

Comments of Jennifer Wang's "Fundamental Essences"

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Jennifer Wang takes the following to be a plausible principle connecting essence and dependence:

(EDL) If y figures in the essence of x , then x depends upon y .

For the purposes of these comments, I will accept (EDL), interpreting its terms in the way that Jenn suggests. But, Jenn notes, the principle creates a puzzle for anyone with causal essentialist leanings. She writes:

Since fundamental entities don't depend upon any other entities, no entities can figure in their essences. It thus seems that fundamental entities have "trivial" essences, for their essences cannot have any other entities as constituents. (p. 6)

Thus, (EDL) rules out what some take to be the best account of fundamental properties: causal essentialism. Jenn's goal is to find a way to accept (EDL) while retaining "the spirit of causal essentialism" (p. 15). To this end, she puts forth a view she calls "modal quidditism", and a tentative proposal as to how best to understand it.

In these comments, I will: (1) Question whether (EDL) leads to the conclusion that fundamental properties have "trivial" essences. I believe the quidditist should say that the essences of properties are "primitive", but not "trivial". (2) Consider whether there is a way to clarify how (EDL) leads to the conclusion that all fundamental entities have primitive essences. (3) Present Jenn's proposed solution, modal quidditism, and ask whether I am understanding it correctly. (4) Consider Jenn's proposal for how to understand how causal roles can be necessary without the necessity being related to essence. (5) Consider two general and one specific objection to her proposal. And (6) suggest that a simpler and more natural causal essentialist response to the puzzle is to allow that fundamental entities can mutually depend on one another, and take *asymmetric* dependence to be the mark of the non-fundamental.

1. First, I want to say a few things about the standard (i.e., not modal) quidditist response to the puzzle, which is the response that I accept. Although Jenn correctly takes quidditism to hold that fundamental properties have *primitive* essences, she sometimes seems to take that to be equivalent to holding that they have *trivial* essences. (p. 9) As I understand quidditism, the quidditist accepts the former, but not the latter. Quidditism, as I understand it, is the view that structurally indiscernible worlds can be qualitatively distinct. The strongest motivation for quidditism comes from our own experience, for example, of color. Imagine a blue

square. Now switch the color to red. This switch in color doesn't alter the internal structure of the visual impression, or its relations to anything external in the visual experience. That's not, of course, to say that color qualia are in fact fundamental. Only that our experience gives us a clear and distinct idea of how worlds can differ qualitatively without differing in structure. It requires substantial argument to go further and say not only that quidditism is a truth about logical space, but that the fundamental properties at our world have qualitative intrinsic natures.

Quidditism should be distinguished from what I call "haecceitism about properties" according to which worlds may differ by a permutation of properties without differing qualitatively, just as the haecceitist about individuals holds that worlds can differ by a permutation of individuals without differing qualitatively.¹ The difference matters because, whereas an anti-haecceitist about individuals should, for consistency, be an anti-haecceitist about properties, there is no reason to think that an anti-haecceitist should not be a quidditist. It also matters because many arguments against quidditism are really arguments against haecceitism about properties. For example, some complain that quidditism is committed to what Jenn calls *Mere Difference*, that two worlds "can differ only in which property plays which causal or nomic role". (p. 11) But, as Jenn herself notes (p. 15), the quidditist is not committed to this since the worlds will also differ qualitatively; only the haecceitist about properties is so committed.

2. Back to the puzzle, which I now understand as saying that (EDL) has the consequence that fundamental properties have primitive essences. It would be nice if the connection between "not depending on other entities" and "having a primitive essence" could be made clearer. Let me float a suggestion that may or not be something Jenn would want to accept.

First, note that versions of causal essentialism that take the essence of a fundamental property to be its nomological role, where the role is gotten by Ramsifying the law book, do not conflict with (EDL) in the way one might expect: no fundamental property figures in the essence of any other, since all properties have been generalized over in giving the role. In this case, Jenn says, the problem is that

¹ Jenn's paper led me to a very nice article on this topic by Tyler Hildebrand, "Two Types of Quidditism". He calls quidditism "qualitative quidditism" and haecceitism about properties "bare quidditism"; I prefer my terminology to preserve that quidditism holds that properties have primitive "suchnesses", not merely primitive "thisnesses". Hildebrand argues extensively, in accord with my own views, that the former is more defensible than the latter. I have one complaint, however: he misinterprets Lewis, classifying him as a bare quidditist. That can't be: a bare quidditist rejects the identity of qualitatively indiscernible worlds, whereas Lewis was agnostic in *Plurality* and seems to accept it in "Ramseyan Humility". The correct thing to say is that Lewis thought that the difference between bare and qualitative quidditism was merely terminological. He would have rejected any attempt to motivate quidditism with reference to our qualitative experience.

the necessitation relation (assuming an Armstrong approach to laws) figures in the essence of all fundamental properties, thus making fundamental properties dependent entities. I do not think most causal essentialists would think that essential dependence on the necessitation relation should in any way conflict with a property being fundamental, but set that aside and focus on the dependence claim. Jenn's move here made me wonder: what about the logical relations and operations that are needed to characterize the essence? Is there some reason why dependence on the necessitation relation counts against the property being fundamental but dependence on logical relations does not count? If not, then we have a quick and more precise argument from (EDL) to the conclusion that all fundamental entities have primitive essences. More precise because 'primitive' can now be understood as 'logically primitive'. Would Jenn accept this argument?

