Msrng & Eval ScI & Eclgcl Sytm

My home ► My courses ► 2015-16 ► Fall '15 ► Msrng & Eval ScI & Eclgcl Sytm

POSC 224 Measuring and Evaluating Ecological Systems

Fall 2015
Tu/Thu 3:10–4:55
Barbara Allen
Office hours by appt: Mon–Thu
Sign Up ON MOODLE
Meet Weitz Cafe

Weitz 235 and ARBORETUM classroom

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?

The Institutional Analysis and Development (IAD) and Social Ecological Systems (SES) Frameworks 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. In this lab and its companion class, POSC 225, “The Global Local Commons,” we will learn these frameworks and the methods used to measure changes in various natural resource systems and social systems. As we study these frameworks in a particular natural resource case, the Carleton Cowling Arboretum, we will be paying particular attention to several primary concerns: the problems of scale and the scope of activity in social institutions and ecological systems as well as the distinction among difficulties in providing collective goods, producing collective goods, organizing institutions for consuming/using a common or shared resource, and organizing a group or association to take collective action. The idea of a “commons” has been used to understand each of these problems—but these concepts differ and we must distinguish among them if we are to understand social and ecological systems!

Readings

The readings for the course have been drawn from a number of books and journal articles available on Moodle links. Our work makes extensive use of the Cowling Arboretum Digital Collection.

Grades will be computed as follows on the assignments listed below:

Research and Reporting for
Assignments

Project Overview

The POSC 224 lab is designed to pair with the POSC 225 class on the global-local commons.

The broad assignment is to research the institutional evolution of the Cowling Arboretum (our Carleton Arb) and the development of the Arb as a physical space and (human cultivated) natural resource. Our readings focus on the interrelationship of human institutions and ecological systems, using two analytical frameworks: The Institutional Analysis and Development Framework and the Social-Ecological Systems Framework. We apply the ideas and methods of analysis learned to a case of social-ecological systems as they develop together over time. Our resource “case study” will be the Arb-as-institution and the Arb-as-forest. Your work will become the basis of an analytical narrative of the Arb as a social-ecological system. A public presentation of this narrative is the project of the POSC 225 class.

The overall project for the 224 and 225 classes involves archival library research on the historical development of the Arb-as-institution (a rule defined social space) as well as the creation and use of data sets based on the measures of the physical resource—the Arb-as-forest. Our data will come in the form of maps, aerial photos, GIS-based data, on-the-ground observation, depth interviews, focus group research, Carleton Board of Trustee (and other significant association) minutes from meetings that created and changed the institutional Arb, journals of key participants in the founding of the Arb, financial documents pertaining to the management of the Arb, and Annual Reports on the Arb—among other resources.

Carleton Archive Data Collection and Institutional Development Infographic Timeline

A Group Project

The Carleton Archive (Library first floor) is a rich repository of “raw data” for our research on the institutional evolution of the Carleton Arboretum. We start our work in the Archive as a group on September 17. You will learn about using primary source materials as “evidence” to support or disconfirm a research hypothesis. As we read the assigned materials for the class, you will learn to generate research hypotheses or cause-and-effect propositions about institutional development and change. By taking an inventory of available primary sources, you will begin to design research to examine these hypotheses—based on the evidence available in the Carleton Archive.

You will each upload a preliminary statement of a proposed research design and hypotheses through the course Moodle on September 24. We will review your ideas as a group and devise a research strategy based upon these initial interests and ideas.
Your archival data collection will produce a timeline for understanding the evolution of Arb-as-institution. A timeline is a particular type of infographics that condenses a great deal of information into a graphic presentation—as an alternative to a paper that lays out a history in sentence and paragraph form. Great infographics look simple, but their simplicity is deceptive. Infographics convey information with immediacy, but it takes time to learn the skills necessary to condense information in graphic form.

Your infographics timeline will become a basic analytical tool for the overall project of understanding the evolution of the Arb as a social/institution system. This group project is due as an upload to the Moodle on October 8.

