

JOSHUA GARY MAUSOLF



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EDUCATION

The University of Chicago

Ph.D. Student, Department of Sociology
M.A., Sociology

expected June 2019
2016

Special Fields: Survey Research Methods, Inequality in Labor Markets,
Wealth, and Social Mobility

Preliminary Exams: Stratification/Inequality, Political Sociology,
Economic Sociology, Urban/Race, Sex and Gender, Family

New York University

B.A., *summa cum laude*, Sociology with High Honors

2012

Thesis: "Environmental Hookups: School Social Environment and the
College Hookup Scene" (Best Thesis, Departmental Honors)

Advisors: Richard Arum, Paula England, Ruth Horowitz, and Jeff Manza

Northern Virginia Community College

A.A. *summa cum laude*, Liberal Arts

2010

PROFESSIONAL EXPERIENCE

Data Science for the Social Good, Chicago, IL

2016

- Fellow, Predicting Adverse Police Interactions

The University of Chicago, Chicago, IL

2015-Present

- Part Time Data Scientist, Knowledge Lab, Computation Institute
- Graduate Research Assistant to Kathleen Cagney, Dept. of Sociology
- Graduate Research Assistant to Jenny Trinitapoli, Dept. of Sociology

New York University, New York, NY

2012-2013

- Research Assistant to Jeff Manza, Ph.D., Dept. of Sociology
- Research Assistant to Patrick Sharkey, Ph.D., Dept. of Sociology

Teachers College – Columbia University, New York, NY

2011-2012

- Publishing Assistant: Acquisitions and Subsidiary Rights

RESEARCH EXPERIENCE

Data Science for Social Good

Fellow

2016

- Conducting data science research in collaboration with the Metropolitan Nashville Police Department as part of the White House Police Data Initiative to build a generalizable machine learning model to predict police officers at risk of having an adverse incident.

The University of Chicago

Graduate Research Assistant for Kathleen Cagney

2016-Present

- Performing research and analysis for a project examining the causal effect of crime on BMI and blood pressure using the Dallas Heart Study.

Graduate Research Assistant for Jenny Trinitapoli

2016-Present

- Supervising a small team of undergraduate and graduate RA's in cleaning the Tsogolo la Thanzi (TLT) data, a longitudinal study of young people's fertility and reproduction in relation to the AIDS epidemic in Malawi.

Graduate Research Assistant for James Evans

2015-2016

- Analyzing hypergraph network data using NetworkX in Python, visualized the network in Gephi, and developed dynamic web graphics with Javascript for a project analyzing the social networks of academics based on their CV's.

New York University

Research Assistant for Jeff Manza

2012-2013

- Researching literature for a project on Occupy Wall Street.
- Conducting background research for the presentation, "A Broken Public? Americans' Responses to the Great Recession," presented at Harvard's Kennedy School, April 2012.

Research Assistant for Patrick Sharkey

2012

- Coding historical, journalistic, and geophysical data to assist a future project examining the cognitive impact of psychological stressors on youth in Chicago Public Schools.

CONFERENCE PRESENTATIONS

- 2016 Joshi, Sumedh, Jonathan Keane, **Joshua Mausolf**, Lin Taylor, Joe Walsh, Jen Helsby, and Allison Weil. "Predicting Adverse Police Incidents." Presented at the annual *Data Science for Social Good Conference*, August 24, Chicago.

- 2016 Mausolf, Joshua G. "Occupy the Government: Presidential and Congressional Rhetorical Response to the Occupy Movement." Presented at the 2nd *Annual International Conference on Computational Social Science* at the Kellogg School of Management, Northwestern University, June 25, Evanston.
- 2015 Mausolf, Joshua G. "Sexual Privilege: The Effect of Private and Elite Campuses on the College Hookup Scene." Presented at the *Annual Meeting of the American Sociological Association*, August 22, Chicago.
- 2015 Mausolf, Joshua G. "Sexual Privilege: The Effect of Private and Elite Campuses on the College Hookup Scene." Presented at the *Engendering Change* conference at the University of Chicago, April 11, Chicago.

