

Hierarchical pluralism is actually universalism

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In a recent publication, Çevik (2023) introduced the concept of the hierarchical multiverse to organize various set theories based on their *degree of intentionality*, which is a measure for its plausibility with respect to the full conception of the theory in consideration. Central to his approach is the assignment of a degree of intentionality to every sentence φ that is independent of ZFC, in such a way to approximate to a maximally consistent theory $T^* := ZFC \cup \{\varphi \mid dg(\varphi) > dg(\neg\varphi)\} \cup \{\neg\varphi \mid dg(\neg\varphi) > dg(\varphi)\}$ that contains ZFC plus all the sentences with the highest degree of intentionality. This talk will critically examine the implications of this approach, arguing that it implicitly commits Çevik to a universe view, where a single, coherent mathematical reality is assumed. This commitment seems to conflict with his “pluralist dilemma”, which posits that one must choose between liberalising mathematical ontology and maximizing the determinacy of mathematical truth, but cannot fully achieve both. We will also relate this discussion to Maddy (1997) famous maxims UNIFY and MAXIMIZE, as well as recent developments in potentialist accounts of set theory.

References

- Çevik, A. (2023). Hierarchical multiverse of sets. *Notre Dame Journal of Formal Logic*, 64(4), 545–570.
Maddy, P. (1997). *Naturalism in mathematics*. Oxford University Press, Oxford.