



The Bounds of Judgement / BJ
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Instituto
de
Filosofia

Lecture Series

POINT-FREE THEORIES OF SPACE

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December 7th – 1st Lecture

Torre B, Gabinete 118 – 16 h

The first lecture, historical, concerns the origins of point-free theories of space. It begins with the notion of space in ancient Greece and Greek approach to geometry. Then it moves on to Kantian idea of space as pure a priori form of intuition and his views on geometry as the science which is synthetic and a priori. After presenting Kantian perspective on space and geometry, the remaining part of the lecture will be devoted to a description of Bertrand Russell's, Theodore de Laguna's and Alfred Whitehead's views on what space is and what kind of science geometry is. The turn towards empirical basis of geometry will be of particular importance in this part of the lecture. Finally the idea of a point-free geometry and how it compares to traditional, point-based approaches will be considered. Basic assumptions and ontological commitments of both point-based and point-free systems of geometry will be presented.

December 9th – 2nd Lecture

Torre B, Gabinete 118 – 16 h

The second lecture will be devoted to a brief presentation of how points can be constructed from other entities. It will focus on two such constructions, of Alfred Whitehead's from *Process and reality* and of Andrzej Grzegorzczak's paper *Axiomatizability of geometry without points*. This part will be a bit technical, with an application of (rather simple) mathematical apparatus. Some familiarity with elementary set theory and logic will be useful, but is not necessary to grasp the main idea of the constructions presented.