

Putnam on science value-neutrality

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Introduction

Hilary Putnam is well-known for his critique of what he calls the 'fact-value dichotomy'. According to him, fact and value are not separated in a clear-cut dichotomy, but rather "entangled". With this idea of *entanglement*, Putnam attacks two common assumptions: 1) That there can be value-neutral judgments of fact and 2) That all concepts can be clearly classified into one of the two categories.

Putnam challenges the first of these assumptions, arguing that there are *epistemic values*, values regulating the "right description of the world" (p. 32) such as "coherence, simplicity, preservation of past doctrine, and the like" that guide scientists in their choice between conflicting theories (p. 31). He reminds us that, first Carnap recognized the relevance of using theoretical terms to formulate scientific theories, then Quine showed that theories, as indivisible wholes, face trial by experiment. Thus, he argues, we have no longer any good reason to refuse to admit that science presupposes values. If the knowledge of facts presupposes the knowledge of theories, why cannot it also presuppose the knowledge of values? Putnam shows in chapter 8 of *The Collapse* that all attempts to solve the problem of theory selection without introducing epistemic values have failed. And so, according to him, we must recognize the role that epistemic values play in science.

Putnam challenges the second of these assumptions by pointing out the existence of what he calls (after Bernard Williams) *thick ethical concepts*. These

concepts are not classifiable in a sharp fact/value dichotomy. For example, a concept like 'cruel' is sometimes used to *evaluate* (e.g. "My child's teacher is very cruel"), and sometimes used to *describe* (e.g. "Vlad the Impaler was an exceptionally cruel monarch"). Putnam remarks that most of the concepts that are being used in real ethical discussions belong to this entangled category. Among these concepts are, for example, "generous", "elegant", "skillful", "strong", "weak" or "vulgar" (p. 35). They are *thick* as opposed to "thin" ethical concepts, the classical concepts of ethics, e.g. "good", "bad", "ought", "right", "wrong", "vice", "virtue", "duty" etc. (p. 35). There have been attempts to shrug thick ethical concepts out, but none of these attempts are satisfying for Putnam. All attempts to class them either in the "pure facts" or the "pure values" sides of the dichotomy, and attempts to separate them into a factual and an evaluative component fail. So, thick ethical concepts are, according to Putnam, inescapable.

My aim in this presentation is not to raise objections against epistemic values or thick ethical concepts. I will rather criticize Putnam on one of the things he thinks to result from these two aspects of the fact-value entanglement. Putnam maintains, among other things, that his arguments against the fact/value dichotomy challenge the thesis of the value-neutrality of science. He thinks that recognizing the fact-value entanglement compels us to return to the classical American pragmatists' idea that science presupposes values. I will show that this is not the case: we can concede Putnam all his arguments in favor of a fact-value entanglement without being compelled to break away from science value-neutrality.

To demonstrate this, I will first return to the science value-neutrality thesis as defined by Max Weber, who Putnam considers as the orthodox position he's

breaking away from. Then, I will successively determine if *epistemic values* and *thick ethical concepts* break away from Max Weber's science value-neutrality.

1. Weber on values in science

For Max Weber, values can have an influence on science as long as they do not determine the *conclusions* of the researchers. They can affect what I will call judgments of *relevance*, as opposed to judgments of *truth* or *rational acceptability* (the judgments that lead researchers to their *conclusions*). Weber describes two main value-driven operations carried out by researchers that involve what I call judgments of relevance: 1) problem selection and 2) the building of ideal-types.

It is easy to see that in the case of problem selection, there is no influence of values on the *conclusions* reached. Values determine about what questions are being asked, but not which answers are given.

