The Ostrom Workshop and the “Bloomington School” of Political Economy/Institutional Analysis/Public Choice
Roadmap to Presentation

• The Workshop
• Central tenets of the “Bloomington School”
• The Polycentric Approach to Governance
• The IAD & SES Frameworks
  – Systematic approaches to institutional analysis useful across disciplines
  – Rules in use; ADICO; evaluative criteria; nested, linked, or networked “action situations;” applications
The Ostrom Workshop in Political Theory and Policy Analysis

• Founded in 1973 as a locus of interdisciplinary collaboration and contestation
  – Colloquia, conferences, “book parties,” working groups
  – Represented disciplines include virtually all social sciences and law

• Teaching as well as research center
  – Average of a dozen PhD students + 10-20 visiting scholars at any one time

• Affiliated faculty of approximately 80
  – About 40% on campus
  – All continents, except Antarctica
Why “Workshop”?  

• Workshop (according to the OED):
  1. A room or building in which goods are manufactured or repaired
  2. A meeting at which a group of people engage in intensive discussion and activity on a particular subject or project

• Elinor (“Lin”) and Vincent Ostrom were skilled woodworkers as well as scholars and conceived of collaborative research in terms of *artisanship* – literally, building things (frameworks, theories, models, policies) together
  - Master & Apprentice model of relations between senior & junior scholars
What the Workshop Is About

- **Scholars** from **various disciplines** engaged in **collaborative research** and **learning**, using **multiple methods**, frameworks, models, and theories, in an atmosphere of both **contestation and cooperation**, to improve our **understanding** (or **diagnoses**) of and **responses** to **collective-action** (or **social-cost**) problems at **various scales** of governance.
Visiting Scholars
Workshop Faculty
Affiliated Organizations
The Importance of Interdisciplinary Cooperation

• A comprehensive understanding/diagnosis of social and social-ecological problems is beyond the theories and tools of any single discipline

• Just as there are no institutional panaceas, there are no single methodological approaches that are always first-best

• Scholars must be prepared to use various approaches from several disciplinary perspectives
  – Small-n case studies (based on field studies)
  – Meta-analyses of case studies
  – Large-n econometric analyses
  – Field and lab experiments/games
  – Agent-based modeling
Central Features of the “Bloomington School”

• “The art & science of association” (Tocqueville)
  – Governance ≠ government
  – The “polycentric” approach (Ostrom, Tiebout & Warren 1961)
• Inherently interdisciplinary enterprise
  – Requiring common vocabulary and grammar
• Greater optimism about human potential for welfare-enhancing collective action than other positive political-economic theories
• Frameworks, theories, and models for systematic institutional analysis
  – IAD framework
  – SES framework
• Multiple-methods
  – Game theory, experiments, & field research
  – Thickly descriptive case studies
  – Meta-analyses
  – Small-n quantitative
  – Large-quantitative

I’m not going to talk much about methods in this presentation
What is the “Polycentric Approach”? 

• From Ostrom, Tiebout, and Warren (1961)
  – Independent but interdependent authorities that are
    • Multi-level (neighborhood, local, state, regional, national, international, global)
    • Multi-type (general purpose nested jurisdictions, as in traditional federalism, and specialized, cross-jurisdictional political units, such as special districts
    • Multi-sectoral (public, private, voluntary, community-based, and collaborative hybrids)
  – Maximizes choice for consumers and possibilities for experimentation and learning among governance units
    • Tiebout voting without moving
Testing Polycentricism Empirically

• Groundwater studies in Los Angeles starting in 1960s and continuing throughout history of Workshop
  – 50 years worth of time-series data collected
• 1970s Police studies
• Common-pool resource governance
  – *Governing the Commons* (1990)
    • Focused Lin’s attention on the need for common definitions and coding for meta-analyses
  – IFRI database
• Polycentric Climate Policy
Polycentricism in Vancouver, BC

Metro Vancouver: Directors appointed proportionally from local Councils and direct election for citizens outside of municipalities.

