

CHANGE THE LOGIC, CHANGE THE MEANING?

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In his 1946 Princeton Bicentennial Lecture Gödel suggested the problem of finding a notion of definability for set theory which is "formalism free" in a sense similar to the notion of computable function — a notion which is very robust with respect to its various associated formalisms. One way to interpret this suggestion is to consider standard notions of definability in set theory, which are usually built over first order logic, and change the underlying logic. We show that constructibility is not very sensitive to the underlying logic, and the same goes for hereditary ordinal definability (or HOD). We observe that under an extensional notion of meaning for set theoretic discourse, Quine's Dictum "change of logic implies change of meaning" is only partially true. This is joint work with Menachem Magidor and Jouko Väänänen.