ERRATA TO DEPTH RELEVANCE AND HYPERFORMALISM

Tore Fjetland Øgaard has pointed out in correspondence that there are unfortunately counterexamples to Lemma 1, Corollary 2, and Theorem 5 in the above paper. example, $\neg p \vee \neg(p \to \neg p)$ is a theorem of DR but $\neg q \vee \neg(p \to \neg p)$, which is clearly a depth-substitution instance of it, is not. Thus the claim that DR is closed under depth-substitutions is false.

The problems stem from the disjunctive rules R4, R5, and R6. The argument I give for the inductive clause concerning their non-disjunctive cousins does not generalize to them.

The results do hold for the system that we get by omitting the disjunctive rules R4, R5, and R6. In [1], I call this system DR^-. Since DR^- contains the logic DW and all of its sublogics, the results still hold for a range of interesting and well-studied relevant logics. But I should probably not call the results actually proved in my paper the strong and weak Brady theorems, but rather something like the strong and weak restricted Brady theorems.

References

[1] Shay Allen Logan. Strong depth relevance. Australasian Journal of Logic, 18(6):645–656, 2021.