

Association News

Elinor Ostrom: A Career in Institutional Analysis

Michael McGinnis, *Indiana University*

Too often, political scientists fixate on high-profile issues of war, elections, and lawmaking and thereby neglect the matters of most direct concern to real people. Do farmers have enough water to irrigate their fields? Can fishers catch enough fish to feed their families? Are city streets crime-ridden or supportive of neighborhood community? Throughout her long and distinguished professional career, Elinor Ostrom (Lin to her friends and colleagues) has pioneered innovative ways to answer such questions.

Notice that the word “government” does not appear in the opening paragraph, which focuses instead on groups of people: farmers, fishers, and city dwellers. From the very beginning of her career, Lin has recognized that “governance” has a much broader scope than the activities of governments. Throughout human history and in all parts of the world, self-governing groups of individuals have developed a diverse set of successful responses to their collective problems, through ongoing processes of discussion and implementation. Many political scientists might not recognize such mundane activities as political, but the central theme of Lin’s extensive and expansive research agenda has been to understand the conditions under which self-organized collective action can be successful.

Lin Ostrom received her Ph.D. in 1965 from UCLA and has spent her entire academic career at Indiana University. Lin accompanied her spouse and collaborator Vincent Ostrom to Bloomington when he accepted a position in the IU political science department, but it was not until several years later that Lin obtained a tenure-track position—a designation that occurred the same year she consented to serve as grad-

uate director. She later served as department chair for four years and acting chair for one year. Currently, Lin is the Arthur F. Bentley Professor in Political Science and holds a part-time appointment in the School of Public and Environmental Affairs at Indiana University. Lin has served as President of the Public Choice Society, the Midwest Political Science Association, the International Association for the Study of Common Property, and, now, the American Political Science Association. One of the founding editors of the *Journal of Theoretical Politics*, she has served on the editorial boards of nine scholarly journals. She has advised the U.S. Agency for International Development, the National Academy of Sciences/National Research Council, the National Science Foundation, the National Sheriff’s Association, the International Association of Chiefs of Police, and the U.S. Advisory Commission on Intergovernmental Relations. But throughout her career Lin’s primary administrative position has been as Co-Director, along with Vincent Ostrom, of the Workshop in Political Theory and Policy Analysis. Located in an ex-fraternity house in Bloomington, the Workshop lies at the heart of an ever-expanding worldwide network of collaborating scholars with an abiding interest in institutional analysis and self-governance.

In today’s political climate, Lin’s unrelenting focus on self-governing groups sound like a right-wing diatribe against governmental interference, but that impression is mistaken. There is no ideological ranting or raving in Lin’s professional work, simply an unremitting focus on learning what works. Practical, yes, but with a sustaining vision of the virtues of self-organization and self-governance. In a guest edi-



Elinor Ostrom

torial in the January 1994 issue of *Research & Creative Activity*, Lin and Vincent state this vision succinctly.

Once we understood the logic of the use of land and water in paddy agriculture, for example, we came to appreciate the marvel of hillside terraces in Nepal and elsewhere that would justify their being considered among the Wonders of the World. In a contrary way, intelligent people can perversely reduce urban landscapes to rubble. How people think of themselves, structure their relationships with others, and pursue the opportunities that they see as available to them may make the difference between a sustainable and meaningful way of life and one reduced to rubble. Working with others to gain mutual advantage under changing conditions of life requires substantial use of knowledge, moral sensitivity, skills, and intelligence in the exercise of self-organizing and self-governing capabilities.

Anyone associated with the Ostroms can attest that Lin and Vincent have

applied this very sense of appreciation and vision to their interactions with colleagues.

Vision aside, social scientists also need theory. A fundamental premise of Lin's work is that individual and collective choice takes place within changeable contexts of institutional arrangements, which themselves are the consequences of human artifice. To understand self-organized collective action in all its complexity, analysts must make careful use of language. Lin has been particularly concerned with specifying the precise meaning of the word "institution" and with maintaining a clear distinction among the terms "framework," "theory," and "model."

