

INTL 7008	Advanced Data Analysis for Human Security Practitioners	Fall 2022
W 3:35-6:35	Peabody Hall 205S	Prerequisites: INTL 7000
Danny Hill	Dept. of International Affairs	dwhill@uga.edu
Office Hrs: By appointment	Office: 319 IA Building	

Course Description

This course presents students with an overview of statistical models commonly used in political science, with a special focus on applications to human security and violent political conflict. We will begin with conceptualization and measurement, basic statistics and linear regression before moving to more advanced topics including regression models for discrete data, event history/duration models, models for panel data, and prediction and forecasting. It is very difficult to produce or consume quantitative research on human security without some familiarity with these topics. Substantive research topics include democratization, human rights, civil war, state-sponsored mass killing, coups, terrorism, international conflict, conflict intervention, and economic sanctions. Because reading books and articles and attending lectures is not sufficient to learn how to perform statistical analysis competently, students will be required to complete lab exercises during some weeks. Special attention will be given to estimation and post-estimation analysis using the statistical software program R. Students will apply various models to different sets of human security-related data in a series of computer lab assignments, and to data relevant to their own area of specialization in a final analysis to be submitted at the end of the semester.

Expected outcomes/learning objectives

By the end of the course students will be very familiar with the most commonly used data sets in cross-national research on political conflict, and will be comfortable executing statistical analysis using software programs and translating the results into informative and easy-to-read reports.

There is one book you must buy

Ward, Michael D. and John Ahlquist. 2018. *Maximum Likelihood for Social Science*. New York: Cambridge University Press.

All other readings will be made available electronically.

Grades

Your grades will be based on lab assignments, a final paper, and class attendance/participation. Your final grade will be determined as follows:

Lab assignments (4): 50%

Final paper: 50%

Grade Distribution:

90-100: A	80-89: B	70-79: C
60-69: D	59 and below: F	

Lab Exercises/Homework Assignments

Students will complete 4 lab assignments throughout the semester. The assignments will require students to use the statistical software program R, which is open-source and completely free. We will spend a lot of time in class going through example code, and I will be available outside of class to answer any questions you have about assignments. All lab assignments are due Wednesday by 12 p.m. the week after are assigned.

Final Paper

For your final paper, you are expected to execute a complete analysis and write-up of your results. The paper can be on any topic related to human security and must include a *complete* analysis using one of the methods of analysis covered in this course. This means your research question must be amenable to off-the-shelf data (that you could download right now), assuming you have not collected relevant data yourself before the course begins. For this project you are strongly encouraged to extend/finish other projects you have already begun. You may also use a paper you are writing for another course in which you are currently enrolled, if that is feasible.

There are a few dates you need to remember with respect to the final paper. You must submit to me via email a 1-2 page research proposal by Friday, September 16th. The proposal should outline your research question and the analysis you plan to conduct. I will then set up individual meetings with each of you to discuss your paper proposals. By Friday, October 14th you must submit a rough draft of the *research design* portion of your paper, meaning everything except the analysis. Your research design draft should include a description of the data you plan to analyze. During the week of November 14-18 I will again meet with each of you individually to discuss progress on your final paper and any problems you might be encountering with your analysis. You must submit replication files (a script and a data file) along with your paper. Final papers are due December 7 by 5 p.m.

Course Website and Email

Can be accessed through www.elc.uga.edu. You will need to check this site regularly for any syllabus updates or for posted readings. Announcements may also be sent out via email. It is your responsibility to check ELC for syllabus updates.

Syllabus Change Policy

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Students with Disabilities

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate during regular office hours or by appointment.

University Honor Code/Academic Honesty Policy

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Withdrawal Policy

Students who withdraw from the class before the withdrawal deadline are assigned a grade based on their performance (pass/fail) in the class up the point of withdrawal. This means that students who are failing will be assigned a "WF" grade even if they withdraw before the deadline. Students who withdraw from the class after the withdrawal deadline are automatically assigned a "WF" grade upon withdrawal.

Course Schedule

August 17: Course introduction

No reading

August 24: Measurement and induction

Alvarez, Michael, José Cheibub, Fernando Limongi, and Adam Przeworski. 1996. "Classifying Political Regimes." *Studies in Comparative International Development* 31(2):137.

Munck, Gerardo L. and Jay Verkuilen. 2002. "Conceptualizing and Measuring Democracy: Evaluating Alternative Indices." *Comparative Political Studies* 35(1): 5-34.

Stohl, Michael, David Carleton, George Lopez, and Stephen Samuels. 1986. "State violation of human Rights: Issues and Problems of Measurement." *Human Rights Quarterly* 8(4): 592-606.

Cingranelli, David L. and David L. Richards. 1999. "Measuring the Level, Pattern and Sequence of Government Respect for Physical Integrity Rights." *International Studies Quarterly* 43(2): 407-418.

Russell, Bertrand. 1912. *The Problems of Philosophy*. Chapter 4.

Oneal, John R. and Bruce M. Russett. 1997. "The Classical Liberals Were Right Democracy, Interdependence, and Conflict, 1950-1985." *International Studies Quarterly* 41(2): 267-293.

August 31: Bivariate relationships and hypothesis tests

Schroeder, Larry D., David L. Sjoquist, and Paula E. Stephan. 1986. *Understanding Regression Analysis: An Introductory Guide*. Thousand Oaks, CA: Sage Publications.

