Giorgio de Chirico, La lassitude de l'infini, 1912

פרופסור פאולו מנקוסו

פרופסור לפילוסופיה ע"ש ווילים ס. ומריון סלוסר
המחלקה לפילוסופיה
אוניברסיטת קליפורניה, ברקלי, ארה"ב

Professor Paolo Mancosu

Willis S. and Marion Slusser Professor of Philosophy
Department of Philosophy
University of California, Berkeley, USA

Lecture within the framework of the "Logic in Philosophy" Distinguished Lecture Series in memory of Ruth Manor

הרצאה במסגרת סדרת הרצאות "מופת בלוגיקה בפילוסופיה" לזכר רות מנור

HOW MANY POINTS ARE IN A LINE SEGMENT?
FROM GROSSETESTE TO NUMEROSITIES

Opening remarks:
Dr. Ofra Rechter
Department of Philosophy

דברי פתיחה:
ד"ר עפרה רכטר
החוג לפילוסופיה

The Lecture will be held on Wednesday
10 December 2025, at 16:00
Room 449, Gilman Building
Tel Aviv University, Ramat-Aviv

ההרצאה תתקיים ביום רביעי
10 בדצמבר 2025, בשעה 16:00
חדר 449, בניין גילמן
אוניברסיטת תל-אביב, רמת-אביב

Light refreshments will be served before the lecture | כיבוד קל יוגש לפני ההרצאה

Paolo Mancosu

Willis S. and Marion Slusser Professor of Philosophy
Department of Philosophy
University of California, Berkeley, USA

December 10, at 16:00
Room 449, Gilman Building

HOW MANY POINTS ARE IN A LINE SEGMENT? FROM GROSSETESTE TO NUMEROSITIES

In his commentary on Aristotle's *Physics*, Robert Grosseteste (ca. 1253-1175), Oxford theologian and Chancellor of the University, wrote: "Moreover, [God] created everything by number, weight, and measure, and He is the first and most accurate Measurer. By infinite numbers which are finite to Him, he measured the lines which He created. By some infinite number which is fixed and finite to Him, He measured and numbered the one-cubit line; and by an infinite number twice that size, He measured the two-cubit line; and by an infinite number half that size, He measured the half-cubit line."

In Grosseteste's account the numerosity of the points in a finite line segment covaries with the length of the line segment. This position gave rise to an interesting number of debates in the 13th century, especially as a consequence of a challenge raised by the Oxford theologian Richard Fishacre (1248-1205) who set up a one-to-one correspondence between the points in line segments of different lengths. I will reconstruct some aspects of this medieval debate, connect it to later intuitions (Bolzano and Cantor), and then discuss recent results from the theory of numerosities to the effect that the counting of points in a line segment preserving the part-whole principle is compatible with Lebesgue measure. I conclude that Grosseteste's intuitions can find a suitable mathematical implementation.

PAOLO MANCOSU is the Willis S. and Marion Slusser Professor of Philosophy at the University of California, Berkeley. He is one of the leading contemporary philosophers working on the history and philosophy of mathematics and logic. His research combines deep technical expertise in logic with a broad historical perspective on the evolution of mathematical and philosophical ideas. His current work focuses on neologicism, the philosophy of mathematical practice, and the history of mathematical infinity.

Prof. Mancosu has received numerous distinctions, including the Shoenfield Prize, the Chaire d'excellence internationale Blaise Pascal, the Prix Jean Cavaillès, the Humboldt Research Award, and the Guggenheim Fellowship.

His recent publications include Abstraction and Infinity (OUP, 2016); An Introduction to Proof Theory (OUP, 2021); Syllogistic Logic and Mathematical Proof (OUP, 2023); In the KGB's Crosshairs (WriteUP, 2024); and The Wilderness of the Infinite (OUP, in press).