▶ JULIETTE KENNEDY, *Do syntactic features supervene on semantic ones in foundations of mathematics? A few starting points.*

Department of Mathematics and Statistics, Helsinki University, Gustaf Hällströminkatu 2b, Finland.
E-mail: `juliette.kennedy@helsinki.fi`.
URL Address: `http://www.math.helsinki.fi/logic/people/juliette.kennedy/`.

The practice of foundations of mathematics is built around a firm distinction between syntax and semantics. But how stable is this distinction, and is it always the case that semantically presented mathematical objects, in the form e.g. of a model class, might give rise to a "natural logic" in which the model class is definable? Can a logic without a syntax be considered a logic at all? In this talk I will investigate different scenarios from set theory and model theory in which an investigation of the notion of an implicit or internal logic or syntax becomes possible. I will close by discussing some historical issues raised by Blanchette [1], Goldfarb [2] and others having to do with the relation between having a precise syntax and the development of metamathematics, in early foundational practice.

[1] PATRICIA BLANCHETTE, *From Logicism to Metatheory*, **The Palgrave Centenary Companion to Principia Mathematica** Bernard Linsky and Nicholas Griffin , editors), Palgrave Macmillan, Basingstoke, United Kingdom, 2013, pp.59–78.

[2] WARREN GOLDFARB, *Logic in the Twenties: the Nature of the Quantifier*, **The Journal of Symbolic Logic**, vol. 44 (1978), no. 3, pp. 351–368.