

We are sympathetic to a cultural evolutionary view of shamanism and the importance of convincing observers for some practices to take hold. The cultural and biological aspects, however, are deeply intertwined in the development of shamanism. A narrow interpretation of the cultural view might erroneously suggest that the biological aspects of trance are irrelevant or secondary. A long history in anthropology and other fields treats trance with circumspection; these views make performing research and publishing on trance especially challenging (Herbert 2011; Penman & Becker 2009).

Times are changing, however. Interest in shamanism is resurging (Walsh 2007), and recent research on trance and altered states shows the viability of neuroscience investigations and promising clinical applications. More rigorous research on trance is needed. With more data and improved understanding, some more theatrical practices will likely disappear, whereas other beneficial practices should grow and spread.

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## Shamans as healers: When magical structure becomes practical function

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**Abstract:** Singh's analysis has much to be said for it. When considering the treatment of illness, however, he begins from a shaky premise about uncontrollability and, so, fails to make the most of what shamanic treatments – as placebos – can deliver.

Manvir Singh argues convincingly that shamans tick all of the boxes we might expect of a magical agent with the power to influence events over which normal human beings have no control. Yet, in the case of illness, to which his analysis is the most obvious fit, he seems to have misread the situation. He classes recovery from illness along with winning the lottery and being struck by lightning as an “outcomes that seemingly occur randomly ... cannot be accounted for by predictive theories, because the causal forces escape human perception” (sect. 3.3.1, para.1). True, illness can strike out of the blue, and there may be little people can do to prevent it. Once a person has been unlucky enough to be struck down, however, their return to health is not as unpredictable or, for that matter, as uncontrollable as Singh implies.

In our review of the evolutionary psychology of healing (Humphrey & Skoyles 2012), Skoyles and I described how, for human beings, the progress of recovery depends on a range of factors operating at the levels of physiology, psychology, and culture. To summarise:

1. Humans, like all animals, possess a highly effective suite of internal physiological healing mechanisms designed to beat back infection and repair bodily damage. This means that most people, most of the time, eventually recover of their own accord, even from serious illness.

2. Healing has intrinsic costs, however. For example, running a temperature to kill invading bacteria requires a 50% increase in metabolism, and antibody production uses up precious nutrients that are difficult to replace. So, although it may be desirable for patients to get well as soon as possible, it is essential they keep sufficient resources in reserve to cope with future challenges.

3. To make the best of this, the pace of recovery is regulated by a brain-based “health governor” designed by natural selection to manage the healing budget in the light of environmental information. This governor acts, in effect, like a hospital manager who must decide how to allocate resources on the basis of an inventory of what's available and a forecast of what the future holds.

4. A major consideration is the prospect of external help, especially if this suggests the present bout of illness will be short lived. Evidence of immediate environmental assets such as protection, food supplies, medicinal drugs, and tender loving care can provide such assurance; but it can be more speculative, as when there is good reason to believe that specific curative forces are being activated by someone else.

5. The health governor is potentially gullible. It cannot necessarily tell the difference between real and fake news or between a reasonable inference based on solid evidence and one based on a lie. This means that an empty promise of cure – a placebo – may be as effective as a valid promise in speeding up recovery.

6. Human beings have discovered and learned to take advantage of this loophole in the innate health management system. Although the deeper explanation remains hidden from everyone involved, placebo treatments of illness operate widely, at both individual and cultural levels. Shamanic healing rituals are a notorious example. When patients credit a shaman with supernatural powers to banish illness, they empower the shaman to activate their own innate capacities for self-cure.

Now, Singh has given us the best account yet of the logic that lies behind belief in shamanism. He thereby has provided the best explanation of why the treatments may, in reality, be able to do what is claimed. Yet, the surprise in this article is that Singh himself makes so little of this. For him, the fact that the treatments actually work is of secondary importance to the fact that everyone thinks they ought to work.

