependence on the will" [DHP3 P23] and represent 'copies' or 'representations' of sensory ideas [PHK 33]. He recognises that imagining may involve "variously compounding and dividing" things perceived by the senses (e.g. imagining "a man with two heads or the upper part of a man joined to the body of a horse") but in all cases what is imagined are *particular* things, not 'abstract ideas' (it being impossible to imagine, for example, "the abstract idea of motion distinct from the body moving" [PHKi 10]. Berkeley might, but doesn't, question whether 'spirits' and 'God' might be as much creatures of our imaginations as two-headed men and centaurs (rather than real beings of which we can have a 'notion'). The imaginative powers of our brains allow us to conceive all sorts of 'things' (including spirits, gods, ghouls, ghosts, goblins and fairies at the bottom of the garden). Our susceptibility to belief in our own creative fictions can result in our attributing independent 'external' existence to such 'beings', despite lacking any evidence for this and despite all the conceptual problems involved. They 'exist' at least as items within many people's mental 'baggage' and, as such, can have immense power to influence human behaviour. Across the world many people are still killing and dying in the name of their own particular 'god' or interpretation of how that 'god' should be worshipped.

We occupy a *social and institutional world* that *is* of our own creation.

5.35 Key products of human imagination and *intercommunication* are the complex patterns of beliefs, attitudes and behaviour that make up our 'social and institutional world'. Although beyond the scope of this paper to explore, this 'world' includes phenomena such as family, marriage, property, money, nation states, governments and a wide range of political, economic, social and other organisations (including Philosophy Cafés!). Unlike the observer-*independent* "brute reality of physical particles in fields of force"' [Searle, 1999] our social and institutional world is observer-*dependent*, being the *creation* of human intentionality. It possesses, nevertheless, what Searle [1999 and 2010] calls "*epistemic objectivity*". In other words, the phenomena involved exist as identifiable facts about human intentional states amenable to examination and analysis. They can vary widely between different groups of people, providing much scope for conflict. Institutional reality is thus inherently fragile and permanently subject to change that may be gradual and peaceful or sudden

[97] It is unclear whether an *individual* or *collective* enterprise is envisaged and what happens if different minds want different things.

and violent (e.g. the English Civil War and Revolution, which for Berkeley comprised recent history). We have already argued that conscious states, being "real features of the real world", can *themselves* function causally (see 5.13). As Searle [2010] points out, "all institutional facts have to bottom out in brute facts". The brute reality of human starvation and violent death, for example, is causally related to the institutional reality, both now and in the past, of social and economic inequality, nationalism, racialism and religious bigotry. Berkeley, a much travelled 'man of the world' with an interest in social, political and economic affairs, wrote both his *Principle*s and *Dialogues* during the War of the Spanish Succession (1701-13). There is no evidence, however, of his questioning, let alone explaining, how the war's associated 'institutional reality' (e.g. rival monarchies and nations) and 'brute reality' (e.g. slaughter of men and horses at battles such as Blenheim and Malplaquet) could be accounted for by the implanting by God of sensory ideas in the immaterial substance of dimensionless and positionless spirits. All who 'philosophise' risk entering a realm of words and concepts divorced from reality. All who theorise must "only connect"[98] and always ask "if this is so, how do I account for this or that fact of experience?"

Berkeley's greatest philosophical contribution is perhaps a negative one.

