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*Epistemic Solipsism and Philosophy of Physics*

Physics prides itself in not being a purely analytic exercise of refining formal systems. Rather, it attempts to be a pursuit of developing models that have correspondence with some external reality. Therefore, confining epistemic reach of conscious agents who practice physics to merely their sense-data presents Physics with, what I henceforth call, the *central problem* - if sense-data is all that we have direct access to, how is knowledge of the external world possible? Russell hoped to provide a plausible elucidation to the aforementioned question with his theory of Logical Atomism. However, in doing so he resorted to *relying on testimonies of others to establish a perduring external reality* and this left a loose end that compromises the robustness of his philosophical foundations for physics. In this paper, I argue that there is value in transitioning towards epistemic solipsism<sup>1</sup> as it makes the foundations of philosophy of physics more robust to changes in ontological frameworks.

Some prerequisite philosophical argumentation is required to convince oneself that sense-data truly is all that we have access to. For the sake of brevity, I assume that the reader has already convinced themselves of the confines of their epistemic reach. One way that Russell articulates the central problem that such epistemic confines present to philosophy of physics is by asserting that we try to explain our sense-data as a function of external objects. However, considering sense-data is all that is directly accessible to us, ideally physics should be working with the inverse of that function (i.e., explaining external objects as functions of our sense-data). Following the principle of parsimony, Russell substitutes 'External World' as a class of inferred entities with logical constructions emerging from our sense-data. In doing so, he invariably relies on the testimony of others to establish the consistency in the appearances of objects. This is a problem because if I have no reason to believe that a frame-invariant (mind-independent) world exists outside my sense-data, I have no reason to believe that other

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<sup>1</sup> Solipsism is the philosophical doctrine that the only conscious mind that exists and holds experiences, thoughts, emotions, etc. is *mine*.

people exist except as a part of my consciousness. Thus, to establish the independent existence of objects, we cannot rely on testimony of others since the testimony itself might not have an independent existence outside my mind. Though Russell himself could not untangle this logical knot and unsatisfactorily substantiates realism on the basis of it being an ‘instinctive belief’, he recognizes the internal consistency of holding a solipsistic world view. In fact, Russell even says that it would give him ‘great satisfaction’ if he could dispense with the assumption that sense-data of other people exist and ‘establish physics upon a solipsistic basis’. As I intend to demonstrate, such a solipsistic physics can be achieved without necessarily facing an incompatibility with metaphysical realism.

Before I transition towards epistemic solipsism in the foundations of philosophy of physics, there is value in explicating why is it that Logical Atomism (or any philosophical doctrine that intends to provide resolution for the central problem) holds the metaphysical realist stance. To reiterate, the central problem that we are concerned with is how could we arrive at knowledge about external reality whilst only ever having access to our sense-data. To even be worrying about the central problem, one must first posit the metaphysical existence of the external world independent of one’s own consciousness that needs to be explained. In the absence of the external reality, there is no epistemic gap that needs to be filled and this is what I shall, henceforth, call the *trivial resolution*.

At this juncture, I wish to make a clarification that – in my opinion – greatly dissolves the philosophical problem at hand. Even though those who embark on the project to bridge the gap between sense-data and external world hold a realist position metaphysically, they still hold variants of idealism or solipsism epistemically. This disambiguation is important in order to ensure that one does not conflate epistemic investigations with ontological ones. Here, two questions arise – (1) why do I claim that philosophers working on the central problem are epistemic idealists/solipsists and (2) how could epistemic idealism not be in stark contrast to metaphysical realism. Let us now look at each of these two questions.

The sense in which I use the term ‘epistemic idealism’ refers to the philosophical position which asserts that only mental entities are in direct epistemic access of conscious minds. Unpacking this definition provides a response to the first question raised in the previous paragraph. Only if one

holds this particular epistemic position, the central problem requires a non-trivial resolution. Otherwise, if knowledge of the external world was directly accessible, one would not even have to worry about inferring a class of objects tagged ‘external’ or developing logical models that act on sense-data to give information about what is metaphysically deemed ‘external’.

