

WHAT IS LOGICAL REALISM?

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WHAT IS LOGICAL REALISM?

- Metaphysical realism leading to realism about logic?
- The idea that logical facts are mind- and language-independent.
 - But that does not entail anything about the nature of logical facts or about our epistemic access to them.
- The goal is to outline and systematize the different ways that logical realism could be entertained and to examine some of the challenges that these views will face.
- I believe that logical realism is true (already since Tahko 2009).
 - Earlier I only focused on arguing that LNC can be understood as a mind- and language-independent principle concerning logical structure in the world (cf. Mares 2004).

MARES

“The metaphysical dialetheist holds that there are aspects of the world (or of some possible world) for which any accurate description will contain a true contradiction. Semantic dialetheism, on the other hand, maintains that it is always possible to redescribe this aspect of the world, using different vocabulary (or perhaps vocabularies), consistently without sacrificing accuracy.”

Mares, E.D. 2004. Semantic Dialetheism. In Priest, G., Beall, J.C. and Armour-Garb, B. (eds.) *The Law of Non-Contradiction*. Oxford: Clarendon Press, p. 270.

TWO THESES ABOUT LOGICAL REALISM

- LaPointe (2014), drawing on Resnik (1999), suggests that logical realism in its various forms is committed to the following two theses:
 1. (LF) There are *logical facts* (or “logical structure”), that is, there is a fact of the matter when it comes to the truth-value of claims about logic.
 2. (IND) Logical facts are independent of our cognitive and linguistic make-up and practices. They are *objective* in the sense that they are mind- and language-independent.
- Like LaPointe, I want to set aside the analysis of *truth* or what it is for a logical fact to make some claim about logic true (but see Tahko 2014).
- Focus on (IND).

LOGICAL REALISM \rightarrow ONE TRUE LOGIC?

- Since logical pluralism may satisfy (LF) and (IND), we need to be more precise.
- Consider Eklund's (forthcoming) recent attempt to clarify logical pluralism(s).
 1. **mapping pluralism**: there are the different possible languages (trivial?)
 2. **indeterminacy pluralism**: it is indeterminate which of the languages is the actual language we speak
 3. **purpose pluralism**: different languages (truth predicates, etc.) are best for different purposes (trivial?)
 4. **goodness pluralism**: given some particular purpose, different languages serve that purpose equally well (interesting, but what purpose?)

LOGICAL PLURALISMS

- Eklund suggests that there are not only four, but eight types of pluralism.
 - *Carnapian pluralism*, focuses on the logical expressions themselves, the connectives and the quantifiers.
 - *Beall-Restall pluralism*, focuses on logical consequence or validity.
- Goodness pluralism is the one that Eklund finds most interesting.
 - Potential "purpose": *how we ought to reason*.
 - Shall we interpret "ought" logically or epistemically? (Quick & dirty rules?)
 - Truth-preservation? (Too general? Carnapians: different logics will preserve truth for different languages. Field: validity cannot be understood as truth-preservation.)
 - If we follow Field (2009), we end up with anti-realism about epistemic normativity: no correct logic "in some goal-independent sense".

THE LOGIC OF THE BOOK OF THE WORLD

- Eklund on Sider (2011): among the possible meanings there are some that are “especially fundamental, or natural, or structural, or joint-carving” [p. 16].
- The one true logic would then attempt to capture those logical expressions that have this kind of privileged status.
- For Sider, the “fundamental language” contains some logical expressions, but no *metalogical* expressions.
 - Since metalogical expressions are ruled out, problems concerning the truth predicate do not arise (e.g., semantic paradoxes and vagueness).
- We can find something partly similar in Maddy (2007).

MADDY

“(1) logic is true of the world because of its underlying structural features, and (2) human beings believe logical truths because their most primitive cognitive mechanisms allow them to detect and represent the aforementioned features of the world. [...] (3) human [beings] are so configured cognitively because they live in a world that is so structured physically.”

Maddy, P. 2007. *Second Philosophy: A Naturalistic Method*. Oxford University Press, p. 226.

LOGICAL REALISM IS A METAPHYSICAL VIEW

- Maddy draws inspiration from a variety of historical sources (Frege & Kant).
 - She traces the normativity of logic to Frege’s idea that logic is concerned with the ‘laws of truth’ rather than mere ‘laws of thought’.
- Strikingly, Maddy goes beyond a simple statement of logical realism; she gives an empirically-motivated account of how human beings can epistemically access the objective logical structure of the world.
 - Maddy’s notion of a KF-world (for Kant-Frege), an idealized starting point for our pursuit of worldly logical structure (from rudimentary logic to classical logic).
- The epistemic element is, I think, something that we should not build into the definition of logical realism itself.