The Institutional Analysis and Development (IAD) framework, an organizing schema that emerged out of extensive discussions at the Workshop, categorizes concepts that can be used to build different theories of any given empirical phenomenon. The term "model" is reserved for more detailed representations of specific situations. The payoff from this effort at terminological clarity can be seen in her co-authored book *Rules, Games, and Common Pool Resources*, (1994) in which alternatives to standard and narrowly constricted models of rational choice are presented and tested. Despite what some rational choice theorists may claim, there is not a single model of rational choice, equally relevant for all situations. Instead, rational choice *theory* subsumes separate *models* of rational behavior within the context of different types of markets, games, auctions, experimental settings, hierarchical organizations, and other institutional arrangements. The IAD *framework* reminds analysts that to model individual behavior it is important to incorporate, in some manner, the actors' self-understanding of their roles and their conceptions of proper or acceptable behavior in particular contexts.

Another important component of the IAD framework is the distinction among three levels of political interactions: operational, collective choice, and constitutional. At the operational level, concrete actions are undertaken by either those individuals most directly affected or by

public officials. The rules that define and constrain the activities of individual citizens and officials have been established at the collective choice level, and the rules by which these rules themselves are subject to modification are located at the constitutional level of analysis. At each level, individual and collective choice is constrained to some range of strategic options. The point of this demarcation of levels is to highlight similarities among political processes at different levels of analysis. At each level actors confront an "action situation" with strategic options and role expectations as defined at the next highest level, and the choices of actors at any one level jointly produce patterns of interactions and outcomes.

Institutional arrangements shape and constrain the behavior of individuals, but any group contains at least some potential rule breakers. In the IAD framework considerable importance is attached to the means by which actors at all levels monitor each other's activities and sanction undesirable or inappropriate behavior. Monitoring and sanctioning are often said to constitute a "second-order" collective action problem: to deter free riding, a group needs some mechanism of monitoring and sanctioning, but since such mechanisms are costly, individual monitors or sanctioners have an incentive to shirk their responsibilities. Despite the barriers to collective action identified by political philosophers and rational choice theorists, many groups facing real life problems have found successful and sustainable ways to organize their own activities. Demonstrating the possibility of self-governance in a wide variety of empirical contexts has been the overriding theme of Lin's career.

The IAD framework also highlights the multidisciplinary nature of institutional analysis—another overriding theme. It is simply not possible to answer questions about the long-term viability of forestry resources, for example, without careful consideration of the findings of physical scientists, biologists, and resource economists, as well as the dynamics of market exchange. Thus, in its definition of the "action situation" confronting individuals at any

single level of analysis, the IAD framework gives equal billing to physical/material conditions, attributes of the community within which individuals interact, and the "rules-in-use" that pattern their interactions.

Finding a home for cross-disciplinary work is never easy in the highly compartmentalized and narrowly turf-conscious environment of the contemporary American university. But in the Workshop, Lin and Vincent have built and sustained exactly the sort of nurturing environment cross-disciplinary work requires. As a consequence, Lin's work consistently integrates subjects and methods typically treated in isolation. For example, *Rules, Games, and Common Pool Resources* begins with a generalization of standard game theoretic models in which participants are allowed to discuss their common problems and establish institutional procedures to deal with these problems. In the remainder of the book, these principles are tested in a series of experimental settings and applied to an extensive review of field studies. This integration of formal theory, experiments, and field research is unique and may suggest the future shape of the study of political economy.

Taken as a whole, Lin's work is exemplary for its success at integrating theory, method, and empirical analysis. In each of her major empirical projects, Lin has developed innovative new techniques of measurement.

In her doctoral dissertation on water management in southern California, Lin concluded that success in this policy area was facilitated by the mutually supportive interaction of public agencies at the state and local levels. Through surveys, interviews, and participant observation, Lin determined that institutional arrangements at the state level allowed a local association to deal with water management problems; this, she found, was crucial to the success of water management. The importance of interactions among multiple levels of institutions has been a recurring theme in her work.

At Indiana University, Lin's first major project was a comparative study of police services delivered by

police departments in the Indianapolis metropolitan area. Many graduate and undergraduate students were full participants in this project, so much that they suggested the basic components of the project's research design. Lin and her students tested claims about the effects of production scale by comparing the performance of small and large police departments serving comparable middle class, white neighborhoods directly adjacent to one another. In several later studies conducted by other scholars, this research was replicated for African-American neighborhoods in Chicago and for a variety of neighborhoods in the St. Louis metropolitan area. This work also served as the basis of a multi-method study of police service delivery in 80 metropolitan areas across the United States. Related Workshop projects applied similar modes of analysis to the evaluation of other areas of public service provision.

