

7. OSTROM IN
THE CITY: DESIGN
PRINCIPLES AND
PRACTICES FOR THE
URBAN COMMONS



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Ostrom in the City: Design Principles and Practices for the Urban Commons

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Introduction

If cities are the places where most of the world’s population will be living in the next century, as is predicted, it is not surprising that they have become sites of contestation over use and access to urban land, open space, infrastructure, and culture. The question posed by Saskia Sassen in a recent essay — who owns the city? — is arguably at the root of these contestations and of social movements that resist the enclosure of cities by economic elites.¹ One answer to the question of who owns the city is that we all do. In our work we argue that the city is a common good or a “commons” — a shared resource that belongs to all of its inhabitants, and to the public more generally.

We have been writing about the urban commons for the last decade, very much inspired by the work of Jane Jacobs and Elinor Ostrom. The idea of the urban commons captures the ecological view of the city that characterizes Jane Jacobs classic work, *The Death and Life of Great American Cities*.² It also builds on Elinor Ostrom’s finding that common resources are capable of being collectively managed by users in ways that support their needs yet sustains the resource over the long run.³

Jacobs analyzed cities as complex, organic systems and observed the activity within them at the neighborhood and street level, much like an ecologist would study natural habitats and the species interacting within them. She emphasized the diversity of land use, of people and neighborhoods, and the interaction among them as important to maintaining the ecological balance of urban life in great cities like New York. Jacob’s critique of the urban renewal slum clearance programs of the 1940s and 50s in the United States was focused not just on the destruction of physical neighborhoods, but also on the destruction of the “irreplaceable social capital” — the networks of residents who build and strengthen working relationships over time through

trust and voluntary cooperation — necessary for “self governance” of urban neighborhoods.⁴ As political scientist Douglas Rae has written, this social capital is the “civic fauna” of urbanism.⁵

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This social capital — the norms and networks of trust and voluntary cooperation — is also at the core of urban “commoning.” The term commoning, popularized by historian Peter Linebaugh, captures the relationship between physical resources and the communities that live near them, to utilize and depend upon them for essential human needs.⁶ In other words, much of what gives a particular urban resource its value, and normative valence, is the function of the human activity and social network in which the resource is situated. As such, disputes over the destruction or loss of community gardens, of open and green spaces, and of spaces for small scale commercial and artistic activity are really disputes about the right to access and use (or share) urban resources to provide goods necessary for human flourishing.⁷

The urban commons framework thus raises the question to which Elinor Ostrom’s groundbreaking work provides an intriguing answer. Ostrom demonstrated that there are options for managing shared, common goods which are neither exclusively public nor private. She found examples all over the world of resource users cooperatively managing a range of natural resources — land, fisheries, and forests — using “rich mixtures of public and private instrumentalitie.”⁸ Ostrom identified the conditions and “design principles” which increase the likelihood of long-term, collective governance of shared resources. In many of these examples, users work with government agencies and public officials to design, enforce and monitor the rules for using and managing the resource.

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Building in part on the insights of Vincent Ostrom, and others, she referred to this kind of decision making as “polycentric” to capture the idea that while the government remains an essential player in facilitating, supporting, and even supplying the necessary tools to govern shared resources, the government is not the monopoly decision maker.⁸ Polycentric systems have multiple governing entities or authorities at different scales and each governing unit has a high degree of independence to make norms and rules within its own domain.⁹ Polycentric systems also can unlock what she

called “public entrepreneurship” — opening the public sector to innovation in providing, producing, and encouraging the co-production of essential goods and services at the local level. Public entrepreneurship often involves putting heterogeneous processes together in complementary and effective ways.¹⁰

As such, our work has explored whether the commons can be a framework for addressing a host of internal and external resource challenges facing cities, and specifically to rethinking how city space and shared goods are used, who has access to them, and how their resources are allocated and distributed. Recognizing that there are many tangible and intangible urban resources on which differently situated individuals and communities depend to meet a variety of human needs, what might it look like to bring more polycentric tools to govern the city, or parts of the city, as a “commons?” Is it possible to effectively manage shared urban resources without privatizing them or exercising monopolistic public regulatory control over them, especially given that regulators tend to be captured by economic elites? Can the Ostrom design principles be applied to cities to rethink the governance of cities and the management of their resources? We think they cannot be simply adapted to the city context without significant modification.

