University of Zurich UZH

Seminar "Research Designs for Studying Digital Media and Politics"
University of Zurich, Fall 2022

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Office Hours: By appointment
Course number: 615h535a Seminar

Overview and Objectives

This applied methods seminar aims to familiarize students with state-of- the-art approaches for the study of digital media and politics. The emphasis of the seminar is on the research design processes introducing common research designs on and with digital media data both conceptually and practically. Students will, in particular, devise and implement their own designs throughout the course linking their technical skills with how they are applied in current research. Specific techniques are introduced and reviewed where appropriate, including their strengths and limitations, but the emphasis is on study design more broadly. The seminar is therefore ideally suited for those already familiar with computational social science or data science techniques looking to learn how these can be best leveraged in a research setting.

Course Objectives and Key Skills

- Students will develop a good understanding of current quantitative research designs in the social and behavioral sciences for the study of digital media and politics, with a particular emphasis on political behavior.
- They will be able to conceive of their own designs and practically implement them in order to answer relevant research questions while critically evaluating their strengths and limitations.

Course Times

The course takes place every Monday 10:15 – 12:00 starting on Sep. 19, 2022; the last session of the class is on Dec. 19, 2022. The seminar sessions take place in person in AFL-E-022.

Course Assessment

Grading is based on the successful completion of three smaller assignments (40%) throughout the term and a larger written assignment in the form of a final project and paper (60%). The deadline to submit the final paper is at the end of term on Friday Dec. 23, 2022 (midnight).

Students work in teams focusing on a substantive question in the area of digital media and politics. The objective for the teams is to arrive at a complete and implemented research design at the end of the term with the design, implementation and (at least preliminary) results described in the final paper.

The three smaller assignments throughout the term are each linked to different intermediate milestones in the development of the research design and the final paper:

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- **Assignment 1:** A short concept note (max. 2 pages) due in week 5 of the class that identifies a research gap and sketches the research question.
- **Assignment 2:** A draft research design (5-10 pages) due in week 8 of the class that builds on the short concept note and provides details on the case, data, methods etc.
- **Assignment 3:** A first proof-of-concept implementation of the research design and demonstration due in week 12 of the class.

Communication

Email addresses of the instructors and all participants in the course are to be treated confidentially. The (virtual) classroom is the best place to raise questions which are relevant for everybody in the class. The best time to ask short questions that might not be relevant for everybody is after class. The office hours should be dedicated to discuss more in- depth questions. I strongly discourage emails about class content that could be solved in class, after class or during office hours. I would like to encourage you to contact me via email or during office hours if there is something that makes you feel uncomfortable in class or about the course.

Course Outline and Resources

The following outline provides a detailed overview over the course, the different session formats and milestones. In addition, it provides relevant background readings where appropriate.

Part 1 – Introduction

The first introductory sessions at the start of the term will be focused on providing a common conceptual and methodological background and are structured more in lecture-style format.

Week 1 (Sep. 19). Research on Digital Media

Introduction and course overview session.

Background Readings:

Farrell, Henry. (2012). "The Consequences of the Internet for Politics." *Annual Review of Political Science* 15(1): 35–52.

Lazer, David, Alex Pentland, Duncan Watts, Sinan Aral, Susan Athey, Noshir Contractor, Deen Freelon, Sandra Gonzalez-Bailon, Gary King, Helen Margetts, Alondra Nelson, Matthew J. Salganik, Markus Strohmaier, Alessandro Vespignani & Claudia Wagner. (2020). "Computational Social Science: Obstacles and Opportunities." *Science* 369: 1060–1062.

Gilardi, Fabrizio. (2022). *Digital Technology, Politics, and Policy-Making.* Cambridge University Press. *Chapter 1.*

Week 2 (Sep. 26). Overview: Data Sources

Overview of the most important data sources for studying digital media and how to access them.

Background Readings:

Ruths, Derek & Jürgen Pfeffer. (2014). "Social Media for Large Studies of Behavior." *Science* 192: 59–60.

Jungherr, Andreas & Yannis Theocharis. (2017). "The Empiricist's Challenge: Asking Meaningful Questions in Political Science in the Age of Big Data." *Journal of Information Technology & Politics* 14(2): 97–109.

Guess, Andrew, Kevin Munger, Jonathan Nagler & Joshua Tucker. (2019). "How Accurate Are Survey Responses on Social Media and Politics?" *Political Communication* 36(2): 241–258.

