Misinformation

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Contributing departments: Geography

Anthropology

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Introduction

Misinformation often takes different forms (propaganda, urban legends, myths, gossip).

Each new communication technology leads to a new problem with misinformation. Shifts in consuming digital information through online social networks has accelerated & exacerbated information integrity problems.

Sometimes false information is incentivized (disinformation) for strategic gain among bad actors. Misinformation often travels faster and father than authentic content.

Impacts of a misinformed populous include adverse public health impacts (anti-vaccines, anti-masking, etc.), manipulated belief systems (trust, xenophobia, politics, risks), and economic well being globally.
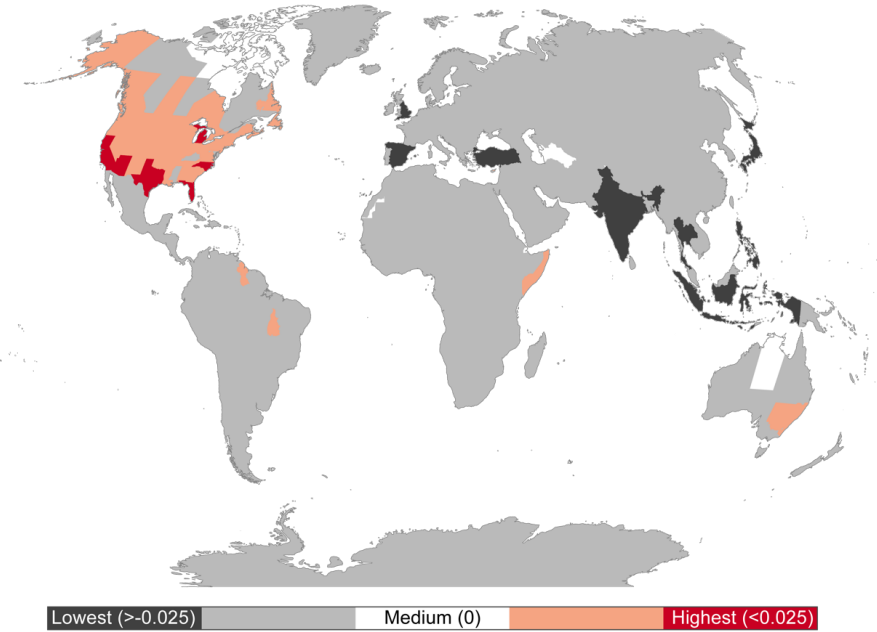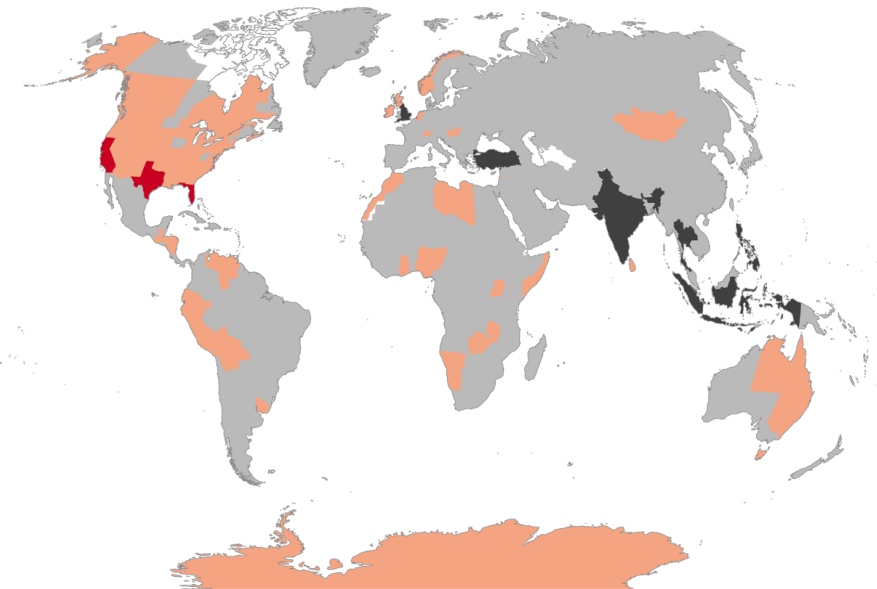
Challenge of a Global Scale

Foreign disinformation and inauthentic behaviour (2020)

Attempts
28
8
1

Bioweapon

Lowest (>-0.025)   Medium (0)   Highest (<0.025)

Chinese or Wuhan and Lab

LQ of xenophobic COVID tweets (2020)

Research Questions

How to identify, address, and/or mitigate mis/disinformation?

