

POSC 224 Measuring and Evaluating Ecological Systems

Fall 2017

Tu/Thu 3:10–4:55

Barbara Allen

Office hours by appt: Mon–Thu

Sign Up ON MOODLE

Weitz 235

See Moodle for discussion of assignments and due dates

The Course

How do we know what we think we know about physical environments and social environments? How do human beings and the physical world shape each other? How can we design democratic institutions that help us deal with natural resource problems? How do we evaluate the provisional answers that we would give to any of these questions?

In the 2017 POSC 224 Lab you will learn two frameworks of analysis: The Institutional Analysis and Development (IAD) and Social Ecological Systems (SES) Frameworks, which are designed to provide data on social, economic, and political institutions and the physical environment in such a way that we can understand the reciprocal effects of institutional and environmental change. And will learn three additional research methods: focus group, depth interview, and small-*n* questionnaire writing, data collection, and analysis. You may choose any of these methods and/or frameworks to conduct research on a local problem with a "global link."

Readings and Grades

The readings for the course have been drawn from a number of books and journal articles available on Moodle links. **Grades** will be computed as follows on the assignments listed below:

Research Design	20
Research Instrument Design	20
Data Collection	20
Data Analysis	10
Oral Presentation	10
Written (Individual) Report	<u>20</u>
Total	100

OPTIONAL EXTRA CREDIT

Viz Assignment 1	5
Viz Assignment 2	5
Viz Assignment 3	<u>5</u>
Total Possible	15

Assignments

Project Overview

In 2017, the POSC 224 lab is designed to pair with the POSC 180 On Local and Global Communities

The broad assignment is to research a local issue or problem, enterprise, or event that has been affected by global phenomena or is in some way influencing global phenomena. We want to see how the local and the global connect. All social systems are in some way "located" in ecological systems; all ecological systems are nowadays in some way "located" in social systems. This connection of the social and ecological is the second aspect of the problem, enterprise, or event that your case must demonstrate. You will learn about two closely related frameworks for studying social-ecological systems and local-global links. You will learn about the development of case studies and three methods of data collection to be used in your research. The course requires you to work as a group to decide on a topic, collect, analyze, and interpret data, as well as to report your findings in a written and visual/aural presentation. Your work connects with the activities of POSC 180 and you along with students from that course will give public presentation of your research findings during Common Time November 9, 2017. Please place that date on your calendar today.

Data Collection, Analysis, and Oral Presentation

A Group Research Project—Defining a Question

Who doesn't have questions about events in the world today?! The key to thinking about "solutions" involves thinking about a proper diagnosis and understanding the different scales at which issues/events/problems occur and might be addressed by some sort of intervention. Often we see the global better by starting at the local. So think! You will each upload a *preliminary* statement of a proposed research question on course Moodle by September 20.

We will review your ideas as a group and devise a research strategy based upon these initial interests and ideas on September 21.

A Group Project—Hypotheses, Variables, and Methods

On September 19, 21, 26, and 28 you will learn two primary qualitative methods for collecting qualitative data from individual subjects: depth interviews and focus group methods. Additional methods and the overall ideal of good case study research design will supplement the basics in ways appropriate to your specific research question. As a first step, you will undertake a mini-research project concerning the choices, costs, and benefits from buying products through on-line vendors or local retail outlets (that are not big-box stores). This project, which will be undertaken by POSC 224 and POSC 180 will raise a number of questions that can prompt questions of greater depth and scope. Use it as the basis for "how to" as well as "what" you wish to undertake in the weeks that follow. The lessons of the first three weeks of this course include active listening training, question construction, and other aspects of interview techniques. You will also learn how to design focus group research plan. We will discuss writing the questions and outline of activities for a focus group (this plan is called the focus group protocol); skills involved in moderating a group; skills involved in filming and transcribing the group discussion; and how to analyze the content of the discussion as part of qualitative and/or quantitative research. You may choose to use this research method in your data collection, depending upon your research goals.

Please submit draft interview questions or focus group protocol and a proposed initial interview/focus group schedule on September 25.

A Group Project—Presentation

Our work in POSC 180 and in this class includes workshops on visual representations of data. Working as a group, you will design an oral presentation of research findings that uses visual representation skills.

Research Report on SES/IAD Frameworks

An Individual Project

Each of you will write a brief of approximately 5 pages in which you use the SES and/or IAD frameworks to understand some aspect of the group's research. Although this research report is designated as an individually authored paper, you may share researches and insights and *if you choose* you may arrange to write a longer, co-authored paper with other members of the class. If you wish to undertake co-authored work, you must discuss the paper with me no later than September 26. This final written report is due on October 12. You will present your report to the class on October 12.