5.36 With his deep suspicion of anything smacking of 'abstraction', Berkeley at least avoided some of the absurdities of 'idealist' philosophers who attribute independent existence to the creations of their own imaginations. Such creations include Plato's 'ideal forms' and Hegel's 'World Spirit' "that floats around mysteriously above us individuals and of which we as individuals are just expressions" [Searle, 1999]. Berkeley accepted uncritically, however, Locke's characterisation of 'ideas' as the objects of human knowledge, drew "consequences from consequences", became "deeper entangled in difficulties and mistakes" and ended up with all the incoherencies (or 'repugnancies', as he would say) highlighted in this paper. Rather than attempt to *resolve* our confused notions of 'mind' and 'matter' he simply jettisoned 'matter', leaving us with something too vague and insubstantial to account for all that we experience. Crucially he remained wedded to the notion of 'spirits' as dimensionless, positionless and structureless 'immaterial' entities. Perhaps Berkeley's greatest philosophical contribution is a negative one. By setting out his immaterialist arguments with some facility and ingenuity and ending up with essentially incoherent conclusions, he challenges us to identify 'where he goes wrong'. In the process we are forced to examine and re-appraise many of our own presuppositions and concepts. It is suggested in this paper that the way forward lies in the abandonment of traditional conceptualisations of 'immaterial' and 'material' (or 'mind' and 'matter') and acceptance that consciousness is a *natura*l attribute of configurations of 'stuff' in the form of brains. As suggested earlier (see 2.10) this is not to *reduce* such phenomena to the product of 'mere matter' but rather to *elevate* so-called 'matter' to something much more wonderful and exciting. Of course, major conceptual issues remain, particularly in relation to the nature of the 'micro-world' beyond the direct reach of our 'macro-level' senses (see 5.27). Conceptually most challenging, perhaps, is the possibility of a '*two-way'* causative process between neurobiological processes and flows of consciousness in the brain (implied in 5.13) coupled with the fact that we are inescapably *part* of the very reality we seek to comprehend.

Roger Jennings
2013 (revised and extended 2014)

[98] The quote is from E. M. Forster's novel *Howards End* (1910): "Only connect! That was the whole of her sermon. Only connect the prose and the passion, and both will be exalted, and human love will be seen at its height. Live in fragments no longer. Only connect, and the beast and the monk, robbed of the isolation that is life to either, will die."

References:

Austin, J. L. (1962) *Sense and Sensibilia* (reconstructed from Austin's notes by G. J. Warnock). OUP
Ayer, A. J. (1940) *The Foundations of Empirical Knowledge*. Macmillan
Ayer, A. J. (1956) *The Problem of Knowledge.* Penguin Books
Ayer, A. J. (1973) *The Central Questions of Philosophy.* Penguin Books
Berkeley, George (1710) *The Principles of Human Knowledge.*
Berkeley, George (1713) *Three Dialogues between Hylas and Philonous.*
Dennett, Daniel C. (1991) *Consciousness Explained*. Penguin
Gibb, Barry J. (2012) *The Rough Guide to the Brain.* Rough Guides
Hume, David (1739) *A Treatise of Human Nature.*
Johnson, Samuel * (1729) *Letter to Berkeley (written at Stratford, Connecticut).*
Jones, Nick (2009) *Starting with Berkeley.* Continuum
Kant, Immanuel (1781) *The Critique of Pure Reason*.
Körner, S (1955) *Kant*. Penguin Books
Lewis, C. I. (1929) *Mind and the World Order: Outline of a Theory of Knowledge.*
Locke, John (1689) *An Essay concerning Human Understanding.*
Magee, Bryan (1998) *The Story of Philosophy*. Dorling Kindersley
Martin, Brian R. (2011) *Particle Physics: a Beginner's Guide.* Oneworld Publications
Pinker, Steven (2007) *The Stuff of Thought: Language as a Window into Human Nature.* Penguin Books
Rooney, Anne (2011) *The Story of Physics.* Arcturas
Russell, Bertrand (1912) *The Problems of Philosophy.* Oxford University Press
Ryle, Gilbert (1949) *The Concept of Mind.* Hutchinson
Searle, John R. (1984) *Minds, Brains and Science: The 1984 Reith Lectures.* BBC
Searle, John R. (1999) *Mind Language and Society: Philosophy in the Real World.* Basic Books
Searle, John R. (2004) *Mind: A Brief Introduction.* Oxford University Press
Searle, John R. (2010) *Making the Social World: The Structure of Human Civilization.* Oxford University Press
Warnock, G. J. (1953) *Berkeley.* Penguin Books
Warnock, G. J. (1962) *Introduction* to Fontana Edition of *Principles and Dialogues.* Collins

* An American clergyman and philosopher. *Not* the English lexicographer of the same name (see footnote 2).