LOGICAL REALISM IS A METAPHYSICAL VIEW

- Another recent attempt to interpret (Sider's) logical realism by Michaela McSweeney (forthcoming):
- McSweeney asks: if logical realism is true, which of our logical concepts and terms respect the logical structure?
 - We're looking for some kind of *causal link* between logical concepts and structure.
- McSweeney's dilemma: *Privileged vs. Unfamiliar*.
 - Which quantifier (\exists or \forall) carves at the joints?
 - Either one of these is privileged or neither is.

LOGICAL REALISM AND LOGICAL CONSTANTS

- McSweeney's two versions of logical realism:
 - *ontological realism*: logical constants refer to individual entities.
 - Very fine-grained theory, only one of \exists or \forall can carve at the joints (but which?).
 - *ideological realism*: logical constants are *syncategorematic*
 - They don't refer, but they are (more or less) joint-carving bits of ideology (e.g., Sider?).
- Notice that there's a novel sense of logical pluralism to be extracted from this.
 - Could there be redundancy at the fundamental level (both \exists and \forall)?
 - If we abandon the *uniqueness* of the fundamental, then this seems possible (cf. Tahko 2018).

OUTLINING LOGICAL REALISMS

- Does the choice between the two versions of logical realism matter?
 - Plural grounds vs. a conjunctive ground (e.g., Correia 2013).
 - [f] is grounded [g], [h]
 - [f] is grounded in [g] & [h]
- True conjunctions are grounded in their conjuncts, so [g] & [h] is grounded in [g], [h].
 - Is there any ontological difference between [g] & [h] and [g], [h]?
 - On a 'worldly' conception of facts, it's not obvious that there is.
 - But grounding is supposed to be irreflexive, so [g] & [h] and [g], [h] must be distinguished ([g] & [h] can't ground itself).
- So, certain combinations views about grounding, facts, and logical realism are incompatible.

OUTLINING LOGICAL REALISMS

- Or consider Fine's comments on Sider:
 - “The E-project is concerned with *saying* what can be said in the most fundamental terms, while the D-project is concerned with *describing* what can be described in the most fundamental terms.” (Fine 2013: 730.)
 - Focus on sub-propositional constituents vs. propositions.
 - A disjunction $[g] \vee [h]$ will always be parsed as either $[g]$ or $[h]$.
 - The disjunction may be dispensable in the D-project but not in the E-project.
 - The core question: are there any logical constants among the D-fundamentals?
- Sider “seems to take for granted that logical constants are fundamental without giving any thought to whether they are necessary for describing the world” (Fine 2013: 731).

OUTLINING LOGICAL REALISMS

- My suggested labels (reflecting McSweeney's distinction):
 - *Realism about logical constants*: “g & h” is properly parsed only if the conjunction & (in addition to “g, h”) is part of mind- and language-independent reality (some constants are D-fundamental).
 - *Realism about logical structure*: “g & h” can be parsed in terms of “g, h”, but there is some logical structure in the mind- and language-independent reality (logical structure is D-fundamental).
- Following Fine (2013), it's not clear whether Sider falls under the first or the second view!
- Are there any further reasons to prefer one option over the other?

THE CASE OF NEGATION

- Consider negation.
 - Realism about logical constants might have the upper hand.
 - What kind of logical structure could make negative propositions true?
 - One could try an old line of argument, starting from Demos (1917).
 - Negative facts can be accounted for in positive terms (as opposed to, e.g., polarities among facts, cf. Beall 2000, Molnar 2000, and Priest 2006).
 - Postulate primitive incompatibility as a genuine, worldly feature.
- Perhaps the thought can be traced all the way to Aristotle:
 - “The same attribute cannot at the same time belong and not belong to the same subject in the same respect.” (Aristotle, *Metaphysics* 1005b19–20.)

THE CASE OF NEGATION

- The idea of incompatibility as the source of negation does come up from time to time.
 - Price (1990) is interested in the *evolutionary* basis of negation: “I suggest that negation be explained in terms of the primitive notion of incompatibility” (p. 228).
 - Berto (2015) suggests that incompatibility “carves nature at its joints”:
 - “What kinds of things can be compatible or incompatible, that is, can stand in (in)compatibility relations? Different items plausibly qualify: concepts, properties, states of affairs, events, propositions. This is good. It makes (in)compatibility a stable notion across different ontological categories, providing evidence for its being one that carves nature at its joints.” (p. 771)
- I will not defend this idea any further (but see Tahko 2017).
 - I take it that realism about logical structure as defined here is at least entertainable.

THE OVERGENERATION PROBLEM

- If realism about logical structure is true, then we face the following question:
 - What counts as *logical structure*, apart from just *structure*?
- The overgeneration problem: we don't want all structure to count as logical.
 - But if logical constants are not part of the structure, then what makes this a version of *logical realism*?
 - One way of seeing this is that realism about logical structure is a reductionist view about logic (but I don't think it's the only way).
 - Consider: there is D-fundamental (logical) structure that we can capture with logical constants (e.g., primitive incompatibility is D-fundamental), but the constants do not refer to entities.
 - The one true logic is a particularly suitable expressive device for capturing the most basic features of the (logical) structure of the world.

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