

## ETHICAL VALUES, SCIENTIFIC PRACTICE AND VIRTUE EPISTEMOLOGY

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Discussions of the role value judgements play in scientific activity generally start by assuming a categorization of values in distinct kinds: epistemic or cognitive and others, political, social, ethical. Second, non-epistemic values are meant to influence, at most, the choice between theories or research programs. Third, this influence would not affect the epistemic/representational content of scientific knowledge (Lacey), but would entail however, fourthly, the inability of epistemology to account for the conditions of scientific knowledge (Laudan).

I will call these four points into question. I will consider ethical value judgements, in relation to judgments of responsibility, significance and negligibility, as judgments stating what is important to us, and argue that even though ethical they can have an epistemic function. I will take up two specific cases of development of models, both addressing a ‘knowledge-phenomenon’: in cognitive science I will contrast models pertaining to representational and to embodied theories of cognition (Varela). In social science I will contrast deficit and participation models of public understanding of science (Wynne, Jasanoff). In these two cases, I want to show that ethical values can first influence the conception of the phenomena to be explained, what has to be accounted for, and then, through judgments of significance, influence the identification of what has to be taken into account, what kind of data count as relevant. These judgments condition the kind of possible models for the phenomenon under study. Furthermore, through judgements of negligibility ethical values can influence the assessment of models of a given kind. But if ethical values contribute to the epistemic/representational content of these models, does that imply an inability of epistemology to apply to scientific knowledge?

I will contend that it only shows a deficiency of traditional epistemology, oblivious to the conditions of formation of knowledge, and stresses the need for philosophy of science to enlarge its vision of epistemology and to benefit from recent developments in this domain. The shift in philosophy of science towards the conditions of scientific practice and formation of scientific knowledge, that is associated with the perception of the epistemic function of ‘non-epistemic’ values, was mirrored in epistemology by a shift towards the conditions of acquisition and enunciation of knowledge claims and beliefs. Contextual (DeRose) and virtue epistemologies (Code, Zagzebski), as developed in the two last decades, show the epistemological relevance of considerations relative to the epistemic context in the evaluation of knowledge claims and to the intellectual virtues of the epistemic agents in the formation of beliefs. The epistemological legitimacy of such considerations provides philosophy of science with a promising epistemological framework for conceiving the epistemic relevance of ethical value judgements in the production of scientific knowledge.