

Institutional Analysis and Development: Micro Workshop in Political Theory and Political Analysis

Prof. Elinor Ostrom

Indiana University, Bloomington

Preface

The central questions underlying this course are:

- How can *fallible* human beings achieve and sustain self-governing entities and self-governing ways of life as well as sustaining ecological systems?

To address these questions we will have to learn a variety of tools to understand how fallible individuals behave within institutions as well as how they can influence the rules that structure their lives. This is a particularly challenging question in an era when global concerns have moved onto the political agenda of most international, national, and even local governing bodies. Instead of studying how individuals craft institutions, many scholars are focusing on how to understand global phenomena. It is also an era of substantial violence, terrorism, and disruption. Many of the problems we are witnessing today are due to a lack of understanding of the micro and meso levels that are essential aspects of global processes.

In our effort to understand self-governance, we will be studying the four “I’s”: individuals, incentives, institutions, and inquiry.

To understand processes at any level of organization, one needs to understand the *individuals* who are participants and the incentives they face. When we talk about “THE” government doing X or Y, there are individuals who hold positions in a variety of situations within “THE” government. We had better understand how individuals approach making decisions in a variety of situations given the incentives they face. Those *incentives* come from a variety of sources, but a major source, particularly in the public sector, are the rules of the game they are playing. *Institutions* include the rules that specify what may, must, or must not be done in situations that are linked together to make up a polity, a society, an economy, and their inter-linkages. To understand this process we must be engaged in an *inquiry* that will never end.

The settings we study are complex, diverse, and dynamic. Thus, we need to develop frameworks and related approaches to studying these nested systems. And, we can learn a variety of theories (and models of those theories) that help us understand particular settings. We cannot develop a universal model of all settings for all time. Thus, our task of inquiry is a lifelong task. And, the task of citizens and their officials is also unending. No system of governance can survive for long without rules and rule enforcement, but the enforcement of rules relies on force and potential use of violence. Consequently, we face a Faustian bargain in the design of any system of governance.

A self-governing entity is one whose members (or their representatives) participate in the

establishment, reform, and continuity of the constitutional and collective choice rules-in-use or accept the legitimacy and appropriateness of these rules. All self-organized entities (whether in the private or public spheres) are to some extent self-governing. In modern societies, it is rare to find any entity whose members (or their representatives) have fashioned all constitutional and collective-choice rules that they face. Some rules are likely to have come from external sources. Many rules will have come from earlier times and are not discussed extensively among those using the rules today.

On the other hand, even in a totalitarian polity, it is difficult for central authorities to prevent all individuals from finding ways of self-organizing and creating rules of their own. Some of these may even be contrary to the formal laws of the totalitarian regime. Given that most modern societies have many different entities, let me rephrase the first question we started with: How can fallible individuals achieve and sustain large numbers of small, medium, and large-scale self-governing entities in the private and public spheres?

We cannot thoroughly understand the diverse processes of self-governance in any semester-long or year-long course of study. How humans can govern themselves is a question that has puzzled and perplexed the greatest thinkers of the last several millennia. Many have answered that self-governance is impossible. In this view, the best that human beings can do is live in a political system that is imposed on them and that creates a predictable order within which individuals may be able to achieve a high level of physical and economic well-being without much autonomy. In this view, the rules that structure the opportunities and constraints that individuals face come from outside, from what is frequently referred to as “the state.”

For other thinkers, rules are best viewed as spontaneously emerging from patterns of interactions among individuals. In this view trying to design any type of institution, whether to be imposed on individuals or self-determined, is close to impossible or potentially disastrous in its consequences. Human fallibility is too great to foretell many of the consequences that are likely to follow. Efforts to design self-governing systems, rather than making adaptive changes within what has been passed along from past generations, involves human beings in tasks that are beyond their knowledge and skills.

The thesis that we advance in this seminar is that individuals, who seriously engage one another in efforts to build mutually productive social relationships – and to understand why these are important – are capable of devising ingenious ways of relating constructively with one another. The impossible task, however, is to design *entire* social systems “from scratch” at one point in time that avoid the fate of being monumental disasters. Individuals who are willing to explore possibilities consider new options as entrepreneurs, use reason as well as trial and error experimentation, and can evolve and design rules, routines, and ways of life that are likely to build up to self-governing entities with a higher chance of adapting and surviving over time than top-down designs. It takes time, however, to learn from errors, to try and find the source of the error, and how to improve one part of the system without generating adverse consequences elsewhere.

Successful groups of individuals may exist in simple or complex nested systems ranging from very small to very large. The problem is in a complexly interrelated world, one needs effective organization at all levels ranging from the smallest work team all the way to international organizations. If the size of the group that is governing and reaping benefits is too small, negative externalities are likely to occur. Further, even in small face-to-face groups, some individuals may use any of a wide array of asymmetries to take advantage of others. Individuals who are organized in many small groups nested in larger structures – a polycentric system – may find ways of exiting from some settings and joining others or of seeking remedies from overlapping groups that may reduce the asymmetries within the smaller unit. If the size of the only group that is governing and reaping benefits is too large, on the other hand, essential information is lost. Further, the situation may change from one of adaptive problem solving to one of exploitation.

Scale and complex nesting are only part of the problem. Another part has to do with how individuals view their basic relationships with one another. Many individuals learn to be relatively truthful, considerate of others, trustworthy, and willing to work hard. Others are opportunistic. Some approach governance as involving basic problem-solving skills. Some approach governance as a problem of gaining dominance over others. The opportunities for dominance always exist in any system of rule-ordering where some individuals are delegated responsibilities for devising and monitoring conformance to rules and sanctioning rule breakers. Those who devise self-governing entities that work well only when everyone is a “saint”, find themselves invaded by “sinners” who take advantage of the situation and may cause what had worked successfully to come unglued and fail.

Thus, the opening answer on Page 1 that we give to the question is: self-governance is possible in a setting, if . . .

- Most individuals share a common broad understanding of the biophysical, cultural, and political worlds they face, of the importance of trying to follow general principles of reciprocity and fairness, and of the need to use artisanship to craft their own rules;
- Most individuals have significant experience in small to medium-sized settings where they learn the skills of living with others, being responsible, gaining trust, being entrepreneurial, and holding others responsible for their actions;
- Considerable autonomy exists for constituting and reconstituting relationships with one another that varies from very small to very large units (some of which will be highly specialized while others may be general-purpose organizations);
- Individuals learn to analyze the incentives that they face in particular situations

(given the type of physical and cultural setting in which they find themselves) and to try to adjust positive and negative incentives so that those individuals who are most likely to be opportunistic are deterred or sanctioned.

The above is posed as a “possibility” not a determinate outcome. In other words, we view self-governing entities as fragile, social artifacts that individuals may be able to constitute and reconstitute over time. We can make scientific statements about what kinds of results are likely if individuals share particular kinds of common understandings, are responsible, have autonomy, possess analytical tools, and consciously pass both moral and analytical knowledge from one generation to the next. These are strong conditions!

With this view, self-governing entities may exist as an enclave in the midst of highly authoritarian regimes. This may not be a stable solution, but self-governance may provide opportunities to develop productive arrangements for those who establish trust and reciprocity backed by their own willingness to monitor and enforce interpersonal commitments. If the macro structure is not hostile or even supports and encourages self-organization, what can be accomplished by smaller private and public enclaves can be very substantial. This is initially a bottom-up view of self-governance. Productive, small-scale self-organization, however, is difficult to sustain over time in a larger political system that tries to impose uniform rules, operates through patron-client networks or uses terror to sustain authoritarian rule. Having vigorous local and regional governments and many types of voluntary associations is part of the answer, but not sufficient in and of itself.

Simply having national elections, choosing leaders, and asking them to pass good legislation is hardly sufficient, however, to sustain a self-governing society over the long run. Electing officials to national office and providing them with “common budgetary pools” of substantial size to spend “in the public interest” creates substantial temptations to engage in rent-seeking behavior and distributive politics. The central problem is how to embed elected officials in a set of institutions that generates information about their actions, holds them accountable, allows for rapid response in times of threat, and encourages innovation and problem solving. Solving such problems involves the design of a delicately balanced system. It requires decisions from sophisticated participants who understand the theory involved in constituting and reconstituting such systems and share a moral commitment to the maintenance of a democratic social order.

Now, what is the role of the institutional analyst in all of this? Well, for one, it is essential for those who devote their lives to studying the emergence, adaptation, design, and effects of institutional arrangements to understand a very wide array of diverse rules that exist in an equally diverse set of physical and cultural milieus. To understand how various rules may be used as part of a self-governing society, one has to examine how diverse rules affect the capacities of individuals to achieve mutually productive outcomes over time or the dominance of some over others. Eventually, one has to examine constellations of embedded institutional arrangements rather than isolated situations. And, one has to examine the short-run and long-run effects of many different types of rules on human actions and outcomes. Further, one has to acquire considerable humility

regarding exactly how precise predictions can be made about the effects of different rules on incentives, behavior, and outcomes achieved. Design of successful institutions may indeed be feasible. Designed institutions, which tend to generate substantial information rapidly and accurately and allow for the change of rules over time in light of performance, are more likely to be successful than those resulting from “grand designs” for societies as a whole.