Referencing to specific sections of texts

The following abbreviations are used:

DHP	*Dialogues between Hylas and Philonous*
EHU	*Essay concerning Human Understanding*
PHKi	*Principles of Human Knowledge - Introduction*
PHK	*Principles of Human Knowledge - Part 1* (no other Part exists)
THN	*Treatise of Human Nature*

The following examples should make clear the referencing system used:

[DHP2 P14]	2nd Dialogue; Philonous' 14th statement
[EHU 1.4.18]	Book 1; Chapter 4; Section 18
[PHKi 3]	Section 3 (of the Introduction)
[PHK 2]	Section 2 (of of the main text)
[THN 1.3.5]	Book 1; Part 3; Section 5

† Berkeley does not divide the *Dialogues* into numbered sections. Some commentators refer to the page numbers of a standard edition of the work - but this is not much use to any reader without that edition. In this paper reference is made to the statements of Hylas and Philonous numbered sequentially within each *Dialogue*. The statements vary widely in length some being just one or two words (e.g. when Hylas just says "Agreed"). The number of statements made in each Dialogue by Hylas and Philonous are as follows:

	Dialogue1	Dialogue 2	Dialogue 3
Hylas	247	72	90
Philonous	247	72	91

It is an easy matter to pencil a sequential number against the statements when reading each *Dialogue*.

Appendix A: Berkeley's Life, Works and Times

Key Life Events

1685	Born near Kilkenny in Ireland. English father.
	Schooled at Kilkenny College ('the Eton of Ireland').
1700	Enters Trinity College, Dublin.
1704	Graduates as BA.
1707	Becomes a Fellow. Ordained as Anglican clergyman.
1713	First visit to England and London. Enters literary society (Swift, Addison, Steele & Pope).
1713-14	In France (as chaplain to Earl of Peterborough).
1716-20	In France and Italy (as tutor to son of Bishop of Clogher).
1721-24	Back in Ireland as Senior Fellow at Trinity College, Dublin.
1724	Appointed Dean of Derry but gets someone else to act in his place.
1724-28	In London promoting scheme for a college in Bermuda.
1728	Marries Anne Forster. Sails to America. Lives at Newport, Rhode Island.
1731	Returns to London (after government abandons Bermuda scheme).
1734	Appointed Bishop of Cloyne.
1752	In Oxford to supervise second son's entry to Christ Church.
1753	Dies (aged 67) while still in Oxford.
	Buried in Christ Church Cathedral, Oxford.

Main Works

1709	*An Essay towards a New Theory of Vision*
1710	*A Treatise concerning the Principles of Human Knowledge*
1713	*The Three Dialogues between Hylas and Philonous*
1721	*De Motu*
1732	*Alciphron*
1733	*Theory of Vision Vindicated*
1734	*The Analyst*
1744	*Siris*

Some Close Contemporaries

Philosophy:

1632-1704	John Locke
1638-1715	Nicolas Malebranche
1646-1716	Gottfried Leibniz
1711-1776	David Hume

Science:

1635-1703	Robert Hooke
1642-1727	Isaac Newton
1656-1742	Edmund Halley

Art:

1697-1764	William Hogarth
1697-1768	Giovanni Canal (Canaletto)
1723-1792	Joshua Reynolds

Music:

1676-1741	Antonio Vivaldi
1685-1750	Johann Sebastian Bach
1685-1759	Frederic George Handel
	(The Messiah 1742)

Literature:

1660-1731	Daniel Defoe
	(Robinson Crusoe 1719)
1667-1745	Jonathan Swift
	(*Gulliver's Travels 1726)*
1688-1744	Alexander Pope

Key Historical Events during Berkeley's Lifetime

1688 The 'Glorious Revolution'.
- James II deposed.
- William III and Mary II (daughter of James II) accede to English throne.
- Bill of Rights (1689) limits power of Crown and establishes rights of Parliament.
- Battle of the Boyne (1690) effectively ends Stuart resistance in Ireland.

1688-97 War of the Grand Alliance.
- France (under Louis XIV) invades the Palatinate (area straddling the Rhine).
- Opposed by alliance of Holy Roman Emperor (Leopold I of Bohemia and Hungary), England, Spain, the Dutch, and some German 'states' (e.g. Saxony).
- European land and sea battles including defeat of French navy at La Hogue (1692).
- Treaty of Ryswick (1697) ends the war.