3. Jenn's proposed solution to the (EDL) puzzle is to accept what she calls "modal quidditism". She characterizes it as follows: "fundamental properties necessarily, but not essentially, play the causal role that they do." (p. 12) Thus, with respect to the question of the essences of fundamental properties, she agrees with the quidditist: they are primitive. But, nonetheless, fundamental properties have their causal roles necessarily. This, for example, rules out possibilities where two fundamental properties that in fact play different roles switch places. But note that it doesn't rule out that distinct properties, with different primitive quiddities, play the same causal role at different worlds. It thus avoids positing the possibilities that arise from "permutations" (in worlds without symmetric roles); but it does nothing to rule out possibilities that arise by "replacement" of alien fundamental properties from alien worlds where they play the same causal role. Thus, I was surprised when Jenn said: "the modal quidditist rejects the possibility of two distinct scenarios that agree on the causal and nomic facts, for fundamental properties necessarily play the causal and nomic roles that they do." Am I misunderstanding modal quidditism? It seems to me that the rejection of this possibility requires the rejection of alien fundamental properties, which is no part of modal quidditism as Jenn characterized it. The rejection of this possibility would follow if one added to modal quidditism that same causal role is not only metaphysically necessary, but also sufficient, for being the same fundamental property. But this view is too strong: it rules out laws with symmetric roles, which certainly seem to be possible.

4. As Jenn notes, the biggest challenge for modal quidditism is to give some account of the necessity of causal roles. One option would be to somehow try to explain the necessity in terms of the essences; but that route seems pretty much blocked by the quidditism, the fact that the essences are primitive. Jenn prefers another option: there *is* no explanation; the necessity is primitive. She says: "the causal laws ... are primitively necessary given the fundamental properties that exist." (p. 14) Somehow, it brutally follows from the *existence* of the properties, independently of their nature, that they necessarily have the causal roles that they do.

5. I think this radical disassociation of necessity from essence is very interesting, but also problematic. Let me mention three sorts of objection to this account. The

first two are not specific to Jenn's view, and there are familiar sorts of replies. The third focuses on the relation between existence and modality that Jenn proposes.

5.1. Of course, as a Humean, I can be expected to complain about the primitive necessity. For a Humean, solutions that posit primitive necessity are really just an acceptance that there is no solution: we have something obscure that we want to understand. We say: "give up, you can't understand it; it is brutally true."

That may not have force against those who don't share my Humeanism. But I would also point out that invoking primitive necessity seems dubious because it can be used to support any intuitions about modality, even those at opposite extremes. Armstrong invokes primitive necessity to provide an account of laws according which causal roles are *not* necessary; Jenn invokes primitive necessity to provide an account according to which causal roles *are* necessary. Who's right, and how can we decide? For the Humean, only through the "honest toil" of comparing competing explanations of the necessities can we get a grip on the problem and its proper solution.

5.2. Another objection is that taking the causal roles of fundamental properties to be necessary does not accord with how physicists think and talk. Physicists will contemplate whether fundamental properties, such as charge or mass, satisfy this law or that law without any hesitation in saying that, whichever law ends up being correct, they are talking about the same fundamental properties. This certainly seems to conflict with the view that the causal laws are metaphysically determined by the existence of the fundamental properties. This objection, of course, is familiar, and applies to causal essentialism. A bad reply, in my opinion, is to say that the physicist is confusing metaphysical and epistemic necessity, and that they really hold only that it is epistemically possible that the fundamental properties satisfy different laws. A better reply is to invoke a counterpart theory for properties, and thereby capture quiddistic intuitions "on the cheap" in a way that parallels how Lewis captures haecceitistic intuitions "on the cheap". (Hawthorne endorses this defense of causal essentialism.) But for those who are constitutionally unable to accept any sort of counterpart theory, the objection is serious.

5.3. What I find most interesting and radical about Jenn's proposal is how it goes against the traditional account of how existence relates to modality, an account that I accept. On the traditional account, the modal facts are prior to, and independent of, what exists or what is actual. The modal heavy lifting is done by the possible natures of things, or, on a holistic account, the possible ways that a world could be; existence results from a simple on/off switch that, when flipped on, lights up some possibilities making them actual. This traditional conception is nicely illustrated by Leibniz's image of God, looking over possible worlds with all of the modal facts already included, choosing one of the worlds to "light up" with existence or actuality. But, of course, the traditional conception can be divorced from Leibniz's theology. The idea that modality is independent of existence carries over to any account that there are objective facts about modality, and that only some of what possibly exists,

actually exists. Now, pointing out that Jenn's proposal goes against tradition is not, of course, an objection in itself. But it is an invitation to say something more about how mere existence, independent of essential nature, is supposed to have the heavyweight implications for modality that Jenn proposes.

6. Finally, though I perhaps should resist the urge to meddle in accounts that rest on causal essentialist intuitions that I do not share, let me say something about what I would take to be the best causal essentialist response to Jenn's puzzle. It seems to me that the causal essentialist should not deny that fundamental properties mutually depend on one another; that seems to me to be the heart of the causal essentialist intuitions about fundamental properties. Thus, the causal essentialist, it seems to me, should allow that dependence can be symmetric. The problem arises from the assumption that, if an entity depends on another entity, then it cannot be fundamental. Fundamental entities should be characterized instead as entities that do not depend *asymmetrically* on any other entities. On this approach, the relation of grounding, which is asymmetric, should not be identified with ontological dependence, although it may be definable in terms of patterns of ontological dependence.

Of course, Jenn is aware that there are responses along these lines, and for the sake of her paper was setting them aside. Even if I'm right that Jenn's own proposed response is not the best response for someone with causal essentialist leanings, it is in the space of possible responses, and is certainly worth pursuing.