

10

Are Ostrom's Design Principles Sufficient for Design?

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Elinor Ostrom's (1990) design principles for common pool resource institutions have found a receptive audience among both researchers and decision makers (Design Principles). Using a set of 14 studies of long-term commons governance, reflecting on resources that ranged from forests to fisheries to irrigation, Ostrom condensed in simple, everyday language ten key features associated with the long-term survival of resource institutions. Applied in many analytical investigations to understand how resource commons are managed, these Design Principles have repeatedly emerged as being relevant to effective resource governance (Alidina 2005, Dayton-Johnson 2000, Lane 1998). Although Ostrom herself did not view the Design Principles as being sufficient for effective governance, she did view them as essential elements that help account for the success of institutions (1990:90). The regularity with which scholars have found some subset of these principles to stand the acid test of empirical application suggests that they are a convenient starting point for analyzing resource governance.

A number of the studies included in this special issue demonstrate again, using examples from diverse settings and resource types, that the elements of Ostrom's design principles are present across enduring commons — and of great use in their evaluation. Ykhanbai and Vernooy (this volume) use them to analyze co-management arrangements for community-state-market Mongolian pastoral systems, while Haile (this volume) shows how they help assess traditional hiza'ti forest enclosures in Eritrea. Van Schie (this volume) draws

on the principles to evaluate sustainable forestry among the Algonquin of Canada in the context of inadequate state commons management policies. Nagendra, Ghate and Rao (this volume) show how the IFRI database launched by Ostrom has been essential for demonstrating the potential for self-governance of resources in India's forests and cities. Pacheco (this volume) applies the principles to show the viability of self-organized indigenous institutions for sustainable biodiversity use, which Bolivia is arguing should form a central application of the Convention on Biological Diversity (CBD). Gachenga (this volume) shows their utility in analyzing adaptability of customary law water management in Kenya. From Mexico, Pacheco-Vega (this volume) explores how Ostrom's principles have been used by the country's commons scholars to fight Hardin's tragedy narratives, while Merino (this volume) show how they can assist in developing a better understanding of the relationship that indigenous Mexican society has with nature. Finally, Kauneckis (this volume) takes a more theoretical approach to examine how the Design Principles have influenced more recent research on, and analysis of, commons institutions.

Each of these studies finds the elements of Ostrom's framework present and in operation in their cases. The authors use the Design Principles to assess areas of strength and weakness in the commons systems they are studying. The principles are thus a clear anchoring point to analyze whether an existing institutional arrangement has the features that will likely lead to positive commons management outcomes. They also enable

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analysts to assess institutional configurations and make preliminary judgments about whether a given common-pool resource institution is likely to endure. In conjunction with her later work (Ostrom 2011), they help sort through a bewildering variety of real-world contexts, institutional arrangements, user group characteristics, and resource features to enable systematic thinking about the governance of commons. They bring researchers a long way towards understanding the interactions among users, resources, institutions, and outcomes.

Thus, we agree that Ostrom's Design Principles enable researchers, and also practitioners, to identify and assess existing commons. In this postscript, however, we ask a different question: In what ways and to what extent are the Design Principles also useful in *designing* new institutions to govern the commons? Ostrom's distillation of regularities in institutional empirics is a tour de force when it comes to moving from the concrete to the abstract. But to what extent is this distillation of key governance features also adequate to design new institutions and organizations to manage the commons—to move from the abstract principles to concrete functioning commons?

This is no idle question. Part of the lure of the Design Principles is precisely their relevance to practice. Since the middle of the 1980s, governments in developing countries have pursued scores if not hundreds of distinct decentralization measures to devolve control over forests, irrigation systems, pastures, and fisheries to local users. Hundreds of NGOs have sought to involve local communities in managing resources. And given the simplicity with which the Design Principles are stated, the hope is evident that project managers, decision makers and policy analysts in NGOs and in government agencies can use them to shape new resource management institutions and revise existing institutions for better outcomes.

But, as stated, the Design Principles do not provide sufficient guidance to design new projects for managing common pool resources.

They appear to be concrete principles of design. But they are far too abstract to guide specific judgments about the kind of institutions that will yield positive outcomes in a given context. Applying them to design new institutions requires recourse to other elements in Ostrom's oeuvre. By themselves, the Design Principles are not enough to move from the abstract to the specific, from principle to practice.