Further, there is no direct incompatibility between metaphysical realism and epistemic idealism. Contrary to what one might presume, epistemic idealism does not reject the existence of external reality. To claim that the external reality does not exist, is to also claim something about external reality. But within the formalism of epistemic idealism, there is nothing that can be known about external reality. Therefore, for coherence within the context of this paper, epistemic idealism must suspend judgement over the ontological question of external reality.

Considering epistemic idealism does not make a choice between metaphysical realism and metaphysical idealism, for our project we must ensure that regardless of whichever metaphysical position is true our foundations for physics remain robust. Suppose metaphysical idealism is the correct position (regardless of whether or not we can ever *know* it is the correct position), our epistemic idealism remains coherent and the central problem arrives at the trivial resolution mentioned earlier. In such a framework there are no external objects that physics needs to account for and, therefore, there is no bridge that must be built over the gap of sense-data and external world. Physics, under a metaphysical idealist position, still remains a pursuit to understand reality. However, now instead of claiming physical theories to be the laws that govern an external mind-independent world, physicists must accept that physical theories are laws that govern the consistent patterns in the mental projections of reality that their minds conjure up. Because consistency of reality (whether it is mental or physical) is a phenomenological fact, physics remains a non-trivial evidence-based exercise in both realist and idealist metaphysical frameworks. On the other hand, if realism is the correct metaphysical position, then frameworks like Logical Atomism investigate (what seems to be) the knowledge we accumulate about the external world.

At this stage, if one moves from epistemic idealism to epistemic solipsism, they still suspend judgement over their metaphysical stance. However, the change that comes from this transition is that

now one must also refrain from discussing the ontological question about other minds (for the exact same reasons as stated above). To ensure that our foundations of physics remain unperturbed by the true metaphysical status of other minds, let us again consider both the case of existence and non-existence of other minds. If other minds do exist and their sense-data is compatible with our sense-data, then there is an invariant reality independent of individual minds. In this case, Russell's original formulation of Logical Atomism can be reconstructed. If other minds exist and their sense-data is incompatible with my sense-data, (assuming sense-data has strong correspondence with reality) the external world is not frame-invariant (as it changes with the minds which are experiencing the world). Discarding frame-invariance requires adopting some form of idealism, because metaphysical realists require a mind-independent reality. As mentioned earlier, holding the idealist metaphysical stance along with idealist epistemic stance dissolves the central problem trivially. Finally, if other minds simply do not exist then testimonies of others cannot be used to substantiate the existence of the external invariant reality because the testimonies themselves do not have an independent existence outside of my own mind. The suspension of this judgement, however, works in our favour because we are anyway functioning under the doctrine of epistemic idealism. This again leaves us with two possibilities. Other minds do not exist and an external perduring reality also does not exist. This is simply the idealist metaphysical position restated and, as explained earlier, it provides a trivial resolution to the central problem by eliminating the gap between sense-data and external reality. Or, the last possibility is, other minds do not exist but an external mind-independent reality does exist. In such a case, we do not need to rely on testimonies about sense-data of others to substantiate the existence of the external reality because we have established the existence of the external reality by elimination of all other logical possibilities. From the result of our systematic enumeration of all relevant metaphysical positions, we arrive at the following conclusion - epistemic solipsism suspends judgement over the metaphysical status of other minds and the external reality but for the cases where the central problem requires non-trivial resolution, Logical Atomism coherently provides one.

