HAOHAO LEI

Nuffield College, University of Oxford
Leverhulme Centre for Demographic Science, University of Oxford
Department of Sociology, University of Oxford
Max Planck Institute for Demographic Research

haohao.lei@nuffield.ox.ac.uk
lei@demogr.mpg.de

Address: Nuffield College, New Road, Oxford, OX1 1NF

EDUCATION

DPhil Sociology (Population Science and Demography) 10/2023–Present
Leverhulme Centre for Demographic Science, University of Oxford
Nuffield College, Oxford
Supervisors: Prof. Jennifer Beam Dowd, Prof. Ridhi Kashyap
College Advisor: Professor Melinda Mills, MBE, FBA, FAcSS
Clarendon Scholar – University of Oxford's Flagship Scholarship Programme
Thesis: *Three Essays on Demographic Analyses of Deaths of Despair and Intergenerational Transmission of Longevity: Identifying Trends, Noise, and Narratives in Population Science*

Affiliated PhD Student 10/2023–Present
Max Planck Institute for Demographic Research, Rostock
Member of the International Max Planck Research School for Population, Health, and Data Science
Labour Demography Lab, Max Planck Institute for Demographic Research, Rostock
Supervisor: Dr Angelo Lorenti

OxPo Doctoral Fellow 01/2025–04/2025
Centre for Research on Social Inequalities, Sciences Po, Paris
French National Centre for Scientific Research (Centre national de la recherche scientifique, CNRS), Paris
Supervisor: Dr Zachary Van Winkle
Academic project: *Life Trajectory Complexity and Midlife Mortality in the U.S.: A Sequence Analysis Approach*

MPhil Sociology and Demography (Distinction) 09/2021–06/2023
Leverhulme Centre for Demographic Science, University of Oxford
Green Templeton College, Oxford
Supervisor: Dr Charles Rahal
College Advisor: Professor Mary Daly FBA
Thesis: *Exploring the association and interdependence between employment and fertility in 27 countries: A multi-domain sequence analysis approach*

BSc Social Sciences with Data Science (First Class Honours) 09/2017–07/2021
Social Data Institute, University of London
Supervisor: Dr Maria Sironi
Thesis: *Family formation trajectory and its correlation with later-life health: A sequence analysis approach*

CURRENT APPOINTMENTS

Ronald Coase Fellow in Political Economy 08/2025–08/2026
Mercatus Center

Tutor in Demography 10/2024–Present
Hertford College, Oxford
Magdalen College, Oxford

Tutor in Quantitative Demography 10/2024–Present
Institute of Human Sciences, University of Oxford

Research Assistant   11/2022–Present
Leverhulme Centre for Demographic Science, ERC Grant MORTAL Project

Co-Organizer of the Population Health Reading Group   10/2024–Present
Leverhulme Centre for Demographic Science, Oxford Department of Sociology, Big Data Institute, and Oxford Population Health

PREVIOUS WORK EXPERIENCE

Crude Oil Trading Internship   07/2024–09/2024
Sinochem International Oil, London

Remote Research Assistant   06/2022–08/2022
Massachusetts Institute of Technology, Media Lab, City Science Group

Research Assistant   12/2021–03/2022
Leverhulme Centre for Demographic Science, ERC Grant CHRONO Project

Research Assistant   06/2019–09/2021
Shanghai Qinpu Center for Disease Control and Prevention, Centre for Occupational Health

Research Assistant   07/2020–09/2020
Shanghai Municipal Center for Disease Control and Prevention, Centre for Chronic Disease

Remote Research Assistant   10/2019–04/2020
University of Edinburgh, Usher Institute, Centre for Global Health

Private Equity Summer Intern   06/2018–10/2018
Loyal Valley Capital

AWARDS AND FUNDING

Finalist, Fidelity International Stock Pitch Competition 2025
UK Data Service 2021 Dissertation Award Winner
Ronald Coase Fellowship, Mercatus Center, George Mason University
Clarendon Scholarship, University of Oxford
International Max Planck Research School for Population, Health, and Data Science (IMPRS-PHDS), Max Planck Society
OxPo Academic Exchanges, Department of Politics & International Relations, University of Oxford
Graduate Student Travel Grant, Nuffield College, University of Oxford