The second case requires more explanation. Ideal-types are idealized reconstructions of phenomena that, according to Weber, are necessary in social sciences, because it is impossible to study social phenomena in all their concrete variety. A researcher must reconstruct the phenomenon studied, clearing away the contingent details, to be able to focus on the essential aspects. Weber recognizes that, among researchers, judgments as to what aspects of a phenomenon are essential, may vary according to their interests, and therefore, according to their values. For example, a researcher who is more concerned with the injustices of capitalism will be more prone to consider class war and the search for profit as essential to capitalism, than one who is interested in economic growth. This is an influence of values on the practice of science, but one that is consistent with science values-neutrality. Here, as in the case of problem selection, values do not affect researchers' *conclusions*. Ideal-types determine

what aspects of reality a researcher will study, but not what his research will lead to discover about them. Therefore, as in the case of problem selection, the building of ideal-types results in only an influence of values on judgments of relevance. Weber makes it clear that once any researcher has chosen their problems and built their ideal-types, they must observe the world as they see it, in a value-neutral way.

At this point I will examine up to what point Putnam extends the value influence on science from this limit.

2. Do Putnam's epistemic values break away from Weber?

With epistemic values, Putnam, comparatively to Weber, extends the legitimate influence of values on science in two ways. First, Weber discusses the influence of values only in the context of *social* sciences. As his main field of interest is social sciences, I think we can safely assume that he envisages it only in this particular context. Putnam increases the extension of the context by recognizing the influence of epistemic values on *natural* sciences. In chapter 8 of *The Collapse*, where Putnam's arguments for the recognition of epistemic values are the most complete, his focus is on *natural* sciences.

Second, I showed in the last section that Weber does not admit an influence of values on the *conclusions* of researchers. Epistemic values break away from this restriction. As I mentioned, Putnam insists that the values of coherence, simplicity, reasonability, etc. play an essential role in the selection of scientific theories. Particularly in this last move, Putnam seems to break considerably away from Weber's science value-neutrality thesis. Values determine not only what the scientists will focus on (what they will deem relevant), but also their *conclusions*.

The two previously described extensions are however compensated by an important restriction. For Putnam, epistemic values are distinct from ethical values (see *The Collapse* p. 31). Therefore, his idea of an influence of *epistemic* values on the *conclusions* of the scientists must be distinguished from an influence of *ethical* values. In his essays on “The Methodology of Social Sciences,” Weber indistinctly discusses values and ethics. It seems obvious enough that he does so because, for him, there are no values outside of ethics, and so what he is looking for is, in fact, a science that is *ethically*-neutral. I don’t think we can really imagine Weber, or another standard defender of science value-neutrality, complaining that any researcher’s allegiance to coherence, simplicity and reasonability has biased their conclusions. Therefore, the kind of value-dependence brought by epistemic values does not really break away from Weber’s thesis (though it perhaps conflicts with the terms in which he expresses it). Accurate science is precisely science practiced under epistemic values. In order to avoid confusion, perhaps the usual discussion about science *value*-neutrality should be exchanged for one on science *ethical*-neutrality. I think this would be more faithful to the essence of Max Weber’s idea.

3. Do thick ethical concepts break away from Weber?

3.1 Thick ethical concepts in Amartya Sen’s economics

Epistemic values are not the only one of Putnam’s entanglement consequences that raises the issue of science value-neutrality. In chapter 3 of *The Collapse*, Putnam shows the role that thick ethical concepts (the other main facet of the fact-value entanglement) play in the economics of Amartya Sen. Putnam thinks that a science such as economics cannot be completely independent from

ethics, and that thick ethical concepts are the optimal way to integrate ethics into this particular science.

The problem with value-neutral economics, according to Putnam, is that it fails to define adequate criteria for economic optimality. A healthy economy is one that promotes the well-being of people—and the definition of well-being is a matter of ethical debate. Sen's economics takes this into consideration. Instead of applying an abstract criterion of optimality that has no effect on the real well-being of real people, it applies multiple concrete criteria Sen calls "capabilities". These capabilities are abilities "to achieve *functionings* that [a person] has reason to value", and this can include various things such as "being well nourished, avoiding escapable morbidity and premature mortality, [...] having self-respect, being able to take part in the life of the community, and so on."¹ This "capability approach" brings relevant ethical considerations back to economics.