People in Metro Vancouver

- 911 services
- Water
- Garbage
- Land use planning
- Recycling
- Sewage
- Libraries
- Fire protection
- Community centres
- Interlink libraries
- Translink
- Transit
- Police
- Roads
- Community centres
- Hospitals
- Post-secondary education
- University Endowment Lands
- Agricultural Land Commission
- K-12 education
- Parks Board (Vancouver)
- Parks
- Senate/Board of Governors
- Municipal Regional Provincial Federal
- Direct elections for Members of the Legislative Assembly
- Direct elections for Mayors and Councils
- Translink Board
- Health Authorities
- Federal Government
- Electoral Area A
- Mayors of Metro Vancouver

Sam Bradd for SouthFraser.net – May 2012
Frameworks, Theories, and Models

- **Frameworks**: Structure our thinking about a system (grammar and syntax)
- **Theories**: Hypothesize causal relations between system elements
- **Models**: Specify & test relations among elements
IAD Framework
(A “Meta-theoretical Conceptual Map”)

- Physical Conditions
- Community Attributes
- Rules

Action Arena
- Action
- Actors

Patterns of Interaction
- Outcome

Evaluative Criteria
What Are “Institutions” in the IAD Framework?

• Followed Douglass North’s definition of institutions as “the rules of the game” that structure human interactions, including
  – Formal legal rules
    • Relatively easy to change
    • Rules in form v. rules in use (e.g., Pound 1910; Llewellyn 1930)
  – Informal social norms (e.g., Ellickson 1994)
    • Often harder to change
  – “Shared mental models” of the world (North & Denzau 1994)
    • The hardest to change
• Distinct from “organizations”
Figure 2: The nested nature of rules and incentives
Source: McGinnis, 1999:6
The ADICO Grammar of “Institutional Statements”

• **Attributes**
  – The individual or group to whom the institutional statement applies

• **Deontic**
  – Prescriptive operator of what is permitted, required, or forbidden

• **alm**
  – The goal of the institutional statement to which the deontic refers

• **Condition**
  – Represents when and where operators for which the alm is allowed, required, or forbidden

• **Or else**
  – Sanctions for rule noncompliance
Types of Rules Affecting Action Situations

Relationship Between Rules-In-Use & Elements of the Policy Action Arena

PHYSICAL WORLD

COMMUNITY  →  ACTION ARENA

RULES-IN-USE

1. Position  →  Action Situation Positions
2. Boundary  →  Participants
3. Authority  →  Actions & Linkages
4. Aggregation  →  Control
5. Scope  →  Outcomes
6. Information  →  Information
7. Payoffs  →  Costs & Benefits

Actors
Resources
Valuations
Information Processing
Selection Processes
<table>
<thead>
<tr>
<th>Type of Rule</th>
<th>Function of Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position rules</td>
<td>Create positions (e.g., member, judge, voter, representative) that actors may hold.</td>
</tr>
<tr>
<td>Boundary rules</td>
<td>Define (1) who is eligible to hold a certain position, (2) the process by which positions are assigned to actors (including rules of succession), and (3) how positions may be exited.</td>
</tr>
<tr>
<td>Choice rules</td>
<td>Prescribe actions actors in positions must, must not, or may take in various circumstances.</td>
</tr>
<tr>
<td>Aggregation rules</td>
<td>Determine how many, and which, players must participate in a given collective- or operational-choice decision.</td>
</tr>
<tr>
<td>Information rules</td>
<td>Authorize channels of information flows available to participants, including assignation of obligations, permissions, or prohibitions on communication.</td>
</tr>
<tr>
<td>Payoff rules</td>
<td>Assign rewards or sanctions to particular actions that have been taken or based on outcomes.</td>
</tr>
<tr>
<td>Scope rules</td>
<td>Delimit the range of possible outcomes. In the absence of a scope rule, actors can affect any physically possible outcomes.</td>
</tr>
</tbody>
</table>
What Happens Inside the Action Situation?
Evaluative Criteria for Institutional Choice

