Samuel Thau

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Education

Stanford University
PhD in Economics *2022 –*
Primary Fields: Industrial Organization, Political Economy

Secondary Field: Applied Econometrics

Harvard College
A.B in Applied Mathematics *2018 – 2022*
Specialization in Economics

Published Papers

Interacting Policies in Containing a Disease
With Arun Chandrasekhar, Matthew O. Jackson, and Paul Goldsmith-Pinkham
Proceedings of the National Academy of Sciences *May 2021*

Working papers

Non-Robustness of Diffusion Estimates on Networks With Measurement Error
With Arun Chandrasekhar, Tyler McCormick, Paul Goldsmith-Pinkham and Jerry Wei
Revise and Resubmit at ***Econometrica***

Network diffusion models are used to study disease transmission, information spread, technology adoption, and other socio-economic processes. We show that estimates of these diffusions are highly non-robust to mismeasurement. First, even when the network is measured perfectly, small and local mismeasurement in the initial seed generates a large shift in the locations of the expected diffusion. Second, if the initial seed is known, small measurement error in links with the share of missed links close to zero causes diffusion forecasts to be significant under-estimates. Such failures exist even when the basic reproductive number is consistently estimable. We explore strategies for estimating the volume of measurement error in the network. Finally, we examine the empirical content of this non-robustness in the context of mitigating the spread of COVID-19 and in seeding of valuable information to maximize diffusion. Our results imply measurement error necessitates stronger disease mitigation efforts to achieve the same disease outcomes.

In Progress

The Political Content of College Courses
With Jacob Light and Gideon Moore

Debates over ideological bias in higher education have become highly salient. We develop a novel text embedding based method to measure two dimensions of ideological content in college courses: politicization, the extent which the course engages in political content, and slant, the partisan valence of the political content. We compute our measures on a dataset of course descriptions from 500 colleges and universities from 2000 through 2024. We study both aggregate patterns in the data and evaluate contributions of instructor and student preferences to observed content in order to understand who would be impacted by proposed policies. We find a slight increase in the average politicization and a small increase in liberal slant. Both shifts are small relative to persistent cross field differences. Selective schools, on average, have slightly more political and liberal courses than non-selective schools with more pronounced shifts over time. Leveraging instructors moving between institutions, we find that instructors account for 43% of cross sectional variance in political course content. Ongoing work investigates student demand for political content.

Access Journalism: Theory and Evidence from Coverage of Congress

Learning-by-Doing and the Life Cycle of Innovation
With Gideon Moore and Janet Stefanov

On Assumptions of Local Structure
With Arun Chandrasekhar and Matthew O. Jackson

Teaching

Teaching Assistant, Graduate Industrial Organization
Stanford Department of Economics, for Ali Yurukoglu, Matthew Gentzkow, and Hunt Allcott — *Winter 2025*

Teaching Assistant, Real Analysis, Convexity, and Optimization
Harvard Extension School — *Spring 2021*

Teaching Assistant for Quantitative Methods in Economics
Harvard Department of Economics, for Elie Tamer — *Fall 2020*

Professional experience

Research Assistant for Professor Matthew Gentzkow
2023-2024

Algorithm Assisted Redistricting Methodology (ALARM) Project
Member, contributed to projects on state house redistricting. — *2021-2022*

Research Assistant for Professor David Yang
2021

World Data Lab, Research Analyst
2021

Service and Presentations

Refereeing
AER: Insights

Conference Presentations

- Network Science in Economics, University of Minnesota, 2024
- Machine Learning in Economics Summer Conference, Chicago Booth, Summer 2025

Fellowships

Ric Weiland Graduate Fellowship in the Humanities & Sciences
2025-2027

Skills

Programming Languages: R, Python, Julia, Stata, Matlab, and SQL
Languages: English – Native, Spanish – Intermediate