The capabilities defined by Sen are relevant for Putnam's purpose because, according to him, they are defined by using thick ethical concepts.

Just about every one of the terms that Sen and his coworkers and followers use when they talk about capabilities – "valuable functioning", "functioning a person *has reason to value*", "well nourished", "*premature mortality*", "self-respect", "able to take part in the life of the community" – is an entangled term.²

Thus, thick ethical concepts play a role in science.

One could object that this kind of value-influence is equivalent to Weber's building of ideal-types, and therefore, as I explained, it introduces no influence of values on a researcher's *conclusions*. Putnam refuses this, because, for him,

¹ Sen, *Inequality Reexamined*, Harvard University Press, Cambridge, Mass.: 1992, p.5, quoted by Putnam, *The Collapse*, p. 56-57.

² Putnam, *The Collapse*, p. 62-63.

judgments of relevance and judgments of warranted acceptability are not independent.

Acceptability and relevance are interdependent in any real context, however. Using any word – whether the word be ‘good’, or ‘conscious’, or ‘red’, or ‘magnetic’ – involves one in a history, a tradition of observation, generalization, practice and theory. [...] And standing inside a tradition certainly affects what one counts as ‘rational acceptability’. If there were one method one could use to verify any statement at all, no matter what concepts it contained, then the proposed separation of the ability to verify statements from the mastery of a *relevant* set of concepts might be tenable; but we have already seen that there is no reason to accept the myth of the one Method. (Reason, Truth and History, p. 202-203)

This interdependence between relevance and warranted acceptability implies that researchers must take care when using value-loaded concepts. What they deem relevant will affect what they will end up determining to be true.

Thus, thick ethical concepts seem to go further than epistemic values: they introduce an influence of *ethical* values on the *conclusions* of science.

3.2 Three restrictions

Again, however, the extension of the legitimate role of values in science will be compensated by important restrictions, of which I will describe three. First, Putnam gives arguments for the recognition of the influence of ethical values only in *social* sciences. In chapter 3 of *The Collapse*, he shows the role of thick ethical concepts in economics, and then ends the chapter suggesting that the same demonstration could be made about law (p. 64). With this restriction, Putnam, in some respects, returns to Weber who restricted value-influence to social sciences.

The second restriction also concerns the kind of science where the extension of the legitimate role of values occurs. The field of economics, about which Putnam shows the influence of values on the conclusions of researchers, is *welfare*

economics. By definition, this field of economics is not purely descriptive, but action-oriented. It aims not only to understand the relationship between the various economic parameters, but also to create *good* living conditions within society. Just like medical science applies biological and chemical knowledge in order to pursue improving human health, welfare economics seek to apply economic knowledge to pursue socio-economic well-being. Value influence in action-oriented sciences is nothing new and does not even depend on the acceptance of Putnam's fact-value entanglement. A hundred years before Amartya Sen, John Maynard Keynes, in his book *The Scope and Method of Political Economy*, recognized this. It is moreover interesting to note that, for Keynes, the best way to avoid the fallacious reductionism criticized by Sen and Putnam was to clearly distinguish the role of *ethics* in identifying the *goals* pursued by economic policy, from the role of *economics* (as a purely descriptive science) in determining the best *means* to achieve these goals. (See *The Scope and Method of Political Economy*, chap. 2). This runs counter to Putnam's idea of a fact-value entanglement.