- When to regulate or prevent?

What are the impacts of misinformation?

- Health, financial, social, political, trust etc..
- Who/What populations are most impacted?

Who is producing/benefitting from misinformation? Which populations are most susceptible?

- how can impacts be mitigated? Where is it coming from?

Election (Nov 3, 2020) to Insurrection (Jan 6, 2021)
#stopthecount & #stopthesteal tweets
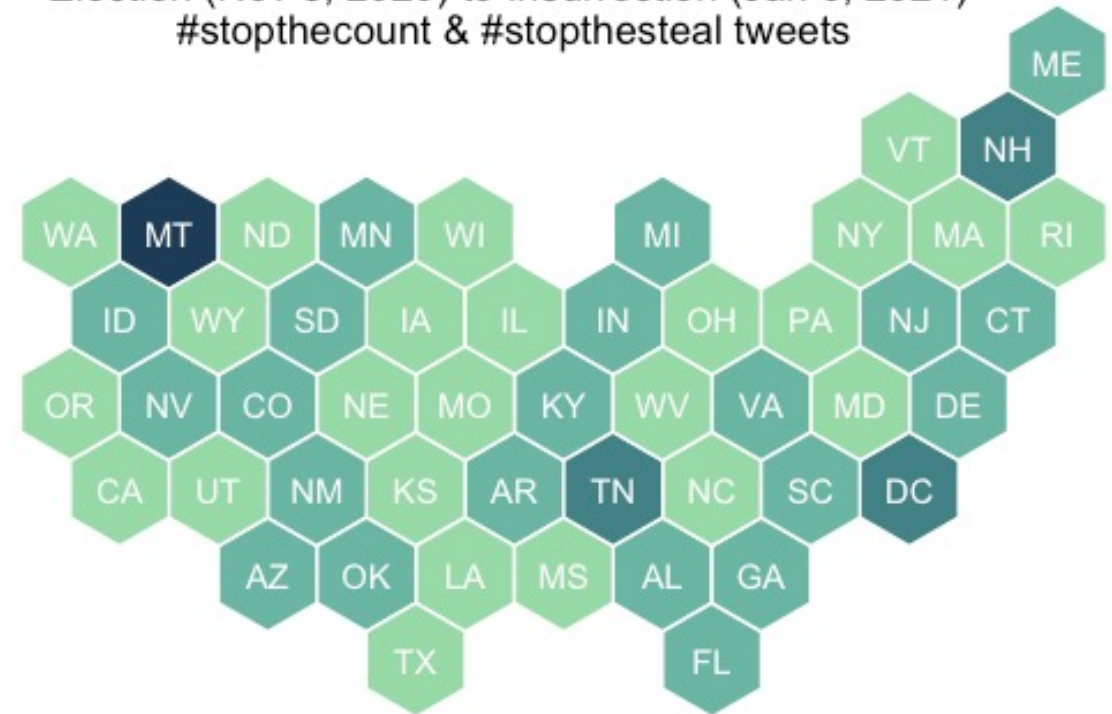
Opportunities/Challenges (interdisciplinary/collaborative)

Challenges

- How can we ethically examine the impacts? How to simulate the spread of misinformation?

- How distinguish inauthentic content from authentic?

- Misinformation is often disseminated on platforms owned by Facebook (e.g. Whatsapp) which balances privacy and proprietary information. This makes it challenging for researchers to ethically access data.