GRANTS, AWARDS, AND FELLOWSHIPS

- 2016-2017 Marshall Field Fellowship in Sociology (\$23,000)
- 2016 The Eric and Wendy Schmidt Data Science for the Social Good Summer Fellowship (\$16,500)
- 2014-2019 The University of Chicago, Social Science Fellowship 2014-2019 (\$107,000)

HONORS AND DISTINCTIONS

New York University

- Graduation honors, *summa cum laude*, Sociology B.A. with High Honors
- Official selection, "Best Honors Thesis," New York University, Department of Sociology, nominated for the *Phi Beta Kappa – Albert Borgman Prize*.
- Founders Day Award
- Dean's List

Northern Virginia Community College

- Graduation honors, *summa cum laude*
- Award of Academic Achievement in Mathematics
- NSCS Special Recognition for "Scholarship, Leadership, and Service"
- Presidential Scholar
- Dean's List

CURRENT MANUSCRIPTS IN PREPARATION OR UNDER REVIEW

- 2016 Mausolf, Joshua G. "Occupy the Government: Analyzing Presidential and Congressional Rhetoric and Responsiveness to the Occupy Movement." (In preparation).

- 2016 Mausolf, Joshua G. "Sexual Privilege: The Effect of Private and Elite Campuses on the College Hookup Scene." (Manuscript).
- 2015 Manza, Jeff, Clem Brooks, and Joshua Mausolf. "The Impact of Occupy Wall Street." Ch. 5 in *A Broken Public? Inequality and Mass Opinion in the New Gilded Age* by Jeff Manza and Clem Brooks. (TBD).

SELECTED SCHOLARLY PAPERS

- 2015 Mausolf, Joshua, Bridgit Donnelly, and Christine Cook. "Predicting Dropouts in Montgomery County Public Schools: A Machine Learning Approach to Educational Policy."
- 2012 Mausolf, Joshua G. "Occupy the Whitehouse: Presidential Politics and the Efficacy of the 99 Percent." (Review and Resubmit, *Mobilization*).
- 2012 Mausolf, Joshua G. "Environmental Hookups: School Social Environment and the College Hookup Scene."
- 2012 Mausolf, Joshua G. "Spatial Enslavement: Mass Incarceration and the Politics of Disadvantage."
- 2011 Mausolf, Joshua G. "Ethical Racism and the Obamaian Epoch: Evaluating White Racial Attitudes in a 'Post Racial' Society."

OTHER PUBLICATIONS AND REVIEWS

- 2016 Mausolf, Joshua G. "The Unintended Consequences of Border Patrol: How U.S. Immigration Policy Backfired." *Chicago Policy Review*, April 15.

RESEARCH PROPOSALS

- 2015 "Analyzing Presidential Rhetoric and Occupy Wall Street: A Computational Approach."
- 2014 "Mapping Network Effects on Self-Perceived Life Chances of College Freshmen."

STATISTICAL AND COMPUTATIONAL EXPERTISE

Statistical programs: R, Stata, SPSS, Pandas, Numpy, Scikit-learn, SciPy, Excel

Computing languages: Python, Linux, Unix, JSON, HTML, CSS, Javascript, SQL, MySQL, PostgreSQL, Flask, Jeckel, Vim

Text analytic programs: NLTK, Beautiful Soup, Atlas.ti

Graphical analytic programs: Tableau, Gephi, NetworkX, VosViewer, R, Stata, SPSS, Matplotlib

STATISTICAL METHODS INCLUDE:

- **Time-series/Econometric Models** (Autoregressive Fractionally-Integrated Moving Average (ARFIMA), Autoregressive Moving Average (ARMA), as well as OLS, 2SLS, IV, and Negative Binomial time-series models)
- **Longitudinal Models** (Mixed Effect Models (MRM) with and without auto-correlated errors for linear, binary, categorical, and multinomial data; Covariance Pattern Models (CPM); GEE models; and Multi-Level Models)
- **Maximum Likelihood Estimation** (Logit/Probit, Ordered Logit/Probit, Categorical Data Analysis, Multinomial, Negative Binomial, Poisson, Survival Analysis)
- **Hierarchical Linear Models (HLM)** for use with linear, binomial, and categorical nested, longitudinal, or cross-classified data)
- **Linear Regression** (Ordinary Least Squares (OLS), 2-Stage Least Squares, Instrumental Variables (IV) Regression, Generalized Least Squares (GLS), and General Linear Models (GLM), Bayesian Linear Regression)
- **Dimensionality Reduction** (Principal Components Analysis (PCA), Exploratory Factor Analysis, Confirmatory Factor Analysis)
- **Graphical** (Time Series/Regression Plots of Model Predictions versus Observations, Margins Plots, Box Plots, Bar Charts, Histograms, Scatter Plots, Line Plots, Lowess/Lfit/Qfit Lines, and combinations of the above to produce clear and compelling visuals of complex data)
- **Other Analyses or Tests** (Bootstrapping, Bagging, Adjusting Analyses for Survey Sampling Weights, ANOVA, MANOVA MANCOVA, One/Two-Sample T-Tests, F-test, Chi² Test, Cohen's Kappa Test, A/B Testing, Bayesian Information Criterion (BIC), Akaike information criterion (AIC), and Least Log Likelihood, Likelihood Ratio Testing, Cronbach's Alpha, Regression Diagnostics to Assess Proper Model Fit and Specification)