The last of Putnam's restrictions I will describe relates to the way in which ethical values can interfere with science. This restriction follows from Putnam's determination not to allow fact-value entanglement to open the way to relativism. Putnam criticizes Rorty, among others, for sinking into self-refuting relativism. The restriction I'm talking about can be observed in a passage of *The Collapse* on Max Weber. There, Putnam subtly moderates his assertion that values affect scientists' conclusions. He says that "the ascertaining of the answer to the scientist's question [is] not to be *dictated* by [the] scientist's value system", and that "[w]ith this, [...] Amartya Sen would agree."³ What is important in this

³ Putnam, *The Collapse*, p. 63.

passage is the use of the possessive and that of the word “dictated”. The scientists’ conclusions must not be *dictated* by *their* values. How then can values affect the scientists’ conclusions?

As I explained, according to Putnam’s analysis of Amartya Sen’s economics, ethical values shape scientists’ concepts and conclusions *through thick ethical concepts*. For Putnam, thick ethical concepts are not purely subjective. They are common among people of the same culture, and, even more, they make claims to objectivity. To make it as brief as possible (as I cannot enter into the complex issue of Putnam’s conception of objectivity here) Putnam’s thick ethical concepts acquire their objectivity in two ways:

- 1) Thick ethical concepts transfer the objectivity acquired by a responsiveness to the factual characteristics they denote, to the evaluation they contain.
- 2) The evaluations they contain can obtain their objectivity by themselves—as for Putnam, there can be “objectivity without objects” (See his book *Ethics without Ontology*, lecture 3).

Thus for Putnam, the virtue of thick ethical concepts, as a way in which values can shape scientists’ conclusions, lies in their objectivity.

Those who are familiar with Putnam’s thought will remark that what Putnam calls objectivity is, in many respects, different from the classical idea of objectivity. Some might even want to refuse the use of the term “objectivity”. I, however, will not enter into that winding debate. My approach, as I stated it in introduction, is not to criticize Putnam’s arguments, but rather to observe what happens if we concede them. For my purpose, all I need to observe now is that Putnam’s acceptance that values affect a scientist’s conclusions is conditional on

the values' claim on objectivity. Only objective evaluations can legitimately have an influence on the scientists' conclusions. This is an important restriction if compared with Weber. As I showed, Weber allows a plurality of ideal-types defined relatively to the scientists' individual interests. Putnam does not allow this. According to him the ethical influence on science should only occur through objectively established thick ethical concepts. Thus, in this regard, if Putnam differs from Weber, it is not in being more permissive as to how values can interfere in science, but in being more restrictive!

To sum up, thick ethical concepts—although they extend the legitimate value-influence on science, in that they admit the influence of *ethical* values on the *conclusions* of scientists—do not break that much away from Weber's science value-neutrality. These two extensions are compensated, first by a limitation of their scope to *social* and *action-oriented* sciences, and second by the requirement that the influence of the values only occur through objectively established thick ethical concepts. The idea of objective evaluations breaks, at least in intent, away from Weber, who subscribes to the common assumption that values are subjective. But the restriction of the influence of values to action-oriented sciences and the differences between Weber and Putnam's conceptions of objectivity make it clear that, in the end, the influence of ethical values Putnam admits is easily compatible with Weber's conception of science value-neutrality.

Conclusion

In the preceding analysis, I demonstrated that neither epistemic values nor thick ethical concepts introduce an influence of values on science that break significantly away from Weber's science value neutrality thesis. For, epistemic values do bring an aspect of value-influence to the conclusions of natural

sciences, but they also restrict this influence to *epistemic* values (excluding *ethical* values). As Weber's aim was that science be neutral with regard to *ethical* values, *epistemic* values do not break away from his requirement. And secondly, thick ethical concepts seem at first glance to have more impact, but when analyzed more closely, they reveal themselves to be more conservative. I also suggested that the main reason why Putnam restricts the legitimate influence of values on science is his determination to avoid relativism. Value-influence on science is one of the main aspects that Putnam wants to revive from classical American pragmatists. My analysis shows that Putnam's anti-relativism makes it harder for him to renew with this aspect of American pragmatism. This makes me wonder: can one really hope to break away from science value-neutrality and avoid relativism at the same time? Thank you !