Week 3 (Oct. 3). Overview: Methods

Overview of different key methodological approaches for studying digital media and politics.

Background Readings:

Boas, Taylor C., Dino P. Christenson & David M. Glick. (2020). "Recruiting Large Online Samples in the United States and India: Facebook, Mechanical Turk, and Qualtrics." *Political Science Research and Methods* 8(2): 232–250.

Earl, Jennifer, Andrew Martin, John McCarthy & Sarah Soule. (2004). "The Use of Newspaper Data in the Study of Collective Action." *Annual Review of Sociology* 30(1): 65–80.

Grimmer, Justin & Brandon M. Stewart. (2013). "Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts." *Political Analysis* 21(3): 267–297.

Week 4 (Oct. 10). Work Session 1 – Research Topic

*Team selection and discussion to identify a relevant topic and a potential research design. The short research design note (max. 2 pages) is due <u>one week</u> later (***Assignment 1****).*

Part 2 – Methods Deep Dive and Design Implementation

The second part focuses more on the practical considerations for the specific research questions the teams are pursuing. This includes a deep-dive on the "do's and dont's" of approaches used but also hands-on work on the particular issues the teams may encounter.

Week 5 (Oct. 17). Twitter API

Best practices and challenges in using the Twitter API.

Background Readings:

Pfeffer, Juergen, Angelina Mooseder, Luca Hammer, Oliver Stritzel & David Garcia. (2022). "This Sample Seems to Be Good Enough! Assessing Coverage and Temporal Reliability of Twitter's Academic API." *arXiv: 2204.02290*.

Zubiaga, Arkaitz. (2018). "A Longitudinal Assessment of the Persistence of Twitter Datasets." *Journal of the Association for Information Science and Technology* 69(8): 974–984.

Bruns, Axel & Katrin Weller. (2016). "Twitter as a First Draft of the Present – and the Challenges of Preserving it for the Future." *WebSci '16: Proceedings of the 8th ACM Conference on Web Science.* New York, NY: ACM Press, p. 183–189.

Week 6 (Oct. 24). Media Data and Measurement

Working with (online) media data, biases and exposure to news.

Background Readings:

Barberá, Pablo, Amber E. Boydstun, Suzanna Linn, Ryan McMahon & Jonathan Nagler. (2021). "Automated Text Classification of News Articles: A Practical Guide." *Political Analysis* 29(1): 19–42.

Hamborg, Felix, Karsten Donnay & Bela Gipp. (2019). "Automated Identification of Media Bias in News Articles: An Interdisciplinary Literature Review." *International Journal on Digital Libraries* 20(4): 391–415.

Scharkow, Michael, Frank Mangold, Sebastian Stier & Johannes Breuer. (2020). "How Social Network Sites and Other Online Intermediaries Increase Exposure to News. *Proceedings of the National Academy of Sciences* 117(6): 2761–2763.

Guess, Andrew. (2015). "Measure for Measure: An Experimental Test of Online Political Media Exposure." *Political Analysis* 23(1): 59–75.

Week 7 (Oct. 31). Text as Data

Practical challenges in using current text as data approaches and how to tackle them.

Background Readings:

Osnabrügge, Moritz, Elliott Ash & Massimo Morelli. (2021). "Cross-Domain Topic Classification for Political Texts." *Political Analysis*, doi:10.1017/pan.2021.37.

Widmann, Tobias & Maximilian Wich. (2022). "Creating and Comparing Dictionary, Word Embedding, and Transformer-Based Models to Measure Discrete Emotions in German Political Text." *Political Analysis*, doi:10.1017/pan.2022.15.

Bestvater, Samuel E. & Burt L. Monroe. (2022). "Sentiment Is Not Stance: Target-Aware Opinion Classification for Political Text Analysis." *Political Analysis*, doi:10.1017/pan.2022.10.

Hamborg, Felix & Karsten Donnay. (2021). NewsMTSC: A Dataset for (Multi-)Target-dependent Sentiment Classification in Political News Articles. *Proceedings of the 16th Conference of the European Chapter of the Association for Computational Linguistics (EACL) 2021*. Stroudsburg, PA: ACL, 1663–1675.