Opportunities

- Many funding calls from various organizations soliciting proposals in this area

- Need for interdisciplinary teams that bridge social science and data science

- Global impact of misinformation case studies

- Overlapping interests in health & misinformation

Jen Badham, Sociology and DRMC

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https://www.durham.ac.uk/staff/jennifer-badham/

Methodological expertise:

Agent-based modelling

International collaborations: public health, criminology

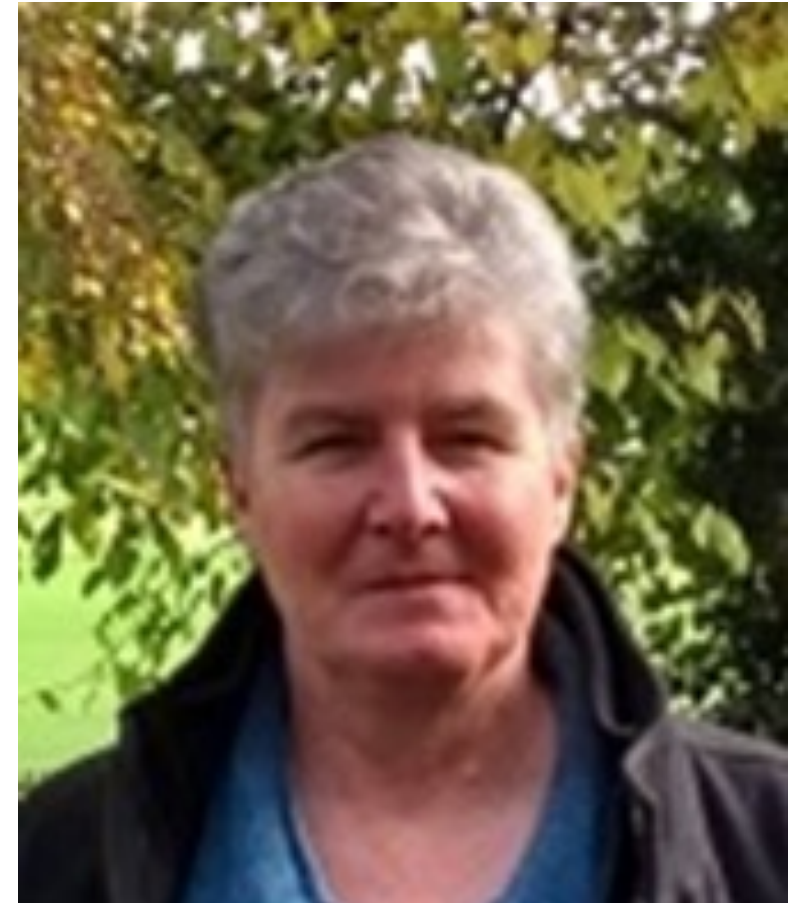Annual short course for postgraduate students, academics, policy

Social network analysis

Relevant research:

Simulation studies of effect of network structure on diffusion

COVID-19 simulations for policy planning

Health behaviour interventions

Jamie Tehrani, Professor of Anthropology

Department of Anthropology and Durham Cultural Evolution Research Centre (DCERC)

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Research interests: Cultural transmission and evolution, especially of narratives like folk tales, urban legends, conspiracy theories.

"I use phylogenetic methods from evolutionary biology to map how stories spread and mutate over time and place, as well as cultural transmission experiments to investigate what makes certain concepts, characters, etc. catch on and stick".

Selected papers:

Tehrani, J. J. (2020). Descent with Imagination: Oral Traditions as Evolutionary Lineages. In Evolutionary Perspectives on Imaginative Culture. Carroll, J., Clasen, M. & Jonsson, E. Springer. 273-289.

Stubbersfield, J. M., Widger, T., Russell, A. J. & Tehrani, Jamshid J. (2021). The HCT Index: a typology and index of health conspiracy theories with examples of use. Wellcome Open Research 6: 196.

Acerbi, A. & Tehrani, J. (2018). Did Einstein Really Say that? Testing Content Versus Context in the Cultural Selection of Quotations. Journal of Cognition and Culture 18(3-4): 293-311.

Jiménez, Á.., Stubbersfield, J. & Tehrani, Jamshid J. (2018). An experimental investigation into the transmission of antivax attitudes using a fictional health controversy. Social Science & Medicine 215: 23-27.

Tehrani, J. J., Nguyen, Q. & Roos, T. (2016). Oral Fairy Tale or Literary Fake? Investigating the Origins of Little Red Riding Hood Using Phylogenetic Network Analysis. Digital Scholarship in the Humanities 31(3): 611-636.