Weekly outline with readings and assignments

WK 1 Tues Sept 14 The Meaning of the Commons and the Problem of Measurement

I. An Overview of our Projects

II. Time for you to discuss local issues, events, or problems that might be the basis of a group research project

ASSIGNMENT AFTER CLASS: BEGIN THE INITIAL RESEARCH PROJECT ON THE COSTS AND BENEFITS OF LOCAL AND ON-LINE SHOPPING

Readings on the IAD Framework for discussion 9/19

I will be discussing ideas from the following work with you beginning 9/19.

Required reading is on the syllabus beginning Sept 16. Listed here is "after class" optional reading that will help several of you with projects of interest (e.g. comps that you've made me aware of...) to you. These are optional, but I will draw on them as I talk with you in our workshops.

After Class **Optional** Reading: From E. Ostrom. 2005. *Understanding Institutional Diversity* Ch. 1 "[Understanding the Diversity of Structured Human Interactions](#)" pp. 1–6.

John Searle, ed. 1969. "[The Distinction Between Brute Facts and Institutional Facts](#)." In *Speech Acts: An Essay on the Philosophy of Language*. New York: Cambridge University Press. 50–53.

Thurs Sept 16 NO CLASS MEETING— WORK ON LOCAL AND ON-LINE VENDOR PROJECT PARTS 1 & 2

The Idea of “Commons” and Common Pool Resource Theory—We will discuss ideas from the following 9/19. They are listed in order of importance to our discussion

REQUIRED Please listen to [John Searle](#) Ted Talk

Elinor Ostrom. 1990. *Governing the Commons*. London: Cambridge University Press. Ch 1. "[Reflections on the Commons](#)," London: Cambridge University Press. 1–28.

Elinor Ostrom. 1999. "[Design Principles in Long-Enduring Irrigation Institutions](#)," in Michael McGinnis, ed. *Polycentric Governance and Development*. Ann Arbor: University of Michigan Press.

Edella Schlager. 2004. "[Common-pool resource theory](#)." *Environmental Governance Reconsidered*. MIT Press, Cambridge: 145–176.

Arun Agrawal. 2002. "[Common Resources and Institutional Sustainability](#)," in Elinor Ostrom et al. *The Drama of the Commons*. [Committee on the Human Dimensions of Global Change, National Research Council, Division of Behavioral and Social Sciences and Education, Board on Environmental Change and Society] Washington: National Academic Press. 41–85.

OPTIONAL: Garrett Hardin. 1968. "[The Tragedy of the Commons](#)," *Science* 162 (December 13). 1243–1248.

REMEMBER TO SUBMIT YOUR FILMED INTRODUCTION OF YOURSELF

AND SUBMIT PARTS 1 & 2 OF YOUR VALUE AND COMMODITY ANALYSIS AND VENDOR CHOICE FOR OUR 9/19 DISCUSSION

Questions of Scale and Measurement: Using the Institutional Analysis and Development Framework

WK 2 Tues Sept 19

I. Discuss data collection projects

II. Interview Protocol and Questionnaire design; Active Listening Skills

III. Problems of Scale Part 1: Understanding resources from different perspectives

Read: Elinor Ostrom and Harini Nagendra. 2006. "[Inaugural Article: Insights on Linking Forests, Trees, and People from The Air, On the Ground, and in the Laboratory](#)," *Proceedings of the National Academy of Sciences*, 103(51), 19224–19231.

Nagendra, H., and E. Ostrom. 2011. "[The challenge of forest diagnostics](#)," *Ecology and Society*, 16(2): 20.

Oran R. Young. "[The Problem of Scale in Human/Environment Relationships](#)," in Robert Keohane and Elinor Ostrom, eds. *Local Commons and Global Interdependence*. London: Sage. 27–45.

Thurs Sept 21

I. The Ideal of Case Study Analysis

II. Focus Group Protocol and Management

III. Problems of Scale Part 2: Understanding institutions from different perspectives

Elinor Ostrom. 2005. *Understanding Institutional Diversity* Ch. 1, "[Understanding the Diversity of Structured Human Interactions](#)" 1–31.

Thomas Schelling. 1978. "[Thermostats, Lemons, and Other Families of Models](#)" from *Micro Motives and Macro Behavior*. New York: Norton. 83–133.