• Libertarian goal (individual freedom)
• Social-welfare function
  • Comparative CBA or cost-effectiveness analysis
  • Maximum sustainable yield
  • Should incorporate aggregation of individuals’ distributional concerns
• Fairness (or equity or justice)
  • Kantian moral imperatives
  • Rawlsian “maximin” principle
  • Sen’s “capability approach”
• Laswell’s value categories
The SES Framework

• An outgrowth of IAD
  – Focused on multiple ecological and institutional variables that affect interactions in action situations

• Primarily diagnostic
  – Allows coding of thickly descriptive case studies for qualitative meta-analysis and quantitative analysis

• Focused on three factors that affect interactions within action arenas
  – Attributes of the bio-physical world
  – Attributes of the relevant community
  – Rules in use
Revised SES Framework With Multiple First-Tier Components

Related Social, Economic, and Political Systems (S)

Resource Systems (RS)
Governance Systems (GS)

Focal Action Situations
Interactions (I) ↔ Outcomes (O)

Resource Units (RU)
Actors (A)

Direct causal link
Feedback

Related Ecosystems (ECO)
Second- and Third-tier SES Variables

<table>
<thead>
<tr>
<th>Resource Systems</th>
<th>Resource Units</th>
<th>Governance Systems</th>
<th>Actors</th>
<th>Action Situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Sector</td>
<td>1) Resource unit mobility</td>
<td>1) Rules</td>
<td>1) Group size</td>
<td></td>
</tr>
<tr>
<td>2) Boundary clarity</td>
<td>2) Replacement rate</td>
<td>a) Operational rules</td>
<td>a) Monitoring</td>
<td></td>
</tr>
<tr>
<td>3) Size</td>
<td>3) Interactions</td>
<td>b) Collective-choice rules</td>
<td>i) Environmental</td>
<td></td>
</tr>
<tr>
<td>a) Area</td>
<td>a) Strong to weak</td>
<td>c) Constitutional rules</td>
<td>ii) Social</td>
<td></td>
</tr>
<tr>
<td>b) Volume</td>
<td>b) Predatory or symbiotic</td>
<td>2) Property-rights regime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Infrastructure</td>
<td></td>
<td>a) Private</td>
<td>3) History of use</td>
<td></td>
</tr>
<tr>
<td>5) Productivity</td>
<td></td>
<td>b) Public</td>
<td>4) Location</td>
<td></td>
</tr>
<tr>
<td>6) Equilibrium properties</td>
<td>5) Size</td>
<td>c) Common</td>
<td>5) Leadership</td>
<td></td>
</tr>
<tr>
<td>a) Recharge dynamics</td>
<td>a) Large to small</td>
<td>d) Mixed</td>
<td>6) Social capital</td>
<td></td>
</tr>
<tr>
<td>b) Recharge rate</td>
<td>b) Trophic level</td>
<td>7) Knowledge of SES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Number of equilibria</td>
<td>6) Distinctive markings</td>
<td>8) Resource dependence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Feedbacks</td>
<td>7) Distribution</td>
<td>9) Technology used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Positive</td>
<td>a) Spatial heterogeneity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) Negative</td>
<td>b) Temporal heterogeneity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Predictability</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8) Storage capacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) Location</td>
<td></td>
<td></td>
<td></td>
<td>1) Process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action Situations</th>
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<tbody>
<tr>
<td>1) Process</td>
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<td>a) Monitoring</td>
</tr>
<tr>
<td>i) Environmental</td>
</tr>
<tr>
<td>ii) Social</td>
</tr>
<tr>
<td>b) Sanctioning</td>
</tr>
<tr>
<td>c) Conflict resolution</td>
</tr>
<tr>
<td>d) Provision</td>
</tr>
<tr>
<td>i) Informational</td>
</tr>
<tr>
<td>ii) Infrastructural</td>
</tr>
<tr>
<td>e) Appropriation</td>
</tr>
<tr>
<td>f) Policymaking</td>
</tr>
</tbody>
</table>
Ostrom’s SES Analysis of Hardin’s “Tragedy”

