

Ideal Empiricism - James Mattingly

Abstract:

Bill Demopoulos told us that the main flaw in the logical positivist's project was obscured by how we framed the problems with the partial interpretations approach to scientific theories. The real problem was a lack of appreciation for the epistemic strength of so-called "theory-mediated measurements". While he was pursuing a species of local realism, he did acknowledge that one could "consistently maintain a strict neutrality about ... metaphysical questions of ontology, a reasonable skepticism about the truth of theories, and an understanding of the controversy over the ontological status of entities that transcend observation as one that concerns a question about reality." While he does not frame things exactly this way, the kind of debate he was articulating was not one between scientific realism and anti-realism as normally understood, but one conceptually prior to that: between idealism and realism. That this debate is conceptually prior has not been much focused on.

Here I will do three things. First, I will argue for the claim that the scientific realism/anti-realism debate takes place on the realism side of the idealism/realism debate. I will then try to motivate staying on the (methodological) idealist side, and along the way explore connections between various notions: skepticism, empiricism, relativity, and idealism. I will finally suggest that properly understood idealism and skepticism lead us to see relativity (or the quest for absolutivity rather) as part and parcel of the empiricist project.

What is the payoff for philosophy of physics? There is, as a result, motivation for another relativity inspired interpretation of quantum theory that respects locality, maintains the objectivity of the quantum state and measurement outcomes, and that also gives principled grounds for rejecting the independence of measurement events at distant locations (by rejecting that they're a thing). However, this proposal does not equate relativity with relationalism, as does Rovelli's, for example. It is on the relative side of the absolute/relative divide but on the absolute side of the absolute/relational divide. The proposed interpretation picks up where Wigner shied away, and this discussion connects to the ever-wider literature connected with Wigner, his friends, and their laboratories.