Cities and many kinds of urban commons are different from natural resources and more traditional commons in important ways. This is why, starting ten years ago, we both began to explore the governance of the urban commons as a separate body of study. First, investigating individually how different kinds of urban assets such as community gardens, parks, neighborhoods and urban infrastructure such as urban roads could be reconceived as urban commons, and later jointly to conceive the whole city as a commons.^{11,12} We realized that we needed a different approach to bridge urban studies and commons studies and therefore to pose a slightly different set of questions for the governance of the urban commons.¹³ We also needed to define a different set of design principles for the management of urban commons in the city and the city itself as a commons.

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For this reason, we have been surveying and mapping 100+ cities around the world and 200+ examples of urban commons within them.¹⁴ The goal of this research project is to enhance our collective knowledge about the various ways to govern urban commons, and the city itself as a commons, in different geographic, social and economic contexts. From this study, we have extracted a set of design principles that are distinctively different from those offered by Elinor Ostrom. They which can be applied to govern different kinds of urban commons, and cities as commons. Specifically, we investigate whether these design principles can help cities transition to fairer

and more inclusive, sustainable, resilient futures given existing patterns of urbanization and the contested nature of urban resources such as public spaces, open or vacant land, abandoned and underutilized structures, and aging infrastructure. In our study, we see examples of how these resources can be governed as a commons in cities around the world.

The City as a Commons

To say that the city is a commons is to suggest that the city is a shared resource — open to, shared with, and belonging to many types of people. In this sense, the city shares some of the classic problems of a common pool resource — the difficulty of excluding people and the need to design effective rules, norms and institutions for resource stewardship and governance. Indeed, “the city analog to placing an additional cow on the commons is the decision to locate one’s firm or household, along with the privately owned structure that contains it, in a particular position within an urban area.”¹⁵ Congestion and overconsumption of city space can quickly result in rivalrous conditions in which one person’s use of space subtracts from the benefits of that space for others. For instance, different kinds of urban infrastructure (roads, telecommunications systems, water systems, parks) otherwise considered to be a nonrivalrous public good can become rivalrous either through increased demand or because of regulatory slippage.¹⁶

In addition to more traditional concerns about congestion and rivalry, the openness of cities also raises the question of distribution in the commons. Many contestations of city space and resources revolve around the question of how best to “share” the finite resources of the city among a variety of users and uses.⁷ To be sure, distributive concerns fall outside of the considerations that motivated Garret Hardin’s Tragedy of the Commons — i.e., consuming resources beyond the point where they benefit anyone and in fact reduce the overall benefit of the resource for everyone.¹⁷ But Ostrom’s institutional approach to managing shared resources applies to a much broader range of human behavior and social dilemmas than avoiding suboptimal results from the cumulative actions of rational actors.¹⁸ Ostrom’s work generated an approach that can be used in the analysis and design of effective institutions (or instruments) to manage not just common pool resources but many different types of shared resources.

The “commons,” as defined by scholars who build on Ostrom’s institutional analysis and development (IAD) approach, is as much a reference to community management or governance of shared resources as it is to the nature of the resource itself. “The basic characteristic that distinguishes commons from noncommons is institutionalized sharing of resources among members of a community”.¹⁹ As such, it is not surprising to see the emergence of “new” commons — or nontraditional common pool

resources — such as knowledge commons, cultural commons, infrastructure commons, neighborhood commons, among others.²⁰ These new commons seek to provide an alternative to the private/public (government) binary of governance solutions. These new kinds of commons focus on “communities working together in self-governing ways to protect resources from enclosure or to build newly open-shared resources”.²⁰

It is tempting, in asking whether shared urban resources (including the city itself) can be governed by local communities working together, to apply Ostrom’s design principles to the city and to apply them to the management of many kinds of public and shared resources in the city. For many reasons, however, Ostrom’s ideas cannot be wholly adapted to the city the way they have been used to understand the management and governance of natural resources. Ostrom’s framework needs to be adapted to the reality of urban environments, which are already congested, heavily regulated and socially and economically complex. Without such adaptation, Ostrom’s design principles will be lost in translation.

Ostrom’s study focused mainly on close knit communities in which it was clear who was from the place and who was not (principle 1). For these communities, social control/monitoring and social sanctioning were two central pillars of Ostrom’s design principles for the governance structure that communities often put in place to manage a common pool resource (principles 5 and 6). For this reason, she observed that rules of cooperation among users were written or modified by those who would be entrusted with both the duty to obey them and the responsibility to enforce them (principle 3). The fact that these rules were written by the same community of users that apply them suggested the need to leave some room for adaptation of such rules to local needs and conditions (principle 2). Of course, these structures and rules were premised on the assumption that communities’ right to self-govern the resource would be recognized by outside authorities (principle 4).

