## Principles of Human Knowledge

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Berkeley provides a strange mixture of the sophisticated and the naive. Such a mixture is a common recipe for crankiness, and Berkeley surely shows such features<sup>1</sup>. He was an ordained minister of Irish origin, later to rise to the position of Bishop, and whose overriding ambition was to free religion from specious skepticism and to extol the benevolent existence of God, through the application of reason and common sense. As such his philosophy contains a purported proof of God, the possible inability of which to convince can have no other source than stupidity and mental laziness in those subjected to it. Yet for all his obvious flaws and shortcomings, his ideas have far wider applications than he ever intended, and ramifications of which he no doubt would have resented. And he was supposedly also an able technical thinker, William James in his treatise on Psychology praises what he wrote about vision and visual illusion.

One of the central philosophical problems is the epistemological one. How can we get secure knowledge of the external world? How do we know what we see, hear and touch and taste, is real, and that we are not misled, or are dreaming? Locke made a famous distinction between the primary and secondary properties of an object. The primary ones, such as position, extension, solidity, were intrinsic, objective and existing independently of us; while the secondary such as softness, color, taste were secondary ones, extrinsic to the objects, and only existing in our perceptions of them. This theory has much to commend itself, but it raises some very hard, not to say intractable questions. First how can we make the distinction between primary and secondary qualities, and secondly, more seriously, how can we perceive and become conscious of external objects, and how do we know that our perceptions give us a 'true' picture of the world? Questions that obviously are still as valid and elusive as they were in the times of Greek or to the early post-medieval thinkers of Europe, the difference being that now we can pose the questions even more vividly and with more precision. Berkeley has a radical solution, using one of the two main tools of the academic philosopher, namely that of unification (the other one, even more popular as it can be applied indefinitely and appeals to the pedantic temperament, is of making distinctions where none was ever suspected before). Berkeley simply claims that there is no distinction between a thing perceived and our perception of it. In this elegant way, the problem is solved, or rather being shown to be a non-problem. All we have are our perceptions, and they are of course true, as that is all what we have, they are no longer more or less distorted images of some hypothetical other external things, they are the real things. What we see, hear, touch or taste, is exactly what we have, there is nothing else, appearance is everything. No Platonic mysticism about some other external reality of which the one we perceive is but a distorted image.

<sup>&</sup>lt;sup>1</sup> I certainly considered him as such when I first encountered him in the anthology 'The World of Mathematics' in my teens. In this he was represented with his attack on Newton's fluxions.

Thus, in spite of the obvious, not to say perverse contradiction with common sense, it is common sense drawn to its logical conclusion. I like to think of Idealism as a top-down approach to philosophy, starting with what we are most intimately aware of, namely our perceptions and our sense of identity, phenomena of a very high degree of complexity, but which nevertheless have to furnish the basis of all our inquiries. (Materialism, on the other hand, would then correspond to a bottom-up approach.). The common sense feature of the approach is made further clear by Berkeley's insistence that there is nothing more to a perception or an idea, than what we can perceive and understand. This leads to some rather perverse conclusions, as well as making subjectivity the ultimate arbitrator, what Berkeley cannot imagine, is unimaginable. (On the other hand idealism is by its nature intimately connected with subjectivity.) To Berkeley the one ten-thousandth of an inch is unimaginable, and hence does not exist, because Berkeley, no matter how much he tries cannot fathom such a small segment of the visual field. On the other hand, one ten-thousandth of a line ten thousand inches long, gives him no problem. But what about the use of a microscope, or other instruments which greatly enhances human perception? More centrally though, he bases his philosophy on the rejection of abstraction. What exists is the imaginable, in other words part of the contents of the mind, be it sense perceptions or imaginations, or any type of thought; what cannot be imagined, simply does not exist, such as a round square. More centrally the notion of abstraction involves the impossible. We can well imagine objects from which we subtract qualities. We can ignore the color of a speck and only think of its extension, we can subtract from the face of a man, his eyes and nose, but we cannot isolate in our mind all the features that all men have in common, as opposed to what they all have in particular. Or even more focused, how can we think of a general abstract triangle, and how do we know that when we reason mathematically about a triangle, we do not use the special properties of the one which is present in our mind? Every triangle we imagine must have some specific property, such as being obtuse or not<sup>2</sup>. From this he concludes that the notion of abstraction is just philosophical sophistry, in particular the notion of a material reality. What would it consist of? How are we able to form an idea of something from which we have abstracted away all those features which we can perceive. How can we perceive an object that we have made 'unpercievable'? A contradiction in terms, so ipso facto the notion of external imperceptible objects is simply beyond the ken, pure phantasy, and does not exist. And of course he has a good point, we would similarly be quite skeptical if some contemporary philosopher hypothesized some phenomenon which would have no perceptible consequences. Would not the prevalent reaction be the pragmatic one that we can do without it? Berkeley is simply a pragmatist, a notion normally associated with the practical and hard-nosed, practicing Occam's proverbial razor.