**Depth Interviews and Focus Group Protocol Writing, Management, Moderation, and Analysis Strategies**

A Group Project

On September 15 you will learn two methods for collecting qualitative data from individual subjects: depth interviews and focus group methods. Several individuals in the Carleton community have volunteered to be interviewed for your projects. They include: Nancy Braker, Arboretum director; Mary Savina, Professor of Geology and an alum who knew the Arb well; Fred Rogers, Vice President and Treasurer, another alum familiar with the history of the Arb; and Ed Buchwald, Emeritus Professor of Geology and a former manager of the Arb. Your research may suggest other interview subjects.

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 and a proposed initial interview schedule on September 22. We will post the schedule and personnel/equipment requirements.

**Metadata Cataloging of a Physical Environment**

An Individual and Group Project

The Arb-as-forest represents a case study of a forest as an ecological system—a physical space. You will learn to read maps, aerial photographs, and “on-the-ground” observations of the space as it has developed over time. You will also learn how foresters and other researchers assay such a physical space in order to understand the use and health of the forest. You will learn how layers of data may be catalogued as metadata for an object like a photograph or map. Your assignment will be to research the particulars of various artifacts such as a map or photograph and supply that information as metadata linked to the artifact. Your research documents for this assignment includes Arb records in the Carleton Archive (on which you base your timeline) and your transcribed interviews with people who tell you the Arb history. The assignment will be turned in as two parts: 1) materials such as transcriptions of your filmed interviews and annotations for existing oral histories in the Library Archive, which you’ve used as primary sources and 2) as metadata added to the artifact electronic file. The assignment is due October 13.

**Research Report on SES/IAD Frameworks Applied to the Cowling Arb**

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 Arb as an institution and ecological system. 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 October 1. This final written report is due in class on October 15. You will present your report to the class on October 15.

**News forum**

Post your ideas and share information here.

**Ideas and Info**

Turn in your research ideas here.

**Preliminary Ideas for Research and Research Hypotheses**

Turn in your draft of interview questions and schedule for interviews here.

**Draft Interview Questions and Schedule**

Turn in transcripts of your filmed interviews here.

**Interview Transcriptions**

Turn in your Infographic Timeline of Cowling Arb Evolution here.

**Infographic Timeline of Cowling Arb Evolution**

Turn in background for metadata entries here.

**Meta Data Materials**

YOU HAVE 3 MAPS to work with. They come from University of Minnesota via the MN State Geo service.

INFORMATION AT THESE SITES IS NECESSARY FOR THE COMPLETION OF THIS ASSIGNMENT

The provided documents (below) tell you: 1) What the metadata entry looks like in final form (Arb_CDM field); 2) the vocabulary (consistent terms) used to describe an Arb entry (Controlled Vocab); 3) Examples of what info should be entered in each field (ArbDataDictionary); and 4) My effort to make a list of the information that you should be able to locate for each map (Meta Data Information). There is also a discussion of how rights are managed (Rights Management). This is FYI for you.

The assignment is to provide all of the information that you can find on the fields, concentrating on the list that I’ve given to you (#4), using the proper vocabulary (#2) and in consultation with the examples (#3). When I evaluate
your work, I will be MOST interested in your abstracts. That is your chance to show what you’ve learned in archival research.

The assignment is to choose one of the maps and, working in teams, provide the information!

Written Final Research Report

Turn in your written brief of approximately 5 pages in which you use the SES and/or IAD frameworks to understand some aspect of the Arb as an institution and ecological system.

Final Report Presentation Materials

Timeline Project Peer Evaluation

Turn in your timeline project peer evaluation here.

Interview Project Peer Evaluation

Turn in your interview project peer evaluation here.

Forum for non-student coordination of this course -

This forum is hidden from students and is for coordinating the support of this course. If you do not want to receive email from this forum, just unsubscribe from it.  ~Paula

The 2011 Cowling Arboretum Inventory Report

Carleton Archive Resources

These are links to everything "Archive" at the Gould Library

Lighting for Small Space

Lighting a small space

Lighting for a 2-Camera Interview

Basics of 3-Point Lighting. How to light a 2-Camera Interview

Metadata for Aerial Photos of Arb

Meta Data Project Files

These documents tell you: 1) What the metadata entry looks like in final form (Arb_CDM field); 2) the vocabulary (consistent terms) used to describe an Arb entry (Controlled Vocab); 3) Examples of what info should be entered in each
field (ArbDataDictionary); and 4) My effort to make a list of the information that you should be able to locate for each map (Meta Data Information). There is also a discussion of how rights are managed (Rights Management). This is FYI for you.

