On Science and Humanism

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This talk proposes another answer to the unsolved Popperian question of Demarcation. The thesis is that science is not to be characterized by its theories nor by its research methods and models. Rather, the answer is rooted in the values and norms of Humanism. The common thesis is that the scientific research methods and models guarantee the acceptability of scientific claims. However, there is not one method or model that will stand out such that it will qualify as the characteristic one. Furthermore, none will answer for the unity of science nor will help to understand science as a unique culture. Furthermore, this common thesis does not solve the problem of how these research methods and models were selected as scientific in the first place.

This talk argues for two theses: First that the historical and philosophical roots of science are in politics and ideology, and not in any objective ideal. Furthermore, science is a human invention just like art or literature and not for wholly different reasons. Its invention is deeply tied up with the emergence of democracy in ancient Greece and Humanism in the Enlightenment. Second, that science presupposes and advances concurrently Humanistic values, especially the autonomy of the individual to think and decide in a free and uncoerced manner, and the choice to prefer the way of critical reasoning and skepticism.

Two case studies will serve as illustrations to this talk's thesis. The first case refers to the controversy surrounding the removal of the word "science" from the AAA's long-range plan statement in 2010, and will show why it was philosophically wrong. The second case refers to the 1996 Sokal hoax, and will show why Alan Sokal was right.

Causal Pluralism in Political Science: Integration or Incommensurability?

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In A Tale of Two Cultures: Qualitative and Quantitative Research in the Social Sciences, Gary
Goertz and James Mahoney argue that there are fundamental differences quantitative and qualitative research traditions in political science. These differences include different sets of values, beliefs, and norms that result in different research procedures and practices and thus the different traditions might be characterized as constituting different cultures. The result is that while within tradition conversations are often rich and productive, across traditions conversations are typically “difficult and marked by misunderstanding” (2012, 1).

One area in which these differences are particularly apparent is in the approaches taken to the investigation of causes. While quantitative researchers typically seek effects-of-causes through methods that identify average effects, qualitative researchers are often more focused on causes-of-effects, questions of how a particular hypothesized causal factor might give rise to a particular effect within an examined case. Quantitative researchers are thus concerned with causal relations at a population level whereas qualitative researchers are focused on events at the level of individuals.

Such pluralism within disciplines has recently been examined by Sandra Mitchell (2009), who argues for “integrative pluralism,” and Helen Longino (2013), who suggests that in at least some cases different approaches are fundamentally incommensurable. I consider the question of how to think about different approaches to causality in political science using the work of Mitchell and Longino as a framework. I sketch a procedure for thinking about whether and when approaches can be integrated by identifying two dimensions to consider: how the objects of inquiry are conceived and the inferences that different concepts of causality can support. Questions of integration or incommensurability will depend on these factors and communication between the “two cultures” of political science may be facilitated through their consideration.

Analytic Method

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In science and philosophy, it is a common practice to qualify certain kinds of (scientific) methods (e.g., descriptive statistics, logical inference, etc.) as analytic. Among analytic methods we usually include, for example, defining, explicating, proving, conceptual analysis. However, if anyone is further required to specify what it means for a method to be analytic, she may find it difficult to formulate some general characteristics of analyticity as applied to methods.

The definition of analytic method should respect the following requirements: Firstly, it should permit that, by using analytic methods, one may gain epistemic progress. Secondly, it should comply with the intuition that analytic methods do not involve empirical investigation of the world.
The identity of the method is based on its parts and the structure according to which the parts are put together. Assuming that method consists of instruction, the database model of instruction is proposed. Instruction is represented as a state-changing operator having a possible impact on two databases. Now it is argued that analytic method is one consisting only of instructions that are analytic. Assuming that an explicit database of actual knowledge is distinguished from an implicit database of possible knowledge, analytic instruction can be defined as instruction that does not change the content of the implicit database. This view on analytic methods is compatible with the idea that epistemic progress is modelled as a change of state of the explicit database. This change can, but need not, be correlated with the change of state of the implicit database.

**Can Scientific Rationality be Subsumed under Instrumental Rationality?**

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Epistemic instrumentalism (EI) is one of the common normative frameworks for expressing scientific rationality and, in particular, scientific methodology. The basic idea is to express epistemic rationality: "One is rational in believing/accepting P iff P is supported by the evidence." as a type of instrumental rationality:

"One is rational in believing/accepting P iff believing/accepting P is conducive of one's cognitive goals." Such a reductionist approach to epistemic rationality has especially been endorsed by the proponents of naturalized epistemology and philosophy of science, such as Laudan and Giere. While an early criticism of EI came in the 1990s from Siegel, Kelly (2003) posed much more serious challenge (strengthened by Lockard (2013)). Nevertheless, Kelly's remarks have remained unaddressed by philosophers of science, while EI has remained prevalent. The aim of this paper is to examine to which extent Kelly's objections apply to epistemic rationality in the context of scientific inquiry and which consequences they have for a naturalized approach to scientific methodology. We show that, first, in the context of science EI indeed faces the problems pointed out by Kelly and Lockard. Second, we root the source of these problems in the requirement of EI that one's rationality is to be assessed only in view of one's cognitive goals (i.e. the goals in an evaluation are agent-dependent). In view of this we will investigate possible ways out for normative naturalism. We will argue that while naturalized philosophy of science relies on means-ends rationality, it does not rely on the agent-dependency of goals, and hence it does not rely on EI. Nevertheless, epistemic rationality can be expressed as a means-ends rationality (i.e. in an epistemic consequentialist manner) in such a way that the ends do not necessarily belong to the agent's cognitive goals. Finally, we will show that preserving the distinction between epistemic non-instrumentalist and epistemic instrumentalist scientific rationality has important implications for scientific methodology, which have been neglected by both philosophers of science and epistemologists.