Polity project codebook: <http://www.systemicpeace.org/inscr/p5manualv2018.pdf>

Varieties of Democracy codebook: https://www.v-dem.net/media/filer_public/28/14/28140582-43d6-4940-v-dem_codebook_v10.pdf

Political Terror Scale website: <http://www.politicalterroryscale.org/>

Cingranelli-Richards data website: <http://www.humanrightsdata.com/>

Human Rights Measurement Initiative website: <https://humanrightsmmeasurement.org/>

September 7: Multivariate regression

Long, Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage Publications. Pages 1-25.

Lewis-Beck, Michael. 1980. *Applied Regression: An Introduction*. Thousand Oaks, CA: Sage Publications.

Poe, Steven, C. Neal Tate, and Linda Camp Keith. 1999. "Repression of the Human Right to Personal Integrity Revisited: A Global, Cross-National Study Covering the Years 1976-1993." *International Studies Quarterly* 43(2): 291-313.

Lab 1 begins

September 14: Interaction terms and logistic regression

Brambor, Thomas, William Roberts Clark, and Matt Golder. 2006. "Understanding interaction models: Improving empirical analyses." *em Political Analysis* 14(1):63-82.

Long, ch. 3.

Ward and Ahlquist, ch. 3.

Lab 1 due by 12 p.m.

September 21: Applications to civil war and democratization

Fearon, James and David Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97: 75-90.

Collier, Paul and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56: 563-595.

UCDP website: <https://ucdp.uu.se/>

Przeworski, Adam, Michael E. Alvarez, José Cheibub, and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge University Press. Chapter 2.

September 28: Ordered response models, application to economic sanctions and human rights

Long, ch. 5.

Ward and Ahlquist, ch. 8.

Wood, Reed M. 2008. "A Hand upon the Throat of the Nation: Economic Sanctions and State Repression, 1976-2001." *International Studies Quarterly* 52(3): 489-513.

Peksen, Dursun. 2009. "Better or worse? The effect of economic sanctions on human rights." *Journal of Peace Research* 46(1):59-77.

Clay, K. Chad. 2018. "Threat by Example: Economic Sanctions and Global Respect for Human Rights." *Journal of Global Security Studies* 3(2): 133-149.

Lab 2 begins

October 5: Models for event counts

Long, ch. 8.

Lab 2 due by 12 p.m.

October 12: Events data, applications to international conflict and terrorism

Palmer, Glen, Vito D'Orazio, Michael Kenwick, and Matthew Lane. 2015. "The MID4 dataset, 2002-2010: Procedures, coding rules and description." *Conflict Management and Peace Science*.

Correlates of War website: <https://correlatesofwar.org/>

LaFree, Gary, and Laura Dugan. 2007. "Introducing the Political Terrorism Database." *Terrorism and Political Violence*. 19(2): 181-204.

Enders, Walter, Todd Sandler and Khusrav Gaibulloev. 2011. "Domestic versus transnational terrorism: Data, decomposition, and dynamics." *Journal of Peace Research* 48(3):319-337.

Global Terrorism Database website: <https://start.umd.edu/gtd/>

October 19: Advanced models for event counts, application to internal conflict

Ward and Ahlquist, ch. 10.

Schrodt, Philip A. 2010. "Automated Production of High-Volume, Real-Time Political Event Data." Paper presented at APSA Annual Meeting. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1643761

Salehyan, Idean, Cullen S. Hendrix, Jesse Hamner, Christina Case, Christopher Linebarger, Emily Stull, and Jennifer Williams. 2012. "Social Conflict in Africa: A New Database." *International Interactions* 38(4): 503-511.

Social Conflict Analysis Database website: <https://www.strausscenter.org/ccaps-research-areas/social-conflict/database/>

Lab 3 begins

October 26: Event history/duration models

Box-Steffensmeier, Janet M. and Bradford S. Jones. 2004. *Event History Modeling: A Guide for Social Scientists*. Cambridge University Press. Chapters 2-5.

Ward and Ahlquist, ch. 11.

Lab 3 due by 12 p.m.

November 2

I will be at a professional conference, no class

November 9: Application to conflict intervention and duration

Carter, David and Curtis Signorino. 2010. "Back to The Future: Modeling Time Dependence in Binary Data." *Political Analysis* 18(3): 271-292.

Collier, Paul, and Anke Hoeffler, and Måns Söderbom. 2004. "On the duration of civil war." *Journal of Peace Research* 41(3): 253-273.

International military intervention dataset: <https://www.k-state.edu/polsci/intervention/>

Lab 4 begins

November 16: Panel data

Lab 4 due by 12 p.m.

Green, Donald P., Soo Yeon Kim, and David H. Yoon. 2001. "Dirty Pool." *International Organization* 55(2): 441-468.

Clark, Tom S. and Drew A. Linzer. 2015. Should I Use Fixed or Random Effects? *Political Science Research and Methods* 3(2): 399-408.

Gelman, Andrew, and Jennifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Chapter 12.

November 23

Thanksgiving break, no class

November 30: Prediction and forecasting

Ward and Ahlquist, ch. 5

Ward, Michael D. Brian D. Greenhill, and Kristin M. Bakke. 2010. "The Perils of Policy by p-value." *Journal of Peace Research* 47(4): 363-375.

Harff, Barbara. 2003. "No Lessons Learned from the Holocaust: Assessing Risks of Genocide and Political Mass Murder since 1955." *American Political Science Review* 97: 57-74

Early Warning Project Website: <https://earlywarningproject.ushmm.org/>

Beger, Andreas, Cassy L. Dorff, and Michael D. Ward. 2015. "Ensemble forecasting of irregular leadership change." *Research & Politics* 1(3).