Resource System (RS)
RS1 – Sector - Pasture
RS3 – Finite size
RS5 - Renewable

Resource Units (RU)
RU1 – Mobile animals on stationary grass
RU4 – Fattened cattle can be sold for cash
RU6 – Distinctive markings

Governance System (GS)

Focal Action Situation
The Pasture

Users (U)
U1 Large number of users
U7 Maximization of short-term economic gains

Interactions & Outcomes (I→O)
I1 All users maximize
O2 Destruction of the pasture

Revised SES Application to Hardin’s “Tragedy of the Commons”

**Resource System (RS)**
- RS1 – Sector - Pasture

**Focal Action Situation**
- The Open-Access Pasture

**Resource Units (RU)**
- RU1a – Stationary grass
- RU1b – Mobile cattle
- RU2a – Slow growing grass
- RU2b – Cattle can be added or reduced quickly
- RU3 – Cattle convert grass to beef
- RU4 – Grass has use value; cattle have exchange value
- RU6 – Cattle may be marked; grass is plain

**Governance System (GS)**
- GS4: Grass is open access
- GS4: Cattle privately owned
- GS5: Grass is privatized when consumed by cattle
- GS5: Cattle remain privately owned while on pasture

**Users (U)**
- U1 Large number of users
- U7 Maximization of short-term economic gains

**Interactions & Outcomes (I→O)**
- O2 Destruction of the pasture
Unresolved Issues for SES Framework

• Further development of RS and RU variables (Janssen, Anderies, Epstein, Kreitmar)

• How to systematize selection of variables for analysis?
  – Is it always clear from the context which variables are significant?
  – Does variable choice reflect value pre-judgments?

• After diagnosis of “bad” outcomes (co-produced by social and ecological conditions), how can causal variables be identified and changed?
Governing Common-Pool Resources

- Types of goods

<table>
<thead>
<tr>
<th></th>
<th>Lost cost exclusion</th>
<th>High cost exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High rivalry in consumption</strong></td>
<td>Private Goods</td>
<td>Common-pool Resources</td>
</tr>
<tr>
<td><strong>Low rivalry in consumption</strong></td>
<td>Toll or Club Goods</td>
<td>Public Goods</td>
</tr>
</tbody>
</table>

- Types of management systems
  - Private, common, public property
    - Regulated or unregulated

- Fitting institutions to social-ecological conditions
  - No one-size-fits-all solutions
  - Wide variety of property systems evident around the world
“Design Principles” of Successful Common-Property Regimes for Managing Common-Pool Resources

1. Clearly defined boundaries (membership and physical boundaries of resource are clear)
2. Congruence between appropriation and provision rules and local conditions (rules are congruent with local conditions)
3. Collective choice arrangements (individuals affected can participate in modifying operational rules)
4. Monitors are accountable to the resource users
5. Graduated sanctions against violators
6. Ready access to conflict-resolution mechanisms
7. Recognition of rights to organize, by external government authorities
8. Nested enterprises (where the resource is part of a larger system)
Summing Up

• Central features of the Ostrom Workshop approach to solving CPR, public goods, and social-cost problems
  – The polycentric approach (normative commitment or empirically-based conclusion?)
  – No panaceas (the world is too complex for simplistic solutions)
    • “Embrace complexity”
  – Comparative institutional analysis
    • Using IAD and other frameworks, models and theories
  – Using and combining multiple methods from various disciplines
  – As questions are answered and puzzles are solved, new ones arise
  – We still have much work to do
Key Ostrom Works

GOVERNING the COMMONS
ELINOR OSTROM
The Evolution of Institutions for Collective Action

UNDERSTANDING INSTITUTIONAL DIVERSITY
ELINOR OSTROM

RULES, GAMES, & COMMON-POOL RESOURCES
ELINOR OSTROM, ROY GARDNER, & JAMES WALKER

THE POLITICAL THEORY of a COMPOUND REPUBLIC
Designing the American Experiment
VINCENT OSTROM

3rd Edition, Revised & Enlarged
Foreword by Daniel J. Hausman

Political Economy of Institutions and Decisions
Copyright 1994