

Exposing Medical Pseudo-Science May Be Unethical

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Abstract

An argument is presented according to which exposing pseudo-scientific medical claims may be ethically wrong. It is then suggested that this argument gives an interesting explanation why the successful outing of pseudo-science may lead to an increase in medical pseudo-science overall.

Keywords: pseudoscience; demarcation; placebo effect; alternative medicine; evidence based medicine

Coming from diametrically opposed views, both Laudan (1983) and Pigliucci (2013) take the act of distinguishing between science and pseudo-science as having serious social and ethical consequences. I agree and tend to side with Pigliucci in thinking that this adds urgency to the project of demarcating science from non-science. However, here I will suggest caution in exposing medical pseudo-science due to the potential effect on patients. I will discuss two claims. First, I will present an argument according to which exposing medical claims to be pseudo-scientific may be ethically wrong. Second, I will explain how this argument suggests an interesting explanation why the successful outing of pseudo-science may lead to an increase in medical pseudo-science overall.

First the argument.

- (1) Many ill health situations, in particular those involving multi- and co-morbidity do not have very effective treatment options.
- (2) Alternative medicine, consisting of various pseudo-scientific enterprises, provides repose to some of those suffering from such conditions.
- (3) A significant part (if not all) of this benefit can be attributed to the placebo effect.
- (4) In current, “Western,” societies, placebos are most effective when they have the symbolic currency of science.
- (5) Ergo, exposing these pseudo-sciences will hurt people for whom there are only limited health care alternatives.

I take the general thrust of the argument to be straightforward. The idea that it is wrong to take away something that is helpful to someone, without good reason, especially when there is no alternative, I will consider here as uncontroversial. For premise (3), that the value of alternative medicine comes from the placebo effect, see Ladyman (2013). I am putting to one side deontological and consequentialist arguments against the use of placebos in general, and assume that in some situations relying on a placebo effect is legitimate (cf. Brody 1980). The novelty here is the emphasis on premise (4), namely that it is the scientific appearance or pretension that is critical for the effect of major alternative medicine regimes. In other words, the argument rests on the assumption that convincingly saying to someone of an alternative treatment that they feel helps them, “that’s fine, keep doing it, just keep in mind that it is not based on science” will decrease their benefit from the very placebo effect which they obtain from the alternative treatment. This is of course an empirical claim that may turn out to be false. But there are reasons to think that it is correct to at least some extent. We know

that the placebo effect is not of constant strength and that it is easily affected by contextual features (Marchant 2016; Tuttle et al. 2015). And it has been suggested that there is a need for doctors to support patients in situations like those discussed here by applying their “symbolic power” (Greenhalgh 2013). For the idea that the symbolism of the encounter with a physician causes a placebo effect, see Brody (1988). Presumably, for at least some patients in our society this symbolic power derives in part from the claim to scientific status (premise 4). If part of the placebo effect derives from this symbolic power, exposing the treatment as pseudo-science will decrease the placebo effect and hence will hurt patients.

It is also often argued that good doctors help their patients by listening to them and being socially sanctioned witnesses to their predicaments (Greenhalgh 2013, and the works discussed therein). These functions may be distinct from the placebo effect. Arguably, for many members of contemporary society, these functions too depend on scientific legitimacy of the practitioner. Current practices and economic incentives severely restrict the ability of physicians to play these roles and, while other members of society may perform them just as well, it is medically trained physicians and related professionals such as nurses who have the required scientific legitimacy. They are also the ones socially sanctioned to perform them, affecting a variety of practical concerns (e.g., health insurance coverage, awarding sick days etc.)

This may lead to a related concern. Namely, that the movement toward Evidence Based Medicine (EBM), to the extent that it is successful, may lead people to be less open to treatments and assistance that are not backed by science, such as talk therapies, meeting with alternative medicine practitioners, support from informal social networks, help from clergy, and so on. Rather than being an unmitigated success such a result can have unintended consequences. The lack

of science-based solutions which are sought by people (even for ailments that may not be medical in nature), leads people to seek out science-based solutions that are not there, thereby incentivizing pseudo-scientific claims and endeavors. Thus, EBM may be wind in the sails of pseudo-science. This phenomenon may be called the *pseudo-science positive feedback loop*; the stronger science gets, the stronger the appeal of pseudo-science. In addition, it is possible that after accepting therapeutic pseudo-science people may become more open to accepting pseudo-scientific claims in other realms.

Objections

1. It may be argued that exposing pseudo-science is beneficial for society overall, leads to better resource utilization, improves public discourse, and so on. This may certainly be the case. However, the above arguments suggest two things. First, we should not ignore those who are hurt as an immediate result of such efforts. Second, without changing other aspects of society, exposing medical pseudo-science may lead to opposite results than are intended. In particular, we should strive for alternative channels of social support to be available and determine whether non-science backed alternatives can provide patients with social and economic benefits that they need, such as health insurance coverage, help with the education system, and so on. Otherwise, we may end up with more pseudo-science negating the hoped for benefits to society from eliminating pseudo-science.
2. Likewise, exposing medical pseudo-science may be better in the long term. Again, this may be true. However, for the type of pseudo-scientific claims discussed here this is not a necessary result, and depends on the availability of alternatives for the placebo effect, for listening and witnessing, and so

on, that are as cheap and not harmful as are present practices.

3. A different objection is that “academic” debates on the scientific status of alternative medicine do not significantly affect people when they really need the placebo. In other words, when in dire need people put aside their rationality. Similarly, such debates may affect only a small percentage of people, those that are deeply committed to a scientific worldview. These are of course empirical claims that may or may not be true, and may certainly be a matter of degree. To the extent that they hold they make the argument presented here moot.
4. The argument applies only to some pseudo-sciences, namely therapeutic practices, often those involving a lot of interpersonal interaction between patient and practitioner. This is true and it is important to keep in mind. Yet looking at harder cases can help sharpen the conclusions from the argument. Consider the claim that the MMR vaccine causes autism. Arguably, blaming vaccines helps some parents cope with the diagnosis. This does not fall under the argument, however. First, this claim is not part of a therapeutic process for autism, and clearly the peace of mind or sense of purpose derived from it do not come from a placebo effect. Moreover, the direct benefits, if any, are not to the patients themselves but to their caregivers. Conversely, the pseudo-scientific understanding of vaccines causes direct harms and indirect harms when parents refrain from vaccinating their children. This observation helps put a check on the argument: if the pseudo-science providing the placebo effect causes patients to ignore science backed treatment we have to consider the trade-off to decide whether belief in the efficacy of pseudo-science is beneficial or harmful. We also need to take into account opportunity costs.
5. It may be mistakenly suggested that the argument presented here is a

justification for fraud (assuming the pseudo-science in question involves fraud). However, if anything, the argument discussed here only applies to *exposing* fraud, which in some cases may do more harm than good. Note, in addition, that an active placebo effect of the kind discussed here need not involve deception by the practitioner (cf. Brody 1980, 110–11).

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