To be an institutional analyst, one needs to learn to use the best available theoretical tools, while at the same time trying to develop even better theories and conducting further empirical studies that contribute to our theoretical understanding of self-governing systems. All tools have capabilities and limits. The task of the skilled artisan – whether an institutional theorist or a cabinetmaker – is to learn the capabilities and limits of all tools and how best to use a combination of tools to address the wide diversity of puzzles that one comes across in a lifetime of work.

We need tools to address the puzzle. Relevant tools are plentiful in the sense that we do have an extensive body of political, social, and economic theory that focuses on the impact of diverse rules on the incentives, behavior, and likely outcomes within different settings. These tools are limited, however, in that many of the most rigorous theories make assumptions both about the individual and about the settings within which individuals find themselves which may be problematic at least for explaining behavior in some settings. These explicit and often implicit assumptions may mask some of the deeper problems of sustaining democratic systems over time. Many of the difficult problems that human beings face in trying to develop and sustain democratic organizations, are assumed away when one starts with assumptions that individuals have complete and perfect information and can make error-free calculations about expected consequences for themselves and no one else in complex, uncertain worlds.

Further, when assumptions are made that the structure of the situations facing individuals are fixed and cannot be changed by those in the situation, little effort is devoted to addressing how individuals affect their own situations. Yet these same assumptions (full information and fixed structures) are useful when the analyst wants to examine the expected, short-term outcomes of an institutional and physical setting where the options available to individuals are narrowly constrained and where individuals have many opportunities to learn about the costs and benefits of pursuing diverse options. Learning which assumptions, theories, and models to use to analyze diverse institutional arrangements is an important aspect of the training of institutional analysts.

During this seminar, we will use a variety of theoretical tools. These will help us to understand the Institutional Analysis and Development (IAD) framework as well as the Diagnostic Ontological Social-Ecological Systems (DOSES) framework that we have been developing over many years at the Workshop. The skilled institutional analyst uses a framework to identify the types of questions and variables to be included in any particular analysis. The artisan then selects what is perceived to be the most appropriate theory available given the particular questions to be addressed, the type of empirical evidence that is available or is to be obtained, and the purpose of the analysis. For any

one theory, there are multiple models of that theory that can be used to analyze a focused set of questions. Choosing the most appropriate model (whether this is a mathematical model, a simulation, a process model or the design for an experiment) also depends on the particular puzzle that an analyst wants to examine.

Objectives of the Seminar

Given the above background to the substantive focus of this seminar, let us try to present the central objectives for the semester as we see them. The objectives are:

- To understand the constraints and opportunities of human artisanship and entrepreneurship.

If self-governance within any particular organizational setting is only a possibility and not a necessity, then students of self-governance need to understand the constraints on choice presented by the structure of a physical, biological, and social world at any particular point in time as well as the opportunities of using human insight, reason, persuasion, and vigilance to transform inherited structures.

- To learn how to use the IAD framework and the related DOSES framework for analyzing SESs as tools for understanding the commonalities underlying entities that are often treated by diverse disciplines as fundamentally different things.

Markets and states are frequently posed as opposite types of entities. Those who study the American Presidency or the American Congress sometimes view what they study as entirely different from European Parliamentary systems or some of the national systems of Africa or of Asia. We will instead use a common set of elements to analyze repetitive relationships within and across markets, hierarchies, local communities, private associations, families, churches, regional governments, national governments, multinational corporations, and international regimes.

- To learn some very basic elements of game theory as *one* of the theories that is consistent with the IAD framework and to gain some knowledge of simple games, but this is really a very basic introduction and not a course on game theory.

Game theory is emerging as one of the theoretical tools in heavy use across all of the social sciences (as well as in biology). Game theory is useful for the institutional analyst when trying to understand the patterns of outcomes that result from the operation of repetitive situations over time when the motivational structure of participants is clearly understood. It also provides a theoretical tool for analyzing what to expect when rules are changed. As will become obvious in the semester, there are also many perplexing issues that are not yet resolved both about the theory of games and its applications to the study of institutions. We will do some reading drawing more on an evolutionary perspective and how this perspective combined with game theory helps us understand some of the above

issues. And, we will also begin to study the growing field of agent-based modeling.

- To recognize core problems that humans repeatedly face in a wide diversity of settings such as those involved in providing and regulating the use of public goods and common-pool resources, asymmetric information problems, adverse selection problems, moral hazard problems, aggregation of preferences problems, team coordination problems, principal-agent problems, and the problems of constituting complex orders under incomplete information.

Learning how to recognize the key symptoms of the core problems that humans repeatedly face is essential for institutional analysts. Diagnosis of the source(s) of the problems involved in a simple or complex setting is necessary prior to effective advice about the types of rules, norms, and strategies that have a chance to improve on outcomes.

- To understand how polycentric political systems, including but not limited to federal ones, operate based on principles learned from this course.

An irony exists in the contemporary world. This problem is at the heart of recent controversies about how to govern America and how to solve problems in the developing world. The recent policy focus on devolution in developing countries has emphasized shifting responsibility from national to state and local level. As this has been happening, the national governments have frequently continued to seek control, but not implementation, of many programs. One needs to dig into proposals for decentralization to see what is being devolved and HOW before one can even begin to evaluate these.

- To understand the importance of respecting the assets and limits of diverse disciplines and core research methods that are used to undertake careful empirical studies of the institutions and their operations in diverse environments.

Many of the theoretical questions of interest to an institutional analyst can be studied using individual case studies, meta-analyses of existing case studies, large-N field studies, formal theory, experimental research, and agent-based modeling. No one person can become an expert in all of these methods, but scholars need to overcome their suspicion of methods developed by others and recognize that learning cumulates faster and better if careful research has been undertaken with complementary research methods. One also needs to learn the limits of each method.

- To conduct an institutional analysis of an important and interesting puzzle relating to human behavior in a rule-ordered setting at a local, regional, national or international domain.

Each enrolled student and visiting scholar will write a paper that is an institutional analysis of a structured situation or linked set of situations that generate outcomes that are either puzzling, deemed inefficient, inequitable, unsustainable or in need of change. It is also important to study situations that have generated productive outcomes and are worthy of emulation and to identify what aspects of the structure and human behavior within that structure that has led to positive results.

Procedures and Requirements

The assigned readings:

Aligica, Paul Dragos, and Peter J. Boettke. 2009. *Challenging Institutional Analysis and Development. The Bloomington School*. New York: Routledge.

McGinnis, Michael D., ed. 1999. *Polycentricity and Local Public Economies. Readings from the Workshop in Political Theory and Policy Analysis*. Ann Arbor: University of Michigan Press.

McGinnis, Michael D., ed. 2000. *Polycentric Games and Institutions: Readings from the Workshop in Political Theory and Policy Analysis*. Ann Arbor: University of Michigan Press.

Ostrom, Elinor. 2005. *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Poteete, Amy, Marco Janssen, and Elinor Ostrom. Forthcoming 2010. *Working Together: Collective Action, the Commons, and Multiple Methods in Practice*. Princeton, NJ: Princeton University Press.

Graduate students taking the course for credit have four types of assignments. First, each student is expected to write a short (1-3 pages) memo to be distributed among participants in the class every second week. Students should reflect on what they are currently reading and related topics. From time to time, I might ask for comments on a particular subject. These memos are not individually graded, but 20% of the final grade will be based on class participation and the faithfulness and quality of the memos will be reflected in this part of the grade.

Second, a take-home exam will be given out during the week before finals. It will be due on finals week. This exam is worth 30% of your grade. You will be involved in preparing the study questions for this exam.

Third, a final paper is required. Each student and visiting scholar will be expected to select either a type of problem (such as that of providing a particular type of public good or common-pool resource) or a type of decision-making arrangement (such as that of a legislature, a court, or a self-organized collectivity) and undertake an analysis of how combinations of rules, the structure of the goods and technology involved, and culture

interact to affect the incentives facing individuals and resulting patterns of interactions adopted by individuals. The student may focus on an operational, a collective choice or a constitutional-choice level, but the linkage among these levels should be addressed. Some participants are interested in large-scale phenomena and will want to examine international or national regimes. Others will focus on a smaller scale of organizations. Some may want to address the “scaling up” and “scaling down” question in institutional analysis.

This is an excellent opportunity to do a research design for a dissertation that applies institutional analysis to a particular problem. Students and visiting scholars may wish to do the first draft of a paper that eventually will be submitted for publication. The final paper constitutes 50% of the final grade. Since learning how to make deadlines is an essential skill for all academics, keeping to this deadline is taken *very seriously*.

