

Peer Review

Review of: "Observers as Agents: Relational Epistemology from Physics to Ecology"

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I fully agree with the author about the importance of relationalism in the understanding of the world around us. However, the statement about “observer/actor-based operational-relational epistemology that situates agency and perspective as fundamental, objective (i.e., inter-subjective) features of reality” doesn’t work; the assumption of objective being synonymous with inter-subjective is invalid. The author is still tied to the ‘objectivity’ trap. The statement “that all physical quantities are defined relative to a given observer, rejecting the notion of observer-independent facts” is much appreciated, but still assumes that if we know the position of the observer, we can define ‘objectively’ the facts ‘relative to the observer.’ This, however, keeps us stuck within the philosophical domain of realism. The idea of shifting away from ‘pure,’ full, or absolute objectivity (which doesn’t exist) to acknowledging the impact of the subject as agent/observer, its subjectivity, and intersubjectivity as a collective interpretation means one way or the other addressing and including relativism – which has been seen since Max Weber 100 years ago as an ‘absolute’ no-go, also in this paper it seems. The author confirms my reasoning by stating that “It maintains objective consistency through defined interaction protocols,” which is equally problematic as the individual observer observing. Effectively, the author is proposing to replace the ‘idealism’ within ‘realism’ (reaching a kind of ‘absolute’ or ‘certain’ understanding of reality outside the brain) by a ‘relationalism’ within ‘realism’ (replacing the subjective side of the subject with intersubjective agreements), as if that guarantees objectivity about a reality beyond the brain. However, also this path doesn’t lead to objectivity, as all that comes through the senses requires interpretation, by the subject as well as through inter-subjective reasoning. The sentence “Human cognition presents scaled-up observation systems, integrating sensory-motor input-outputs with abstract reasoning, language, and culture” doesn’t say much, as it also does not address interpretation (which is value-judgement and is

different from 'objectivity') and doesn't distance itself from assuming objectivity is within reach. The suggestion that "Integrating both views [from Luhman & Habermas] illustrates how observation extends from individual agents to emergent social structures, operating through recursive feedback mechanisms" presents a mechanistic/instrumental kind of reasoning and a mechanistic kind of functioning of the brain: "The solution is in the mechanism of observation," leading to a far too simplistic idea of our mental capacities. It wants to tell us that while individual observations might not lead to objectivity, collectives do, as these lead to an aggregated level of knowledge: "universally shared categories of understanding." We might be able to objectify to a greater or lesser extent; however, full or absolute objectivity is not within our reach, never, and it doesn't matter if we go for the subject or take intersubjective reasoning seriously. That means that aside from realism, there's always some relativism involved – if we like it or not. In relatively stable, certain situations, realism flourishes; in unstable situations full of uncertainty (which are unavoidably there, and taken as such by quantum theory (acknowledging the influence of the observer), the complexity sciences (acknowledging uncertainty is fundamental and cannot be fully reduced to zero), contingency theory, and more), relativism becomes more and more relevant: a matter of degree (relational gradients and probabilities). And this matter of degree relates realism and relativism, consequently addressing relationalism. There is no escape; if we want to solve this issue, we have to embrace relativism in addition to realism, the idea that with observation also value-judgement takes place, and that we have to add axiology to ontology and epistemology. Therefore, I challenge the idea that there is "the need to integrate diverse observer perspectives into a coherent whole" leading to "shared, inter-subjective, operationally consistent knowledge," as long as interpretation remains the blind spot. So, instead of a Discrete–Continuous Duality as an Epistemological Structure, you might want to look into a Complementary Duality (Niels Bohr's life motto) first as an Epistemological Structure combining realism and relativism, fact and value, objectivity and (inter)subjectivity...

I fully agree that solipsism isn't much help, and intersubjectivity is a necessity in understanding reality. It sort of already did: a fact is a fact as it conforms to a set of indicators, which has been collectively agreed on. I do not agree that intersubjectivity is a certain path to objectivity, replacing the subject, subjectivity, and such. Intersubjectivity means collective value judgement, which still includes interpretation. And that is precisely the factor that is lacking here. Just to make it more clear, see the statement "coherence conditions and shared operational protocols allow independent observers to reconcile differing perspectives into mutually comprehensible knowledge:" then who is it that comes with these conditions and protocols? These are humans and the agreements they make, as facts are essentially agreements

acknowledging that what is observed meets pre-defined conditions, agreed upon collectively and therefore always open for discussion. See as well the statement “objectivity emerges through structured relational translation rules that allow different observers to compare, reconcile, and validate their measurements and descriptions.” As if these rules are something ‘true,’ and fixed and frozen beyond us, therefore solid and sound, undisputable, which they aren’t, as these are also agreed on. You want to exclude the human factor assuming that turning them into a collective will do the trick, which doesn’t.

Reference to Wolfram and the statement that “his observer theory generalizes beyond physical systems, applying equally to mathematical and linguistic domains, framing observers as systems that extract simplified narratives from complex underlying structures,” is an interesting one. Indeed, humans are able to collectively embrace systems of thought (frames of reference) as if these are real beyond the brain, and absolute and certain. However, these remain products of the brain, based more on logic than observation, with mathematics as an amazingly thorough system of thought (although Gödel made clear that mathematics isn’t a fully consistent system either), with the rule of law something all people have to count on, and so on. But here too, these systems differ in degree of being trustworthy with regard to their internal logic.

Instead of ‘Relational Objectivity as a Foundational Principle,’ I see uncertainty as fundamental, with knowledge and understanding being the outcome of a complementary duality between realism and relativism, between which degrees of certainty & complexity exist, which brings us to relationalism. This perspective also takes “the emergence of shared knowledge through linguistic coordination and consensual domains” seriously, a statement that doesn’t work with ‘relational objectivity’ as it cannot explain how ‘consensual’ agreements work. ‘Consensual’ agreements do not lead to objectivity, but are one of the essential steps in a process of ‘objectifying’ the world around us as much as possible. And I see ‘objectifying’ as something different – it is indeed relational – from ‘objectivity,’ a process towards instead of a goal to be achieved. Therefore, I see the statements “objectivity arises not from observer-independence but from structured intersubjective processes grounded in language, interaction, and recursive observation,” and “observer-based models do not weaken scientific objectivity understood as inter-subjectivity” as contradictions in terms.

On page 4, the following sentence is incomplete: “Philosophers of chemistry, including Harré [24], Hendry [25], and [26], formalize...”

The statement “Ostrom’s framework for commons governance [36] formalizes how local observational perspectives contribute to coherent collective management.” Is this really so, that Ostrom’s framework formalizes...?

While you talk about the observer-relative perspective, wouldn't it be more correct to go for an observer-relational perspective?

I thoroughly enjoyed reading this article. The positions are presented very clearly, allowing me to formulate my own and making commentary a pleasant experience. I have tried to solve the issue as well, a couple of years ago. Have a look at: De Roo, G. (2021) Knowing in Uncertainty – On epistemic conditions differentiated for situations in varying degrees of uncertainty, the distinction between flat and hierarchical ontology, and the necessary merger with the axiological domain of values, *Disp – The Planning Review*, 57:2, 90-111; <https://doi.org/10.1080/02513625.2021.1981016>. I am very willing to continue the conversation on a personal level.

Declarations

Potential competing interests: No potential competing interests to declare.