RESEARCH INTERESTS

Social demography, population science, social epidemiology, philosophy of science, event history analysis, sequence analysis, applied machine learning, fertility analysis

TRAINING

Complex Systems in Our Changing World, Complexity Winter School, Vienna Complex Science Hub (2025)
Social Network Analysis and Network Science, Said Business School, University of Oxford (2025)
ICPSR Summer Program in Quantitative Methods for Social Research, University of Michigan (2024)
Oil & Gas Industry Operations and Markets, Duke University (2024)
Introduction to Crude Oil, CME Group (2024)
The Econometrics of Time Series Data, Queen Mary University of London (2024)
Max Planck Institute for Demographic Research, Demographic Methods (2023)
Max Planck Institute for Demographic Research, Population Health (2023)
Dr Ilya Kashnitsky's Data Visualization Workshop, Leverhulme Centre for Demographic Science (2022)
Machine Learning and Analysing Twitter Data Workshop, Oxford Spring School in Advanced Research Methods, University of Oxford, Department of Politics & International Relations (2022)
ICPSR Summer Program in Quantitative Methods for Social Research, University of Michigan (2021)

SKILLS

R, Stata, SPSS, QGIS, Python, Microsoft Office

ACADEMIC WORKS

Peer-reviewed Publications

- **Lei, H.** (2025). Reassessing the U-shaped relationship between gender equality and fertility: A replication and extension of Kolk's (2019) study using comprehensive gender equality measures. *Demographic Research*, 53, 937–968.
- Li, X., Song, P., Zhu, Y., **Lei, H.**, et al. (2020). The disease burden of childhood asthma in China. *Journal of Global Health*, 10(1).

Conference Presentations

- **Lei, H.**, & Dowd, J. (2024). Selective Shields of a College Degree: Analyzing the Association Between Education and Despair Trajectories in the U.S. *PAA 2025 Annual Meeting Oral Session.*
- **Lei, H.** (2024). Reassessing the U-Shaped Relationship Between Gender Equality and Fertility *Accepted for Gender Inequalities, Fertility, and the Future of Family Demography Oral Session*, orgnized by Max Planck Institute for Demographic Research.

Work in Progress

- **Lei, H.**, & Dowd, J. *Selective Shields of a College Degree: Education and Despair Trajectories in the U.S..*
- **Lei, H.**, & Sironi, M. *Family Formation Trajectories and Their Association with Later-Life Health in England: A Sequence Analysis Approach.*
- **Lei, H.** *Employment and Fertility in 27 Countries: Exploring Their Association and Interdependence Using a Multidomain Sequence Analysis Approach.*
- Dowd, J. B., Schöley, J., Aburto, J. M., Jaadla, H., Polizzi, A., **Lei, H.**, & Kashyap, R. *Temporary Shock or Lasting Scar? The Impact of COVID-19 on Life Expectancy Trajectories in High-Income Countries.*
- Doniec, K., & **Lei, H.** *Marriage and Health Trends Over Five Decades in the U.S..*
- **Lei, H.** *Research Note: How Social Network Structures Modify the U-Shaped Gender Equity–Fertility Relationship.*(Manuscript under review at *European Journal of Population*)

REFERENCES

Jennifer Beam Dowd
PROFESSOR OF DEMOGRAPHY AND POPULATION HEALTH
Deputy Director of the Leverhulme Centre for Demographic Science, Univeristy of Oxford
Nuffield Department of Population Health, Demographic Science Unit
Univeristy of Oxford
jennifer.dowd@demography.ox.ac.uk

Charles Rahal
ASSOCIATE PROFESSOR IN DATA SCIENCE AND INFORMATICS
Nuffield Department of Population Health, Demographic Science Unit
Leverhulme Centre for Demographic Science
Univeristy of Oxford
charles.rahal@demography.ox.ac.uk

Ridhi Kashyap
PROFESSOR OF DEMOGRAPHY AND COMPUTATIONAL SOCIAL SCIENCE
Department of Sociology, Univeristy of Oxford
Leverhulme Centre for Demographic Science
Univeristy of Oxford
ridhi.kashyap@nuffield.ox.ac.uk

Maria Sironi
ASSOCIATE PROFESSOR IN SOCIAL STATISTICS
Department of Statistical Sciences, University of Padua
Social Data Institute, University College London
maria.sironi@unipd.it