## When Big Data Meets Sociological Imagination: Transdisciplinary Approaches and Infrastructures for Computational Social Science

Online Symposium

Organized by: Digital Society Research Cluster College of Liberal Arts and Social Sciences City University of Hong Kong

Institute for Advanced Study in Humanities and Social Sciences Zhejiang University

> Co-hosted by: Department of Media and Communication College of Liberal Arts and Social Sciences City University of Hong Kong

> Department of Chinese and History College of Liberal Arts and Social Sciences City University of Hong Kong

> > June 15, 2022

09:00 – 13:00, 15 June, 2022. [Hong Kong, UTC/GMT+8] 20:00 – 00:00, 14 June, 2022, [US, CDT, UTC/GMT -5] 19:00 – 23:00, 14 June, 2022, [US, MDT, UTC-6] 03:00 – 07:00, 15 June, 2022, [CEST, UTC+2]

#### **Registration**

https://cityu.zoom.us/meeting/register/tJAvfu2rrDgjHteHm3Mh7Vy0usIoTlnSAqaq



## \*\* the following is in Hong Kong time: [UTC/GMT+8] 9:00 a.m. to 9:05 a.m.: Welcome and Introduction

Dr. Lik Hang Tsui on the Digital Society research cluster in CityU Dr. Fen Lin on the symposium

## 9:05 a.m. to 10:30 a.m.: Dingxin Zhao & Zhiwu Chen: A Dialogue

Keynote Speakers: Prof. Dingxin Zhao & Prof. Zhiwu Chen



Prof. Dingxin Zhao is the chair of the Department of Sociology, Zhejiang University, and Max Palevsky Professor Emeritus of Sociology at the University of Chicago. His research covers historical sociology, political sociology, social movements, social change and economic development. His interests also extend to sociological theory and methodology. Zhao has publications in journals such as *American Journal of Sociology, American Sociological Review, American Behavioral Scientist, Social Forces, Mobilization*, and *Sociology*. He is the author of awards-winning books *The Power of Tiananmen* (2001) and *The Confucian-Legalist State* (2015) in English, and several other books in Chinese.



Professor Zhiwu Chen is Chair Professor of Finance at the University of Hong Kong (HKU), where he will assume the directorship of the Hong Kong Institute for the Humanities and Social Sciences effective July 1, 2022. Professor Chen is a former Professor of Finance at Yale University (1999-2017). His research covers finance theory, the sociology of finance, economic history, quantitative history, emerging markets, as well as China's economy and capital markets. He has been a member of the HKU Council since November 2018. He was also a Special-Term Visiting Professor at Peking University and Tsinghua University. In 2013, he started the annual Summer School for Quantitative History cum International Symposium on Quantitative History at Tsinghua University and continues to organize them at Peking University, with the goal of promoting quantitative historical research in China and beyond.

# 10:30 a.m. – 11:00 a.m.: Dr. Kaiping Chen, University of Wisconsin-Madison

**Bio:** Kaiping Chen is an assistant professor in computational communication in the Department of Life Sciences Communication at the University of Wisconsin-Madison and an affiliate of the Department of Political Science, the UW-Madison Robert & Jean Holtz Center for Science and Technology Studies, the Center for East Asian Studies, the African Study Programs, and the Nelson Institute for Environmental Studies. Chen's research employs data science and machine learning methods as well as interviews to examine how digital media and technologies affect political accountability to public well-being and how deliberative designs can improve the quality of public discourse on controversial and emerging technologies. Chen's work is interdisciplinary and draws from theories in communication, political science, and computer science.



**Title:** When National Identity Meets Conspiracies: The Contagion of National Identity Language on Public Participation and Discourse about COVID-19 Conspiracies

#### Abstract:

There are growing concerns about the role that identity narratives play in spreading misinformation on social media, which threatens informed citizenship. Drawing on the social identity model of deindividualization effects (SIDE) and social identity theory, we investigated how the diffusion of and discourse on conspiracy and counternarratives during the COVID-19 pandemic was affected by the use of national identity language on Sina Weibo, one of the largest social media platforms in China. Our results revealed a pattern of identity communication contagion in public conversations on conspiracies: national identity language usage in original posts triggered more frequent use of national identity language in all subsequent conversations. We also found that users who engaged in discussions about COVID-19 conspiracies increasingly used national identity theory with misinformation studies, our paper offers theoretical and empirical insights into how identity-contagious communication might exacerbate public engagement with misinformation on social media in non-Western contexts. In addition, the implications of identity-contagious communication for misinformation corrections and the public understanding of other social groups are discussed.

