

REPORT

On the Modern History of Mathematics

Topic: Emerging Themes

Dates: Jan 20 – 24, 2025

Venue: Isaac Newton Institute for Mathematical Sciences (INI)

Organizers: Adrian Rice, Randolph-Macon College

June Barrow-Green, The Open University

Christopher Hollings, University of Oxford

Troy Astarte, Swansea University

Report by: Sayori Ghoshal

Conference webpage: <https://www.newton.ac.uk/event/mhmw01/>

The Isaac Newton Institute for Mathematical Sciences hosted the first ever Modern History of Mathematics Workshop, that spans over four months in 2025. The workshop officially opened with a week-long program, titled 'Emerging Themes'. Invited speakers had been asked to present their research with a view to what they considered the most significant open question, or lacuna, in their respective area of the history of mathematics. The presentations ranged from histories of mathematical experts to marginalised figures who have contribution to histories of mathematics, from histories of pure mathematics to histories of fields which used mathematical tools, and from histories in Europe and America to histories of colonial and postcolonial mathematics.

As one of the invited speakers for this opening program, I presented my research on the history of statistics in India, titled *Calculative Reasoning: Colonial Tool to Democratic Compulsion*. The presentation entailed an overview of the history of the statistical sciences in colonial and postcolonial India. I shared my findings and analysis on how the histories of colonialism and imperialism have impacted the history of mathematical and statistical reasoning. In my presentation, I highlighted that although histories of science have accounted for the problems of scientific knowledge within colonial contexts, histories of mathematics and statistics have yet to engage more critically with imperialism, colonialism, postcolonialism, nationalism, and democracy. Using examples from my research on the history of statistics in modern India, I reflected on how such big picture analyses, of the intersectional

relation between calculative reasoning and geopolitics, can show us: 1) how the history of mathematics and statistics remain embedded in state politics and political thought, 2) how calculative reasoning informs political structures, and 3) how the history of such disciplines has multiple origins and trajectories much like other sciences. The presentation offered these as possible ways of bridging the gap between history of science, history of politics, and the history of mathematics and statistics.

My travel to Cambridge was made possible by a travel grant from the International Commission for the History of Mathematics (ICHM). I am grateful for the support since this workshop provided an exciting and important opportunity to share my research on the history of statistics to historians of mathematics. The discussion session following my presentation helped me understand how I could develop my research further, and what other questions could benefit and deepen my study. The discussions as well as informal conversations with participants throughout the week enabled me to forge new connections and plan potential future collaborations with scholars in the field. The other presentations were also invaluable in offering ideas about current historiographical trends, research directions and concerns in the field. I am thankful to the organizers, the INI staff and the ICHM for this opportunity to share and learn.