

Hanyu Chwe

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Survey researcher turned computational social scientist.

EDUCATION

- Ph.D.** Network Science | **Northeastern University** Expected 2023
NULab Fellow, 2018-2019
- B.A.** Economics and Political Science, Honors | **Swarthmore College** 2016

RESEARCH EXPERIENCE

Northeastern University, Boston, MA September 2018 –
Network Science Institute | Professor David Lazer

- Social Science One Project: Through a public/private partnership mediated by Social Science One, Dr. Lazer's team was awarded access to Facebook URL data.
 - Wrote Presto queries and Python scripts to access and analyze high-volume, differentially private data in a specialized computing environment hosted by Facebook.
 - Merged a customized Twitter dataset with Facebook data to analyze how the two social media platforms engender different user behaviors.
 - Used principal component analysis to show that user demographics (age, gender, political ideology) directly impact URL sharing patterns.
 - Built a local/national URL classifier using the geographical distribution of Twitter shares to understand how partisan identity drives local and national news sharing.
 - Designed a regression discontinuity approach to understand how Facebook's January 2018 news feed algorithm change impacted media outlets.
 - Queried Crowdtangle data to measure how the January update promoted posts from friends over public pages.
- Race & Tinder Project: This project uses synthetic profiles to understand the impact of racial and algorithmic biases on minority users of online dating platforms.
 - Created the experimental research design for the project.
 - Built tools to web-scrape Tinder user interactions and profiles.
 - Carefully assembled stock photos to create realistic profiles that vary by race and gender.
 - Coded user interactions as part of a grounded theory approach to uncover behavioral patterns.
- The COVID States Project: In response to the COVID-19 crisis, Dr. Lazer's team conducts an ongoing 50-state survey to measure American opinion at the state level.
 - Wrote reports analyzing COVID-19 test result delays and access to testing.
 - Built crosstabs and tables for survey analysis.
 - Created a logistic regression classifier to filter out dishonest or inattentive respondents.

University of Southern California, Los Angeles, CA May 2019 – August 2019
Information Sciences Institute | Professor Emilio Ferrara

- Created an ideological "census" of Gab to classify different alt-right communities.
 - Created a customized word embedding model to represent individual users.
- Investigated how Black celebrities are displayed and discussed on Gab.
 - Used OpenCV to measure face darkening of pictures of Black celebrities shared on Gab.

Pew Research Center, Washington, DC

September 2016 – May 2018

Global Attitudes Project

- Helped manage the Global Attitudes Project, an annual survey spanning approximately 40,000 respondents in 35-40 countries.
- Wrote, edited, and fact-checked research blog posts and reports.
- Created and researched potential survey questions.
- Used SPSS and STATA to process, analyze, and conduct quality control tests on survey data.

Swarthmore College, Swarthmore, PA

May 2015 – October 2015

Professor Stephen Golub

- Created a cross-national index of labor regulation severity in STATA & Microsoft Excel to determine the relationship between formal labor regulation and manufacturing exports.
- Wrote comparative case studies on labor regulations in Ghana, China, Bangladesh, and Ethiopia.

Innovations for Poverty Action, Accra, Ghana

August 2014 – December 2014

North Volta Rural Bank

- Worked on two randomized controlled trials evaluating the North Volta Rural Bank's financial inclusion policies for low-income and salaried Ghanaians.
- Cleaned large datasets in STATA and edited survey questionnaire codebooks in Microsoft Excel.

SKILLS

- **Programming Languages:** Python (numpy, pandas, matplotlib, scikit-learn), R (basic), PrestoSQL, STATA, SPSS, Microsoft Excel, LaTeX
- **Experimentation & Causal Inference:** randomized trials, instrumental variables, regression discontinuity design, difference-in-differences, randomization inference
- **Machine Learning:** clustering (k-means, spectral, GMM), dimensionality reduction (PCA, SVD, CUR), linear, multivariate, and logistic regression, recommendation systems
- **Natural Language Processing:** sentiment analysis, word embeddings, language models,
- **Networks:** epidemic modeling, centrality analysis, network sampling, robustness, visualization

SELECTED PUBLICATIONS

Hanyu Chwe, et al. "COVID-19 Test Result Times." The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States. October 16, 2020.

Jacob Poushter, Caldwell Bishop, and **Hanyu Chwe**. "Social Media Use Continues to Rise in Developing Countries but Plateaus Across Developed Ones." Pew Research Center, Washington D.C. June 19, 2018.

Hanyu Chwe. "How people in India see Pakistan, 70 years after partition." Pew Research Center, Washington D.C. December 7, 2017.

Bruce Stokes, Dorothy Manevich, and **Hanyu Chwe**. "Three Years In, Modi Remains Very Popular." Pew Research Center, Washington D.C. November 15, 2017.

Hanyu Chwe. "How Americans, Mexicans see each other differs for those closer to border." Pew Research Center, Washington D.C. October 25, 2017.

Margaret Vice and **Hanyu Chwe**. "Mexican Views of the U.S. Turn Sharply Negative." Pew Research Center, Washington D.C. September 14, 2017.

Dorothy Manevich and **Hanyu Chwe**. "Globally, more people see U.S. power and influence as a major threat." Pew Research Center, Washington D.C. August 1, 2017.

Stephen Golub, Aly Mbaye, **Hanyu Chwe**. "Labor Market Regulation in Sub-Saharan Africa with a Focus on Senegal." University of Cape Town, Development Policy Research Unit, May 2015.