

國立中正大學哲學系學術演講

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講題：**Certainty and Infinity: Rethinking the limits of
17th Century Philosophical Method**

In the standard reading of early modern philosophy, mathematical certainty via the "geometrical method" (Descartes) stands out as an ideal for philosophical practice and presentation. The affinity between mathematics (specifically geometry) and philosophy was, as ever, a grasp at certainty. However, in this same historical conjuncture, the explosion of mathematical work also introduced uncertainty, or at least an uneasiness, with regard to the prodigious incurrence of new mathematical methods and concepts. The key instance of this ambivalence is the progressive rise of the infinite and infinitesimal in mathematics, in part due to the work of Leibniz, through the late 17th and the 18th century.

This article begins with the interpretation of this double-edged phenomenon in the early modern period in Léon Brunschvicg's 1912 *Les étapes de la philosophie mathématique*. By placing Spinoza and Leibniz, direct contemporaries, on two sides of a historical divide concerning the actuality of the infinite, Brunschvicg argues for a metaphysical impact of mathematics in this transformation that is neither a direct mathematical notion nor a philosophical invention. Instead mathematical innovation (ie. speculation) transformed the background limits of thinking about the infinite and was uniquely inscribed in Leibnizian metaphysics. Here, the interface between mathematics and philosophy, far from the ideal scrupulousness of the geometrical method, was instead the permissiveness of the infinite made generic and mundane.

With this affirmation of the geometrical method as one that takes uncertainty rather than certainty as its task, we return, in our final remarks, to a re-evaluation of the Spinozist project. Here we find that Spinoza's views on the infinite remains justified against its harsher traditional critiques. Yet it is precisely because of this that the Leibnizian alternative emerges in stark difference. In so doing we have rejected Brunschvicg's judgment but put, in its place, something nonetheless true to its spirit.