1694 Death of Mary II.

1701 Act of Settlement.
- No British monarch to be a Catholic or married to a Catholic.
- If Anne (sister of Mary II) has no heirs, succession to go to Sophia of Hanover (granddaughter of James I) and her heirs.

1701 Death of James II. France recognises his son James Stuart as 'James III' of England.

1701-13 War of Spanish Succession.
- Rival French (Bourbon) and Austrian (Hapsburg) claims to Spanish throne.
- England supports Austrian claim (fear of French dominance in Europe).
- French beaten at Blenheim (1704), Ramilies (1706), Oudenaarde (1708) and Malplaquet (1709).
- Peace of Utrecht (1713) ends the war.

1702 Death of William III. Accession of Queen Anne.

1707 Act of Union between England and Scotland (to form United Kingdom of Great Britain).

1714 Death of Queen Anne. Accession of George I (son of Sophia of Hanover).

1715 Failed uprising in Scotland in support of James Stuart (the 'Old Pretender').

1720 'South Sea Bubble' financial disaster.

1721-42 Robert Walpole (regarded as the first 'Prime Minister') heads Whig governments during period of comparative peace and prosperity.

1727 Death of George I. Accession of his son George II.

1740-48 War of Austrian Succession.
- Fought over right of Maria Theresa, daughter of Holy Roman Emperor Charles VI, to succeed to his Hapsburg territories (including Duchy of Austria, Kingdoms of Hungary and Bohemia and various territories in Italy and Netherlands).
- Britain and the Dutch support her against Prussia, Bavaria, France & Spain.
- War with Spain in West Indies (started as 'War of Jenkins' Ear' in 1739).
- War with France in North America ('King George's War' 1744-8) and India ('First Carnatic War' 1746-8).
- Battle of Dettingen (1743): British/Hanoverians (led by George II) defeat French.
- Battle of Fontenoy (1745): French defeat British, Hanoverian & Dutch forces.
- Treaty of Aix-La-Chapelle (1748) ends the war.

1745-46 Scottish uprising (backed by France) in support of Charles Stuart, grandson of James II.
- His army reaches Derby but retreats and is wiped out at Culloden (1746).
- 'Young Pretender' flees to France. End of Stuart attempt to regain British throne.

Appendix B: Particles of the 'standard model' (anti-particles not shown)

Source: Martin (2011)

Type	Name	Force			Charge	
		Experiences	Mediates	Spin	Electric	Colour
leptons	electron, muon, tauon,	g w e		$^1/_2$	-1	no
	electron neutrino, etc.	g w		$^1/_2$	0	no
quarks	up, charm, top,	g w e s		$^1/_2$	$+^2/_3$	yes
	down, strange, bottom	g w e s		$^1/_2$	$-^1/_3$	yes
bosons	photon		e	1	0	no
	charged gauge bosons	g w e	w	1	±1	no
	neutral gauge boson	g w	w	1	0	no
	gluons	g s	s	1	0	yes
	Higgs boson	g w		0	0	no

Forces in descending order of strength: s - strong; e - electromagnetic; w - weak; g - gravity

Appendix C: Locke's Classification of 'Ideas'

Simple Ideas	**By one sense only**		light and colours; heat, cold, solidity and texture; tastes; smells; noises, sounds and tones [EHU 2.3.1]
	By more than one sense		Space or extension, figure, rest and motion (all via both sight and touch) [EHU 2.5]
	By reflection only		Perception or thinking; volition or willing [EHU 2.6.2]
	By sensation & reflection		pleasure and pain; existence and unity; power; succession [EHU 2.7.1]
Complex Ideas	**Modes**	**Simple modes**	"combinations of the same simple idea" [EHU 2.12.5]
		Mixed modes	"combinations of simple ideas of different kinds" [EHU 2.12.5]
	Substances		"combinations of simple ideas as are taken to represent distinct particular things subsisting by themselves; in which the supposed or confused idea of substance , such as it is, is always the first and chief" [EHU 2.12.6]
	Relations		"the consideration and comparing one idea with another" [EHU 2.12.7]