Schedule of Topics

Week 1	An Overview of the Seminar: Frameworks, Theories, and Models to Analyze and Understand Institutional Incentives and Outcomes
Week 2	An Introduction to the Study of Institutions, Complex Systems, and Collective Action Dilemmas
Week 3	Theories and Models of Human Behavior: Toward a Behavioral Theory of Human Choice in Social Dilemmas
Week 4	Structural Variables that Affect Action Situations
Week 5	Games and Institutional Analysis
Week 6	Studying Collective Action in the Field
Week 7	Polycentricity
Week 8	Learning from Experiments
Week 9	Pretesting a New Experimental Design
Week 10	Studying Linked Social-Ecological Systems
Week 11	Applications of IAD or DOSES to your Puzzles
Week 12	Bureaucratic Forms of Organization and their Potential Control
Week 13	Puzzles and Challenges of Development
Week 14	Collective Choice and Constitutional Choice: Constituting and Reconstituting Multi-Agent, Multi-Level, Overlapping Realms of Local, National, and International Regimes

Course Description

Week 1: An Overview of the Seminar: Frameworks, Theories, and Models to Analyze and Understand Institutional Incentives and Outcomes.

Members of the seminar will be expected to read the preface for the syllabus (and to have glanced at the rest of it), and to have begun to think about how their own work might be related to the general work to be covered during the seminar. We will discuss the general organization of the semester's work. There are several key issues that we will discuss during this class. They include:

- The Faustian bargain underlying all governance;
- The differences among frameworks, theories, and models - and how various theories (and models of these theories) can be used to analyze particular questions using the institutional analysis framework;
- The importance of both static and dynamic analyses when thinking about institutional questions;
- When single-level analysis is appropriate and when multiple levels of analysis should be invoked;
- Thinking about whole systems and thinking about parts;
- Thinking about decomposable systems; and
- Thinking about impossible and possible rather than only necessary and sufficient.

A central theme of the seminar is that human organization is the result of layers and layers and layers of conscious and unconscious structuring both within the single individual and within any organized polity. To study institutions, there is no single, correct level of analysis. To ask any particular theoretical or empirical question, however, an analyst can generate more useful information by starting to address that question at one level instead of others. Readings about an American sport – when only the surface features are discussed and “explained:” will hopefully make you think about how we can dig below what we see happening before us. We are all engaged in the craft of science as Dyson so well articulates.

Essential Readings for Week 1:

This Syllabus

“A Psycho-Cultural Interpretation of an American Sport,” from the *Chicago Maroon*, October 14, 1955.

Aligica, Paul, and Peter J. Boettke. 2009. “Introduction.” In *Challenging Institutional Analysis and Development. The Bloomington School*, 1-4. New York: Routledge

Dyson, Freeman. 1998. "Science as a Craft Industry." *Science* 280 (May 15): 1,014-1,015.

Poteete, Amy, Marco Janssen, and Elinor Ostrom. Forthcoming 2010. "Overcoming Methodological Challenges." In *Working Together: Collective Action, the Commons, and Multiple Methods in Practice*, 3-41. Princeton, NJ: Princeton University Press.

Week 2: An Introduction to the Study of Institutions, Complex Systems, and Collective Action Dilemmas.

Much of our training as social scientists has been to focus on the analysis of simple, static one-layer situations. This does not prepare us for analyzing complex multi-level systems that evolve over time as organisms adapt through trial and error, imitation, and other mechanisms. We need to understand more of how human institutions have evolved and how we can survive and flourish in complex adaptive systems.

In this week, we will address basic foundation at a micro level involving the recognition of systems within systems within systems.

The concept of an action situation is one way to identify the "smallest relevant unit of analysis" for comparative research. These concepts have been used to design (1) the various Workshop databases developed to study the effects of institutions on incentives to provide and appropriate from common-pool resources; (2) many of our qualitative studies; (3) game theoretical analyses; and (4) experimental studies in the laboratory. One way of modeling a theory of how a particular action situation is structured, the likely behavior of participants, the consequences that are likely to be produced, and an evaluation of those consequences is by using formal game theory. The language of game theory is being used across the social sciences to analyze a wide diversity of interesting questions.

To overcome collective action dilemmas, participants need to devise rules that reasonably cope with the temptations of the situation they face. This is not a simple task given the large number of variables involved. It frequently requires considerable entrepreneurship to bring new structure to the "games" involved. Part of the solution is designing appropriate rules.

Essential Readings for Week 2:

Aligica, Paul, and Peter J. Boettke. 2009. Part 1. In *Challenging Institutional Analysis and Development. The Bloomington School*, 5-52. New York: Routledge.

Dietz, Thomas, Elinor Ostrom, and Paul Stern. 2003. "The Struggle to Govern the Commons." *Science* 302(5652) (December 12): 1907-1912.

Ostrom, Elinor. 2005. Chapters 1 and 2. In *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Saleth, R. Maria, and Ariel Dinar. 2004. Chapters 1 and 2. In *The Institutional Economics of Water: A Cross-Country Analysis of Institutions and Performance*. Cheltenham, UK: Edward Elgar.

Simon, Herbert A. 2000. "Public Administration in Today's World of Organizations and Markets." *PS: Political Science and Politics* 33(4) (December): 749-756.

Velasco, Juan, and Amanda Hobbs. 2009. "The Legacy of an Idea." *National Geographic* (February).

Wilson, James. 2002. "Scientific Uncertainty, Complex Systems, and the Design of Common-Pool Institutions." In *The Drama of the Commons*, ed. Elinor Ostrom, Thomas Dietz, Nives Dolšak, Paul C. Stern, Susan Stonich, and Elke U. Weber, 327-359. Washington, DC: National Academy Press.

Supplemental Readings for Week 2:

Akerloff, George A., and Janet L. Yellen. 1993. "Gang Behavior, Law Enforcement, and Community Values." In *Values and Public Policy*, ed. Henry J. Aaron, Thomas E. Mann and Timothy Taylor. Washington, DC: Brookings Institutions.

Albert, Hans. 1989. "Law as an Instrument of Rational Practice." In *Contract and Organization: Legal Analysis in the Light of Economic and Social Theory*, ed. Terence Daintith and Gunther Teubner, 25-51. Berlin: de Gruyter.

Aumann, Robert J. 1976. "Agreeing to Disagree." *Annals of Statistics* 4:1236-1239.

Brennan, Geoffrey, and James M. Buchanan. 1985. *The Reason of Rules: Constitutional Political Economy*. Cambridge: Cambridge University Press.

Campbell, Jeremy. 1982. *Grammatical Man: Information, Entropy, Language, and Life*. New York: Simon and Schuster.

Comaroff, John L., and Simon Roberts. 1981. *Rules and Processes: The Cultural Logic of Dispute in an African Context*. Chicago: University of Chicago Press.

Commons, John R. 1968. "Preface" and "Mechanism, Scarcity, Working Rules." In *Legal Foundations of Capitalism*, vii-viii, 1-10. Madison: University of Wisconsin Press.

Dasgupta, Partha. 1993. *An Inquiry into Well-Being and Destitution*, 208-17. Oxford: Clarendon Press.

Ellickson, Robert. 1991. *Order without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press.

Follette, Mary Parker. 1940. "Constructive Conflict." In *Dynamic Administration*, ed. H.

D. Metcalf and L. Urwick, 30-49. New York: Harper & Row.

Frohlich, Norman, and Joe A. Oppenheim. 1992. *Choosing Justice. An Experimental Approach to Ethical Theory*. Berkeley: University of California Press.

Galanter, Marc. 1981. "Justice in Many Rooms: Courts, Private Ordering, and Indigenous Law." *Journal of Legal Pluralism* 19:1-47.

Gambetta, Diego. 1988. *Trust: Making and Breaking Cooperative Relations*. Cambridge: Basil Blackwell.

Garrett, Geoffrey, and Barry R. Weingast. 1993. "Ideas, Interests, and Institutions: Constructing the European Community's Internal Market." In *Ideas & Foreign Policy. Beliefs, Institutions, and Political Change*, ed. Judith Goldstein and Robert A. Keohane, 173-207. Ithaca, NY: Cornell University Press.

Gluckman, Max. 1965. "Dispute Settlement." In *Politics, Law and Ritual in Tribal Society*, 169-215. Oxford: Basil Blackwell.

Heiner, Ronald A. 1990. "Rule-Governed Behavior in Evolution and Human Society." *Constitutional Political Economy* 1:19-46.

Libecap, Gary. 1996. "Economic Variables and the Development of the Law: The Case of Western Mineral Rights." In *Empirical Studies of Institutional Change*, ed. Lee Alston, Thráinn Eggertsson, and Douglass C. North, 34-58. Cambridge: Cambridge University Press.

Libecap, Gary D. 1995. "The Conditions for Successful Collective Action." In *Local Commons and Global Interdependence. Heterogeneity and Cooperations in Two Domains*, ed. Robert O. Keohane and Elinor Ostrom, 161-190. London: Sage Publications.

Moon, Donald J. 1993. *Constructing Community. Moral Pluralism and Tragic Conflicts*. Princeton, NJ: Princeton University Press.

Nader, Laura, and Barbara Yngvesson. 1973. "On Studying the Ethnography of Law and Its Consequences." In *Handbook of Social and Cultural Anthropology*, ed. John J. Honigsmann. Chicago: Rand McNally.

North, Douglass C. 2005. *Understanding the Process of Economic Change*. Princeton: Princeton University Press.

