Divergent Philosophies in Evolutionary Science

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Abstract

At a 1982 meeting of the Philosophy of Science Association, Ernan McMullin directed his presidential address to acknowledgement of the fact that subjective value-judgments play an essential role in science. McMullin identified epistemic values that were broadly sanctioned within scientific communities (e.g. predictive accuracy, simplicity, coherence, consistency, unifying power, fertility) but whose relative priority could be determined by factors outside science. He illustrated this point with the example of a famous disagreement between Bohr and Einstein concerning the scientific status of the quantum theory of matter. According to McMullin, the scientists' disagreement on the matter was not merely the result of conflict concerning how to prioritize epistemic values. Disagreement in substantive metaphysical beliefs about the nature of the world also impacted their determination of what constituted "good" science.

Michael Ruse distinguishes epistemic values from what he terms metavalues, or values concerned with the nature and limitations of science *qua* theory of knowledge. Using this distinction, the present project explored the value-commitments endorsed by Stephen J. Gould and Edward O. Wilson, two leading scientists in the field of evolutionary biology. Taking as a case study their widely publicized disagreement over the theoretical field of sociobiology, I demonstrate how evaluation of the scientists' epistemic and metavalues can (1) equip philosophers with an instructive mechanism to track diversity in the methodological assumptions directing post-Darwinian evolutionary sciences, and (2) equip scientists and non-scientists with a means for assessing the causal force of differentiated social experience in evolutionary sciences' production of scientific knowledge.

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