Aarushi Kalra

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References

Professor **Andrew Foster**
Department of Economics
Brown University
Providence, Rhode Island 02912
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Professor **Peter Hull**
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Professor **Brian Knight**
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Professor **Stelios Michalopoulos**
Department of Economics
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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

Brown University Providence, RI, USA
Ph.D. Candidate in Economics 2025 (*expected*)

Delhi School of Economics New Delhi, India
M.A. Economics 2017

Lady Shri Ram College, University of Delhi New Delhi, India
B.A. (Honors) Economics 2015
Exchange: National University of Singapore

Teaching and Research Fields

Development Economics, Political Economy, and Economics of Digital Platforms and AI

JOB MARKET PAPER

Social Media Algorithms versus Preferences in a Large-scale RCT
Awards: Distinguished Paper Award, North Eastern Universities Development Consortium
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 and UZH Workshop in AI + Economics 2024, NBER Conference on Information and Competition in the Digital Economy 2024, ISI-Delhi Growth and Development Conference 2024, Caltech Information and Misinformation in Elections Conference 2025, Georgetown McCourt School of Public Policy*

How do profit-driven personalization algorithms compete with user preferences in radicalizing social media users? As social media usage reaches record highs, personalization algorithms risk radicalizing users by reinforcing existing beliefs. However, evidence on how algorithms and user behavior jointly shape harmful online engagement is limited. In this paper, I conduct an individually randomized experiment with 8 million users of a prominent TikTok-like platform in India, replacing the feed-ranking algorithm with random content delivery. I focus on hateful content targeting minority groups, given its prominence on Indian social media and establish a trade-off: random post recommendation lowers exposure to anti-minority ("toxic") content by 27%, but at a substantial cost to the platform as overall platform usage falls by 35%. Strikingly, treated users share a larger proportion of the toxic posts they view, mitigating the decline in the number of toxic posts shared from the platform. Users with a higher interest in toxic content at baseline drive this result as they seek out posts the algorithm does not show them. I rationalize these findings with a model of a revenue-driven algorithm that faces heterogeneous users choosing which posts to consume. Counterfactual simulations evaluate alternative interventions that target toxicity in the algorithm's recommendations. Finally, I collect survey evidence to trace users' behavior beyond the platform and show that the most affected users substitute away to other platforms. These results underscore the limits of piecemeal algorithmic regulation intended to moderate harmful content.

WORKING PAPERS

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: Comparative Welfare State Conference 2024 (Brown), 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 Colloquim 2022 (Brown), Annual Conference on Economic Growth and Development 2021 (ISI-Delhi), Brown-MIT Graduate Development Workshop 2021, Brown Applied Micro Lunch 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)

Selected Works in Progress

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)

Work Experience

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

Fellowships and Awards

- 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

- NSF Dissertation Research Improvement Grant, National Sciene 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

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 Analysis for MPA *(Professors Jesse Bruhn, Bryce Steinberg, Neil Thakral, Alex Poterack)* — 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 — 2018

Peer Reviewed Publications

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*)

Other

- **Service:** Co-founder, *Bahujan Economists*
- **Referee:** Journal of Development Economics, PLOS One, ACM Journal of Computing and Sustainable Societies
- **Organization:** Fair February 2022, Data Science Initiative, Brown University; Women in Data Science Datathon 2023, Brown University
- **Affiliations:** Populations Studies and Training Center at Brown, Watson Institute of International and Public Affairs, Saxena Center for Contemporary South Asia
- **Languages:** English (fluent), Hindi (native), Punjabi (advanced), Urdu (elementary)

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