COMPUTATIONAL METHODS INCLUDE:

- **Python** (Developing a variety of custom python applications such as machine learning pipelines, web scrapers, text analysis, data cleanup and preprocessing, regular expressions, statistical analysis and graphs, interfacing with other languages (SQL/Linux), and dynamic web development)
- **SQL** (MySQL, PostgreSQL, SQL for data storage and complex queries (both local and remotely))
- **Machine Learning** (Logistic Regression, Random Forest, Decision Trees, Boosting, Bagging, Gradient Boosting, Linear SVM, K-Nearest Neighbor)
- **Web Development** (HTML, CSS, Javascript, to design and customize web pages, developing and embedding dynamic Javascript/XML visual objects, building static webpages with Jeckel and dynamic webpages with Flask using a Python and SQL interface)
- **Data Mining and Web Scraping** (Building complex **Python** and **Linux** based web-scraping packages to navigate static or dynamic pages, pager/index count pages, or infinite scroll pages; parse specified data text or alternate data; and download and organize this data in a custom database, data frame, or file structure. Example: White House, Office of Press Secretary website)
- **API/JSON Queries** (Utilizing **Python** API queries: e.g. Twitter API, Sunlight Foundation API)
- **Other** (Linux, Mac, and Windows, Shell, SSH protocol, Git/Github, RegEx, NLTK, Pandas, Numpy, Sklearn, BeautifulSoup)

DATASETS USED IN RESEARCH OR ANALYSIS INCLUDE:

General Social Survey (GSS), American Community Survey (ACS), American National Election Survey (ANES), National Longitudinal Survey of Youth 1997 (NSLY97), Project on Human Development in Chicago Neighborhoods (PHDCN), National Immunization Survey (NIS), NORC Presidential Election Study, Online College Student Life Survey (OCSLS), Montgomery County Public Schools Survey, and Lakeside Neighborhood Survey (2015 PAPI)

SURVEY METHODOLOGY AND RESEARCH DESIGN

- **Survey Weighting** (Calculation of base weights, unit non-response weights, item non-response weights, and post-stratification weights under a variety of survey implementations or combinations of simple random sampling, systematic sampling, PPS-sampling, stratified sampling, cluster-sampling, or multi-stage sampling using some combination thereof)
- **Survey Design and Optimization** (Designing the appropriate type of survey given a fixed budget or variance, desired sample size, expected response rate, and design factor to maximize results)
- **Questionnaire Design** (Design of appropriate survey questions, indexes, and scales that meet cognitive requirements under a variety of implementations such as web (CAWI), phone (CATI), in-person (CAPI), and mail; as well as critically analyzing these questionnaires using pre-testing and cognitive interviewing)
- **Other Research Design Competencies** (Experimental Design, A/B Tests, Focus Groups, Semi-Structured Interviewing, Unstructured Interviewing, Ethnographic Study)

LANGUAGES

- English (native), French (proficient), Spanish (elementary)
- Python, R, Stata, SQL, PostgreSQL, Linux, Bash, Git, Markdown, JSON, HTML, CSS

Office Software Expertise:

- **Microsoft Office Suite** (Word, PowerPoint, Access, Outlook, Excel)
- **Adobe Applications** (Acrobat Pro, Adobe Photoshop, Lightroom)
- **Google Applications** (Google Slides, Sheets, Documents, Gmail, Google Drive, Google Trends)
- Project management (SAP, CRM)
- Proficient in **Windows**, **Apple**, and **Linux** operating systems.

TEACHING

- Fall 2016 Teaching Assistant, Computing for the Social Sciences
 (principal instructor: Benjamin Soltoff)
- Fall 2016 Teaching Assistant, Social Science Inquiry -1
 (principal instructor: Cheol-Sung Lee)
- Spring 2016 Teaching Assistant, Statistical Methods of Research 2
 (principal instructor: Xi Song)
- Spring 2016 Teaching Assistant, Principal Components and Factor Analysis
 (principal instructor: Kathleen Cagney)

ASSOCIATIONS

American Sociological Association
Population Association of America
National Society of Collegiate Scholars
Phi Theta Kappa International Honor Society
The University of Chicago Alumni Association
New York University Alumni Association