The findings of these studies by Lin Ostrom, Roger Parks, Gordon Whitaker, and many of their Workshop colleagues helped undermine the once conventional wisdom that bigger is always better, that public services are most efficiently provided by centralized authority. Instead, these researchers demonstrated that multiple and overlapping jurisdictions made for better results by enabling service providers to operate at the scale most efficient for particular activities.

Comparative evaluation of the performance of diverse public agencies is by no means an easy task. Despite concerns about the self-serving nature of official reports, many policy studies of public service delivery rely heavily on such sources. Lin and her colleagues developed innovative means to measure actual conditions experienced by the public in their own neighborhoods. For example, rather than merely counting the number of streetlights, the project team measured the ambient light at street level, a measure which was directly comparable for different neighborhoods. The most memorable measuring instrument was a wheeled contraption used to measure the size and depth of potholes. In these research projects Lin and her colleagues learned how to make

effective use of the complementary strengths of surveys, participant observation, official data, and physical measures.

Originally established in 1973 to coordinate these projects on urban political economies, the Workshop soon came to encompass a much broader range of research topics. Transition to a global scope of operations began in 1981, when the Ostroms spent a year at the Center for Interdisciplinary Research at Bielefeld University in Germany. Both Lin and Vincent were deeply affected by their discovery of a coterie of like-minded scholars in Europe, and productive contacts between scholars at the Workshop and at Bielefeld have continued ever since.

The unique combination of theoretical clarity, openness to multiple techniques of empirical and formal analysis, and sensitivity to nested levels of analysis developed by Lin and her colleagues turned out to be ideally suited to the study of common pool resource (CPR) regimes. The paradigmatic example of a CPR is the well-known "tragedy of the commons" in which individual appropriators selfishly extract such excessive levels of the resource that the long-term sustainability of the resource is undermined. Important empirical situations include watersheds, fisheries, irrigation systems, and forests, each of which have been the focus of considerable attention by Lin and her Workshop colleagues in recent years.

As Lin states in the opening pages of her influential recent book *Governing the Commons* (1990), policy analysts have typically restricted their attention to two responses to the problems of the commons: centralized state management or privatization. By doing so, policy analysts overlook the many alternative institutional arrangements that have been developed and successfully implemented by groups throughout the world. After summarizing and comparing institutional arrangements in mountain meadows and forests in Switzerland and Japan, irrigation systems in Spain and the Philippines, fisheries in Sri Lanka and Turkey, and watershed management in California, Lin identifies a set of "design

principles" that characterize successful CPR regimes. These principles include the existence of clearly defined boundaries, congruence between rules and local conditions, collective arrangements for monitoring and sanctioning inappropriate behavior, and conflict-resolution mechanisms based on recognition of the rights of each group to organize themselves for collective action.

In her typically modest manner, Lin describes her analysis of small-scale CPR regimes as "nano-level" policy analysis. Yet, her focus on the minutiae of CPR management has enabled her to examine the basic structure of successful institutional arrangements and to draw out lessons equally valid at much larger levels of analysis. In recognition of the relevance of Lin's research to global affairs, the International Studies Association awarded *Governing the Commons* its yearly Sprout Award for the best book on international environmental problems.

Forestry management is the current incarnation of Lin's multifaceted research program. In the International Forestry Resources and Institutions Research Program (IFRI), the IAD framework and multiple measures are applied to many different uses of forest resources: timber, fuel, food, water, mining, and tourism. With the support of the United Nations, the U.S. government, and private funding agencies, scholars associated with IFRI have developed and field-tested a rigorous method of measuring the characteristics of forested areas in Bolivia, Ecuador, Guatemala, India, Mali, Nepal, Uganda, and the United States. The central goal of this project is to understand what combinations of institutional arrangements are most likely to allow sustainable development of forestry resources. Again, rigorous comparison lies at the heart of her method: the coding form generated for this project includes measures of more than a hundred variables on the physical, economic, and institutional characteristics of specific forested regions. Furthermore, the data and analytical conclusions from the IFRI project are made freely available to local people to aid local efforts to improve living conditions.

Lin Ostrom took a leading role, along with anthropologist Emilio Moran, in establishing the Center for the Study of Institutions, Population, and Environmental Change (CIPEC) at Indiana University, a collaborative undertaking by the Workshop and three other research centers in anthropology, sociology, and environmental science. Funded by the National Science Foundation as part of its major program on global environmental change, CIPEC is committed to combining state-of-the-art satellite positioning and imagery systems with time-worn sampling techniques in order to increase the rigor of empirical analysis of environmental conditions and institutions specifically related to the management of forests throughout the Western Hemisphere. The work of this center has only just begun, but it promises to make a major contribution to these important areas of research and policy.