North, Douglass. 1990. "Institutions and Their Consequences for Economic Performance." In *The Limits of Rationality*, ed. Karen Cook and Margaret Levi. Chicago: University of Chicago Press.

Oliver, Pamela. 1980. "Rewards and Punishments as Selective Incentives for Collective Action: Theoretical Investigations." *American Journal of Sociology* 85(6):1356-1375.

Ostrom, Elinor. 2007. "Collective Action Theory." *Oxford Handbook of Comparative Politics*, ed. Carles Boix and Susan Stokes, 186-208. Oxford, UK: Oxford University Press.

Ostrom, Vincent, and Elinor Ostrom. 1999. "Public Goods and Public Choices." In *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael McGinnis, 75-103. Ann Arbor: University of Michigan Press.

Rowe, Nicholas. 1989. *Rules and Institutions*. Ann Arbor: University of Michigan Press.

Schauer, Frederick. 1991. *Playing by the Rules. A Philosophical Examination of Rule-Based Decision Making in Law and in Life*. Oxford: Clarendon Press.

Schlager, Edella, and Elinor Ostrom. 1993. "Property-Rights Regimes and Coastal Fisheries: An Empirical Analysis." In *The Political Economy of Customs and Culture: Informal Solutions to the Commons Problem*, ed. Terry L. Anderson and Randy T. Simmons, 13-41. Lanham, MD: Rowman & Littlefield.

Sen, Amartya. 1999. "The Possibility of Social Choice." *American Economic Review* 89(3):349-378.

Shimanoff, Susan. 1980. *Communication Rules: Theory and Research*. Beverly Hills: Sage.

Taylor, John F.A. 1993. "The Ethical Foundations of the Market." In *Rethinking Institutional Analysis*, ed. Vincent Ostrom, David Feeny, and Hartmut Picht, 377-388. San Francisco, CA: ICS Press.

Toulmin, Stephen. 1974. "Rules and Their Relevance for Understanding Human Behavior." In *Understanding Other People*, ed. Theodore Mischel, 185-215. Oxford: Blackwell.

Wilson, James Q. 1993. *The Moral Sense*. New York: The Free Press.

Week 3: Theories and Models of Human Behavior: Toward a Behavioral Theory of Human Choice in Social Dilemmas.

The neoclassical model of the individual used by economists in theoretical and empirical studies of market behavior has proved to be a robust and powerful model both for its usefulness in explaining choices in market situations but also as the foundation for explaining choices in other well-structured situations, including many collective action situations. Most game theoretic analyses of market and collective action settings use a

very clearly specified model of the individual and of the situation in which the modeled individuals find themselves.

The assumptions of rational choice theory have been criticized on a number of fronts - primarily for their lack of reality. There is an extensive supplemental bibliography for this week for those who wish to read widely on the subject of rational choice. Given the very substantial empirical evidence that human behavior frequently does not conform to the neoclassical model, one has to take the criticisms seriously. On the other hand, one does not lightly discard a highly powerful and very useful model of human choice-making behavior.

The stance that we take in this seminar is that one should retain the neoclassical (or, game theoretical) model as one, but not the exclusive model of the individual to be used in conducting institutional analyses. In other words, this is one of the tools of the trade and an institutional analyst should know this tool well. Knowing a tool well means knowing its capabilities and its limitations. This model is particularly useful in regard to the following three tasks:

1. Undertaking a theoretical analysis of what a fully informed and narrowly self-interested person would do in a particular type of well-defined situation.

James Buchanan has frequently argued that an essential analysis of any particular institutional arrangement must examine what strategies would be selected by individuals who are selfish, opportunistic, and calculating. If these strategies lead to optimal outcomes for others - as they do in a highly competitive market - the institutional arrangement is quite robust to the type of individuals who will be using it. If these strategies lead to suboptimal outcomes, then one is alerted to the problems that the naïve use of the institutional arrangement might produce. The use of the neoclassical model of the individual enables one to examine how vulnerable a particular institutional arrangement is to the calculations of a narrow hedonist.

2. Undertaking a normative analysis of what fully “rational” persons should do in a particular type of highly structured and repetitive situation.

Many game theorists view game theory as a “theory of advice” for how to be rational in diverse situations. In light of many of our readings this semester, one might recast this normative view of game theory so that it is viewed as a theory of advice for individuals facing situations of relating to strangers where no trust and reciprocity has been developed. The same theory might not offer good advice for how to behave rationally in settings where individuals know each other’s identity, have established a real sense of community and reciprocity, and expect to relate to one another over a very long time. It is these latter problems that are causing a considerable amount of ferment and reconsideration among thoughtful scholars.

3. Undertaking a positive, theoretical analysis in those situations that are tightly

constrained, where the actions and outcomes are clearly known, and where some single value - such as profit or likelihood of re-election - can serve as an external indicator of utility.

The key question facing institutional analysts who wish to undertake positive analyses of less structured and certain situations is what modifications in the neoclassical theory are the most likely to generate useful predictions in particular kinds of settings? Thinking of human behavior as adaptive is the approach that is discussed by Vincent Ostrom and Brian Jones. Herbert Simon retains the fundamental presumption that individuals compare benefits against costs but relaxes the assumptions about how finely values are measured and the type of calculation process presumed. If one adds to the important work of Simon, the work of Kahneman and Tversky (and others) on perception and framing effects and of Coleman (and others) on the adoption of norms of behavior, one begins to gain a model of a fallible learner who develops routines, heuristics, or SOPs (standard operating procedures) for coping with much of life that may reflect more or less opportunistic behavior dependent upon both personal and social developments.

Recent work on evolutionary theory applied to language, culture, and social relations is also providing useful insights to the central questions we will be addressing. We do need to develop an integrated approach in the social sciences that does not see our approach as totally apart from the biological foundations of human behavior. In an institutional milieu that is highly competitive, the external structure may be so selective that those who survive can be thought of as having maximized whatever value is needed for survival. But, many environments do not have such strong selection pressures. Thus, the neoclassical model becomes one - but not the only - model of the individual that the institutional analyst can use. In his classic article on "rationality," Popper gives us some very good advice: rest as much of your analysis on the structure of the situation rather than on the model of the individual.

Essential Readings for Week 3:

Aligica, Paul Dragos, and Peter J. Boettke. 2009. Part II. In *Challenging Institutional Analysis and Development. The Bloomington School*, 53-98. New York: Routledge.

Bianco, William T. 1998. "Different Paths to the Same Result: Rational Choice, Political Psychology, and Impression Formation in Campaigns." *American Journal of Political Science* 42(4) (October): 1061-1081.

Bowles, Samuel. 1998. "Endogenous Preferences: The Cultural Consequences of Markets and Other Institutions." *Journal of Economic Literature* 36(1) (March): 75-111.

McElreath, Robert Boyd, and Peter J. Richerson. 2003. "Shared Norms and the Evolution of Ethnic Markers." *Current Anthropology* 44(1) (February): 122-129.

North, Douglass C. 2005. Chapters 7 and 9. In *Understanding the Process of Economic Change*. Princeton: Princeton University Press.

Ostrom, Elinor. 2005. Chapter 4. In *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Supplemental Readings for Week 3:

Aaron, Henry J. 1994. "Public Policy, Values, and Consciousness." *Journal of Economic Perspectives* 8(2) (Spring): 3-21.

Alchian, Armen. 1950. "Uncertainty, Evolution and Economic Theory." *Journal of Political Economy* 63:211-221.

Anderson, John R. 1980. *Cognitive Psychology and Its Implications*. San Francisco, CA: W.H. Freeman.

Ashby, W. Ross. 1960. *Design for a Brain: The Origin of Adaptive Behavior*. 2d ed. New York: Wiley.

Buchanan, James. 1979. "Natural and Artifactual Man." In *What Should Economists Do?*, ed. H. Geoffrey Brennan and Robert D. Tollison, 93-111. Indianapolis, IN: Liberty Press.

Clark, Andy, and Annette Karmiloff-Smith. 1993. "The Cognizer's Innards: A Psychological and Philosophical Perspective on the Development of Thought." *Mind & Language* 8(4) (Winter): 487- 519.

Cook, Karen, and Margaret Levi. 1990. *The Limits of Rationality*. Chicago: University of Chicago Press.

Dawes, Robyn M. 1988. *Rational Choice in an Uncertain World*. New York: Harcourt Brace Jovanovich.

Day, Richard H. 1968. "How to Co-operate in Business without Really Trying: A Learning Model of Decentralized Decision Making." *Journal of Political Economy* 76 (July/August): 583-600.

Edwards, Ward, ed. 1992. *Utility Theories: Measurements and Applications*. Boston: Kluwer.

Elster, Jon. 1979. *Ulysses and the Sirens: Studies in Rationality and Irrationality*. Cambridge: Cambridge University Press.

Elster, Jon, ed. 1986. *Rational Choice*. New York: New York University Press.

Faysse, Nicolas. 2005. "Coping with the Tragedy of the Commons: Game Structure and Design of Rules." *Journal of Economic Surveys* 19(2) (April): 239-261.

