

Comments on Mark Heller “The Donkey Problem”

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Heller’s argument

Thesis: the best solution to the Donkey problem undermines the main motivation for Fourdimensionalism.

Three premisses:

1. The best solution to the Donkey problem is conventionalism.
2. The main motivation for Fourdimensionalism is the Donkey problem.
3. Conventionalism is available both to Three- and to Fourdimensionalists.

Heller’s first premiss

What is the Donkey problem?

The Donkey problem is how to explain facts of grounding other than by appealing to brute modality. Why does every world that contains particles arranged ϕ -wise contain a donkey (at that location)? The relation of grounding, at least prima facie, have to be distinguished from two other relations:

- identity: why does every world that contains Hesperus also contain Phosphorus?
- necessary connections: a necessitarian about causation has to explain why every world that contains the cause also contains the effect.
- composition: why do particles arranged ϕ -wise constitute an entity?

Is it a problem for linguistic ersatzists?

I think Lewis thinks the Donkey problem is a problem for linguistic ersatzists because they cannot collapse groundings into identity of facts. There are no otherworldly facts for linguistic ersatzists, so how do they distinguish between:

- “there is a donkey” and “particles are arranged ϕ -wise” are descriptions of the same fact
- necessarily, if “there is a donkey” and “particles are arranged ϕ -wise” mean what they do, then they are descriptions of the same fact

Is it a problem for Lewis?

According to Lewis, he does not have the Donkey problem because it collapses into identity: every world that contains a particles-arranged- ϕ -wise fact contains a donkey-existence fact because every (possibilist quantification!) particles-arranged- ϕ -wise fact is a donkey-existence fact.

Heller holds that this is unsatisfactory because facts about which worlds there are (in the Ludovician multiverse) are grounded in what modal sentences are true.

But Lewis might reply that facts about which worlds there are founded in combinatory principles.

What is conventionalism?

Conventionalism is the view that the same fact can be described in equally acceptable but incompatible ways and that both descriptions are true.

Heller’s conventionalism is the conjunction of this with an ontological claim about what really is fundamental (cf. **PP**) below).

Does conventionalism solve the Donkey problem?

The proposed solution seems to be that the claim (??)For every complete world-description that contains “there are particles arranged ϕ -wise” but does not contain “there is a donkey” there is a complete world-description that contains “there is a donkey” but not “there are particles arranged ϕ -wise” solves the Donkey problem and does not appeal to brute modality.

But it solves the Donkey problem only if we can recognise the two descriptions as being descriptions of the same thing.

Is conventionalism the best solution to the Donkey problem? An alternative would be that the facts are not identical, but one is grounded in the other (Fine 2001).

Heller's second premiss

What is the connection between the Donkey problem and the rejection of permanent coincidence?

Heller suggests that if we accept permanent coincidence, we have a Donkey problem. But only necessary permanent coincidence does seem to do so.

Is the rejection of permanent coincidence the main motivation for Fourdimensionalism?

I think that Sider's argument from vagueness does not establish Fourdimensionalism, but a weaker premiss, *Instantaneous Plenitude*. Let us use, following Sider (2001: 59), "four-dimensionalism" for the following claim:

(4D) Necessarily, each spatio-temporal object has a temporal part at every time at which it exists.

(4D) follows from three other claims, *Instantaneous Plenitude* (**IP**), *No Permanent Coincidence* (**NPC**) and *Unrestricted Diachronic Composition* (**UDC**):

(IP) Necessarily, for every time that some spatiotemporal objects exists, there is something coincident with it at that time that exists only at that time.

(NPC) No two objects are coincident at every time at which any of them exists.

(UDC) For all things that exist at some times, there is something that overlaps them and is overlapped by them at all and only the times at which they exist and that exists at all and only the times at which at least one of them exists.

Take some spatio-temporal object a . At any time t at which it exists, there is, by **(IP)**, some b_t coincident with a at t that exists only at t . By **(UDC)**, there is a fusion of all and only those b_t s that exists at the same times than a . By **(NPC)**, this fusion is identical to a . Hence a has instantaneous temporal parts at all times it exists (**4D**).

