

# REVIEW OF YOHANES S. PURWADI'S “SOCIO-CULTURAL DIMENSION OF SCIENCE”

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Whenever we claim that our idea is better than another idea, it is always important to have a good understanding of the 'inferior' idea and to be able to present our own one in a clear and coherent manner. The failure to do both will lead not only to a bad argument, but, more fatally, also to an unfair judgment of the idea we oppose.

Unfortunately, in his essay the author is unsuccessful on both accounts. His lack of understanding about the idea he opposes, i.e., empiricism, can be seen from what he regards as missing from positivism/empiricism, but captured by his 'cultural epistemology': “As a system of human knowledge, science can be constructed by various cultural backgrounds [...]. Traditions can be valuable sources of knowledge [...]. Society and culture can be seen as sources for epistemology, i.e. science is contextualized.”

He is not aware that empiricism does not necessarily have any problem with those assertions, because it only demands science to be autonomous in regard of the context of justification (the validation of hypotheses). This simply means that scientific hypotheses' validity should be determined by facts alone. No social or religious institutions are allowed to decide which hypothesis is right or wrong. In the matter of the context of discovery (the process of acquiring hypotheses), empiricism is welcoming any kind of source, including social ones.

Another crucial feature of empiricism the author misses is that the empiricistic idea about the autonomous nature of science is a normative idea. It is about what science ought to be. People around the world may not see science that way. The author may be correct that “science is defined in different ways in different cultures.” But this fact has no relevance at all to rebut the empiricistic idea, since it alone does not show us why science should not be as empiricism wants it to be.

The last misunderstanding about empiricism worth mentioning, and the gravest one, is his view that only by leaving empiricism we can respect the importance of the humanistic values supplied by our historical experiences. It is as if positivism is committed to the claim that mankind only needs science to live successfully in this world. It is as if positivism necessitates that we must infer the value or norm to live with solely from the facts revealed by science. This is false. We should remember that it is David Hume, one of the pioneers of empiricism, who first reminds us about the fallacy of inferring norms directly from facts (commonly called the 'naturalistic fallacy').

Empiricism only concerns itself with the best way to develop our knowledge about facts of the world. It does not have anything to say about what kind of goals we should serve with that knowledge, since it is not an ethical system. Thus it does not have anything against the effort to use science for “expansions of humanity.”

After clarifying the notion of empiricism, we can see that the difference between the author's position and empiricism is not as great as claimed. The only way he can keep a categorical distance from empiricism is by rejecting the empiricistic requirement of science's autonomy in regard to the context of justification. I take this as what he means when he asserts that “the pursuit of all forms of knowledge should be put within the metaphysical framework that embraces eternal values.”

The claim should be made more explicit, though, which is that cultural and religious institutions are allowed to determine the validity of scientific hypotheses. Not only that, the precise meaning of the claim must be made clearer. It should be clear whether the claim means that science's validity can never be free from cultural and religious influences (a factual claim) or that science's validity ought to be influenced by the social institutions (a normative claim). The author seems to want to embrace both of them, as can be seen from the way he cites Harding and Manheim, who hold the first claim, and the way he refers to Sardar, who holds the second one. But this is

an unwise choice, for it will lead to a contradiction. Holding the first claim implies the futility of the second one, while maintaining the second claim implies the falsity of the first one.

However, based on my reading, the author is more willing to take the normative claim as his basis to reject empiricism's conception of science. He is more inclined to say that science should not be as empiricism wants it to be. Let us just suppose for now that my guess is right, so that we can try to assess the reason he probably uses to back his position. We have seen earlier that an ethical world can be kept together with an empiricistic vision of science, so it is intriguing to know what kind of reason the author may still use to present his case against empiricism. Here, I believe he will say that the essential problem with empiricism is that it will make science permanently unable to fulfil the 'spiritual needs' of mankind.

The author shows an enormous respect toward spiritual needs. His deep admiration may be responsible for his unawareness of the lurking principal contradiction between cultural epistemology and the spiritualistic theory of knowledge. Cultural epistemology, as he admits, puts humans as the prime source of knowledge, but spiritualistic epistemology, as he admits, puts the transcendent entity as the prime source.

Although he himself does not explain rigorously enough about what he means by spiritual needs, I think it is safe to assume that what he means by that phrase is the need to believe in the existence of an unobservable entity that behaves in fundamentally unpredictable ways, but can somehow affect the course of events in our observable world. In short, it is the need to believe in the existence of a spirit. It is true that empiricistic science is basically inimical to this kind of belief. Science, in the end, will rationally eliminate the place of spirit in our ontology. But what is wrong with it? Despite his great appreciation toward a spirit, he does not explain well enough why spirituality is indeed important for us. He repeatedly claims that spirituality is fundamental to our humanity, authenticity and dignity, but he does not explain why it must be the case. He probably believes that spirituality is the only basis of our good values, as hinted by the following words: "the emphasis on the empirical implies a tendency to materialize everything so 'that science operates in an I-It mode, whereas religion operates in the I-Thou mode'." But the belief rests on a fallacious reasoning (the 'naturalistic fallacy' mentioned above).

The fact that we humans have no spirit or soul does not entail that we should see each other as objects to be exploited. Multiple moral narratives,

some may be good and some may be dangerous, can be made compatible with materialism. The same thing also happens to spiritualism, as demonstrated by our history where many moral narratives that advocate slavery and racism indeed take spiritualism as the basis of their imperatives. Materialists can even argue that their position is better in limiting the amount of possible harmful narratives.