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Ostrom found, however, that for more complex resources this governance responsibility or power was shared with other actors to form nested enterprises (principle 8). Notwithstanding the above, she observed that conflicts might arise because even the most united communities have internal fractions and therefore require accessible, low-cost tools to solve their own disputes (principle 7). These are the basic design principles which for years have been driving the study and observation of common, shared resources — namely scarce, congestible, renewable natural resources such as rivers,

lakes, fisheries, and forests.

Cities and many kinds of urban resources are different from natural resources and more traditional commons in ways that render necessary adjustments to some of Ostrom's principles. First, cities are typically not exhaustible nor nonrenewable, although they can become quite fragile over time due to internal and external threats. There are, of course, natural resources such as lakes, rivers, trees, and wetlands in urban environments that can be rendered quite vulnerable by rapid urbanization, migration, and landscape change.²¹

Because they resemble in most ways traditional common pool resources, researchers have approached the possibility for collective governance and polycentric management of these "urban commons" in a similar fashion.²² However, much of the city consists of built urban infrastructure — open squares, parks, buildings, land, streets, roads and highways — which can be purposed and repurposed for different uses and users. In this way, these resources — the kind of "urban commons" to which we refer — are quite distinct in character and design from the forests, underwater basins and irrigation systems that were the subject of Elinor Ostrom's study of common pool resource governance.

Second, cities and many of their resources are what we might call "constructed" commons, the result of emergent social processes and institutional design.²³ As with knowledge commons, the urban commons often require the creation of governance or management structures that allow for not only the sharing of existing resources but also the production of new resources which will be shared by a group or community of actors.²³ The process of constructing a commons — what some refer to as "commoning" — involves a collaborative process of bringing together a wide spectrum of actors that work together to co-design and co-produce shared, common goods and services at different scales.^{24,25} They can be created at the scale of the city, the district, the neighborhood, or the block level.

Third, cities do not exist in a pre-political space. Rather, cities are heavily regulated environments and thus any attempt to bring the commons to the city must confront the law and politics of the city.¹¹ Managing and creating urban common resources most often requires changing or tweaking (or even hacking, in a sense) the regulation of public and private property and working through the administrative branches of local government to enable and/or protect collaborative forms of resource management. Legal and property experimentation is thus a core feature of constructing different kinds of urban commons.²⁶

Fourth, cities are incredibly complex and socially diverse systems which bring together not only many different types of resources but also many types of

people.²⁷ Because of this diversity and the presence of often thick local (and sublocal) politics, social and economic tensions and conflicts occur at a much higher rate and pace than many natural environments. The economic and political complexity of cities also means that governance of urban commons cannot be just about communities governing themselves. Rather, collective governance of urban commons almost always involves some forms of nested governance — perhaps involving other levels of government and in most cases cooperation with other urban actors and sectors.²⁸

Design Principles for the Urban Commons

Based on these differences, we began to think anew about design principles for the urban commons, taking into account what Ostrom learned about successful governance of natural resources commons. While many of her principles have clear applicability to constructed urban commons — such as recognition by higher authorities (principle 7), the importance of nestedness for complex resources (principles 8), the existence of collective governance arrangements (principle 3), and resource adaptation to local conditions (principle 2) — others are of limited utility or need to be adapted to the urban context.

For instance, communities should drive, manage, and own the process of governing shared urban resources, but we have seen time and time again that they can rarely avoid dealing with the state and the market. While this can be true of natural commons, and rural communities, we think both the state and the market are even more omnipresent in cities, making it difficult to side step them over the long run. As such, we observe that many types of urban commons tend to benefit from cooperation with other than internal community members and resource users. Rather, they need to collaborate and manage resources with other commons-minded actors, such as those constituting knowledge institutions and civil society organizations.

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We have observed that in contexts where the State is the strongest, and markets are not as strong, local and provincial government actors can lend assistance to, and form a solid alliance with, communities to advance collective governance of urban resources. In this sense, the State generally acts as an enabler of cooperation and pooling of resources with other actors.

On the other hand, where the State is weak or weaker, either because of corruption or lack of resources, the market seems to be the only answer to enable the pooling of resources (i.e. human, economic, cognitive, etc.)

needed for collective action and collaborative management of urban resources. The market could subsidize the commons if proper legal structures and participatory processes are put in place and there is sufficient social and political capital among resource users to negotiate with market actors.