David Lewis' argument from vagueness for unrestricted composition goes as follows:

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| (i) | For every thing, definitely (it exists) or definitely (it does not exist) | no ontic vagueness |
| (ii) | For every things, definitely (they are identical) or definitely (they are not) | no ontic vagueness |
| (iii) | Definitely $(p \rightarrow q) \vdash$ Definitely $(p) \rightarrow$ Definitely (q) | logic |
| (iv) | For every n , definitely (there are just n things) or definitely (not so) | from (i), (ii), (iii) |
| (v) | Definitely (there is a cat iff $\phi(a_1, \dots, a_n)$) | composition |
| (vi) | Definitely (there is no cat iff there are just n things) | composition |
| (vii) | Definitely (there is a cat) or Definitely (there is no cat) | from (vi), (iv), (iii) |
| (viii) | Definitely $(\phi(a_1, \dots, a_n))$ or Definitely $(\neg\phi(a_1, \dots, a_n))$ | from (vii), (v), (iii) |

The argument shows that " $\phi(x_1, \dots, x_n)$ " must be definitely true or false of any n objects that may or may not be a cat. The argument then continues as follows:

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| (ix) | Every non-trivial condition ϕ on composition is vague | argument from elimination |
| (x) | No vague condition ϕ on composition satisfies (viii) | metaphysical non-arbitrariness |
| (xi) | Only the empty and the impossible conditions ϕ satisfy (viii) | from (ix) and (x) |
| (xii) | There are composite objects. | common sense |
| (xiii) | $\phi(a_1, \dots, a_n)$ iff a_1, \dots, a_n exist | from (xi) and (xii) |
| (xiv) | There is a cat iff a_1, \dots, a_n exist | from (xiii), (v), (iii) and 'Definitely $(p) \vdash p$ ' |

Sider's argument from vagueness is an adaptation of Lewis' argument to the temporal case. It consists in a restriction of (v) to diachronic composition, where a_1, \dots, a_n all exist at (possibly) different temporal instants. He concludes that there is no non-trivial restriction of diachronic composition, because any would be vague. This establishes **(UDC)**, but not yet **(4D)**.

Should we reject coincidence?

Heller argues that a difference in persistence conditions should not be brute. But this applies only to non-permanent contingent coincidence.

I agree that the “underlying intuition” – which, I agree, is the Principle of Modal Supervenience – applies to permanent contingent coincidence as well. Heller argues, rightly in my opinion, that weak global supervenience of modal persistence conditions does not adequately capture this intuition.

But against non-permanent coincidence we would need a stronger principle: that the existence conditions of a thing at time t are grounded in facts about the thing at earlier times than t (Heller talks about the “structure” of the thing, but I am not quite sure what he means by this).

I agree that the car/cat analogy makes it plausible that weak global supervenience is not enough and that we should reject even non-permanent coincidence.

Heller’s third premiss

What does conventionalism amount to in the 3D/4D context?

A mysterious passage:

“The fundamental ontology is an ontology of properties distributed in a manifold. The entire actual world can be described without any terms for material objects. But the debate between 3Dists and 4Dists is a debate about the nature of material objects. The conventionality of these objects deflates the 3D / 4D debate.”

Call the following claim the “Patchwork Principle”:

(PP) The fundamental ontology is a property-instantiation ontology, and *both* the particles- and the donkey-ontology are re-descriptions of it at different levels of granularity.

I do not understand in what relation **(PP)** stands to conventionalism: I think both adherents of **(PP)** could reject conventionalism (I think Lewis does) and conventionalists could reject **(PP)** (I think Hirsch does).

Is conventionalism available to Threedimensionalists?

I think a form of conventionalism that solves the Donkey problem is available only to Threedimensionalists accepting **(UDC)** for their fundamental ontology.

Does 3D conventionalism really solve the Donkey problem?

According to Heller, **(PP)** solves the Donkey problem:

“...those apparent cases of coincidence are really cases in which lump-talk and statue-talk are describing the very same distribution of fundamental properties. It is true to say “there is a lump there” and true to say “there is a statue there” and true to say “they are distinct,” but these three truths do not require brute modality if they are understood as the conventionalist understands them.”

But why is it true to say for the conventionalist to say that they are distinct?

References

Fine, Kit. “The Question of Realism.” *Philosophers’ Imprint* 1(1), pp. 1–30, 2001. 2

Sider, Theodore. *Four-Dimensionalism: An Ontology of Persistence and Time*. Oxford: Clarendon Press, 2001. 2