Reflection Seminar
Session 2

Monday 23rd January, 2–4pm

1 Overview

The second session will survey the strength of what we've been calling Standard Reflection principles, for first- and higher-order languages, with an eye to getting a tighter grasp on Koellner's claim that Reflection Principles are either weak or inconsistent.

(SR) $$\phi(A) \to \exists\alpha\big(\phi^{V_\alpha}(A \cap V_\alpha)\big)$$

Upper and lower bounds on the strength of such principles will be reviewed. In the higher-order case this will incorporate an introductory overview of some large cardinal theory: including Inaccessible, Mahlo, Π_n^m-Indescribable, and Measurable cardinals.

2 Readings

The technical material in the second session will be self-contained. It will *not* presuppose any knowledge of large cardinals but will presuppose a grasp of the basics of Zermelo-Fraenkel set theory.

Background reading. The presupposed material is covered, e.g., in Frank Drake's *Set Theory: An Introduction to Large Cardinals*, ch. 2 (North Holland, 1974).

Much of the relevant material on the relevant large cardinals may be found in chs. 4, 6 and 9, but familiarity with this will not be assumed.

3 Location

The seminar will take place from 2–4, in the (aptly named) Fraenkel Room, Corpus Christi College, Oxford. (See here for a map of Oxford and map of Corpus.)

Philosophy of Mathematics Seminar. For those wishing to also attend Gabriel Uzquiano's talk 'Indefinite Extensibility Revisited' at 4.30pm, 10 Merton Street is a 2 minute walk from Corpus Christi.