Fishburn, Peter C. 1989. "Foundations of Decision Analysis: Along the Way." *Management Science* 35(4) (April): 387-405.

Frank, Robert H. 1985. *Choosing the Right Pond: Human Behavior and the Question for Status*. Oxford: Oxford University Press.

Frank, Robert H. 1988. *Passions Within Reason: The Strategic Role of the Emotions*. New York: Norton.

Gigerenzer, Gerd. 2004. "Striking a Blow for Sanity in Theories of Rationality." In *Models of a Man: Essays in Memory of Herbert A. Simon*, ed. Mie Augier and James G. March, 389-410. Cambridge, MA: MIT Press.

Gigerenzer, Gerd, and Reinhard Selten, eds. 2001. *Bounded Rationality. The Adaptive Tool Box*. Cambridge, MA: MIT Press.

Harsanyi, John C. 1986. "Advances in Understanding Rational Behavior." In *Rational Choice*, ed. Jon Elster, 82-107. New York: New York University Press.

Heiner, Ronald A. 1983. "The Origin of Predictable Behavior." *American Economic Review* 73(4) (September): 560-595.

Hogarth, Robin M., and Melvin W. Reder, eds. 1987. *Rational Choice: The Contrast between Economics and Psychology*. Chicago: University of Chicago Press.

Jones, Bryan D. 2001. Chapters 1-5. In *Politics and the Architecture of Choice: Bounded Rationality and Governance*. Chicago: University of Chicago Press.

Kahneman, Daniel. 1994. "New Challenges to the Rationality Assumption" and "Comments" by Christian Kirchner and Reinhard Selten. *Journal of Institutional and Theoretical Economics* 150(1) (March): 18-44.

Kleindorfer, Paul R., Howard C. Kunreuther, and Paul H. H. Schoemaker. 1993. *Decision Sciences: An Integrative Perspective*. New York: Cambridge University Press.

Koford, Kenneth J., and Jeffrey B. Miller. 1991. *Social Norms and Economic Institutions*. Ann Arbor: University of Michigan Press.

Margolis, Howard. 1988. *Patterns, Thinking, and Cognition: A Theory of Judgment*. Chicago: University of Chicago Press.

Marshall, Graham. 2005. Chapters 1-4. In *Economics for Collaborative Environmental Management: Renegotiating the Commons*. London: Earthscan.

North, Douglass C. 1990. "A Transaction Cost Theory of Politics." *Journal of Theoretical Politics* (October): 355-367.

Orbell, John et al., 2004. "Machiavellian" Intelligence as a Basis for the Evolution of

Cooperative Dispositions.” *American Political Science Review* 98(1):1-15.

Popper, Karl R. 1985. “The Rationality Principle.” In *Popper Selections*, ed. David Miller, 357-365. Princeton, NJ: Princeton University Press.

Richerson, Peter J., Robert Boyd, and Brian Paciotti. 2002. “An Evolutionary Theory of Common Management.” In *The Drama of the Commons*, 403-443. Washington, DC: National Academies Press.

Satz, Debra, and John Ferejohn. 1994. “Rational Choice and Social Theory.” *The Journal of Philosophy* 91(1):71-87.

Schelling, Thomas C. 1978. *Micromotives and Macrobehavior*. New York: W.W. Norton.

Searle, John R. 2005. “Social Ontology: Some Basic Principles.” Working Paper.

Selten, Reinhard. 1991. “Evolution, Learning, and Economic Behavior.” *Games and Economic Behavior* 3:3-24.

Sen, Amartya K. 1977. “Rational Fools: A Critique of the Behavioral Foundations of Economic Theory.” *Philosophy and Public Affairs* 6(4) (Summer): 317-344.

Shepsle, Kenneth A. 1989. “Studying Institutions: Some Lessons from the Rational Choice Approach.” *Journal of Theoretical Politics* (July): 131-149.

Simon, Herbert A. 1987. “Rationality in Psychology and Economics.” In *Rational Choice: The Contrast between Economics and Psychology*, ed. Robin M. Hogarth and Melvin W. Reder, 25-40. Chicago: University of Chicago Press.

Tversky, Amos, and Daniel Kahneman. 1986. “Rational Choice and the Framing of Decisions.” *Journal of Business* 59(4):S251-278.

Week 4: Structural Variables that Affect Action Situations.

Underlying all governance processes are collective action dilemmas. While they have been depicted as simple games, such as the Prisoners’ Dilemma game, they are rarely simple in the field. They depend on the context of the situation – on the bio-physical setting, the community, and the rules. We have stressed that one of the factors that affects the structure of an action situation is the biophysical world or in a simplified view “the nature of the goods” involved. We will discuss a general way of broadly classifying four types of goods (of which there are many sub-types).

The term “institution” has a diversity of meanings in the literature as discussed by Hodgson (2006). Institutional theorists do need to come to a common understanding or we only continue the “Tower of Babel” that characterizes much of the social science

literature. As understood as part of the IAD framework, rules can be expressed linguistically as the “mays,” “musts,” and “must nots” that potentially affect all of the working parts of any action situation including a market. What type of variables are these? When do we know that humans are following a set of rules? How can we begin to develop a technical language to talk about rules in a careful manner? How can we know if the rules of one system are similar to or different from the rules of another system? The concept of “working rules” comes from John R. Commons. The introduction to his book gives you a brief overview of his approach. Sue Crawford and I have struggled mightily with the concepts of rules, norms, and equilibrium strategies and how to relate these. You should carefully read our Chapter 5. I build on these issues in Chapters 6 and 7 of *Understanding Institutional Diversity*. Professor Armando Razo will join us and discuss his thinking about an “Ontological and Theoretical Framework for Comparative Analysis of Networks and Institutions.”

We will hand out a worksheet for analyzing rules during the seminar session for Week 4. During the Week 6 session, we will discuss the worksheets you will share with each other. You need to re-read one or two cases that you choose where the authors have provided at least some basic information about the underlying structure of an action situation. Or, you may have to infer what these rules are. You will then identify which rules affect which part of an action situation and how this affects the structure, behavior, and outcomes. You will have two weeks to be thinking about this assignment. Hopefully, you will pick cases that relate to your paper for the seminar and this will help prepare some of the foundation for your seminar paper.

Essential Readings for Week 4:

Ahl, Valerie, and T. F. H. Allen. 1996. Chapters 1 and 2. In *Hierarchy Theory: A Vision, Vocabulary, and Epistemology*. New York: Columbia University Press.

Hodgson, Geoffrey M. 2006. “What Are Institutions.” *Journal of Economic Issues*. XL(1) (March): 1-25.

Ostrom, Elinor. 2005. Chapters 5, 6, and 7. In *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Ostrom, Vincent, and Elinor Ostrom. 1999. “Public Goods and Public Choices.” In *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael McGinnis, 75-103. Ann Arbor: University of Michigan Press.

Supplementary Readings on IAD Framework:

The IAD framework has been described by many Workshop colleagues. Developments include:

Kiser, Larry, and Elinor Ostrom. 1982. “The Three Worlds of Action: A Metatheoretical Synthesis of Institutional Approaches.” In *Strategies of Political Inquiry*, ed. Elinor Ostrom, 179-222. Beverly Hills, CA: Sage. Reprinted in McGinnis (2000), Chapter 2.

Miller, John H., and Scott E. Page. 2007. Parts 1 and 2. In *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*. Princeton: Princeton University Press.

Oakerson, Ronald. 1992. "Analyzing the Commons: A Framework." In *Making the Commons Work: Theory, Practice, and Policy*, ed. Daniel W. Bromley, et al., 41-62. San Francisco, CA: ICS Press.

Ostrom, Elinor. 2007. "Institutional Rational Choice: An Assessment of the Institutional Analysis and Development Framework." In *Theories of the Policy Process*, 2nd ed., ed. Paul A. Sabatier, 21– 64. Boulder, CO: Westview Press.

Ostrom, Elinor. 1987. "An Agenda for the Study of Institutions." *Public Choice* 48:3-25. Reprinted in McGinnis (2000), Chapter 3.

Ostrom, Elinor, Roy Gardner, and James Walker. 1994. Chapter 2. In *Rules, Games, and Common-Pool Resources*. Ann Arbor: University of Michigan.

Sproule-Jones, Mark. 1993. *Governments at Work: Canadian Parliamentary Federalism and Its Public Policy Effects*. Toronto: University of Toronto Press.

Thomson, James. 1992. *A Framework for Analyzing Institutional Incentives in Community Forestry*. Rome: Food and Agriculture Organization of the United Nations.

Similar efforts to identify a "smallest relevant unit of analysis" have used such terms as: collective structures, transactions, frames, and the other terms listed below. The following is an initial bibliography of key works that describe other efforts to identify units of analysis that are very similar to the concept of an action situation:

Collective Structure:

Allport, F. H. 1962. "A Structuronomic Conception of Behavior: Individual and Collective." *Journal of Abnormal and Social Psychology* 64:3-30.

Events:

Appleyard, Roger. 1987. "Events and Acts: The Structure of their Effects." *Behavioral Science* 32:92-105.

