ABSTRACTS

B3.13 Metaphysical Issues in the Philosophy of Science

Hooking On and Biting Back: A Defense of Longino's Account of Objectivity
Jennifer Fellows, Philosophy, Douglas College, New Westminster, B.C., CANADA

In her recent paper Karyn L. Freedman has argued that Longino’s account of objectivity cannot claim to be epistemically valuable because it fails to defeat the relativist. She argues that for an account to defeat the relativist it must be able to do three things: guarantee epistemic accuracy of our theories, ensure that reality bites back when our theories are wrong-headed, and guarantee that we will never ratify two contradictory hypotheses as knowledge simultaneously. In the following paper I offer a defense of Longino’s account of objectivity as epistemically valuable by illustrating that Longino’s account can defeat one particular type of relativism. However, I claim that the root of Freedman’s objections to Longino’s account is a disagreement over what is metaphysically possible. Freedman sees two possibilities: monism and relativism. Longino suggests a third possibility: pluralist realism. In order to find Longino’s account to be an intelligible overcoming of one type of relativism, one must also find pluralist realism to be a metaphysical possibility.

Extended Agents and Development of Science and Technology
Yasuo Nakayama, Graduate School of Human Sciences, Osaka University, Suita, Osaka, JAPAN

Until the first half of the 20th century, epistemologists used to take individualistic positions. For example, some logical positivists took methodological solipsism. In 1960s, Thomas Kuhn succeeded in introducing some components of collective epistemology into philosophy of science. However, Kuhn paid little attention to technological devices for experiments and observations.

In this presentation, to connect collective elements of epistemic agents with technological devices, we use a notion of extended agent that is proposed in [The Extended Mind and the Extended Agent, Procedia Social and Behavioral Sciences, 2013, vol. 97: 503-510]. Then, we describe developments of science and technology in terms of extended agents.

This definition of extended agent presupposes a position of four-dimensionalism that allows us an extensive use of the notion of temporal part.

(a) An atomic agent is an agent. It is four-dimensionally extended and any spatial part of it is no agent.
(b) Let temporal-part(x,t) denote the temporal part of object x in time t. Let A be an agent that uses (tool) B in time t in order to perform an action. Then, the mereological sum of temporal-part(A,t) and temporal-part(B,t) is an agent.
(c) If agents A1, … , An perform a joint action, then A1 + … + An is an agent. Here, we use + as an operator that builds a mereological sum of given objects.
(d) If an object satisfies neither (a) nor (b) nor (c), then it is no agent.
(e) An agent that is not atomic is called an extended agent.

According to this definition, multiple researchers and multiple technological devices can be components of a single extended agent. Then, we can assign epistemological states to these extended agents.

An aim of this presentation is to describe interactions between science and technology based on a position in analytic metaphysics.