Week 8 (Nov. 7). Progress Presentations

*Submission and presentation of draft research design for each team (***Assignment 2***).*

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Week 9 (Nov. 14). (Online) Experiments in Practice

Insights on state-of-the-art of different (online) experimental designs.

Background Readings:

Searles, Kathleen, Joshua P. Darr, Mingxiao Sui, Nathan Kalmoe & Raymond Pingree. (2022). "Partisan Media Effects beyond One-Shot Experimental Designs." *Political Science Research and Methods* 10(1): 206–14.

Balietti, Stefano, Lise Getoor, Daniel G. Goldstein & Duncan J. Watts. (2021). "Reducing Opinion Polarization: Effects of Exposure to Similar People with Differing Political Views." *Proceedings of the National Academy of Sciences* 118(52): e2112552118.

Coppock, Alexander, Andrew Guess and John Ternovski. (2016). "When Treatments are Tweets: A Network Mobilization Experiment over Twitter." *Political Behavior* 38(1): 105–128.

Bail, Christopher A., Lisa P. Argyle, Taylor W. Brown, John P. Bumpus, Hoahan Chen, M.B. Fallin Hunzaker, Jaemin Lee, Marcus Mann, Friedolin Merhout & Alexander Volfovsky. (2018). "Exposure to Opposing Views on Social Media can Increase Political Polarization." *Proceedings of the National Academy of Sciences* 115(37): 9216–9221.

Munger, Kevin. (2017). "Tweetment Effects on the Tweeted: Experimentally Reducing Racist Harassment." *Political Behavior* 39: 629–649.

Week 10 (Nov. 21). Research Highlight – The Stop Hate Speech Project

Practical insights from running a large-scale project involving machine learning and large-scale online interventions.

Background Readings:

Siegel, Alexandra & Vivienne Badaan. (2020). "#No2Sectarianism: Experimental Approaches to Reducing Sectarian Hate Speech Online." *American Political Science Review* 114(3): 837–55.

Hangartner, Dominik et al. (2021). "Empathy-Based Counterspeech Can Reduce Racist Hatespeech in a Social Media Field Experiment." *Proceedings of the National Academy of Sciences* 118(50): e2116310118.

Yildirim, Mustafa Mikdat, Jonathan Nagler, Richard Bonneau & Joshua A Tucker. (2021). "Short of Suspension: How Suspension Warnings Can Reduce Hate Speech on Twitter." *Perspectives on Politics*, DOI:10.1017/S1537592721002589

Haimson, Oliver L, Daniel Delmonaco, Peipei Nie & Andrea Wegner. (2021). "Disproportionate Removals and Differing Content Moderation Experiences for Conservative, Transgender, and Black Social Media Users: Marginalization and Moderation Gray Areas." *Proceedings of the ACM on Human-Computer Interaction* 5(CSCW2): 1–35.

Week 11 (Nov. 28). (Linked) Surveys and Tracking Designs

Large-scale online survey designs linked with observational data (social media) or web tracking.

Stier, Sebastian, Nora Kirkizh, Caterina Froio & Ralph Schroeder. (2020). "Populist Attitudes and Selective Exposure to Online News: A Cross-Country Analysis Combining Web Tracking and Surveys." *The International Journal of Press/Politics* 25(3): 426–446.

Bol, Nadine, Joanna Strycharz, Natali Helberger, Bob van de Velde & Claes H. de Vreese. (2020). "Vulnerability in a Tracked Society: Combining Tracking and Survey Data to Understand Who Gets Targeted with What Content*." New Media & Society* 22(11): 1996–2017.

Eady, Gregory, Jonathan Nagler, Andrew Guess, Jan Zilinsky & Joshua A. Tucker. (2019). "How Many People Live in Political Bubbles on Social Media? Evidence from Linked Survey and Twitter Data." *SAGE Open* 9(1): 1–21.

Week 12 (Dec. 5). Work Session 2 – Proof-of-concept

*Submission and (short) presentation of proof-of-concept implementation of each team (***Assignment 3***).*

[Note: The last two weeks can be used, as needed, for the team(s) to focus on finalizing the research design(s). The idea is to keep these two weeks light so that the focus can be on the project while still providing the opportunity to discuss any open issues.]

Week 13 (Dec. 12). Work Session 3 – Trouble Shooting

Opportunity to clear up any remaining methodological/conceptual issues.

Week 14 (Dec. 19). Final Presentation

Presentation of the (near) final research design and last-minute feedback.