Heise, David R. 1979. *Understanding Events: Affect and the Construction of Social Action*. New York: Cambridge University Press.

Frames:

Goffman, Irving. 1974. *Frame Analysis: An Essay on the Organization of Experience*. Cambridge, MA: Harvard University Press.

Logic of the Situation:

Farr, James. 1985. "Situational Analysis: Explanation in Political Science." *Journal of Politics* 47(4) (November): 1085-1107.

Popper, Karl. 1961. *The Poverty of Historicism*. New York: Harper & Row.

Popper, Karl. 1976. "The Logic of the Social Sciences." In *The Positivist Dispute in German Sociology*, ed. T. W. Adorno. New York: Harper & Row.

Problematic Social Situations:

Raub, Werner, and Thomas Voss. 1986. "Conditions for Cooperation in Problematic Social Situations." In *Paradoxical Effects of Social Behavior: Essays in Honor of Anatol Rapoport*, ed. A. Diekmann and P. Mitter, 85-104. Heidelberg: Physical.

Scripts:

Schank, Roger C., and Robert P. Abelson. 1977. *Scripts, Plans, Goals, and Understanding: An Inquiry in Human Knowledge Structures*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Transactions:

Commons, John R. 1968. "Transactions." In *Legal Foundations of Capitalism*, 64-142. Madison: University of Wisconsin Press.

Units of Meaning:

Barwise, Jon, and John Perry. 1983. *Situations and Attitudes*. Cambridge, MA: MIT Press.

For a book that is informed by formal game theory but is devoted to teaching future negotiators the logic of situations, see:

Raiffa, Howard. 1982. Parts IV and V. In *The Art and Science of Negotiation*. Cambridge, MA: Harvard University Press.

Week 5: Games and Institutional Analysis.

Our strong recommendation to anyone who plans to study institutional arrangements is that they should be well trained in at least one formal method for analyzing individual choice. Game theory is a very powerful formal modeling tool for the institutional analyst and can be applied to many diverse situations in a fruitful manner. Sometimes the usefulness of a game theoretical analysis is to provide a clear picture of what would happen in a setting where all decisions are made independently and little opportunity for communication, gaining common agreement, and the development of norms exist. This then becomes a powerful "zero" model for comparison with behavior in richer settings.

In some highly competitive settings, predictions made using rational choice theory are very close to observed outcomes because competition drives out those participants whose

choices are much different from those made by a rational player. In such settings, rational choice models go far in helping analysts predict behavior.

Essential Readings for Week 5:

McGinnis, Michael D. 2007. "Narratives of Strategic Interaction Involving Religious Organizations: Proselytism, Humanitarian Aid, and International Conflict." Paper presented at the 48th Annual Conference of the International Studies Association, Chicago, IL, February 28-March 3.

McGinnis, Michael D., ed. 2000. Chapters 7, 8, 12, and 13. In *Polycentric Games and Institutions: Readings from the Workshop in Political Theory and Policy Analysis*. Ann Arbor: University of Michigan Press.

Rasmussen, Eric. 2007. "The Rules of the Game." In *Games and Information: An Introduction to Game Theory*, 8-41. 4th ed. Oxford, England: Wiley-Blackwell.

Supplemental Readings on Game Theory and Its Foundations:

Boulding, Kenneth E. 1963. "Towards a Pure Theory of Threat Systems." *American Economic Review* (53):424-434.

Dixit, Avinash, and Susan Skeath. 1999. *Games of Strategy*. New York: Norton.

Dixit, Avinash, and Barry J. Nalebuff. 1993. *Thinking Strategically*. New York: W. W. Norton, all.

Fudenberg, Drew, and Jean Tirole. 1991. *Game Theory*. Cambridge, MA: MIT Press.

Gardner, Roy. 2003. *Games for Business and Economics*. 2d ed. New York: Wiley.

Gintis, Herbert. 2000. *Game Theory Evolving*. Princeton: Princeton University Press.

Güth, Werner. 1991. "Game Theory's Basic Question - Who is a Player?: Examples Concepts and Their Behavioral Relevance." *Journal of Theoretical Politics* (October): 403-436.

Morrow, James D. 1994. *Game Theory for Political Scientists*. Princeton, NJ: Princeton University Press.

Rasmusen, Eric. 1989. *Games and Information. An Introduction to Game Theory*. Oxford, England: Blackwell.

Schelling, Thomas C. 1978. "Hockey Helmets, Daylight Saving, and Other Binary Choices." In *Micromotives and Macrobehavior*, 213-243. New York: W. W. Norton.

Young, H. Peyton. 1998. *Individual Strategy and Social Structure. An Evolutionary Theory of Institutions*. Princeton: Princeton University Press.

Week 6: Studying Collective Action in the Field.

Having spent two weeks on the use of experiments to study collective action dilemmas, we will now turn to research based on field studies. I would recommend reading the chapters from the Poteete et al. volume first as they discuss an extensive body of studies and some of the real challenges involved in doing field research on collective action.

Essential readings for Week 6:

Auer, Matthew. 2006. "Contexts, Multiple Methods, and Values in the Study of Common-Pool Resources." *Journal of Policy Analysis and Management* 25(1):215-227.

Poteete, Amy, Marco Janssen, and Elinor Ostrom. Forthcoming 2010. Chapters 2, 3, 4, and 5. In *Working Together: Collective Action, the Commons, and Multiple Methods in Practice*. Princeton, NJ: Princeton University Press.

Elinor Ostrom. 2005. Chapter 8. In *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Stern, Paul C., Thomas Dietz, Nives Dolšak, Elinor Ostrom, and Susan Stonich. 2002. "Knowledge and Questions After 15 Years of Research." In *The Drama of the Commons*, 445-489. Washington, DC: National Academy Press.

Week 7: Polycentricity.

Recent developments in Indianapolis make this topic particularly relevant. In early August of 2004, Mayor Bart Peterson proposed to save the citizens of Marion County over \$35 million dollars by consolidating the city and county police and fire departments, eliminating most of the townships, and greatly increasing his own powers. This raises once again the argument that moving to one large, consolidated unit will be more efficient. Readings by Vincent Ostrom in the McGinnis volume lay out the concept of polycentricity and its usefulness for understanding complex urban governance. The articles from our earlier police studies are highly relevant to the current debate in Indianapolis. Weingast turns particularly to the structure of federal systems and some of their consequences.

Essential Readings for Week 7:

Ostrom, Vincent. 1999. Chapters 2 and 5. In *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael D. McGinnis. Ann Arbor: University of Michigan Press.

"Part III. Empirical Research on Police Services: Chapters 7-10." In *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael D. McGinnis. Ann Arbor: University of Michigan Press.

Weingast, Barry R. 2006. "Second Generation Fiscal Federalism: Implications for Decentralized Democratic Governance and Economic Development." Working Paper. Stanford: Stanford University, Department of Political Science.

Supplemental Readings for Week 7:

Bendor, Jonathan, and Dilip Mookherjee. 1987. "Institutional Structure and the Logic of Ongoing Collective Action." *American Political Science Review* 81(1) (March): 129-154.

Cohen Michael D. 1981. "The Power of Parallel Thinking." *Journal of Economic Behavior and Organization* 2:285-306.

Ostrom, Vincent. 2007. *The Political Theory of a Compound Republic: Designing the American Experiment*. 3rd ed. Lanham, MD: Lexington Books.

Ostrom, Vincent. 1991. *The Meaning of American Federalism: Constituting a Self-Governing Society*. San Francisco, CA: ICS Press

Ostrom, Vincent, and Elinor Ostrom. 1999. "A Behavioral Approach to the Study of Intergovernmental Relations." In *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael D. McGinnis. Ann Arbor: University of Michigan Press.

Painter, Martin. 1991. "Intergovernmental Relations in Canada: An Institutional Analysis." *Canadian Journal of Political Science* 24(2) (June): 269-288.

Sproule-Jones, Mark. 1991. "Evaluation." In *Governments at Work: Canadian Parliamentary Federalism and Its Public Policy Effects*, ed. Mark Sproule-Jones, 263-274. Toronto: University of Toronto Press.

Tiebout, Charles. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64: 416-424.

Week 8: Learning from Experiments.

One method of studying collective action dilemmas is by designing and running experiments where one is able to change underlying structural aspects one by one. We will discuss some of the key aspects of experimental research this week and then do a pretest of an experiment that we plan to undertake very soon during the following week.

Essential Readings for Week 8:

Bianco, William T., Michael S. Lynch, Gary J. Miller, and Itai Sened. 2006. "A Theory Waiting to Be Discovered and Used: A Reanalysis of Canonical Experiments on Majority-Rule Decision Making." *The Journal of Politics* 68(4) (November): 838-851.

Cardenas, Juan Camilo. 2009. "Experiments in Environment and Development." *Annual Review of Resource Economics* 1:24.1-24.27.

Cardenas, Juan-Camilo. 2003. "Real Wealth and Experimental Cooperation: Experiments in the Field Lab." *Journal of Development Economics* 70:263-289.