Recent grants:

2021: Decoding Hidden Heritages in Gaelic Traditional Narrative with Text-Mining and Phylogenetics. AHRC Large Grant. Co-I. £399,000

2016 – 2018 Towards an epidemiology of health conspiracy theories. Wellcome Trust Seed Award in Society and Ethics. PI. £49,957.
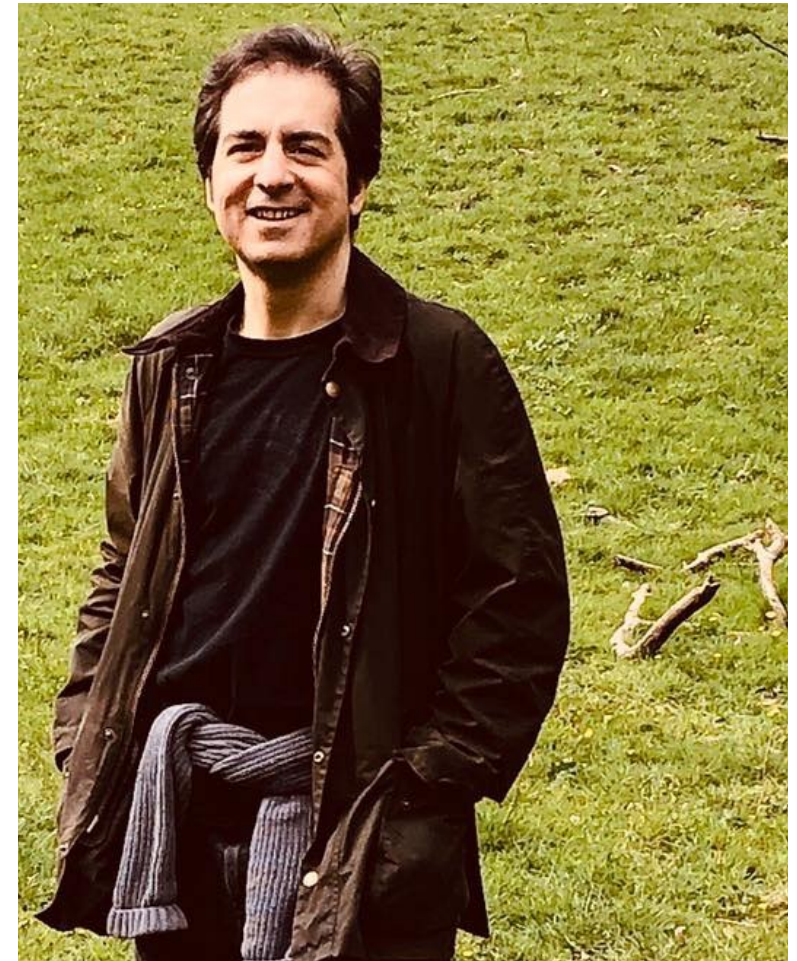
Monica Stephens, Geography

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Relevant projects & datasets:

I use digital traces to understand issues of inequality exclusion and marginalization augmented by social media and online communities

A Geospatial Infodemic: Mapping Twitter conspiracy theories of COVID-19 (2020, *Dialogues in Human Geography*, 10(2))

Misinformation in the digital age: an American infodemic (Elgar, 2022 – book under review with Elgar for 2022)

"Peddling Post-Truth: The Role of Twitter in State-Level Childhood Vaccine Policy" (resubmission pending to *American Journal of Public Health*)

Funding submissions—Mapping Misinformation: Analyzing the geography of the creation and dissemination of foreign information (SSRC/Facebook-2018, Drescher-2019). Center for Information Integrity (NSF/Univ. at Buffalo)

Data for sharing: Archive of geocoded tweets USA- 2020 election→insurrection; Parler dataset 2020-2021

Methods & expertise

Geographic Information Systems (GIS), social network analysis (SNA), data mining- Twitter, geocoding/geolocating online content, R

Global media communications/public public outreach (2021: NPR, ABC, Associated Press, Reuters, etc..)

Interested staff

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