

A CHALLENGE TO SOCIAL CONSTRUCTIVISM ABOUT SCIENCE

[Bilimde Sosyal Yapısalcılığa Bir Meydan Okuma]

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ABSTRACT

This paper presents a challenge to the coherence of social constructivism about science. It introduces an objection according to which social constructivism appeals to the authority of science regarding the nature of reality and so cannot coherently deny that authority. The challenge is how to avoid this incoherence.

Keywords: Social constructivism about science, concepts, innate, constructed, science, authority of science.

ÖZET

Bu yazı bilimde sosyal yapısalcılığın tutarlığına bir meydan okuma sunar. Sosyal yapısalcılık, bilimin realitenin doğasına ilişkin otoritesinden medet umar ve dolayısıyla bu otoriteyi tutarlı bir biçimde reddedemez şeklinde bir itirazı takdim eder. Mesele bu tutarsızlığın nasıl engelleneceğidir.

Anahtar Sözcükler: Bilimde sosyal yapısalcılık, kavramlar, doğuştan, inşa edilmiş, bilim, bilimin otoritesi.

Social constructivism about science is a doctrine that involves the following claims:

- (a) Scientific concepts are not innate.
- (b) Scientific concepts have been brought into existence by human beings.
- (c) Scientific theories involve scientific concepts.
- (d) There is no good reason to think of scientific theories as identifying the nature of a reality that is independent of human beings.

It is understandable to label a doctrine composed of these four claims as constructivism about science, but perhaps not social constructivism about science. On the basis of (a) and (b), the doctrine says that scientific concepts are constructions, in the sense of being non-innate products of living beings. On the basis of (c) and (d), it encourages us to think of these concepts as constructions in another sense, as well: the sense of not picking out the intrinsic features of reality or else picking them out by coincidence. Where though is the ‘social’ element of this doctrine?

It seems that either the claims above are not sufficient to define social constructivism about science or else the word ‘social’ in the label for this doctrine has no useful role to play. In this paper, I shall grant that one of these two options is correct, but I will not be exploring which option here. The purpose of the paper is to present a challenge to a doctrine that involves these four claims, whether or not they serve to fully define social constructivism about science.

Commentators on social constructivism about science tend to either say that (a) and (b) are obvious or to pass over them in silence. John Searle regards them as basic commitments of our worldview (Searle, 1995, p. 151). A reviewer of a book on this topic writes of banal constructivist theses (Rouse, 2002, p. 63). Commentators focus on (d), since (c) is beyond reasonable doubt. The challenge I wish to present focuses on the first two claims as well as (d).

Let us suppose that the term ‘scientific’ in all four claims refers specifically to the natural sciences. The term ‘independent’ in claim (d) is a tricky one to explain. Here we can say that a reality independent of human beings is a portion of reality as a whole which does not have, as an essential feature of it, being perceived or being believed in by human beings (see Jenkins, 2005). Some social constructivists might deny that any portion of reality fits this description, and say that its non-

existence is why science does not identify its features. At the other end of the spectrum is a social constructivist who says that all of reality is independent of human beings, but denies that the scientific method is a reliable means for identifying its features.

The social constructivist typically accepts (a) and (b) because any given scientific concept cannot be found in all cultural contexts. It is this empirically – oriented constructivist whom I shall focus on. To illustrate their reasoning: the scientific concept of osmosis is not culturally universal, hence it is a human construct and not innate. In response to this inference, one might protest that something can be innate without having the property of being culturally universal, but the social constructivist will say that it is highly implausible that scientific concepts are innate to only some groups of human beings. The genetic commonality of human beings is what makes this implausible (Wade, 2004, p. 160).

Now we can imagine a culture which responds to diversity in concepts in a different way. We can imagine a group of people who think that there is a god and that this deity implants concepts into the minds of human beings. If some human beings have a certain concept that others do not, this is because the god has implanted it into their minds and not all minds; or else it is because the god has implanted it into one human mind, or some human minds, and it has then been passed on, but not to everyone. The lack of universality is not because the concept is a human construct, for to be a human construct means that it was brought into existence by humans, not by a god who then gave it humans.

