

Introduction to Elinor Ostrom

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The article chosen for translation in this issue is by the recently deceased 'Nobel Economics Laureate', Elinor Ostrom. It presents a typical example of her heterodox and provocative critique of the abstract and formalistic case for the 'tragedy of the commons', i.e., the argument that rational economic humans have significant incentives to over-exploit 'common pool resources' at the margin and will eventually render them unsustainable to the lasting harm of future generations (cf. Hardin 1968). Ostrom's analysis is based on her own fieldwork, critical comparison of many empirical studies, game-theoretic analyses, and experiments in institutional design. Overall, these investigations show that, given the ability to communicate, experiment, and adapt institutional rules, people can develop various solutions to the sustainable management of the common pool resources to which the tragedy of the commons is supposed to apply. These resources include many forests, fisheries, arable land, grazing land, aquifers, and irrigation systems and are defined as too large in scale and scope to enable individuals or local communities to prevent others from accessing and exploiting them, thereby rendering them vulnerable to ecosystem collapse. I will provide a more detail critical commentary on this argument after some brief comments on its author.

Elinor Claire Awan was born on 7 August 1933 in Los Angeles, California, to an out-of-work Hollywood set designer and his musician wife. Her early life was spent in conditions of family hardship, not only because of the Great Depression but also because her mother was soon bringing her up alone. She graduated from Beverly Hills High School in 1951 and received a B.A. in political science at UCLA in 1954. She married a classmate, Charles Scott, and moved to Boston, where she worked to put him through law school, returning on her divorce to employment in the HR (Human Resources) department at UCLA. This enabled her to study part-time for a master's degree in public administration (awarded in 1962); she then studied full-time for a PhD in political science, awarded in 1965. Her doctoral thesis documented

how water users in some Californian groundwater basins used equity jurisprudence and the Californian court system to develop an accurate, public history of prior water extractions and then use these histories to reach agreements to reduce pumping.

In 1963, the then Elinor Scott married her MA tutor and PhD supervisor and subsequently and, more importantly, her lifelong collaborator. Vincent Ostrom (1919-2012) had already developed some of the ideas, such as polycentrism, common pool resources, self-governance, and collective action, which Elinor Ostrom would develop in new ways based on a creative mix of different research methods (for details, see Zagorski 2006; Toonen 2010; McGinnis and Ostrom 2012; Arrow et al., 2012). Lin Ostrom, as she was known to friends and colleagues, followed her husband to Indiana University (Bloomington) in 1964. Her first teaching post there was part-time and untenured. In 1973, Lin and Vincent Ostrom co-founded the Workshop in Political Theory and Policy Analysis at Indiana University in order to create the space for transdisciplinary analyses that were otherwise hard to conduct in a period when disciplinary boundaries were very strong. She became a full professor in Indiana University in 1974 and eventually became a Distinguished Professor there; and was also a Research Professor and the Founding Director of the Center for the Study of Institutional Diversity (2006-) at Arizona State University. The Workshop and the Center were twinned and both worked on problems of common pool resources from an institutional perspective. Lin Ostrom was also a lead researcher for the Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program (SANREM CRSP), managed by Virginia Tech University and funded by USAID.

Much of her time was spent in field work and in organizing the Workshop on Political Theory and Public Choice, with its creative mix of scholars and students from different disciplines. Whereas her husband was more philosophical and ideational, Lin Ostrom was more analytical, empirical, and operational, committed to field work, comparative analysis, and experimental studies. Using mixed methods (including in later years satellite observations), she developed well-defined conceptual indicators and self-collected data (on mixed methods in interdisciplinary research, see Poteete, Janssen, and Ostrom 2010). Drawing on this approach, her field studies of collective management of common pool resources in Africa, Indonesia, Japan, Nepal, Spain,

Switzerland, and the USA and on her experimental work at the Workshop, she authored, co-authored, or co-edited several books in the areas of organizational theory, institutional analysis, and public administration, contributing to the development of the Bloomington School of public choice theory, which regards institutions as evolving sets of rules for managing social dilemmas (e.g., Ostrom 1995, 2005, 2010). Of 109 publications listed on her website at Arizona State University, 100 were published from 1990 onwards, the year in which her first major book, *Governing the Commons: The Evolution of Institutions for Collective Action*, appeared (for a summary, see below). Lin Ostrom died from pancreatic cancer on 12 June 2012 but was productive to the end. Indeed, her last article, 'Green from the Grassroots', was published on the day of her death (Ostrom 2012).