By any measure, Lin has undertaken a remarkably broad scope of research activities. What may not be immediately apparent, however, is the extent to which common themes link together all stages of her career as an institutional analyst. Her early work on police and public service provision in U.S. metropolitan areas addresses issues central to policy analysis, urban politics, and American politics more generally. Her later work on watershed management, irrigation systems, fisheries, forests, and other CPR regimes has direct implications for development policies in all regions of the world. Through detailed comparative analysis of irrigation systems in Nepal, for example, Lin and her colleagues have demonstrated the superior performance of farmer-managed systems over those planned and managed by national governments and international lending institutions. These empirical results inspired Lin and Franz Weissing, a game theorist from Germany, to develop mathematical models of the conditions under which rational farmers would undertake the requisite monitoring and sanctioning activities. This line of research promises to have practical consequences for future development projects and will help to build more sophisticated models of games

involving players with clearly distinct roles and responsibilities.

Despite substantive, geographic, and methodological diversity, Lin's work has been guided by a coherent and consistent theoretical perspective, as summarized in the IAD framework. The same theoretical questions have been investigated in empirical contexts that vary from macro-level global climate change to nano-level laboratory experiments. Her rigorous methods of empirical analysis have enabled Lin to draw valid scientific inferences and provide practical advice to policy makers. Her collaborative research has amply demonstrated the beneficial consequences of self-governance in urban political economies in the United States and in rural settings throughout the developing world. Her conceptualizations of the meaning of institutions and their nesting at multiple levels provide important insights to anyone interested in constitutions or in general patterns of governance.

The litany of subfields is wide-ranging: policy analysis, American politics, comparative politics, international relations, normative and positive political theory. All are represented in the corpus of Lin's work, all filtered through the same theoretical perspective. As a consequence, her diverse research projects fit together in a coherent, cumulative package. Lin's multi-faceted work demonstrates that political scientists do not have to sit at "separate tables" in our separate subfields. We can do much better, if only more of us would follow Lin's example.

Lin's attitude toward intellectual inquiry is epitomized in the institution most dear to her heart, the Workshop in Political Theory and Policy Analysis. The Workshop is both multi-disciplinary and multi-national in scope. Weekly colloquia routinely include faculty and students from political science, economics, business, public affairs, anthropology, sociology, ecology, and biology. Visiting scholars from all corners of the world come to learn and share, and many maintain contact after they return home to implement lessons learned at the Workshop. The sense of community at the Workshop was clearly demonstrated

at its twentieth anniversary celebration in 1994, when several generations of faculty and students from all around the world came together to discuss the Workshop.

Research and teaching are fully integrated at the Workshop, with faculty, graduate students, post-doctoral scholars, and past or future policy makers routinely participating in the year-long graduate seminar in Political Order and Development. In this intellectual core of the Workshop, participants read widely about institutional analysis, with heavy doses of Hobbes, Tocqueville, constitutional theory, game theory, the "new institutional economics" of North, Williamson, and many others, the "old institutional economics" of John R. Commons, experimental work in political science and economics, the management of common pool resources, and the history of political order in Russia, China, Africa, and the international system. Each semester ends with a mini-conference in which papers by all seminar participants are presented and discussed, with each paper given far more attention and analysis than is feasible in larger professional conferences.

Collaboration is the hallmark of this scholarly community, and I count myself fortunate to be one of Lin's many co-authors. Overall, Lin's list of publications includes 13 books and more than 80 journal articles, and chapters in edited volumes. To sustain this prodigious research program, Lin has exhibited exceptional entrepreneurial skill. Her projects have been funded by the full spectrum of public and private research foundations, including the Ford Foundation, National Science Foundation, National Institute of Mental Health, Department of Justice, Agency for International Development, U.S. Geological Survey, and the Food and Agriculture Organization of the United Nations. Some observers may be most impressed by the fact that Lin's research activities have been funded by the National Science Foundation, in one form or another, every year since 1971, or by the fact that CIPEC received the largest center award ever made by NSF in the social sciences.

