

## **Cantorian Abstraction: Cardinal Numbers as Arbitrary Sets**

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In this talk, I will propose a reassessment of Cantor (1915) abstractionist account of cardinal numbers, based on the resources of Hilbert (1922)  $\varepsilon$ -operator. The idea was first formalized by Bourbaki (1968) axiomatic Set theory (called BK), where Hume Principle follows from the definition of cardinal numbers. The leading idea is that cardinal numbers are arbitrary sets identified only by the property of being equinumerous to the given sets. After presenting the formal setting, I will compare the BK definition of cardinal numbers with the Frege-Russell and Zermelo-von Neumann accounts. Then, I will develop a Cantorian abstractionist account of cardinal numbers in the line of Fine (1998) which resists Frege's (1884) objections. Finally, I will evaluate the advantages of adopting the BK definition over Hume Principle as a characterization of cardinal numbers.