

Placebo, Naturalism and Propositionality

The 'placebo' response is the measurable, observable, or felt improvement in health or behaviour not attributable to a medication or invasive treatment that has been administered.

So, how might this response be explained rationally? There have been two dominant candidate explanations:

1. A conditioned response, like a reflex response, only one that emerges from conditioning.
2. An expectancy response, on the model of belief and expectation: belief that 'x' leads to expectation that 'x', which triggers response 'y'.

Let's look at these candidate explanations for the placebo response.

Psychological Conditioning

If you ask about or do a bit of digging, you will find that people often invoke conditioning in order to provide a rational explanation (as opposed to magical thinking of some description) of the placebo response. The locus classicus here is Pavlov's dogs: patterned causal sensory stimuli (a) that are reliably associated with another distinct set of sensory stimuli (b) over time, results in the development of a psychological trigger mechanism that, once developed, is operative in the presence of sensory impacts (a) but the absence of (b). In the case of the dogs, the auditory sensory impact caused by the *ringing of the bell* (a) was associated with the *sight, scent and then the taste of food* (b). These distinct sensory impacts became fused into something akin to a mechanism, what is sometimes referred to as a stimulus-response mechanism, through reliable repeated association over time: conditioning. When the dogs subsequently heard the bell they salivated in anticipation of food, despite the absence of food.

Does this explain the placebo response?

No. Numerous authors, most notably Moerman (2002), have documented the many clinical trials where the placebo response simply could not be explained by conditioning. These studies show that the conditioning response explanation faces two problems:

- a. The problem of the absence of the conditioning stage, and
- b. The problem of cultural variance: studies where the same experiments with the same conditioning produced significantly different outcomes when conducted on different groups from different cultures (different enculturation).

So, even in cases where there appear to be grounds for claiming conditioning has taken place, it often cannot play an explanatory role, because that which is the same in both groups, the conditioning, cannot be what accounts for the difference in the responses of each group.

These failings led the proposal of the response expectancy explanation.

Belief and Expectation (Kirsch's Response Expectancies)

Consider the following (perhaps familiar) scenario: you expect to find it hard to sleep after a strong cup of coffee taken late in the day and you do find it hard to sleep. Unknown to you, that coffee you were given on this occasion was actually decaffeinated coffee. Your expectation was based on your belief that the coffee was caffeinated. Your poor night's sleep was a response to this (these) belief(s) (see Kirsch and Weixel 1988).

Response Expectancy faces the problem that it logically implies propositionally structured belief, or to put it another way, it presupposes *belief that*, and this presents a problem for the viability of the explanation. Placebo effects have been demonstrated, time and time again, to operate where the individuals who have exhibited placebo responses do not have the resources required to form the response-relevant articulable belief. This point is not based on a patient being unable to state her belief that intervention x is effective for reason(s) y, it is rather that many studies show that those eliciting a 'placebo' response often simply do not have the resources required to form the belief as to the benefit of the relevant factor.

If packaging, pill colour, pill taste or side-effects contribute to the non-bio-chemical therapeutic effects of a pill then is it really plausible to hold that the patients or participants in trials always *believe that* blue pills are better than white pills for certain ailments? Studies have shown that tablet (or tablet packaging) colour can elicit a medically significant response in statistically significant numbers of people, and that surgical intervention often rates higher than drug administering and so on. What these studies show is that sub-propositional meanings, sometimes indexed at high degrees of cultural specificity, provide that which makes sense of the specific placebo effects. Put another way, ways we take our life-world often determines effectiveness.

Meaning

The explanation advanced by Moerman, and which I endorse, is that what we call the placebo response is a meaning response. Meanings encoded in us and our life-world by our enculturation, made available to us through our *Bildung* or our second nature, lead us to respond to those meanings positively in a medically significant way. For example, I do not have to believe that certain sorts of touching are acts of compassion and that compassion has therapeutic efficacy, I merely have to feel comforted by the warmth of the hand of another resting on the back of my own hand, I merely need to take it this way and that I do so is something that emerges from, or we might say is enabled by, my enculturation or development of my second nature.

So placebo effects are understandable or explainable as effects emerging from takings of the meaningful (life-)world, that cannot be reduced to either expectations and thus propositional knowledge (judgements, beliefs and the like) or conditioned stimulus response mechanisms.

Space is brief, so I'll here propose two things for consideration:

What does this do for our understanding of the scope of naturalism? Do we need to take a wider view of what counts as naturalistic explanation?

What implications does this have for our understanding and explanation of our cognitive capacities? If hitherto you assumed or were committed to the idea that thought must be propositional, are you still?