For me, the most impressive as-

pects of Lin's career is the workshop itself—a vigorous level of intellectual interchange leavened with a welcoming and supportive atmosphere. The American Political Science Association may have her as President for a year, but for me and for many other colleagues, Lin Ostrom will always be Co-Director of the Workshop.

Selected Publications

- Becker, C. Dustin, and Elinor Ostrom. 1995. "Human Ecology and Resource Sustainability: The Importance of Institutional Diversity," *Annual Review of Ecology and Systematics*, 26:113–133.
- Crawford, Sue E. S., and Elinor Ostrom. 1995. "A Grammar of Institutions," *American Political Science Review*, 89:582–600.
- Davis, Gina, and Elinor Ostrom. 1991. "A Public Economy Approach to Education: Choice and Co-Production," *International Political Science Review*, 12:313–335.
- Gardner, Roy, and Elinor Ostrom. 1990. "Rules and Games," *Public Choice*, 70:121–149.
- Gardner, Roy, Elinor Ostrom, and James Walker. 1990. "The Nature of Common-Pool Resource Problems," *Rationality and Society*, 2:335–358.
- . 1994. "Social Capital and Cooperation: Communication, Bounded Rationality, and Behavioral Heuristics." In *Social Dilemmas and Cooperation*, eds. Ulrich Schulz, Wulf Albers, and Ulrich Mueller, 375–41. Berlin: Springer-Verlag.
- Keohane, Robert O., and Elinor Ostrom, eds. 1995. *Local Commons and Global Interdependence: Heterogeneity and Cooperation in Two Domains*, London: Sage.
- Kiser, Larry L. and Elinor Ostrom. 1982. "The Three Worlds of Action: A Meta-theoretical Synthesis of Institutional Approaches." In *Strategies of Political Inquiry*, ed. Elinor Ostrom, 179–222. Beverly Hills, CA: Sage.
- McGinnis, Michael, and Elinor Ostrom. 1996. "Design Principles for Local and Global Commons." In *The International Political Economy and International Institutions*, ed. Oran Young, Vol. II, pp. 464–493. Cheltenham, UK: Edward Elgar Publishing.
- McIver, John P., and Elinor Ostrom. 1976. "Using Budget Pies to Reveal Preferences: Validation of a Survey Instrument," *Policy and Politics*, 4:87–110.
- Ostrom, Elinor. 1965. *Public Entrepreneurship: A Case Study in Ground Water Management*, Ph.D. dissertation, University of California at Los Angeles.
- . 1971. "Institutional Arrangements and the Measurement of Policy Consequences in Urban Areas," *Urban Affairs Quarterly*, 6:447–476.
- . 1972. "Metropolitan Reform: Propositions Derived from Two Traditions," *Social Science Quarterly*, 53:474–493.
- . 1973. "The Need for Multiple Indicators in Measuring the Output of Public Agencies," *Policy Studies Journal*, 2:85–92.
- . 1975. "On Righteousness, Evidence, and Reform: The Police Story," *Urban Affairs Quarterly*, 10:464–486.
- , ed. 1976. *The Delivery of Urban Services: Outcomes of Change*, Urban Affairs Annual Reviews, vol. 10, Beverly Hills: Sage.
- . 1976. "Size and Performance in a Federal System," *Publius*, 6:33–73.
- , ed. 1982. *Strategies of Political Inquiry*, Beverly Hills: Sage Publications.
- . 1983. "A Public Choice Approach to Metropolitan Institutions: Structure, Incentives, and Performance," *Social Science Journal*, 20 (3):79–96.
- . 1983. "The Social Stratification-Government Inequality Thesis Explored," *Urban Affairs Quarterly*, 19:91–112.
- . 1986. "An Agenda for the Study of Institutions," *Public Choice*, 48:3–25.
- . 1986. "A Method of Institutional Analysis." In *Guidance, Control, and Evaluation in the Public Sector*, eds. F. X. Kaufmann, G. Majone, and V. Ostrom, 495–510. Berlin and New York: de Gruyter.
- . 1989. "Micro-Constitutional Change in a Multi-Constitutional Political System," *Rationality and Society*, 1:11–50.
- . 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- . 1992. *Crafting Institutions for Self-Governing Irrigation Systems*, San Francisco: Institute for Contemporary Studies Press.
- . 1992. "Policy Analysis of Collective Action and Self-Governance." In *Advances in Policy Studies Since 1950*, eds. William N. Dunn and Rita Mae Kelly, *Policy Studies Review Annual*, 10:81–119.