However, the logic of Berkeley leads to solipsism, as many a young man (or woman)

This is an interesting problem, and curiously some kind of technical solution appeared in the modern axiomatization of Algebraic Geometry. In addition to specific varieties (in particular triangles), one can speak about generic. The former defined over a specific field, the latter as over a larger function field with variables adjoined. Of course the notion is already implicit in the emergence of algebra, long before Berkeley. Noted should that any kind of reasoning depends on abstractions, including the philosophical reasoning of Berkeley himself, making use of what he rejects.

may have discovered during their own independent pursuit of similar ideas in their adolescence; because the notion of idealism is something inherent and liable to be provoked in the minds of most reflective individuals regardless of philosophical instruction. But Berkeley stops half-way, and his stopping half-way is by most people considered his most flagrant flaw. Why does he believe in other minds? Because he is a gregarious fellow and cannot imagine another state of affairs? That says much for Berkeley as a sympathetic human being, less so as a consistent and passionate philosopher. And why does he believe in God? because the belief in God has been instilled in him and that was what he was set out to prove? Now the ostensibly greater jump involved in believing in God, may logically be the lesser one, or at least a prerequisite for forming the first. This may make us wonder whether the belief in other minds is in the nature of a religious conviction, and if so, that certain kinds of religious convictions, in the sense of convictions that go beyond the power of reason, are simply necessary. (Just as a belief in rational thinking cannot be rationally justified?). This is one of the ramifications of the Berkeley's razor cuts.

Yet, our instinctive reaction against the denial of an external reality, is the coherence that our sensory perceptions present to us. The sensory experiences of a Berkeley is (supposedly) no different than those of ours (maybe even more vivid, for all we know, than that of most people), and he freely acknowledges, that our perceptions come to us unbidden and with great force, impervious to our wills, and as such present a far more coherent and vivid spectacle, than the pale ideas formed by our imagination. Furthermore we learn in life the painful lessons on how to navigate among all those ideas that form in our minds, in order to make our own lives comfortable and secure. (Certain ideas in our head may be our undoing, even cause our deaths). How do we explain all this, and how do we explain the relations between ideas formed in different minds? My idea of the tree in the garden, which is temporarily hidden from me, and thus no longer existing as a perceptive reality, may nevertheless be perceived by my neighbour this very moment. What casual connection is there between my intermittent perception of it and his? And what happens to it, when both of us are away? Does it cease to exist? Does it retreat into a limbo, and if so where? The situation becomes desperate, especially if you accept the notion of other minds. There has to be a God to make sense of it all. In fact God is the supreme mind, in which everything exists as ideas. In other words God is the supreme solipsist that imagines the world, and thus creates it. The idea of God appears almost as a desperate ad hoc construction, to save the collapse of a mental edifice.

Of course Berkeley runs into contradictions, which every metaphysical inquiry is bound to suffer. Recall that Berkeley presents both the notion of ideas and the idea of the mind, or spirit if you prefer. Mind is active, while ideas are passive. An idea can as little hold an idea, as we can perceive the mind as an idea. Thus in addition to ideas there must be a mind. Thus there are after all things we cannot perceive but exist nevertheless. Our mind being something intimately known to us, but not something in it, but the whole thing. This argument is of course very similar to the famous Descartian one - 'cogito, ergo sum'. Thus the world consists of minds and their contents - ideas (i.e. thoughts, notions, perceptions). In particular there are no things, unthinking substances, which are not part of minds<sup>3</sup>. The mind of God by necessity must be like the mind of his own, only much

<sup>&</sup>lt;sup>3</sup> He has of course contradicted himself, although it is a kind of innocent contradiction after all. After

more powerful and extended (in fact, one suspects, so much superior to his own mind, as his unbidden sensory impressions are to the pale product of his imagination). Thus his God, although abstract, is after all human, because it is conceived as a mind, and the only mind Berkeley has any conception of is his own.

Now before Berkeley takes the ultimate step, he speaks about Laws of Nature<sup>4</sup>. This is interesting, because it suggests that the traditional images of a material external world do not need to be those hard, solid balls, of which the naive imagination informs. That the external world is a very abstract one, and indeed having nothing to do with perception, but as it turns out to be, successfully described mathematically. And indeed the modern physical description of the material world is in a sense very idealistic. It is a world of mathematical equations, where the prevalent notions of atoms and particles, are but suggestive, and ultimately misleading metaphors. This was a door that Berkeley chose not to open, although he was close to, instead he fell back upon a more conventional solution, as that had been his goal all along. Thus among the very great philosophers, Berkeley is not first rate.

Finally one could do well to read Berkeley's arguments as how they apply to the question of mathematics. Is mathematics simply something of the human mind, because after all it is a human activity, and having no independent existence? The compelling arguments in favour of this are very similar to the arguments of Berkeley denying an external independent reality. However, most people do not have such an intimate experience of mathematics, as to make this as absurd. But to the working mathematician, the experience of engaging with mathematics is indeed as vivid as of a world filled with desks and chairs, and stones to be kicked. Maybe at times even more vivid.

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having concluded that there are no things but ideas in minds, the notion of mind has so to speak created itself, and being a second-order type of thing. This is a well-known phenomenon in logical thinking, the monodromy of self-referentiality if you so prefer.

<sup>&</sup>lt;sup>4</sup> The relation between God and the Laws of Nature are skimmed. The latter are subservient to the former, so in a pinch, God may transcend his laws.