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A Carnapian approach to the meaning of logical constants

Abstract
Does a consequence relation in a language $L$, as a syntactic relation between sets of $L$-sentences and $L$-sentences, fix the meaning of the logical constants in $L$? In his 1943 book *The Formalization of Logic*, Carnap worried that this seems to fail even for classical propositional logic $CL$. However, adopting the viewpoint of modern formal semantics, which in particular requires meaning assignment to be compositional, Carnap’s worries about $CL$ can be allayed. More importantly, it provides a precise framework for asking Carnap’s question about any consequence relation in any logic. (To what extent) does classical first-order consequence determine the meaning of $\forall$? What about other (generalized) quantifiers? What about the intuitionistic meaning of the connectives? Or $\Box$ in (classical) modal logic? [1] deals with the first of these questions. In the talk I will start by an overview of answers to the first two questions, and then focus on the last one. Despite obvious similarities between $\forall$ and $\Box$, there are important differences. Roughly, while there is essentially just one first-order logic, there are innumerable modal logics. That makes answers to Carnap style questions about the meaning of $\Box$ more intricate, and more interesting, than in the case of $\forall$. Although we in a sense cover very familiar ground in modal logic, the perspective one gets, in particular of so-called neighborhood semantics for modal logic, seems novel. This is joint work with Denis Bonnay.