## 11:00 a.m. – 11:30 a.m.: Dr. Alexander Hohl, University of Utah

**Bio:** Alexander Hohl is an assistant professor at the Department of Geography at the University of Utah. He has received his BS in Geography from the University of Zurich, MA and PhD in Geographic Information Science from the University of North Carolina at Charlotte. His research focuses on computational and statistical aspects of spatiotemporal analysis with application to health geography and social science. Alexander has published his work in peer-reviewed scientific journals, including the American Journal of Public Health, the International Journal of Geographic Information Science, Spatial and Spatiotemporal Epidemiology, and Applied Geography. He currently teaches upper-level classes in GIS, visualization, and spatiotemporal computing.



**Title:** The Geography of Anti-Asian Hate on Twitter during the COVID-19 Pandemic, November 2019 to May 2020

#### Abstract:

Since the first confirmed case of COVID-19 in the US on January 19, 2020, the anti-Asian racist and xenophobic rhetoric began to surge on social media; followed by acts of discrimination and harassment against Asians and Asian Americans in the US. Our objective is to illustrate the spatiotemporal distribution of geolocated tweets that contain anti-Asian hate language in the contiguous US during the early phase of the COVID-19 pandemic. We obtained a dataset of geolocated tweets that match with keywords reflecting COVID-19 and anti-Asian hate and identified geographical clusters using the space-time scan statistic with Bernoulli model. Our results indicate that Anti-Asian hate language on Twitter surged between January and March 2020, exhibiting a significantly clustered spatiotemporal distribution. Clusters vary in size, duration, strength and location and are scattered across the entire contiguous US, including high-population-density cities, their suburbs, as well as rural places. The strongest cluster consists of a single county (Ross County, OH), where the proportion of hateful tweets was 312.13 times higher than for the rest of the country. Our results can inform decision makers in public health and safety for allocating resources for place-based preparedness and response for the pandemic-induced racism as a public health threat.

## 11:30 a.m. – 12:00 p.m.: Dr. Xiaoming Zhang, University of Hong Kong

**Bio:** Zhang Xiaoming is a Ph.D. candidate in the Business School at the University of Hong Kong. He will join the Department of Sociology at Zhejiang University in the fall of 2022. His research interests span the fields of quantitative history, political economy, and organization study. His research agenda aims at understanding how the bureaucratic structure shapes the development of state capacity in historical China. Email: <u>mingxiaoz@outlook.com</u>



**Title:** Information Foundations of State Capacity: Evidence from the Imperial Bureaucracy of China

#### Abstract:

Building a strong state entails ample information regarding civil societies, otherwise, the central authority lacks the foundation upon which taxation schemes and military mobilization are effectively achieved. However, the information foundation of state capacity is surprisingly overlooked by scholars. This paper studies a communication reform in the imperial bureaucracy of Qing China, which allowed certain local officials (functioning as informants) to report to the emperor directly. Leveraging on a fact that the direct communication channel was unevenly introduced, I find government disaster assistance, a critical public good in pre-industrial societies, of prefectures where at least one informant was assigned was significantly increased compared with that of prefectures without an informant after the reform. In addition, I find that the increase in government assistance was mainly attributed to the improvement in information transmission and competitive information supply triggered by direct communication within the bureaucracy. This research contributes to the literature by demonstrating that a flattening and competitive information structure could have a conducive bearing on state capacity development.

## 12:00 p.m. – 12:30 p.m.: Dr. Linzhuo Li, Zhejiang University

**Bio:** Dr. Li is currently working as an assistant professor in the Department of Sociology at Zhejiang University. His research area includes computational social science and economy sociology. He is interested in using computational methods to understand topics broadly related to cultural evolution, fashion, innovation, hierarchy and coordination of production.



Title: Epistemological Issues of Big Data Researches in Social Science

#### Abstract:

We conducted an exploratory analysis to understand how quantitative social science researches change under the era of big data by looking specifically at the form of the data. Guided by some basic insights from the sociology of knowledge, we argued theoretically and demonstrated empirically that there exists an illusion of big data perhaps by a lot of researchers. That is, the increase of the data "volume" tend to be associated with decreased abundance of legitimate variables readily available for social scientists. As a result, big data research tends to face an epistemological challenge — "the crisis of representation". We then briefly discussed how theory might help overcome this challenge and summarized theory-driven big data researches into four types to understand the strengths and weaknesses of each type.

## 12:30 p.m. – 01:00 p.m.: Panel Discussion and Q&A

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