Communication Studies 783

Research Methods II – Quantitative Methods for Research on Mass Media

Syllabus, Fall 2017 (updated Sept 6)

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Objectives: COMM 781 and 783 are the first courses in research methodology and statistics in the Communication Studies PhD program. This class, 783, is intended as a primer in social science research methods and statistical analysis. For students whose work relies primarily on qualitative methods, this term provides the tools required to discuss and evaluate social scientific work in communication studies. For those working mainly with social scientific methods, this is just the beginning of your training, particularly in statistical methods.

The class is set up in a way that links (a) substantive communication studies topics, (b) issues in research methods and design, and (c) statistical analysis. The degree to which we focus on one or the other of these varies by week. Even so, the typical week involves at least some reading on either statistics or research design, a discussion of those readings, an in-class lab on statistical techniques, and a statistical assignment due the following week. The class meets for 2 hours twice a week. Typically, the first class on a topic is focused more on a discussion of methods and statistics, and the other(s) focus more on applying what we've learned.

Note that topics 2-7 focus mainly on statistical themes. Topics 9-11 focus on research design, and we will use these weeks to review and practice the statistical material we learn in the first half of the course. Primarily through replication exercises and weekly assignments, most statistical techniques are reviewed multiple times over the term.

Software: Students are strongly encouraged to bring laptops to class. This is not a requirement, but it is generally useful to not just to watch but also *do* what we talk about in class; and about half our class time will be dedicated to statistical analysis.

We will be exploring data, in ways that hopefully illustrate the material in the text, using R. You will need to have installed R on a computer before class begins. To do so, please visit this website: http://www.r-project.org. R itself is not especially user-friendly, so after installing R, I strongly recommend that you install RStudio, which you get here: http://www.rstudio.com. Both R and RStudio are free, and work on most operating systems.

There is a 6-hour statistics/R 'prep' class, taught by a graduate student in the department, during the first week of the term. This is not required, but it is very strongly recommended. We will leap into work with R in the second week of class the assumption that students have installed and are loosely familiar with R.

Course Design & Readings: Readings will be drawn from a combination of textbooks and journal articles, which will be made available through Canvas.

Throughout the course, I encourage you to take advantage of online resources on both statistics and R. On statistics, consider:

StatSoft Electronic Textbook, http://www.statsoft.com/Textbook

HyperStat Online, http://davidmlane.com/hyperstat/

And on R, you can find answers to almost all your questions (though you can ask me too) at:

Verzani's, *simpleR,* https://cran.r-project.org/doc/contrib/Verzani-SimpleR.pdf

Venables et al., An Introduction to R, https://cran.r-project.org/doc/manuals/R-intro.pdf

Comprehensive R Archive, http://cran.r-project.org/

R Tutor, http://www.r-tutor.com/

Quick R, http://www.statmethods.net/

There are also course notes, distributed through Canvas, and intended to offer brief summaries of some of the statistical issues each week. These are not included in the readings.

All seminars will proceed on the assumption that students have read all required readings beforehand, and participation grades are determined based on students' discussion, command and critique of both methods and issue-related readings. You need to be prepared to discuss the readings, particularly the substantive communication studies readings. You also should arrive at class having downloaded the appropriate dataset. These datasets will be used to apply what we've learned, through replication of analyses in weekly readings, or the production of new analyses, both in class and in weekly assignments.

Note that the readings below are just a start - I will be adding to the readings, and adding datasets, as the term progresses. This allows me to tailor the course (a little) to student interests. Those interests will be the focus of our first meeting; and the course syllabus will fall into place relatively quickly after that.

Requirements: 1. Assignments will comprise 70% of your grade. All assignments must be submitted electronically, in pdf format, though Canvas. There will be one assignment for topics 2 through 11 – nearly weekly, though with some exceptions. Datasets for assignments, and in-class work, will be posted online as the class progresses. The other 30% of your grade will be based on your participation in the seminar. Lateness in assignments, or in attendance, will not be tolerated; which is to say that participation and/or assignment grades will be penalized accordingly.

Schedule: The schedule on the following pages is preliminary, and subject to change over the term based on student abilities and interests. Consider these readings a starting point. Once I've a good sense for the students in the class, I will be adding and adjusting the readings below. In the meantime, I've listing preliminary readings below in the order in which I think they should read.

Schedule

1. Philosophies of Research in the Social Sciences (Sept 5, 7; there are no readings for the class on the 5th, but read these for September 7th)

- Brian Fay and J. Donald Moon. "What Would an Adequate Philosophy of Social Science Look Like?" Ch 2 in Michael Martin and Lee C. McIntyre, eds., *Reading in the Philosophy of Social Science* (MIT Press, 1994).
- Herbert A. Simon. "On judging the plausibility of theories" *(pp. 25-48).* In *Models of Discovery* (Dordrecht, Holland: D. Reidel Publishing, 1977).