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Meta Data Files

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### 13 September - 19 September

**Part 1: The Commons and Common Pool Resource Problems**

WK 1 Tues Sept 15  The Meaning of the Commons and the Problem of Measurement

I. An Overview of our Projects

II. Active Listening, Depth Interviewing, and Focus Group Methodology

ASSIGNMENT AFTER CLASS: BEGIN SCHEDULING INTERVIEWS Starting with our class time Thursday Sept 29

FYI In POSC 225:

I will be discussing ideas from the following books Sept 15 and 17. Required reading is on the syllabus for Sept 17. Listed here is after class optional reading.


Please listen to John Searle after class:

Also discussed today and to be **read by Thursday 17 September**:


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
MEET IN LIBRARY: FIRST FLOOR, CARLETON ARCHIVE

1. Nat Wilson and Barbara Allen explain archival research and resources for studying the institutional evolution of the Carleton Arboretum

FYI POSC 225 Activities:

The Idea of “Commons” and Common Pool Resource Theory


Interview Workshop PowerPoint

A PowerPoint that covers topics from our discussion of active listening techniques.

Institutions--Definitions

PowerPoint slides with definitions

20 September - 26 September


WK 2 Tues Sept 22 MEET IN ARBORETUM CLASSROOM
From the air and from the ground: interpreting maps, photos, and landmarks.

Learn to interpret maps and aerial photographs. Draft shot list for filming in arb using resources such as the Cowling Digital Archives Collection.

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


II. Learning to read maps and aerial images to understand a resource system—from the air

SUBMIT DRAFT OF INTERVIEW QUESTIONS AND INTERVIEW FILMING SCHEDULE


Thurs Sept 24 NO CLASS MEETING TODAY at 3:10 pm

NOTE: THIS IS A POSSIBLE TIME FOR INTERVIEW FILMING AND FILMING IN ARB

PRELIMINARY RESEARCH IDEAS DUE

POSC 224 Class meets 1:15 in Arboretum Classroom. You are welcome to discuss with us:

I. Problem of Scale Part 2: Understanding “Meta-Data,” Types and Interpretation of Evidence, and Frames of Reference


II. Non-fiction film and political argument. Examples from:

27 September - 3 October

WK 3 Tues Sept 29  MEET IN PEPS IDEA LAB

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


II. Measuring Forests


III. Introduction to Infographic Design with Doug Foxgrover

IV. Continue Data Collect; Possible Time for Scheduling Interviews

FYI 225 will reads

ON IAD:


On Forest Measurement:


Wed Sept 30 Film Screening: Queen of the Sun: What are the bees telling us? Taggart Siegel 2010, 82 min

Thurs Oct 1  MEET IN Weitz Finishing Room 031

Infographic Design with Doug Foxgrover

I. Discuss the problem of scope as it applies to your institutional timeline and metadata collection and data entry

II. Continue data collection and work on Timeline

FYI POSC 225 reads:

I. The Problem of Scope
4 October - 10 October

WK 4 Tues Oct 6  MEET FOR Interviews in Weitz 031

I. Applying the Social-Ecological Systems (SES) Framework


II. Discuss uses of collected data in group projects and individual report

III. Complete Draft of Timeline

FYI POSC 225 Reads:


Wed Oct 7

12 noon Set-up to Film Interviews in Studio B

Film Screening *Winged Migration*, Jacques Perrin 2003, 89 min.

