

SCIENCE AND INWARDNESS

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When I examine my inner life I find I experience colours, sounds, tastes and generally the qualitative contents related to the senses. I also experience that I can think and have concepts and ideas, I have feelings, and I experience that impulses to act arise within me. These inner events are only experienced because I am conscious and so can write the above sentences.

I will characterise inner experiences as those experiences which are not in the domain of physics, or indeed of hard science generally. Scientists have broadly agreed among themselves that something is only of scientific interest if it is sharable objectively, and usually amenable to being quantified. No generally agreed philosophy of science exists, although various competing philosophies do of course. The main unifying thread of science appears to be that anything supernatural is beyond its remit. This would be fair if it were not repeatedly sinned against, where individuals such as B.F. Skinner and Richard Dawkins pontificate upon affairs such as individuality and religion which are stated by science to be beyond its competence and outside its self-adopted remit. The assumption such people make is that the scientific method as applied to the sense-perceptible world is capable of providing a complete explanation of everything. This is very obviously an unproved assumption that needs thorough examination. As things are it is treated as an act of faith, so people like Dawkins are as religious - in a sense - as those they criticise.

John Locke and Galileo proposed a distinction between *primary* and *secondary* qualities. Primary qualities are those amenable to quantification, such as length area volume weight wavelength frequency and so on. Secondary qualities are those not so amenable, such as the colours, sounds, tastes and so on that we directly experience. The more modern term *qualia* is very useful in this respect. Thus if I look at a brilliant blue hue produced by a prism then the measurable wavelength of the associated light is a physical quantity that I do not experience directly, while the blue hue that I do experience is a *quale*, which roughly speaking is a unit of quality. The distinction is sharply drawn by imagining that the wavelength associated with a hue is measured and you are told that it is six thousand millionths of a millimetre. You will have no idea what the colour is without prior knowledge or by doing an experiment to find out. The quale and the wavelength are only related empirically. Where the qualia come from is for science a mystery, generally ignored or stated to be outside its remit. What is often said is that a quale is somehow created by the brain in response to the stimulus provided by the senses, and is purely subjective. There are two problems with this view. First it says nothing about how the brain produces the blue quale, and secondly the assumption of subjectivity is unprovable if the source of qualia is unknown. Suppose, for example, that a realm Q exists which becomes connected with the brain when that is stimulated (indirectly) by the senses, such that the details of the stimulus are the contingences for a blue quale existing in Q to be connected. If Q exists in as objective a sense as, say, the realm of X-rays (which once was unknown), then the assumption of subjectivity could be wrong. Max Velmans criticised the assumption of the subjectivity of our experience of the world in a very interesting way (*Understanding Consciousness* Routledge, 2000). If the possible existence of a realm such as Q is denied, then what is a quale and how do we come to experience it? Qualia are a fact of our existence requiring explanation rather than a comfortable dismissal.

Sometimes a very confused argument is given to the effect that qualia are a linguistic convention. The fact that I am taught to call a hue I experience "blue", and because we are all taught thus (colour blindness aside) and so agree on which word to utter when we have the experience, emphatically does not explain - or "explain away" - the quale I experience. It is obviously more than a mere adjective, for it exists in my consciousness. Furthermore the so-called primary qualities are all, without exception, derived from qualia e.g. those relating to an experiment that makes a measurement. The ontological status of the primary qualities cannot be superior to that of the qualia upon which they are based. Philosophy has never been content to put faith in what rests on a dubious foundation, witness the endless philosophical discussions of the status of sense impressions which can on occasions be illusory. In this context, even an illusion is

conveyed by qualia, so the illusion lies in the relation between qualia rather than in the qualia themselves, just as the falsity of a statement lies in the relation it establishes between the words rather than in the words themselves.

I conclude that there is no sound reason to dismiss all qualia either as purely subjective or as non-existent. That they exist in some sense is a plain matter of experience, and their subjectivity needs thorough examination. Some may well be subjective, such as my dislike of bananas, while others such as directly experienced colours may not. Even then "subjectivity" needs clarification.

