

The costs of the Irreflexivity of Ground

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General worry: Imposing irreflexivity on grounding has costs in the ontology of its relata, imposing unmotivated and problematic distinctions.

What I aim to show: you cannot have worldly hyperintensional grounding, ie you cannot have both grounding equivalence between p and both $p \wedge p$ and $p \vee p$ and at the same time also make grounding differences between p and $\neg\neg p$.

The argument:

- (1) $\neg\neg p < \neg\neg p \wedge \neg\neg p$ assumption
- (2) $\neg(\neg p \vee \neg p)$ De Morgan 1
- (3) $\neg\neg(p \wedge p)$ De Morgan 2
- (4) $\neg\neg p$

Perhaps taking the de Morgan laws to be strong grounding equivalences (licensing substitution in grounding claims) is too much.

Another:

If (i) adding the same to the same gives the same or (ii) taking away the same from the same gives you the same, then the proposition that $p \wedge p$ is not as the same as the proposition that p

- (5) $\langle p \wedge p \rangle = \langle p \rangle$
- (6) $\langle p \wedge p \wedge q \rangle = \langle p \wedge q \rangle$
- (7) $\langle p \wedge q \rangle = \langle q \rangle$