An example will make the point clearer. Consider the design principle related to local enforcement of rules. As an abstract summary of whether local populations have the right and the power to enforce the rules for using and managing the commons, the principle turns out to be quite useful. Scholars examining any specific commons dilemma can examine the facts of the case to assess whether the powers of enforcement are locally vested, and analyze the association between this abstract principle and outcomes of interest. Local enforcement can be viewed as being present if there are local guards, or if the rules for enforcement are locally devised, or if the guards are appointed locally in specialized roles, or if specific local individuals are selected permanently as guards, or if households that rely on a resource sequentially monitor and enforce rules, or if guards are paid by locally raised resources, and indeed, for many other versions of what makes enforcement local (Agrawal and Waylen 2013). But it is quite unclear

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enforcement mechanism in a project.

Nor is it of use to say that any one of these specific choices will do. Indeed, the specific choice that local users and managers made when deciding on enforcement was likely a result of many other factors that are not a part of the suite of Design Principles: income and wealth of users, stratified social statuses among users (e.g. caste, class, gender), available assets and capitals, levels of literacy, group size, nature of the resource system, value of harvested units, possibilities of accessing higher-level decision makers, levels of conflict among users—and the list goes on. Indeed, choices over any particular design principle are likely similarly affected by other features of the user group, the resource, the macro-governance context, and other institutional choices. Ostrom's approach of identifying abstract institutional features as Design Principles is extremely useful when it comes to analyzing the institutional characteristics associated with resource outcomes. It is less effective when it comes to converting design principles into institutional choices, combining and aggregating different institutional choices into an institutional arrangement, and judging which institutional arrangement is best suited for the social and ecological conditions and dynamics in which institutions play a regulating and moderating role. The principles do not inform us about the politics and constraints that shape institutional choices (Ribot, Chhatre and

what the choice for local enforcement should be when it comes to deciding which of these choices makes the most sense in translating the principle of local enforcement into practice. By itself, this design principle is not enough to know what to do in any given effort to design the

Lankina 2008).

If the Design Principles are not useful by themselves to decide about how to design new resource governance institutions, for what might they then be useful when it comes to designing institutions and resource management organizations? We offer three answers.

Firstly, it is useful to recognize that the design principles are not, nor perhaps were they intended to be, a blueprint for institutional design. They are better viewed as heuristic devices or guidelines about where to start when crafting new institutions or choosing existing institutions for resource governance.

Secondly, even if the Design Principles cannot be translated directly into a concrete design for managing a resource system, they are extremely useful to decide what resource managers should *not* do when crafting institutions. It may be hard to decide how exactly sanctions should be graduated. But, a designer can avoid creating a sanctioning system that is *not* graduated or that is *reverse* graduated. Or, even if the choice of what to do to make enforcement local throws open more doors than it may be possible for a project designer to explore, it certainly allows the designer to close a large number of doors. Knowing what not to do is extremely useful. It narrows down the field of possibilities drastically for anyone interested in creating and implementing a program of resource management.

Finally, one might argue that the Design Principle are not and should not be used to substitute for the inventiveness that local users and managers necessarily display in iteratively selecting from among a multitude of possibilities the ones that are useful for them. Viewed thus, the abstraction inherent in the design principles is simultaneously a plea for faith in the capacities of the local users and managers. It is not necessary to seek to make them more concrete or to develop the knowledge necessary for making them applicable across a wide variety of contexts. The urge towards concretization may be the natural managerial impulse. But it is perhaps

better to sound a note of caution whereby the requisite concreteness for a given situation is best left to those who depend on resources locally and whose lives and fates are bound up more intimately with the fate of local common pool resources than might be the case for some distant project designers and institutional engineers.

Common property management institutions—from oligopsonies to pastoral systems—are constantly emerging and changing. Existing commons management systems can be evaluated and perhaps even guided using Ostrom's design principles. But functioning commons, and the specificity of each of their operating elements, emerge through a negotiated iterative social endeavor. We believe Elinor Ostrom would have agreed with this conclusion. It is a corollary of the overarching argument about polycentric governance that is emblematic of Elinor and Vincent Ostrom's work.

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