The inner experiences started with are clearly conveyed by qualia and thus also cannot be dismissed as unreal or unimportant. The concern which prompts this article is that many scientists wish to banish from discussion everything based on qualia, yet for most if not all people (including those scientists) the meaning and value of life comes precisely from qualia. Unhappiness, contentment, a sense of achievement, a sense of being valued by others, experiencing that life has meaning, love of children, of partners and of friends are all inner experiences of great importance. Quantities are also of importance to most, such as the bank balance, the size of the car and house, the amount of food available, the temperature of the room and so on. But the importance of these things does not come from the numbers but from the value placed on money, comfort and prestige; and to value something is an inner experience. In short the most important realities of our lives are based on inwardness, on inner experience, not merely on scientific numbers. Why, then, do we allow ourselves to be bullied by the scientific community? If you think we are not, recall the recent banishment of homeopathy in Britain (in February 2010), or the disgraceful treatment of Putzai because he found evidence against GM potatoes. Whether or not the science was right in the latter case, the treatment meted out showed anything but scientific impartiality: he was vilified and bullied.

Inwardness does have scientific importance. The futile arguments between evolutionists and darwinists miss a simple but important point: humans (let us leave aside animals for the moment) react to their environment through inward experiences, yet this is ignored in naive darwinism, in the sense that such experiences are not considered or are explained away. The evidence for evolution is clear, and the existence of intelligence (an inward quality) in the dominant mammal on our planet, together suggest we look at *intelligent evolution*. Such a concept is only sensible if we can embrace inwardness into the scientific paradigm, of course. Once the basis of inwardness, whatever it may turn out to be, is accepted then all branches of science are affected including particularly social science, psychology and medicine.

Then comes the question: how is it possible to handle inwardness scientifically? The usual assumption is that it cannot be done. This is because it is not quantifiable and seems inexorably vague. Both are excuses rather than sound - albeit understandable - reasons. Vagueness is handled in other areas such as chaos theory and fuzzy logic, so vagueness *per se* is no reason for evasion. Let us briefly look at quantification.

An experiment determines the value of the gravitational constant, and repeated experiments confirm that within the limits of experimental error. What underlies the confidence placed in such repeatable measurements? The procedure is to write down (or save-to-disk) the value obtained and then compare all the values thus recorded. But what confidence do I have that the previously recorded values were as I now read them? Ultimately I know that because I am a conscious being able to think about the question and remember having done the experiments. My ability to think is what underwrites the confidence I place in the recorded values. Of course I do not usually go through this procedure; it is drawn out here to show what I would do were doubt cast upon the data. As already mentioned my thinking ability is an inwardly experienced fact of my existence irrespective of theories attempting to reduce it to brain activity. The brain activity usually envisaged is not inward, so that reduction is doomed at the outset.

The conclusion, then, is that the confidence placed in the quantifiable is itself underwritten by our ability to think. Qualia are already subjected to that scrutiny because were I one morning to see my lawn as purple I would immediately suspect something was wrong, either with my senses or the lawn. Thus a proper

scientific study of the activity of thinking is called for if inwardness is to be handled scientifically. This must go well beyond the naive way that study is handled currently, where the assumption at the outset is that it is a subjective brain activity. That assumption is no more than an unproved theory, which is actually wrong if qualia and inwardness are accepted as actually existing. Would the results of a scrutiny of thinking that takes inwardness into account be sharable? Surely yes! We apply thinking to mathematics, for example, and are fully able to share the results.

Conclusion

It is time the scientific community faced up to its responsibility as it places ever more morally-ambiguous technology into human hands. If it thinks its remit is limited to exclude qualia, then it should refrain from commenting on what is outside that remit. If it thinks primary-quality science can explain everything including inwardness, then it should prove that before assuming it, and until then it should with integrity refrain from opinions that do assume it. Recall that Sir Karl Popper, the darling of the 1960's, was scrupulously honest in saying that what failed his criterion was not scientific, but he never said it was rubbish (as did the Vienna Circle).