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Definite mathematical problems, indefinite extensibility and semi-intuitionistic theories of sets

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Brouwer argued that limitation to constructive reasoning is required when dealing with "unfinished" totalities. Dummett argued that the correct logic is intuitionistic, not classical. Most famous are his meaning-theoretic arguments but there is also a separate argument based on the notion of indefinite extensibility. In recent times, Feferman argued that certain mathematical problems, notably CH, are indeterminate employing semi-intuitionistic set theories as a formal framework for presenting his case.

In the talk I'll try to say something about a common core that connects these arguments and also how, from a metamathematical point of view, different levels of indefiniteness/definiteness can be treated in the single framework of semi-intuitionistic theories of sets, whose basic logic is intuitionistic, but for which the law of excluded middle is accepted for bounded formulas.