Her early post-doctoral studies focused on the role of public choice in influencing the production of public goods and services in policing, schooling, public urban service delivery, metropolitan government organization, and so on. These were influenced by public choice theory, game theory, and the concept of polycentrism as the basis of good democratic governance in the 1960s and 1970s. In the 1980s and 1990s she concentrated again on the problem of common pool resource management. It shows how groups manage to solve common pool resource problems to maintain long-term sustainable resource yields in shared ecosystems without the need to resort to private property rights or to top-down state planning. This and her work on polycentrism point towards the importance of networking and solidarity in solving governance problems. In the 2000s, she developed her insights into the self-governing capabilities of social-ecological systems (including knowledge as a commons). Her later work for which, in 2009, she was awarded the Swedish Central Bank's Prize in Economic Sciences in Memory of Alfred Nobel (hence the more familiar, if somewhat misleading, label of the Nobel Prize in Economics). The award was given for 'her analysis of economic governance, especially the commons' and the lecture given on its acceptance has been published on-line (Ostrom 2010). It is also the topic of the article translated below. The co-winner of the 2009 prize was Oliver E. Williamson, an economist, who also works on problems concerned with the institutional design of governance and best known for this analysis of markets and hierarchies. The Nobel Prize in Economics was the most prestigious of many awards and international recognition that she received from the mid-1990s onwards. She is

also one of the few women elected to two of the United States' most prestigious honorary academies: the National Academy of Sciences and the American Academy of Arts and Sciences.

Lyn Ostrom's book, *Governing the Commons* (1990), was a major synthesis of her field studies and other empirical work. It argued that the governance of natural resources used by many individuals in common is not readily solved either by the market (through the allocation of private property rights) or through state planning (especially when a one-size-fits-all centralized approach is adopted). She describes three basic models used to recommend state or market solutions and outlines theoretical and empirical alternatives that illustrate the diversity of possible solutions. Subsequent chapters illustrate successful and unsuccessful methods of governing the commons, highlighting the potential of voluntary organisations to resolve common pool resource dilemmas. She demonstrates that the 'tragedy of the commons' is not pre-ordained and that humans have choice, constrained by institutional design and communication about improved rules, adaptive responses, and continued reflexive learning. The article translated below provides an excellent synthesis of these arguments and also provides more recent references (see also Dietz et al. 2002, 3-4).

In her book, Ostrom identified eight 'design principles' of stable local common pool resource (CPR) management: (1) clearly defined boundaries (effective exclusion of external un-entitled parties); (2) rules regarding the appropriation and provision of common resources that are adapted to local conditions; (3) collective-choice arrangements that allow most resource appropriators to participate in the decision-making process; (4) effective monitoring by monitors who are part of or accountable to the appropriators; (5) graduated sanctions for resource appropriators who violate community rules; (6) conflict resolution mechanisms that are cheap and of easy access; (7) local community self-determination that is recognized by higher-level authorities; and, for larger common pool resources, (8) organization in the form of multiple layers of nested enterprises, with small local community organizations at the base level – this is the idea of polycentrism. These eight principles were modified and expanded in later work to emphasize the role of self-organized governance systems, including effective communication, internal trust and reciprocity, and to take

further account of the nature of the resource system. The arguments have also been extended to the intellectual commons and are not confined to material resources. For example, Hess and Ostrom (2006) is an edited collection on problems of intellectual commons and the 'tragedy of the anti-commons' that emerges from intellectual property legislation, over-patenting, licensing, overpricing, and lack of preservation.

Some of the basic principles of the Bloomington School are presented in Lyn Ostrom's 2005 book on *Understanding Institutional Diversity*. This explains the Institutional Analysis and Development (IAD) framework that she developed and shows how it can be used to guide empirical research on specific policy questions. This framework examines the arena within which interactions occur, the rules employed by participants to order relationships, the attributes of a biophysical world that structures and is structured by interactions, and the attributes of a community in which a particular arena is placed. The diversity of rules, the calculation process used by participants in changing rules, and the design principles that characterize robust, self-organized resource governance institutions. These ideas are further developed in Poteete, Janssen, and Ostrom (2010).

'Institutions and the Environment' was first published in *Economic Affairs*, the house journal of the Institute of Economic Affairs, which is the United Kingdom's original free market think tank (founded in 1955) and committed to market solutions to economic and social problems. The Institute aims to improve understanding of the fundamental institutions of a free economy and free society and to challenge people to think about the correct role of institutions, property rights and the rule of law in creating a society that fosters innovation, entrepreneurship and the efficient use of environmental resources. This reflects the Ostroms' affinities to rational choice theory, public choice theory, and the work of economists such as Frank Knight, Ludwig von Mises, and Friedrich von Hayek. But the Bloomington School of public choice with which the Ostroms are associated differs both from the Virginia School of public choice (which treats elected and appointed public officials to self-interested maximizing agents) and the Richmond School of social choice, which uses game theory and experiments to study voting processes in mass elections and elected legislatures as well as strategic interactions among branches of government (on the Bloomington School, see Aligica and Boettke 2009). As readers of the article will

discover almost immediately, Elinor Ostrom is far from a 'true believer' in private market solutions to the common pool resource problem. On the contrary, she argues that individuals who can communicate with each other, develop and adapt rules, will eventually develop institutions and forms of governance that ensure sustainable exploitation of common pool resources. This can be seen as a contribution to the theorization of governance in free societies but not necessarily as advocacy of free market solutions to all problems. Thus the article repeats one of her most famous slogans, 'no panaceas', and the conclusion that institutional diversity is crucial to solving common pool resource problems.

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Note: a full bibliography can be downloaded at http://www.experts.scival.com/asu/expertPubs.asp?n=Elinor+Ostrom&u_id=202

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