- . 1995. "Designing Complexity to Govern Complexity." In *Property Rights and the Environment: Social and Ecological Issues*, eds. S. Hanna and M. Munasinghe, 33–45. Washington, DC: The Beijer International Institute of Ecological Economics and the World Bank.
- . 1995. "Self-Organization and Social Capital," *Industrial and Corporate Change*, 4:131–159.
- Ostrom, Elinor, William Baugh, Richard Guarasci, Roger B. Parks, and Gordon P. Whitaker. 1973. *Community Organization and the Provision of Police Services*, Sage Professional Papers in Administrative and Policy Studies, 03–001. Beverly Hills, CA: Sage.
- Ostrom, Elinor, and Roy Gardner. 1993. "Coping With Asymmetries in the Commons: Self-Governing Irrigation Systems Can Work," *Journal of Economic Perspectives*, 7:93–112.
- Ostrom, Elinor, Roy Gardner, and James Walker, with Arun Agrawal, William Blomquist, Edella Schlager, and Shui Yan Tang. 1994. *Rules, Games, and Pool Resources*, Ann Arbor: University of Michigan Press.
- Ostrom, Elinor, Wai Fung Lam, and Myung-suk Lee. 1994. "The Performance of Self-Governing Irrigation Systems in Nepal," *Human Systems Management*, 13:197–207.
- Ostrom, Elinor, Roger B. Parks, and Gordon P. Whitaker. 1977. *Policing Metropolitan America*, Washington, DC: U.S. Government Printing Office.
- . 1978. *Patterns of Metropolitan Policing*, Cambridge, MA: Ballinger Books.
- Ostrom, Elinor, Larry Schroeder, and Susan Wynne. 1993. *Institutional Incentives and Sustainable Development: Infrastructure Policies in Perspective*, Boulder, CO: Westview.
- Ostrom, Elinor, and James Walker. 1991. "Communication in a Commons: Cooperation without External Enforcement." In *Laboratory Research in Political Economy*, ed. Thomas R. Palfrey, 287–322. Ann Arbor: University of Michigan Press.
- Ostrom, Elinor, James Walker, and Roy Gardner. 1992. "Covenants with and without a Sword: Self-Governance is Possible." *American Political Science Review*, 86:404–17.
- Ostrom, Vincent, and Elinor Ostrom. 1965. "A Behavioral Approach to the Study of Intergovernmental Relations," *The Annals of the American Academy of Political and Social Sciences*, 359:137–146.
- . 1971. "Public Choice: A Different Approach to the Study of Public Administration," *Public Administration Review*, 31: 302–316.
- . 1977. "Public Goods and Public Choices." In *Alternatives for Delivering Public Services: Toward Improved Performance*, ed. E.S. Savas, 7–49. Boulder, CO: Westview.
- . 1977. "A Theory for Institutional Analysis of Common Pool Problems." In *Managing the Commons*, eds. G. Hardin and J. Baden, 157–172. San Francisco: Freeman.
- Ostrom, Vincent, Robert Bish, and Elinor Ostrom. 1988. *Local Government in the United States*, San Francisco: Institute for Contemporary Studies Press.
- Schlager, Edella, and Elinor Ostrom. 1992. "Property-Rights Regimes and Natural Resources: A Conceptual Analysis," *Land Economics*, 68:249–262.
- Weissing, Franz, and Elinor Ostrom. 1991. "Irrigation Institutions and the Games Irrigators Play: Rule Enforcement without Guards." In *Game Equilibrium Models II: Methods, Morals, and Markets*, ed. Reinhard Selten, 188–262. Berlin: Springer-Verlag.
- . 1993. "Irrigation Institutions and the Games Irrigators Play: Rules Enforcement in Government- and Farmer-Managed Systems." In *Games in Hierarchies and Networks: Analytical and Empirical Approaches to the Study of Governance Institutions*, ed. Fritz W. Scharpf, 387–428. Boulder: Westview.
- Whitaker, Gordon P., Elinor Ostrom, Stephen Mastroski, Roger B. Parks, and Stephen L. Percy. 1982. *Basic Issues in Police Performance*, Washington, DC: U.S. Department of Justice.

Author's Note: I could not have prepared this overview of Elinor Ostrom's career without the comments and suggestions of many colleagues and the detailed information found in various written sources. I wish to thank these colleagues and authors for their assistance, but, of course, I alone am responsible for any errors or misrepresentations.