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## REFERENCES

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Professor **Andrew Foster**  
Department of Economics  
Brown University  
Providence, Rhode Island 02912  
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Professor **Peter Hull**  
Department of Economics  
Brown University  
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Professor **Brian Knight**  
Department of Economics  
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Providence, Rhode Island 02912  
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Professor **Stelios Michalopoulos**  
Department of Economics  
Brown University  
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Professor **Daniel Björkegren**  
School of International and Public Affairs  
Columbia University  
New York, New York 10027  
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## EDUCATION

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<b>Brown University</b> Ph.D. Candidate in Economics	Providence, RI, USA 2025 ( <i>expected</i> )
<b>Delhi School of Economics</b> M.A. Economics	New Delhi, India 2017
<b>Lady Shri Ram College, University of Delhi</b> B.A. (Honors) Economics Exchange: National University of Singapore	New Delhi, India 2015

## TEACHING AND RESEARCH FIELDS

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Development Economics, Digital Economies and Political Economy

# JOB MARKET PAPER

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## **Social Media Algorithms versus Preferences in a Large-scale RCT**

*Presented at* (\* upcoming): Summer Meetings of the Econometric Society 2024 (Nashville), Brown Applied Microeconomics Seminar 2024, Harvard Grad PE Seminar, North Eastern Universities Development Consortium (NEUDC) 2024\*, ETH Zürich Workshop in AI + Economics 2024\*, NBER Conference on Information and Competition in the Digital Economy 2024\*

Is engagement with harmful social media content driven by algorithmically curated feeds or user tastes? I conduct an RCT replacing personalization algorithms with random content delivery for over one million users of a prominent TikTok-like platform in India. I find a trade-off: random post recommendation lowers exposure to anti-minority ('toxic') content on average by 8.7%, but also lowers platform usage. The intervention's impact on socially undesirable behaviors was blunted as users greatly valued posts that the recommendation algorithm did not show them. Strikingly, the proportion of toxic posts shared increased by 7.8%. An economic model incorporating heterogeneous user preferences, endogenous social media activity, and an engagement maximizing algorithm, rationalizes these results and quantifies malleability in user behavior. Estimated behavioral parameters reveal that the influence of exposure to diversified feeds is low, but users are not entirely mechanical in sharing the content they are fed. This points towards limited effectiveness of regulatory measures targeting algorithms. Although over three-quarters of the treatment effects are driven by change in overall platform usage, policy counterfactuals demonstrate that combinations of randomized and algorithmic feeds can check dissemination of toxic content, without substantial costs to the platform.

## WORKING PAPERS

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### **A 'Ghetto' of One's Own: Communal Violence, Residential Segregation, and Group Education Outcomes in India**

*Awards:* Winner, Spatial Structures in the Social Sciences Graduate Student Paper Prize (2022)

*Presented at:* Summer Meetings Econometric Society 2023 (UCLA), Asian Meetings of the Econometric Society 2023 (IIT-Bombay), NEUDC 2022 (Yale), Population Association of America Conference 2022 (Atlanta), Indus Action (New Delhi), Spatial Structures in Social Science Colloquium 2022 (Brown), Annual Conference on Economic Growth and Development 2021 (ISI-Delhi), Brown-MIT Graduate Development Workshop 2021, Brown Applied Microeconomics Graduate Seminar 2020

### **Elections, Leader Identity, and Backlash**

*Presented at:* NBER Conference on Entrepreneurship, Public Policy, and Economics Outcomes 2022 (ISB-Hyderabad), Machine Learning for Economics Summer Institute 2022 (UChicago), Data Science Institute 2022 (Brown), Young Economists' Symposium 2022 (Yale), Development Data Lab, Annual Conference on Economic Growth and Development 2022 (ISI-Delhi)

### **Hate Thy Neighbor: Evidence on the Effects of Local News on Political Polarization from a Large-Scale RCT**

*Presented at:* Brown University Applied Micro Lunch Seminar 2023

### **Internet Shutdowns: Causes and Consequences** (with Ro'ee Levy and Martin Mattsson)

## FELLOWSHIPS AND AWARDS

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- Global Mobility Research Fellowship, Brown University 2023
- Merit Dissertation Fellowship, Brown University 2022
- Center for Contemporary South Asia Teaching Fellowship, Brown University 2021
- Graduate Student Fellowship, Brown University 2018
- Faculty Prize, Lady Shri Ram College, Delhi University 2015
- Exchange Scholarship, National University of Singapore 2014

## GRANTS

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- NSF Dissertation Research Improvement Grant, National Science Foundation 2023
- Weiss Fund for Research in Development Economics 2023
- Saxena Center for Contemporary South Asia Summer Fellowship, Brown University 2022
- Orlando Bravo Center for Economic Research Funding, Brown University 2022, 2021
- Saxena Center for Contemporary South Asia Winter Fellowship, Brown University 2021
- Swearer Center Engaged Course Mini-Grant, Brown University 2021
- Graduate Program in Development Summer Funds, Watson Institute, Brown University 2021, 2020
- Stone Wealth and Income Inequality Fund, Brown University 2020

## TEACHING

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### **Instructor for Undergraduate Course at Brown University**

- Economic and Human Development in South Asia 2021

### **Teaching Assistant at Brown University**

- Machine Learning, Text Analysis, and Economics (*Professor: Amy Handlan*) 2024
- Statistical Methods and Economic Theory for MPA 2022
- Game Theory and Application to Economics (*Professor: Roberto Serrano*) 2020
- Intermediate Microeconomics (*Professor: Fahri Ulusoy*) 2020
- PhD Mathematics for Economists (*Professor: Alex Poterack*) 2019

### **Instructor for Training Indian Economic Service Officers (GoI) at the Institute for Economic Growth, New Delhi**

- Quantitative Methods in Economics with STATA 2021

## WORK EXPERIENCE

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Brown University, Economics Department Research Assistant for Professor Alisa Tazhitdinova	Providence, RI 2020
Center for Development Economics, Delhi School of Economics Research Assistant for Professor Mausumi Das	New Delhi, India 2017–2018
Ranchi University and IIT-Delhi Field Investigator for Professors Jean Drèze and Reetika Khera	Jharkhand/ New Delhi, India 2013–2018

## PEER REVIEWED PUBLICATIONS

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**Impacts of regional lockdown policies on COVID-19 transmission in India in 2020** (with Paul Novosad, *Economic and Political Weekly*, 2022)

**Birth Pangs: Universal Maternity Entitlements in India** (with Aditi Priya, *Economic and Political Weekly*, 2020)

## SELECTED WORKS IN PROGRESS

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**Impact of Personalization Algorithms on Mental Health Outcomes** (with Juan Pereira)

**Understanding Reporting of Intimate Partner Violence: Evidence from Victim-Level Data** (with Marcela Mello and Mahima Vasishth)

## OTHER

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- **Organizational Service:** Co-founder, *Bahujan Economists*
- **Referee Service:** Journal of Development Economics, PLOS One, ACM Journal of Computing and Sustainable Societies
- **Conference Organization:** Fair February, Data Science Initiative, Brown University; Women in Data Science Datathon, Brown University
- **Languages:** English (fluent), Hindi (native), Punjabi (advanced), Urdu (elementary)