Why does he not make more of the practical benefits of placebo-mediated healing? I suspect it's because, in the spirit of Claude Lévi-Strauss, he is reluctant to concede that shamanism has evolved for dirty utilitarian reasons. He wants to see shamanism as a self-contained logical edifice that stands on its own as an appealing intellectual structure. No matter that it may be a flimsy house of cards; it deserves to survive because it is so theoretically appealing.

It is an admirably brave thesis, but I find it unduly purist and, more important, scientifically limiting. By discounting shamanism's potential for genuine cure, Singh is missing an obvious opportunity to explain not only why it survives as a cultural tradition, but also its historic origins.

Presumably, ever since human ancestors became capable of reflecting on their lived experience of illness, they looked for patterns. Surely, they noticed early on that recovery sometimes could be speeded up by the attentions of a trusted member of the community who did nothing other than bid the illness to depart. With no obvious physical cause to account for this action at a distance, they had to look for other explanations. Given the evidence that an ordinary human apparently was able to exert parahuman control over another person's body, it might well have made sense to conclude that this human was not as human as he seemed. Thus, the first faith healer perhaps was crowned as an honorary non-human with magical, animal powers. From there, it was a small step to the creation of a culturally recognised class of healers prepared to play up to and elaborate this role.

This jibes with Singh's account. Note the difference of emphasis, however: Singh explains why a shaman can be expected to be capable of miraculous healing. Yet, he does not raise the possibility that, historically, healing that appeared miraculous came first, and that it was this that inspired people to invent the concept of a shaman. Given that Singh draws parallels between shamanism and other religions, it's worth remarking that Jesus Christ was acclaimed as the son of God because he was seen to perform miracles, not the other way around (see my account of this and other examples in Humphrey 2002a).

## SHAMANS AS HEALERS. WHERE MAGICAL STRUCTURE BECOMES PRACTICAL FUNCTION

Nicholas Humphrey

### **Abstract**

Singh's analysis has much to be said for it. However, when considering the treatment of illness, he begins from a shaky premise about uncontrollability, and so fails to make the most of what shamanic treatments – as placebos – can deliver.

### **Main text**

Manvir Singh argues convincingly that shamans tick all the boxes we might expect of a magical agent with the power to influence events over which normal human beings have no control. Yet, in the case of illness, to which his analysis is the most obvious fit, he seems to have misread the situation. He classes recovery from illness along with winning the lottery and being struck by lightning as an “outcome that seemingly occurs randomly [and] cannot be accounted for by predictive theories, because the causal forces escape human perception.” [ms. page18]. True, illness can strike out of the blue and there may be little people can do to prevent it. But once a person has been unlucky enough to be struck down, their return to health is not so unpredictable or, for that matter, so uncontrollable as Singh implies.

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- But healing has intrinsic costs. For example, running a temperature to kill invading

bacteria requires a 50% increase in metabolism, antibody production uses up precious nutrients that are difficult to replace. So, while it may be desirable for patients to get well as soon as possible, it is essential they keep sufficient resources in reserve to cope with future challenges.

- To make the best of this, the pace of recovery is regulated by a brain-based “health governor” that has been designed by natural selection to manage the healing budget in the light of environmental information. This governor acts, in effect, like a hospital manager who has to decide how to allocate resources on the basis of an inventory of what’s available and a forecast of what the future holds.
- A major consideration will be the prospect of external help, especially if this suggests the present bout of illness will be short-lived. Such assurance can be provided by evidence of immediate environmental assets such as protection, food supplies, medicinal drugs, tender loving care. But it may also be more speculative, as when there is good reason to believe that specific curative forces are being activated by someone else..
- The health governor is potentially gullible. It cannot necessarily tell the difference between real news and fake news, between a reasonable inference based on solid evidence and one based on a lie. This means that an empty promise of cure –a placebo -- may be quite as effective as a valid promise in speeding up recovery.
- Human beings have discovered and learned to take advantage of this loophole in the innate health management system. While the deeper explanation remains hidden from everyone involved, placebo treatments of illness operate widely, at both an individual and cultural level. Shamanic healing rituals are a notorious example. When patients credit a shaman with supernatural powers to banish illness, they empower the shaman to activate their own innate capacities for self-cure, .

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