Hidden assumptions and the placebo effect

Anthony Campbell

Whether, or how far, acupuncture effects can be explained as due to the placebo response is clearly an important issue, but there is an underlying philosophical assumption implicit in much of the debate, which is often ignored. Much of the argument is cast in terms which suggest that there is an immaterial mind hovering above the brain and giving rise to spurious effects. This model derives from Cartesian dualism which would probably be rejected by nearly all those involved, but it is characteristic of “folk psychology” and seems to have an unconscious influence on much of the terminology that is used. The majority of philosophers today reject dualism and this is also the dominant trend in science. Placebo effects, on this view, must be brain effects. It is important for modern acupuncture practitioners to keep this in mind when reading research on the placebo question.

The commonest criticism of acupuncture is that it is “just a placebo”. Accusations of this kind have been voiced for many years, in fact ever since acupuncture began to be more widely used in the West in the 1970s. We now have a large amount of research that bears on the question and it is possible to point to numerous physiological effects of therapeuetic needling. But on the clinical level the specificity of acupuncture remains unclear. The recent large-scale trials conducted in Germany confirm what many of us have already suspected from our clinical observations: acupuncture does produce definite benefits for patients in a lot of disorders but the difference between “true” and “placebo” acupuncture is often slight or non-existent. In other words, needling patients therapeutically works well in many situations but it may make little difference exactly where or how deeply the needles are inserted. It is obviously important to carry out further research on these questions but what I am concerned with here is a somewhat different matter. There are, I believe, hidden philosophical assumptions underlying much of the argument about placebo effects, not only in relation to acupuncture but more generally in medicine.

The placebo concept is based on the idea that a patient’s expectations and hopes are liable to influence his or her response to a medication, surgical operation, or other form of medical intervention. There is ample evidence for the ability of patients’ expectations to produce clinical responses independent of any pharmacological effect, but little is known about how such effects occur.

There is thus a temptation to say, in effect, that there is the body, which is a physiological system on which drugs and other medical treatments are supposed to operate, and there is the mind, which can be affected by suggestion to produce a spurious effect. Between the mind and the body there is an ill-defined no man’s land rather inadequately occupied by something called psychosomatic medicine. It seems to be difficult to talk about placebos without implying a dualistic model of this kind.

The philosopher J.R. Searle makes what I take to be essentially the same point in a different context when he writes: “In denying the dualist’s claim that there are two kinds of substances in the world or in denying the property dualist’s claim that there are two kinds of properties in the world, materialism inadvertently accepts the terms in which Descartes set the debate. It accepts, in short, the idea that the vocabulary of the mental and physical, of material and immaterial, is perfectly adequate as it stands.” Searle seems to be saying here that there is a psychological trap into which philosophers often fall. They intend consciously to reject Cartesian dualism, yet they are still imprisoned in the outdated terminology that René Descartes used. Doctors too, it seems to me, often fall into this trap.

UNCONSCIOUS DUALISM

Placebo responses are produced by the brain. This may seem too obvious to be worth stating, but it appears to be easy to lose sight of. Why does this happen? The reason we forget that the brain is responsible for the placebo effect is that we are almost all unconscious dualists. Dualism in this context refers to the idea that the brain and the mind are separate entities. Monism, in contrast, is the view that there is only one thing: mind is what happens when the brain is working.

Dualism has a long history in Western thought, going back to the Greeks, but its best-known exponent in more recent times was Descartes. Yet it is not the philosophers who we should blame for this, since they were only giving formal expression to an intuition that seems to be endemic, at least in the West.

It is because we are instinctive dualists that we can understand science fiction or fantasy stories in which, for example, someone finds themselves inhabiting the body of another person or an animal. We don’t have to make a mental effort to imagine such impossible scenarios, we do it effortlessly. This is probably because it is the natural way that we think. Very young children appear to be dualists; they ascribe consciousness to their toys, for example. This propensity is carried over into adult life. Unless we suffer from autism we spend much of our time trying to read other people’s minds, and this very easily leads us to think that our own minds are separate from our bodies.

In spite of its intuitive plausibility, dualism is very much a minority view among philosophers today. It is also widely discounted in medicine. An editorial in the Lancet in 1994 said that “With a few dissenters, psychiatry accepts that in principle its disorders are disorders of the brain that can and should be investigated as such.” Increasingly, psychiatric disorders such as depression, schizophrenia and anxiety are being thought of as neurological disorders and are treated by measures designed to alter brain function or sometimes even brain structure.

One widely quoted definition of “placebo” is: “any effect attributable to a pill, potion or procedure, but not to its pharmacodynamic or specific properties”. I am not sure that this is really very useful. In practice, it is often difficult to distinguish these two classes of effect. On the monist assumption it was always to be expected that there would be brain changes in response to placebo, but advances in neuroimaging are now providing direct evidence of them. Yet even here there is a tendency to use dualist language in describing the results. For example, Kong et al write: “Studies in placebo and nocebo research have shown the dramatic power of the mind to alter physiology and underlying brain circuitry”.

THE GHOST IN THE MACHINE?

Now, what picture does that last sentence suggest? Surely it implies that there is some abstract or non-material entity called “mind” which is hovering above the physical brain. Of course, I don’t mean to say that Kong et al really thought that this was the case. Their research is entirely about the brain and no doubt they would reject any suggestion that they thought of the mind as something separate. But my
point is that they have been led by language to speak in terms of a dualist model of mind/brain interaction. Their vocabulary suggests what Gilbert Ryle ironically dubbed “the ghost in the machine”.

What underlies language of this kind is a version of what Daniel Dennett calls the Cartesian Theatre. Although nearly everyone today rejects Descartes’ dualism, they still subconsciously believe in a watered-down version of it. They think there is a place in the brain where all the information comes together. This implies the presence of someone (the theatre audience) who perceives it all and draws it together. But Dennett insists that there is no such place.

Hidden dualist assumptions about the placebo effect are not just of philosophical interest. The implication that placebo effects are produced by the mind rather than the body leads to a feeling of disquiet on the part of many doctors when they suspect that they are inadvertently using a placebo instead of a “real” treatment. They therefore feel reassured when brain imaging studies show changes when acupuncture is performed, but unfortunately such work may cut both ways if it fails to show that the acupuncture effects are specific.

It is not going to be easy to escape from language suggestive of mind/body dualism. In fact, it is probably a waste of time to try, so deeply is dualism embedded in our everyday language and thought. But, in relation to acupuncture, we may need to get away from trying too desperately to prove that the needles have a specific effect that is different from the effects of expectation and scene setting. Other factors may well enter the therapeutic picture too: for example, the preliminary examination for trigger points may have therapeutic effects in itself, by a mechanism similar to that of grooming in other primates.

The important thing to remember is that all such effects are, ultimately, neurophysiological and therefore perfectly “real”.

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