The group in this example have an alternative way of responding to conceptual diversity and this way clashes with an assumption of the social constructivist way. The assumption is this: a concept that a human being uses is either innate to them or it has been brought into existence by humans (or by one human). We can ascribe this assumption to the social constructivist because once they rule out the first option, they endorse the second. Of course, they do not wish to rule out acquiring concepts through communicating with other intelligent life forms, at some point in the future. But they do not think it necessary to take this possibility into account for the world that they currently study. However, the group in the fictional example pursue a third option, not acknowledged by the assumption. They think that there are concepts which are not innate to human beings and, rather than being human constructs, have been implanted into humans by a deity. They therefore imply a rejection of the assumption I have identified, even in the context of the current world.

Since an assumption of the social constructivist has been called into question, they must say why we should make sense of cases of conceptual diversity using their assumption. The obvious way of trying to meet this requirement is to say that, given what we know about the world from the sciences, we cannot take seriously the alternative approach to making sense of conceptual diversity which these people rely on. “We should deny the existence of a god because, given what science has taught us, it is very unlikely that such a being exists and its existence would be utterly bewildering. Furthermore, this divine act of implanting concepts is unintelligible, given a scientific worldview.” But if they respond with one or both of these assertions, whose truth I will not contest, how can the social constructivist endorse (d) – that scientific theories do not identify the nature of a reality that is independent of human beings? To defend their way of making sense of conceptual diversity, which leads them to accept (a) and (b), they appeal to the authority of science over what the nature of an independent reality is, or at least that is how these assertions would ordinarily be understood; but in accepting (d) they reject this authority. *The challenge for social constructivism about science is how to avoid this incoherence.*

One response to this challenge is to simply drop claim (b) from the doctrine. But the impression I have is that social constructivists will not want to do this. It matters to them that the scientific concepts that human beings use are to be understood as things brought into existence by human beings. What about giving up on (d)? That would be the end of social constructivism about science as a philosophical position. And so the challenge remains.

Although I have relied on a fictional example in this paper, it is likely that there is an actual example in which people have some other way of making sense of conceptual diversity, which clashes with assumptions of the social constructivist way. The social constructivist must then offer some reason for continuing to employ their way and this reason must not appeal to the authority of science over the nature of an independent reality, if this doctrine is to also deny that authority.

The relationship between social constructivism about science and naïve realism about science is often depicted in terms of war (see Hacking, 1999, p. 3-4). These two positions are at war with each other. But the material in this paper casts doubt on whether it is appropriate to depict social constructivism as constituting something properly separate from naïve realism, as the war imagery

suggests. Perhaps it is too much shaped by science to achieve a position from which to coherently deny scientific authority over the nature of an independent reality. There are probably other routes to this conclusion than the one offered here. I think a historical study of the development of social constructivism would itself raise the suspicion that the conclusion is correct. It must be conceded, though, that at present the route I have offered is a challenge, not a refutation. We should not be too quick to pronounce that it cannot be met, though I am not sure how to do this.

NOTE

In this paper, I have written of two ways of making sense of conceptual diversity. But what does ‘making sense’ mean in this context? An internet search reveals that it is common enough to write of ‘making sense of X’, but explaining the meaning of this expression is not easy. Here is a preliminary effort, specifically for conceptual diversity. When we believe ourselves to be confronted with an actual case of conceptual diversity, we do not just have this belief, but also a host of other beliefs about the case. Some of these beliefs are formed through the application of general presuppositions to the case, such as the assumption I have highlighted. The general presuppositions that we apply to cases of conceptual diversity together constitute our way of making sense of conceptual diversity. To differ over the general presuppositions that are applied from case to case is to have another way of making sense of conceptual diversity.

REFERENCES

- Hacking, I. (1999) *The social construction of what?*, Cambridge, Massachusetts: Harvard University Press.
- Jenkins, C. (2005) "Realism and Independence," *American Philosophical Quarterly*, vol. 42, p. 199-211.
- Rouse, J. (2002) "Vampires: Social Constructivism, Realism, and Other Philosophical Undead," *History and Theory*, vol. 41, p. 60-78.
- Searle, J. (1995) *The Construction of Social Reality*, London: Allen Lane.
- Wade, P. (2004) "Human nature and race," *Anthropological Theory*, vol. 4, p. 157-172.