

CAN FORMALISM BE REVIVED?

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Yes, I will argue, and a variant of ‘game formalism’, rather than Hilbertian formalism at that; but a variant in which mathematical utterances typically express truth-valued assertions. I start from the fairly orthodox idea that tokens of sentences with a sense or *informational* content express, in a given context, propositions which are made true or false by the world only by dint of augmentations of the sense which are dependent on the circumstances of utterance. The content of these circumstances, the *metaphysical* content I will say, can depart from the informational content in various ways. More controversially (still) I argue that this can mean that some assertions do not represent the world but are made true or false (correct or incorrect) in rather different ways, in projective, or fictional or, in the case at hand, mathematical *modes of assertion*. In the latter case, what makes the sentence true or false is the existence of a concrete proof or disproof (provability η proven, of course) though these conditions form no part of the informational content. Thus we get a radical anti-platonism. In the talk, after sketching this general approach, I will look at what I take to be the most serious difficulties, those relating to negation-incompleteness. I will finish on the problem posed by Gödelian limitative results: if truth is effectively equated with proof, as above, does this not mean that undecidable sentences lack truth values? I will respond to this by extending the strategy I will use to address an even more severe problem. Even in negation-complete theories, Δ_0 arithmetic for example, there are short concrete utterances which we know lack concrete proofs or refutations, at least if they are to be graspable by us. Will formalism, of this stamp, not have to deny that even such sentences have truth values?