Structural Realism: the Worst of Both Worlds?

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Preview of talk

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1. What is Ontic Structural Realism?
   - Negative theses of OSR
   - Positive theses of OSR

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  - Hence we will not be drawn into name-calling and unproductive disputes over general methodology.
  - Such fights may be fun to observe for by-standers, but they are scientifically and philosophically sterile.

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(Qualification: Objects/properties may exist, but are not fundamental.)

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- The construction of objects as bundles would be more complicated and seem to require a multiplication of compresence relations.

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- To link up a relation of n with one of m argument places, we need $n \times m$ different compresence relations.

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- “we should not interpret science [. . .] as metaphysically committed to the existence of self-subsistent individuals” (119)
- “there are objects in our metaphysics but they have been purged of their intrinsic natures, identity, and individuality, and they are not metaphysically fundamental” (131)

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Or does it just amount to the claim that none of the (small number of) fundamental properties is intrinsic? This should be argued case by case.

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"Ontic Structural Realism (OSR) is the view that the world has an objective modal structure that is ontologically fundamental, in the sense of not supervening on the intrinsic properties of a set of individuals. According to OSR, even the identity and individuality of objects depends on the relational structure of the world. Hence, a first approximation to our metaphysics is: 'There are no things. Structure is all there is.' " (p. 130)

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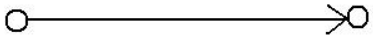
Structure-only is significantly stronger than relations-only.

Isomorphic structures with discernible relations



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Isomorphic but different worlds due to the different “nature” of the relations.

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- This is independent of what account (if any) is given of what “makes them different”.

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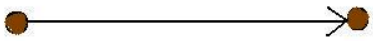
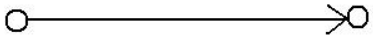
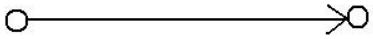




Isomorphic structures with discernible relations



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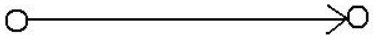

Varieties of possible physical relations

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- This does not carry a commitment to “quidditism”, the view that different relations can swap roles. (Unless “roles” are understood to be merely distribution patterns.)
- There is a good sense in which a mathematical relation cannot swap role with a physical relation (even if it might have the same distribution pattern).

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- “Structure all the way down” does not by itself remove the need for relations with natures; for there might be distinct isomorphic structures that go all the way down.
- We would need at least a guarantee that the total physical structure is not isomorphic to any mathematical structure. But does science give us any reason to believe that this is true?
- More generally: Do we have any evidence for science that relations are constituted by further relations in an infinite descent?

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Could anything do all these things at once?

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- they don't satisfy the realists because they're allowed to be realists only about what is preserved through theory change (so it's a miracle why our theories just about the structure are successful);
- they don't satisfy the anti-realists because there is still scope for error about the natures of fundamental relations (so there is room for a pessimistic meta-induction).