WK 3 APPLICATIONS OF FRAMEWORKS TO CASE STUDIES

Mon Sept 25 Turn in Optional Viz 1 Assignment

Tues Sept 26

I. Applying the Institutional Analysis and Development (IAD) Framework

Read: Elinor Ostrom. 2010. "[The Institutional Analysis and Development Framework and the Commons](#)," *Cornell Law Review*. 95: 807–815.

II. Discuss Optional Viz Assignment 1

III. Continue Discussion of Methods and Data Collection

Read ON IAD:

E. Ostrom. 2005. "[Zooming In and Linking Action Situations](#)," Ch. 2. *Understanding Institutional Diversity*. Princeton: Princeton University Press. 32–68.

E. Ostrom. 1990. *Governing the Commons* Chapter 2, "[An Institutional Approach to the Study of Self-Organization and Self-Governance](#) in CPR Situations." 29–57.

Optional: Larry Kiser and Elinor Ostrom. 1987. "[Reflections on the Elements of Institutional Analysis](#)," Working Paper W87-22 of the Workshop in Political Theory and Policy Analysis.

Thurs Sept 28

I. Conclude discussions of Basic Methods and Practical Applications

II. Continue discussion of IAD and the problem of scope
ON The Problem of Scope

Read: Duncan Snidal. 1995. "[The Politics of Scope: Endogenous Actors, Heterogeneity and Institutions](#)," in Robert Keohane and Elinor Ostrom, eds. *Local Commons and Global Interdependence*. London: Sage. 47–70.

E. Ostrom. 2005. Ch 4 "[Animating Institutional Analysis](#)," Ch. 4. *Understanding Institutional Diversity*, Princeton: Princeton University Press. 99–133.

WK 4 THE SES FRAMEWORK

Mon Oct 2 Research Plan Due

Mon Oct 2 Viz Assignment 2 Due

Tues Oct 3 SES and Case Studies

I. Discuss and Finalize Research Plan revised as a Research Design

II. The Social-Ecological Systems (SES) Framework

Read: Elinor Ostrom. 2009. "[A General Framework for Analyzing Sustainability of Social-Ecological Systems](#)," *Science* 325, 419–422.

Marco Janssen and John M. Anderies. 2013. "[A multi-method approach to study robustness of social-ecological systems](#): the case of small-scale irrigation systems," *Journal of Institutional Economics*. 9: 4, 427–447.

Wed Oct 4 Questions are finalized no later than this date; data collection— Let me know if you need help scheduling facilities for data collection

Thurs Oct 5 MEET IN IDEA LAB Data Collection continues

I. Conceptualizing Presentation of your work

Optional Reading: Elinor Ostrom. 2007. "[Sustainable Social-Ecological Systems: An Impossibility?](#)" Working Paper W87-22 of the Workshop in Political Theory and Policy Analysis. W07-02.

Thurs Oct 8 MEET IN ARBORETUM CLASSROOM

I. Critique Infographic Timeline

II. Finalize data collection

INFOGRAPHIC TIMELINE OF ARB INSTITUTIONAL EVOLUTION DUE IN CLASS

FYI POSC 225 Assignment:

Meeting the Challenge of Institutional Analysis with the IAD and SES Frameworks

Read: Vincent Ostrom. 2012. "Interpreting Social Experiments: An Agenda for Critical Reflections and Inquiry about a Research Program in Comparative Institutional Analysis and Development," in Barbara Allen, ed. *The Quest to Understand Human Affairs*, Vol 2. Lanham: Lexington Books. 297–321.

Vincent Ostrom. 2012. "Conceptualizing the Nature and Magnitude of the Task of Institutional Analysis and Development," in Barbara Allen, ed. *The Quest to Understand Human Affairs*, Vol 2. Lanham: Lexington Books. 181–217.

WK 5 Pulling the work together

Mon Oct 9 Viz 3 Assignment Due

Tues Oct 10 MEET IN IDEA LAB

I. Discuss the overall results of data collection

II. Determine best methods of reporting research findings

Variations of SES Frameworks

Read: Claudia R. Binder, et al. 2013. "[Comparison of Frameworks for Analyzing Social-Ecological Systems](#)," *Ecology and Society*. 18 (4): 26.

Andreas Theil. 2008. "[Integrating Socially Constructed Scale into Theories of Institutional Change](#): Towards the Analysis of Institutional Re-Scaling of Social-Ecological Systems." Paper presented at the Twelfth Biennial Conference of the International Association for the Study of Commons, Cheltenham, England.

Thurs Oct 12 PRESENT REPORT ON YOUR RESEARCH

Research Report Presentations
Individual Reports Due