Lopez, Maria Claudia, James Murphy, John Spraggon, and John K. Stranlund. 2009. "Does Government Regulation Complement Existing Community Efforts to Support Cooperation? Evidence from Field Experiments in Colombia." In (Forthcoming) *Handbook on Experimental Economics and the Environment*, ed. John List and Michael Price. Edward Elgar Publishing.

Ostrom, Elinor. 2005. Chapter 3. In *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Poteete, Amy, Marco Janssen, and Elinor Ostrom. Forthcoming 2010. Chapter 6. In *Working Together: Collective Action, the Commons, and Multiple Methods in Practice*. Princeton, NJ: Princeton University Press.

Walker, James, and Elinor Ostrom. 2007. "Trust and Reciprocity as Foundations for Cooperation." Forthcoming 2009 in *Who Can We Trust?: How Groups, Networks, and Institutions Make Trust Possible*, ed. Karen Cook, Margaret Levi, and Russell Hardin, 91-124. New York: Russell Sage Foundation.

Week 9: Pretesting a New Experimental Design.

Week 10: Studying Linked Social-Ecological Systems.

We are being asked more frequently to address broad questions related to the sustainability of social and ecological systems over time. The National Academy of Science, for example, has added a section on "Sustainability Science" to its regular divisions of the *Proceedings of the National Academy of Sciences (PNAS)* and asked me to be on the Editorial Board for *PNAS* to work on this new multidisciplinary field. In particular, I have organized a Special Feature with Marty Anderies and Marco Janssen of *PNAS* on "Beyond Panaceas: Crafting Diverse Institutional Arrangements for Governing Diverse Social-Ecological Systems."

Marco Janssen and I relate our effort to studying linked social-ecological systems to the range of multiple methods that can be used for these kinds of studies. Weinstein applies the IAD to fisheries in Canada and Japan.

Essential Readings for Week 10:

Agrawal, Arun. 2007. "Forests, Governance, and Sustainability: Common Property Theory and Its Contributions." *International Journal of the Commons* 1(1) (October): 111-136.

Clark, William C., and Nancy M. Dickson. 2003. "Sustainability Science: The Emerging Research Program." *PNAS*. 100(14) (July 8): 8059-8061.

Janssen, Marco, and Elinor Ostrom. 2006. "Adoption of a New Regulation for the Governance of Common-Pool Resources by a Heterogeneous Population." In *Inequality*,

Cooperation, and Environmental Sustainability, ed. Jean-Marie Baland, Pranab Bardhan, and Samuel Bowles, 60–96. Princeton, NJ: Princeton University Press.

Ostrom, Elinor. 2007. “A Diagnostic Approach for Going Beyond Panaceas.” *PNAS* 104(39) (September 25): 15181-15187.

Ostrom, Elinor, Marco A. Janssen, and John M. Anderies. 2007. “Going Beyond Panaceas.” *PNAS* 104(39) (September 25): 15176-15178.

Ostrom, Elinor, and Harini Nagendra. 2006. “Insights on Linking Forests, Trees, and People from the Air, on the Ground, and in the Laboratory.” *PNAS* 103(51) (December 19): 19224–19231.

Pahl-Wostl, Claudia. 2009. “A Conceptual Framework for Analysing Adaptive Capacity and Multi-Level Learning Processes in Resource Governance Regimes.” *Global Environmental Change* 19(3) (August): 354-365.

Weinstein, Martin S. 2000. “Pieces of the Puzzle: Solutions for Community-Based Fisheries Management from Native Canadians, Japanese Cooperatives, and Common Property Researchers.” *Georgetown International Environmental Law Review* 12(2) (Winter): 375-412.

Zagorski, Nick. 2006. “Profile of Elinor Ostrom.” *PNAS* 103(51) (December 19): 19221–19223.

Supplemental Readings for Week 10:

Marshall, Graham. 2005. Chapters 5-8. In *Economics for Collaborative Environmental Management: Renegotiating the Commons*. London: Earthscan.

Week 11: Applications of IAD or DOSES to your Puzzles.

There are no new readings for this week to give you time to catch up with past weeks and to begin serious consideration of the puzzle that you intend to discuss in your own paper. Everyone will be asked to write a one-page memo on the topic they have chosen for their seminar paper. In class, we will break into smaller groups and discuss the puzzles you have regarding key concepts and their applications in class.

Week 12: Bureaucratic Forms of Organization and their Potential Control.

Hierarchy has been viewed within public administration theory as one of the “ideal” forms of organization in which considerable control over subordinates is exercised by superiors. Recent work on institutional analysis has raised serious questions about this image. The key issue is how control is exercised both within bureaus and among bureaus.

Essential Readings for Week 12:

Bianco, William T., and Robert H. Bates. 1990. “Cooperation by Design: Leadership,

Structure, and Collective Dilemmas.” *American Political Science Review* 84(1) (March): 133-147.

Miller, Gary. 1990. “Managerial Dilemmas: Political Leadership in Hierarchies.” In *The Limits of Rationality*, ed. Karen Cook and Margaret Levi, 324-348. Chicago: University of Chicago Press.

Moe, Terry M. 2005. “Power and Political Institutions.” *Perspectives on Politics* 3(2) (June): 215-233.

Supplemental Readings for Week 12:

Alchian, Armen, and Harold Demsetz. 1972. “Production, Information Costs, and Economic Organization.” *American Economic Review* 62 (December): 777-795.

Alchian, Armen, and Susan Woodward. 1988. “The Firm is Dead; Long Live the Firm: A Review of Oliver E. Williamson’s *The Economic Institutions of Capitalism*.” *Journal of Economic Literature* 26 (March): 65-79.

Aoki, Masahiko, Bo Gustafsson, and Oliver E. Williamson. 1990. *The Firm as a Nexus of Treaties*. Newbury Park, CA: Sage.

Auster, Richard, and Morris Silver. 1979. *The State as a Firm: Economic Forces in Political Development*. The Hague: Martinus Nijhoff.

Barzelay, Michael. 1992. *Breaking through Bureaucracy. A New Vision for Managing in Government*. Berkeley: University of California Press.

Borcherding, Thomas E. 1977. *Budgets and Bureaucrats: The Sources of Government Growth*. Durham, NC: Duke University Press.

Breton, Albert, and Ronald Wintrobe. 1982. *The Logic of Bureaucratic Conduct: An Economic Analysis of Competition, Exchange, and Efficiency in Private and Public Organizations*. Cambridge: Cambridge University Press.

Crozier, Michael. 1963. “The Social System at the Shop Level: The Plant Subculture and the Formal Authority System.” In *The Bureaucratic Phenomenon*, 61-88. Chicago: University of Chicago Press.

Downs, Anthony. 1967. *Inside Bureaucracy*. Boston: Little, Brown & Company.

Fallers, Lloyd A. 1965. “A Century of Political Evolution.” In *Bantu Bureaucracy: A Century of Political Evolution Among the Basoga of Uganda*, 126-154. Chicago: University of Chicago Press.

Jensen, Michael, and William Meckling. 1976. “Theory of the Firm, Managerial Behavior, Agency Costs, and Ownership Structure.” *Journal of Financial Economics* 3

(October): 305-359.

Johnson, Ronald N., and Gary D. Libecap. 1994. *The Federal Civil Service System and the Problem of Bureaucracy*. Chicago: University of Chicago Press.

Kay, Neil M. 1979. *The Innovating Firm: A Behavioral Theory of Corporate R & D*. New York: St. Martin's Press.

Leibenstein, Harvey. 1981. "Microeconomics and X-Efficiency Theory: If There is No Crisis, There Ought to Be." In *The Crisis in Economic Theory*, ed. Daniel Bell and Irving Kristal, 97-110. New York: Basic Books.

Marschak, Jacob. 1972. *Economic Theory of Teams*. New Haven: Yale University Press.

McCubbins, Matthew D., Roger G. Noll, and Barry R. Weingast. 1989. "Structure and Process, Politics and Policy: Administrative Arrangements and the Political Control of Agencies." *Virginia Law Review* 75:431-482.

Ouchi, William G. 1977. "The Relationship between Organizational Structure and Organizational Control." *Administrative Science Quarterly* 22 (March): 95-113.

Putterman, Louis. 1995. "Markets, Hierarchies, and Information: On a Paradox in the Economics of Organization." *Journal of Economic Behavior and Organization* 26:373-390.

Shleifer, Andrei, and Robert W. Vishny. 1993. "Corruption." *The Quarterly Journal of Economics* (August): 601-617.

Week 13: Puzzles and Challenges of Development.

For the last half century, International Development Agencies (IDAs) have poured substantial sums into efforts to assist the developing world to achieve a higher economic and political level of development. Many of these efforts have lead to very disappointing results. Several years ago, the Swedish International Development Agency (Sida) asked colleagues at the Workshop to undertake a study of Aid, Incentives, and Sustainability. Oxford University Press asked us to revise our earlier report and make it more general. Since this is another application of our IAD approach to a puzzle in the world, I thought it would be useful to assign several of the chapters from the book entitled *The Samaritan's Dilemma* for this week of the seminar as well as excellent chapters from Amos Sawyer's and Sheldon Gellar's new books, and Ed Araral's excellent article on the bureaucratic incentives compounded by international aid.

