

Heredity under the microscope: a history of human chromosomes

In the 1950s new microscope based techniques to visualize human chromosomes (the structures in the cell that carry genetic information), raised high hopes to distance the study of human heredity from discredited eugenic and racial practices and place it on a 'solid scientific basis'. In the vision of its promoters the new approaches had implications for the study of an ever expanding number of genetic conditions, for the study of cancer, for the biology of sex determination, infertility and aging, for the study of human populations, in radiation studies and toxicology, in the courts and the policy arena.

By following human chromosomes and the techniques and images that came packaged with them, the NSF funded project and the resulting book aim to reconstruct where human heredity mattered and genetic knowledge was embraced, debated, and rejected. More specifically the study will ask: what fueled the explosive growth of that branch of science? Why has that history been neglected in accounts of postwar genetics and why is it relevant to recover that history? Tackling these questions the study will provide new insights into how human heredity has become an overriding concern in the late twentieth and early twenty-first century.