Explanatory Pluralism

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According to C. Mantzavinos, "we explain if and only if we use a theory insofar as this theory is embedded in a certain explanatory game, where the 'explanatory' is defined as a network of certain rule-guided practices" (186). He frames his explanatory pluralism as a response to limitations faced by post-Deductive—Nomological Model accounts of explanation, such as the causal-mechanistic, unificationist, and manipulationist models. Mantzavinos offers an account of explanation, not just scientific explanation, that is broader and more flexible than these models. He achieves the desired breadth in part by being agnostic about major debates that divide these accounts, e.g., reductionism and causation. But, his main argument for pluralism hinges on the fact that none of the mainstream models of explanation can handle certain key cases from the social sciences. One might object that these limitations only show problems with particular monistic models, but not that pluralism is in principle preferable to monism. Though it's important to show the limitations of monistic accounts of explanation, and doing so certainly requires more than a couple of examples, the proof of his explanatory pluralism is in the pudding.

On his account, explanations occur within a hierarchical plurality of values, rules, and problems. An explainer is a problem solver, and problem-solving is a process of learning by trial and error. Shared normative rules determine what is problematic, how we solve problems, and these rules are judged in reference to epistemic and non-epistemic values. The novel aspect of his account focuses on four sets of rules: (1) constitutive rules, which determine what counts as an explanation, what is taken as background knowledge, and various metaphysical assumptions; (2) rules of representation, which can be linguistic, visual, mathematical, etc.; (3) rules of inference, that is, what can be inferred given our representations; (4) rules of scope, which also covers *nestedness*, or rules for how to include one explanatory game within another. Rules are constantly changing in response to natural and social feedback, though certain rules can become resistant to change. As rules change, so do explanations, and so do explanatory games. But, given a plurality of problem solvers and a plurality of institutions, there are also a plurality of rules and games at any given time. Given all these pluralities, it is difficult to grasp what individuates an explanatory game, which seems problematic, given that he takes this as a virtue of his account over paradigms, research programmes, or traditions (186-187). I would conjecture that the constitutive rules are typically the key explanatory game individuators. Metaphysical presuppositions, like 'nature does nothing in vain,' are less responsive to natural and social feedback than rules of inference, representation, and scope.

Having a plurality of both rules and values allows for important comparisons to be made. Rules can be progressive with respect to one value and regressive with respect to another, e.g., the late Ptolemaic system would be regressive with respect to beauty yet progressive with respect to empirical fit. According to Mantzavinos, we can locally evaluate one game against its corresponding values, or we can globally evaluate different games against each other. The sole condition in the global case is that the constitutive rules determining what counts as an explanandum be the same (184). Again, his constitutive rules do the heavy lifting.

In Chapter 6, Mantzavinos offers two valuable case studies of scientific change. The first concerns the change from the explanatory game played by classical political economists to that played by the marginalists. The second concerns the functioning of the heart and the circulation of the blood from Galen to William Harvey. In the first example, the rules change rapidly, but, in the second, the rules change slowly. In both cases, as the rules change, so do the explanatory games. For example, employing analogical inferences between animals and humans is more important when dissecting humans is not an option. In his examples, the different rule changes are relatively clear, but, again, when one game changes into another game is obscure. This perhaps shows that it is not games that are important, but rules. Part of what this chapter shows, perhaps unintentionally, especially regarding Hermann Heinrich Gossen's and Michael Serveto's works, is that there is a *conservative* aspect to scientific change. If one does not follow enough of the mainstream rules, or breaks too many rules, then one's work may be neglected. In order to convince the scientific community to adopt change, even a small one, a scientist can break some of the rules, but needs to show that this will pay off with respect to other community interests. Mantzavinos' explicit focus on rules, rather than something like Kuhn's paradigms, offers a promising, fine-grained and fruitful approach to understanding scientific change.

Mantzavinos' account covers more than scientific explanation. Rules children follow respond to feedback from adults. Mantzavinos calls this an explanatory game with an *authoritarian* normative dimension. Religious explanatory games come with a *dogmatic* normative dimension, since there are extreme sanctions on those who deviate from the rules. Scientific explanatory games differ because they usually come with a *liberal* normative dimension. Though nothing serious hangs on this political language, it can be misleading, especially given that his more prolonged case-studies in fact show a *conservative* normative dimension of science.

Overall, Mantzavinos offers an illuminating approach to explanation that moves the debate forward by side-stepping longstanding metaphysical disputes. His pluralist account is best understood by avoiding this dialectic altogether and by diving into his examples.

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Boundaries of Authority

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Boundaries of Authority is the definitive orthodox Lockean account of the grounds and limits of states' territorial rights. A. John Simmons calls his Lockeanism 'revisionist,' principally in light of his more thoroughgoing 'voluntarism' and his systematic rejection of John Locke's colonialism and Locke's endorsement of the incipient European states system. Simmons attributes these problematic commitments to "false factual assumptions"; Locke misapplied his own theory without, however, impugning the core (121).