In both cases, the concept of “pooling” seems to capture the true essence of commons-based projects and policies in the urban environment. For these reasons, we have identified in our work two core principles underlying many kinds of urban commons as an enabling state and pooling economies.^{11,29}

We also observed for instance that technology in cities plays a key role in enabling collaboration and sustainability, as well as pooling users of urban assets, shared infrastructure, and open data management. Further, urban commons-based governance solutions are cutting-edge prototypes and therefore often require careful research and implementation. In other words, they are experimental: new approaches and new methodologies are constantly being developed and require prototyping, monitoring and evaluation.

These basic empirical observations are now the cornerstone of a much larger and scientifically driven research project that we established and call the “Co-Cities Project.” The idea of the “Co-City” is based on five basic design principles, or dimensions, extracted from our practice in the field and the cases that we identified as sharing similar approaches, values and methodologies.³⁰ While some of these design principles resonate with Ostrom’s principles, they are each adapted to the context of the urban commons and the realities of constructing common resources in the city. We have distilled five key design principles for the urban commons:

- **Principle 1: Collective Governance (or co-governance)** refers to the presence of a multistakeholder governance scheme whereby the community emerges as an actor and partners (through sharing, collaboration, cooperation, and coordination) with four other possible categories of urban actors in a loosely coupled system;
- **Principle 2: Enabling State** expresses the role of the State (usually local public authorities) in facilitating the creation of urban commons and supporting collective governance arrangements for the management and sustainability of the urban commons;
- **Principle 3: Social and Economic Pooling** refers to the presence of autonomous institutions (e.g., civic, financial, social, economic, etc.) that are open, participatory, and managed or owned by local communities operating within non-mainstream economic systems (e.g. cooperative, social and solidarity, circular, cultural, or collaborative economies, etc.) that pool

resources and stakeholders often resulting in the creation of new opportunities (e.g. jobs, skills, education, etc.) and services (e.g. housing, care, utilities, etc.) in underserved areas of the city or for vulnerable inhabitants;

- Principle 4: Experimentalism is the presence of an adaptive, place-based and iterative approach to design legal and policy innovations that enable the urban commons;
- Principle 5: Tech Justice highlights access, participation, co-management and/or co-ownership of technological and digital urban infrastructure and data as an enabling driver of cooperation and co-creation of urban commons.

These design principles articulate the types of conditions and factors that we observe are present and that instantiate the city as a cooperative space in which various forms of urban commons not only emerge but are sustainable. These conditions shape and define what we call a “co-city.” The concept of the co-city imagines the city as an infrastructure on which participants can share resources, engage in collective decision-making and co-production of shared urban resources and services, supported by open data and technology, guided by principles of distributive justice. A co-city is based on polycentric governance of a variety of urban resources such as environmental, cultural, knowledge and digital goods that are co-managed through contractual or institutionalized public-community or public-private-community partnerships.

Polycentric urban governance involves resource pooling and cooperation between five possible categories of actors — social innovators or the unorganized public, public authorities, businesses, civil society organizations, and knowledge institutions — the so-called “quintuple helix governance” approach³¹. These co-governance arrangements have three main aims: fostering social innovation in urban welfare provision, spurring collaborative economies as a driver of local economic development, and promoting inclusive urban regeneration of blighted areas. Public authorities play an important enabling role in creating and sustaining the co-city.

The ultimate goal of a co-city, we believe, is the creation of a more just and democratic city, consistent with the Lefebvrian approach of the right to the city.⁷

Conclusion

The above design principles and practice are based on our observation and study of the ways that a variety of resources in cities, both existing and created, are being managed or governed by local communities in a cooperative fashion with other actors and often enabled by government

bodies and officials. The five design principles, and some of the mechanisms through which they manifest, together with the co-city policy cycle/process, compose the beta version of what we call “the co-city protocol.”³⁰ We interpret such protocol as a language that could guide collaboration among urban communities experimenting with the governance of the urban commons, as well as the exchange of ideas and practices on the commons at the urban level without impairing institutional diversity and adaptiveness. Much like in the digital and open source world, this protocol would allow local communities to build a shared language that could be iteratively updated and could increase shared knowledge around the city, ultimately contributing to the construction of an urban methodological approach to the commons in the city and to governing the city itself as a commons.