Thurs Oct 8  MEET IN IDEA LAB

I. Critique Infographic Timeline

II. Finalize data collection

INFOGRAPHIC TIMELINE OF ARB INSTITUTIONAL EVOLUTION DUE IN CLASS


11 October - 17 October

WK 5 Tues Oct 13  MEET IN IDEA LAB

   I. Discuss the overall results of data collection
   II. Determine best methods of reporting research findings

**INTERVIEW TRANSCRIPTIONS DUE**
**METADATA ENTRY DUE**

FYI POSC 225 Assignment:

Variations of SES Frameworks


Thurs Oct 15  MEET IN IDEA LAB and Weitz Classroom

**Individual Research Report Presentations**

**RESEARCH REPORT DUE**

FYI POSC 225 Reads:


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18 October - 24 October

WK 6 Tues Oct 20  SES and Governance: Polycentric Institutional Arrangements
Thurs Oct 22  Discussion Leader Presentation I
Applications of IAD and SES I: Complex Ecological Systems and Institutional Evolution

Common Reading


Additional Reading


25 October - 31 October

WK 7 Tues Oct 27  Discussion Leader Presentation II
Applications of IAD and SES II: Heterogeneity and Conflict

Common Reading


Additional Reading


Thurs Oct 29  Discussion Leader Presentation III

Applications of IAD and SES III: Local and Indigenous Institutions

Common Reading

Additional Reading


1 November - 7 November

Part 4: Toward Conclusions: Presenting Practical Applications of the IAD and SES Frameworks

WK 8 Tues Nov 3  I. Climate Change and Polycentric Institutional Arrangements


II. Go to PEPS Idea Lab

Workshop I Project Presentation: Assemble materials/assets for presentation and
assign tasks

Thurs Nov 5
MEET IN PEPS IDEA LAB—WEITZ
Workshop II Project Presentation Materials

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8 November - 14 November

WK 9 Tues Nov 10
MEET IN PEPS IDEA LAB—WEITZ
Workshop III Project Presentation Materials

Thurs Nov 12
MEET IN PEPS IDEA LAB—WEITZ
Workshop IV Project Presentation Materials

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15 November - 21 November

WK 10 Tues Nov 17 ***Common Time***

Public Project Presentation
Present for Class discussion at Regular Class Time

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**NAVIGATION**

My home

- Site home
  - Site pages
- My profile

Current course

**Msrng & Eval Scl & Eclgcl Sytm**

- Participants
- Badges
- General
- 13 September - 19 September
- 20 September - 26 September
Questions on Arb administrative decision making
9 Oct, 10:30  Nancy Braker

Awesome Infographic and Other Thoughts on POSC 224
9 Oct, 09:26  Barbara Allen

META DATA ASSIGNMENT
8 Oct, 08:24  Barbara Allen

Archives online resources via dropbox
25 Sep, 15:00  Nat Wilson

Update on Our Classes this Week and Next
23 Sep, 15:24  Barbara Allen

Older topics ...

UPCOMING EVENTS

Meeting with your Student, Abe Eichner
Monday, 12 October, 2:15 PM
» 2:30 PM

Meeting with your Student, Margaret Edwards
Monday, 12 October, 3:15 PM
» 3:30 PM

posc225-00-f15
Tuesday, 13 October, 1:15 PM
» 3:00 PM

posc224-00-f15
Tuesday, 13 October, 3:10 PM
» 4:55 PM

posc225-00-f15
Thursday, 15 October, 1:15 PM
» 3:00 PM

posc225-00-f15
Tuesday, 20 October, 1:15 PM
» 3:00 PM

posc225-00-f15
Thursday, 22 October, 1:15 PM
» 3:00 PM

posc225-00-f15
Tuesday, 27 October, 1:15 PM
» 3:00 PM

posc225-00-f15
Thursday, 29 October, 1:15 PM
RECENT ACTIVITY

Activity since Thursday, 8 October 2015, 3:47 PM
Full report of recent activity...

COURSE UPDATES:
Updated Assignment
Infographic Timeline of Cowling Arb Evolution
Updated Assignment
Preliminary Ideas for Research and Research Hypotheses
Updated Assignment
Draft Interview Questions and Schedule
Updated Assignment
Interview Transcriptions
Updated File
Meta Data Project Files
Added File
Meta Data Files

ASSIGNMENTS SUBMITTED:
8 Oct, 21:36
Jialin Liang
Preliminary Ideas for Research and Research Hypotheses

NEW FORUM POSTS:
Barbara Allen
"Awesome Infographic and Other Thoughts on POSC 224"
9 Oct, 09:26
Nancy Braker
"Questions on Arb administrative decision making"
9 Oct, 10:30