2. <u>Descriptive Statistics</u> (Sept 12, 14)

- Sean Gailmard. 2014. *Statistical Modeling and Inference for Social Science* (Cambridge University Press). Chapter 2, pages 21-43.
- Natalie Jomini Stroud et al. 2017. "Homepage Layout," report from the Engaging News Project.

3. <u>Measurement, Reliability, Validity, and Indices</u> (Sept 19, 21)

- Sean Gailmard. 2014. *Statistical Modeling and Inference for Social Science.* Chapter 2, pages 12-21, and Chapter 3.
- Edward Carmines and Richard Zeller. 1979. *Reliability and Validity Assessment* (Sage). Chapters 1, 2 and 4.
- Kristen Harrison and Veronica Hefner. 2014. "Virtually Perfect: Image Retouching and Adolescent Body Image," *Media Psychology* 17: 1-20.
- Sara Lindberg et al. 2006. "A Measure of Objectified Body Consciousness for Preadolescent and Adolescent Youth." *Psychology of Women Quarterly* 30: 65-76.

4. <u>Background Theory & Statistical Significance</u> (Sept 26, 28)

- Ramon E. Henkel. 1976. *Tests of Significance.* Sage.
- Dalson Britto Figueiredo Filho et al. 2013. "When is Statistical Significance not Significant?" *Brazilian Political Science Review* 7(1): 31-55.

5. <u>Ordinary Linear Least-Squares Regression</u> (Oct 3, 5)

- John Fox, *Applied Regression Analysis*, Chapters 2 & 5.
- Gailmard, *Statistical Modeling and Inference for Social Science.* Chapter 2, pages 43-61.
- Jan Van den Bulck. 2004. "Television Viewing, Computer Game Playing, and Internet Use and Self-Reported Time to Bed and Time out of Bed in Secondary-School Children." SLEEP 27(1): 101-104.

6. <u>Analysis of Variance</u> (Oct 10, 12)

- Fox, *Applied Regression Analysis*, Chapter 8 (esp 8.1 and 8.2).
- supplementary (not required, but helpful): Fox, *Applied Regression Analysis*, Chapter 7.
- James D. Ivory and Sriram Kalyanaraman. 2007. "The Effects of Technological Advancement and Violent Content in Video Games on Players' Feelings of Presence, Involvement, Physiological Arousal, and Aggression." *Journal of Communication* 57: 532-555.

7. <u>Complexities in OLS Regression</u> (Oct 17, 19, 31, Nov 2)

- Fox, *Applied Regression Analysis*, Chapters 7.3, 11-13.
- Scott W. Campbell and Nojin Kwak. 2011. "Political Involvement in "Mobilized" Society: The Interactive Relationships Among Mobile Communication, Network Characteristics, and Political Participation." *Journal of Communication* 61: 1005-1024. (Individual-level survey data)

8. Data Visualization (Nov 7, 9)

- Tufte, *The Visual Display of Quantitative Information*.
- Yau, *Visualize This*, Chapters 1, 3-8.

9. Content Analysis (Nov 14, 16)

- Klaus Krippendorff. 1989. "Content analysis." Pp. 403-7 in the International Encyclopedia of Communications, Erik Barnouw et al., eds., Oxford: Oxford University Press.
- H. Andrew Schwartz and Lyle H. Unger. 2015. "Data-Driven Content Analysis of Social Media: A Systematic Overview of Automated Methods." American Academic of Political and Social Science 659: 78-94.
- Sonya Dal Cin et al. 2008. "Youth exposure to alcohol use and brand appearances in popular contemporary movies," *Addiction* 103: 1925-1932.
- Lori Young and Stuart Soroka. 2012. "Affective News: The Automated Coding of Sentiment in Political Texts." *Political Communication* 29: 205-231.

10. Sampling & Survey Research (Nov 21, 28)

- Suman Mishra. 2014."Doing Survey Research in Media Studies." *The International Encyclopedia of Media Studies*, First Edition.
- Erba, Joseph et al. 2017. "Sampling Methods and Sample Populations in Quantitative Mass Communication Research Studies: A 15-Year Census of Six Journals." *Communication Research Reports,* in FirstView.
- de Vreese Claes H. and Peter Neijens. 2016. "Measuring Media Exposure in a Changing Communications Environment." *Communication Methods and Measures* 10(2-3): 69-80.

11. Experimental Design (Dec 5, 7)

- Leshner, Glenn. 2014. "The Basics of Experimental Research in Media Studies." *The International Encyclopedia of Media Studies*, First Edition.
- Druckman, J. N., D. P. Green, J. H. Kuklinski, and A. Lupia, eds. 2011. *Cambridge handbook of experimental political science*. New York: Cambridge Univ. Press. Introduction.
- Stuart Soroka, Peter Loewen, Patrick Founier and Daniel Rubenson. 2016. "The Impact of News Photos on Support for Military Action," Political Communication 33(4): 563-582.
- Allison Harell, Stuart Soroka and Kiera Ladner. 2013. " Public Opinion, Prejudice and the Racialization of Welfare in Canada." Ethnic and Racial Studies 37(14): 2580-2597.

12. Review(Dec 12)