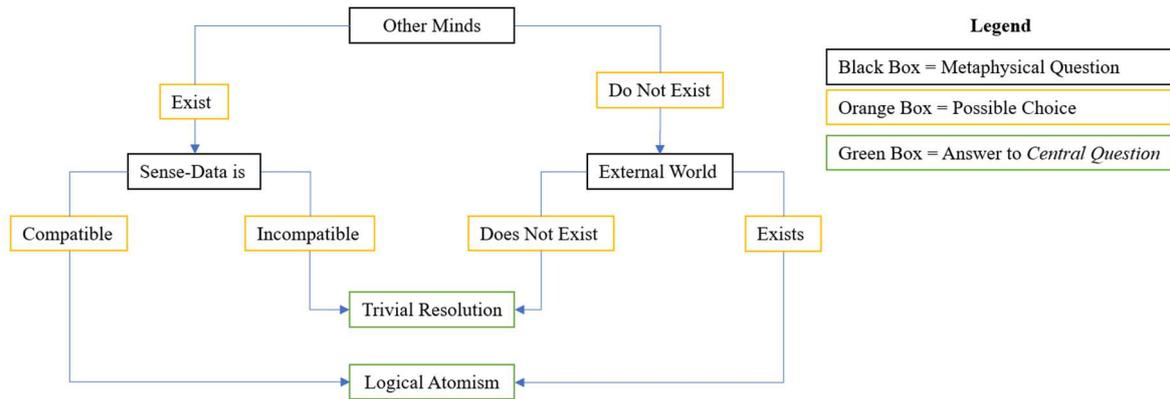


Fig 1: A visual-aid for understanding the layout of my If-Then enumeration of metaphysical possibilities and their relation to the resolution of the Central Question

In this paragraph, I provide a bird’s eye view of the route that the argument has taken till now. First, we clarified the distinction between holding a realist/idealist metaphysical stance and holding a realist/idealist epistemic stance. Then, we established that epistemic idealism/solipsism suspends judgement over the ontological status of other minds and external world (as opposed to asserting their non-existence). From here, we enumerated all possible metaphysical positions and tested their compatibility with epistemic solipsism. We noticed that in some of the metaphysical positions, the central problem had trivial resolutions while in some others we could reconstruct Logical Atomism. However, regardless of their respective metaphysical stance, Physicists continue to investigate reality as it appears to them in phenomenological slices, while systematically suspending judgment on metaphysical inquiries. Epistemic solipsism provided a robust philosophical shelter for physicists in a way such that the value in conducting physics and the prescriptive guidelines that they function under are uninfluenced by resolutions of metaphysical problems.

One objection that could be raised here is that epistemic solipsism, by definition, asserts knowledge of the external world is unattainable and we have via linguistic trickery convoluted the problem to an extent where we fail to recognize an epistemically solipsistic physics would be an oxymoron (because physics is trying to study something which by definition is unknowable). However, such a strong formulation of epistemic solipsism is not what is desired in this paper. What we require is for epistemic solipsism to claim that knowledge of the external world is not *directly* accessible to my

mind. The weaker form of epistemic solipsism, thereby, opens up the scope for a non-trivial resolution of the central problem in the form of inferences about the external world or logical constructions.

Another objection that could be raised is that epistemic solipsism is self-defeating and internally inconsistent. If an object outside sense-data is such that none of its properties are directly knowable, then one can create a property “ $P(x)$ :  $x$  has no directly knowable properties”. Epistemic solipsism asserts  $\forall xPx$ . This, however, creates a Russell-set like paradox. Just how epistemic solipsism must suspend judgment over ontological status of external entities, it must similarly suspend judgement over epistemic status of external entities. At the moment, the (unsatisfactory) response I can provide is that one can climb out of this pit by claiming that knowledge about knowledge (meta-knowledge) can conceivably function under different a separate set of rules. Thus, epistemic solipsism is a framework which discusses meta-knowledge and is – on its own level - internally consistent.

What I hope to have established through this paper is that if physicists function under the epistemically solipsistic framework, their usual work that involves generating formal systems and discovering correspondences between the formal systems and their phenomenological experience of reality remains invariant to the true metaphysical features of the reality. This is made possible by planting the philosophy of physics on foundations that can accommodate all relevant metaphysical positions either by trivially answering how knowledge of the external world is possible or by the Logical Atomism framework.

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