Essential Readings for Week 13:

Araral Jr., Eduardo. 2005. "Bureaucratic Incentives, Path Dependence, and Foreign Aid: An Empirical Institutional Analysis of Irrigation in the Philippines." *Policy Sciences* 38(2-3) (September): 131- 157.

Evans, Peter. 2004. "Development as Institutional Change: The Pitfalls of Monocropping and Potentials of Deliberation." *Studies in Comparative International Development* 38(4) (Winter): 30-52.

Gibson, Clark, Krister Andersson, Elinor Ostrom, and Sujai Shivakumar. 2005. Chapters 1 and 11. In *The Samaritan's Dilemma: The Political Economy of Development Aid*. Oxford University Press.

Lansing, J. Stephen. 2006. Chapters 1 and 7. In *Perfect Order. Recognizing Complexity in Bali*. Princeton: Princeton University Press.

Sawyer, Amos. 2005. Chapters 1, 3, and 9. *Beyond Plunder: Toward Democratic Governance in Liberia*, Boulder, CO: Lynne Rienner Publishers.

Week 14: Collective Choice and Constitutional Choice: Constituting and Reconstituting Multi-Agent, Multi-Level, Overlapping Realms of Local, National, and International Regimes.

Analysis of institutional change is among the most difficult topics to be covered in this semester. So many different variables potentially affect how individuals constitute and change institutions over time. For some scholars, institutional change has been viewed as a process leading to ever better institutions. For others, it is simply the result of the most powerful exerting their continued dominance over a situation. An institutional analyst must recognize that changes in rules do not always lead to increased welfare both because of ignorance and because of opportunistic behavior. A key question is how to analyze changes of rules within rules so as to understand under what conditions individuals may improve their general welfare with time.

Essential Readings for Week 14:

Aligica, Paul, and Peter Boettke. 2009. Part III. In *Challenging Institutional Analysis and Development. The Bloomington School*, 99-141. New York: Routledge.

Gamm, Gerald, and John Huber. 2002. "Legislatures as Political Institutions: Beyond the Contemporary Congress." In *Political Science: State of the Discipline (Centennial Edition)*, 313-41. New York: W.W. Norton.

Hooghe, Liesbet, and Gary Marks. 2001. Chapter 1; Appendices 1 and 2. In *Multi-Level Governance and European Integration*. Lanham, MD: Rowman & Littlefield Publishers.

Knight, Jack. 1992. Chapters 3 and 5. In *Institutions and Social Conflict*. New York: Cambridge University Press.

McGinnis, Michael D. 2008. "Comparative Religion Policy: Understanding Patterns of Religious Participation in Policy Networks and the Political Manipulation of Religious Organizations." Paper presented at the annual meeting of the International Studies

Association (ISA), San Francisco, CA, March 26-30.

McGinnis, Michael D. 2007. "From Self-Reliant Churches to Self-Governing Communities: Comparing the Indigenisation of Christianity and Democracy in Sub-Saharan Africa." *Cambridge Review of International Affairs* 20(3) (September): 401-416.

Supplemental Readings for Week 14:

Aldrich, John H. 1994. "A Model of a Legislature with Two Parties and a Committee System." *Legislative Studies Quarterly* 19(3):313-339.

Bianco, William T., and Itai Sened. 2005. "Uncovering Evidence of Conditional Party Government: Reassessing Majority Party Influence in Congress and State Legislatures." *American Political Science Review* 99(3) (August): 361-71.

Bianco, William T., Michael S. Lynch, Gary J. Miller, and Itai Sened. 2004. "„A Theory Waiting to be Discovered and Used“: A Reanalysis of Canonical Experiments on Majority Rule Decision Making." Working Paper. University Park: Penn State, Department of Political Science.

Brennan, Geoffrey, and James M. Buchanan. 1985. "Is Constitutional Revolution Possible in Democracy?" In *The Reason of Rules: Constitutional Political Economy*, 134-150. Cambridge: Cambridge University Press.

Buchanan, James, and Gordon Tullock. 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.

Cornell, Stephen, and Joseph P. Kalt. 1995. "Cultural Evolution and Constitutional Public Choice: Institutional Diversity and Economic Performance on American Indian Reservations." Working Paper. Cambridge, MA: Harvard University, Kennedy School of Government, Faculty Research Working Paper Series R95-8.

Cox, Gary, and Mathew McCubbins. 2002. "Agenda Power in the U. S. House of Representatives, 1877 to 1986. Working Paper.

Feeny, David. 1988. "The Demand for and Supply of Institutional Arrangements." In *Rethinking Institutional Analysis and Development*, ed. Vincent Ostrom, David Feeny, and Hartmut Picht, 159- 209. San Francisco, CA: ICS Press.

Firmin-Sellers, Kathryn. 1999. "The Concentration of Authority: Constitutional Creation in the Gold Coast, 1950." In *Polycentric Governance and Development: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael D. McGinnis, 186-208. Ann Arbor: University of Michigan Press.

Haney, Patrick, Roberta Herzberg, and Rick K. Wilson. 1992. "Advice and Consent: Unitary Actors, Advisory Models and Experimental Tests." *Journal of Conflict Resolutions* 36 (December): 603-633.

Hechter, Michael, Karl-Dieter Opp, and Reinhard Wippler. 1990. Introduction and Chapters 1-3. In *Social Institutions: Their Emergence, Maintenance, and Effects*. New York: de Gruyter.

Heckathorn, Douglas D., and Steven M. Maser. 1987. "Bargaining and Constitutional Contracts." *American Journal of Political Science* 31(1) (February): 142-168.

Herzberg, Roberta. 1992. "An Analytic Choice Approach to Concurrent Majorities: The Relevance of John C. Calhoun's Theory for Institutional Design." *Journal of Politics* 52 (February): 54-81.

Jillson, Calvin, and Rick K. Wilson. 1995. *Congressional Dynamics. Structure, Coordination, and Choice in the First American Congress, 1774-1789*. Stanford: Stanford University Press.

Krehbiel, Keith. 1993. "Where's the Party?" *British Journal of Political Science* 23(2) (April): 235-244.

Krehbiel, Keith. 1991. "Informational Theories of Legislative Organization." In *Information and Legislative Organization*, 61-103. Ann Arbor: University of Michigan Press.

Kropotkin, Peter. [1902] reprinted, 1989. *Mutual Aid: A Factor of Evolution*. Montreal: Black Rose Books.

Levi, Margaret. 1990. "A Logic of Institutional Change." In *The Limits of Rationality*, ed. Karen S. Cook and Margaret Levi, 402-419. Chicago: University of Chicago Press.

Lupia, Arthur, and Mathew D. McCubbins. "Lost in Translation: Social Choice Theory is Misapplied Against Legislative Intent." (April 12, 2004).

North, Douglass C., and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in 17th Century England." *Journal of Economic History* 49(4) (December): 803-832.

Piaget, Jean. 1965. *The Moral Judgment of the Child*. New York: Macmillan.

Pitkin, Hanna. 1972. *The Concept of Representation*. Berkeley: University of California Press.

Riker, William. 1980. "Implications from the Disequilibrium of Majority Rule for the Study of Institutions." *American Political Science Review* 74:432-446.

Scully, Gerald W. 1992. *Constitutional Environments and Economic Growth*. Princeton: Princeton University Press.

Sened, Itai. 1991. "Contemporary Theory of Institutions in Perspective." *Journal of Theoretical Politics* (October): 379-402.

Shepsle, Kenneth A., and Barry Weingast. 1987. "The Institutional Foundations of Committee Power." *American Political Science Review* 81:85-104.

Smale, Melinda, and Vernon Ruttan. 1995. "How Social Capital Can Facilitate Technical Change: The *Groupements Naam* of Burkina Faso." In *Institutions and Economic Development: Implications of a New-Institutional Economics Approach for Growth, Poverty Reduction, Democracy, and External Assistance*, ed. Christopher Clague. College Park: University of Maryland, Center for Institutional Reform and the Informal Sector.

Strom, Gerald. 1990. *The Logic of Lawmaking: A Spatial Theory Approach*, 8-113; 133-138. Baltimore, MD.: Johns Hopkins University Press.

Taylor, Serge. 1986. "The Evolving Legislature: Organizational Learning under Conflict of Interest." Paper for the American Political Science Association Annual Meetings, Washington, D.C.

Tullock, Gordon. 1990. "The Costs of Special Privilege." In *Perspectives on Positive Political Economy*, ed. James Alt and Kenneth Shepsle, Chapter 8. New York: Cambridge University Press.

Vanberg, Victor, and James M. Buchanan. 1989. "Interests and Theories in Constitutional Choice." *Journal of Theoretical Politics* (January): 49-63.

Wilson, Rick K., and Robert Q. Herzberg. 1987. "Negative Decision Powers and Institutional Equilibrium: Theory and Experiments on Blocking Coalitions." *Western Political Quarterly* 40:593-609.