Chapter Two

The Urban Commons

Our approach to the study of the urban commons began with the same question that Elinor Ostrom asked in her groundbreaking studies of natural resource commons. (Ostrom 1990). Namely, whether there are groups of residents and/or resource users who are willing and able to organize themselves, work together to establish rules for sharing resources, and monitor themselves in the absence of an external authority or externally imposed regulations. Based on our observations and empirical research drawing from case studies in over 100 cities around the world, the clear answer is yes. From community gardens to mesh wireless networks, there are plenty of examples of self-organized groups of users and residents that collectively or collaboratively construct and then manage shared resources together. Some of these "urban commons" even share many of the features of Ostrom's natural resources commons governance scenarios. They are often small-scale resources (a vacant lot, an empty building, neighborhood park, wireless infrastructure, etc.) that rely on the self-organizing efforts of resource users who establish rules of access, use and distribution of goods or services produced by the resource. Some are larger scale, more complex resources (a neighborhood, a large urban park, an urban village, a large broadband network) in which local users or communities must work with other public and private actors to construct and collaboratively govern those resources.

Yet, while some urban commons share much in common with the natural resources that were the subject of Ostrom's work, there are facets of collectively governed urban resources that are notably distinct. In this chapter, we will tease out and illustrate some of the key distinctions. We first offer a basic introduction to Ostrom's framework for analyzing common resources and the assumptions and principles that are the foundation of that framework. We also look briefly at the application of her analytical framework to urban "green" resources in cities as one window into how well her framework might travel or translate in an environment vastly different from the communities she studied. Our bottom-line assessment is that there is much that Ostrom's framework can offer to the study of common resources in cities. Indeed, we understand why it is tempting to apply Ostrom's design principles for user-managed resources to the management of many kinds of public and shared resources in the city. For many reasons, however, we think that Ostrom's principles do not translate precisely in the city the way they do in nature. Ostrom's framework needs to be translated to the reality of urban environments which are often crowded, congested, socially diverse, economically complex, and heavily regulated. As such, we highlight some characteristics of "constructed" urban commons that are not captured well in Ostrom's design principles for user-governed natural resource commons.

Ostrom believed that there is no one model of resource management that is applicable to all common pool or shared resources. In some cases, collective or community governance is not the right solution at all and should give way to more traditional forms of state control or private property regimes. In her early Nobel-prize winning work, she found that collective governance of shared resources is possible, and even sustainable, under certain conditions or where specific factors are present—what she called "design principles." (Ostrom 1990). Collective governance of shared resources is particularly successful for resources with clearly defined boundaries and in communities where it was clear who was "in" and who was "out"—i..e, meaning who had access and who could be excluded. (principle 1). Ostrom's study of successful common pool resource institutions focused mainly on close knit communities that share similar beliefs and a history, or expectation, of continued interaction and reciprocity. In actual field settings where these conditions are present, Ostrom observed that communities were able to develop and enforce rules, as well as conflict resolution procedures, that govern the use of the resource. She found that these communities had put rules in use that were well matched, or adapted, to local needs and conditions (principle 2). For this reason, she observed that rules of cooperation among users were written or modified by those entrusted with both the duty to obey them and the responsibility to enforce them (principle 3).

Collective structures and rules were premised on the assumption that communities' rights to self-govern the resource and to devise their own rules would be recognized and respected by outside central authorities; such recognition also made the rules easier to monitor and enforce. (principle 4). 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). She observed that conflicts might arise because even the most united communities have internal fractions and therefore communities require accessible, low cost tools to solve their own disputes. (principle 7). Ostrom found, however, that for more complex resources, resource users were able to enforce and monitor the rules they created only with the help of external agencies. Thus, the governance responsibility or decision-making power over the resources was shared with other actors to form so-called "nested enterprises" (principle 8). That is, the rules, procedures, monitoring, and sanctions put in place, among other governance activities, are organized in a "nested" institutional structure with layers of activity by different actors. This nesting might occur between user groups using the same resource and/or between user groups and central authorities (e.g. local or regional governments). The involvement of central authorities is more likely to be present for large scale and complex resources. These are the basic design principles which for years have been driving the multidisciplinary study and observation of common, shared resources—namely scarce, congestible, renewable natural resources such as rivers, lakes, fisheries, and forests. (Poteete, et. al. 2010)

Many of Ostrom's cases studies documented the existence of wholly internal solutions to natural resources management. Ostrom identified a number of these self-organized resource governance regimes, including common lands governed by local village communities in Switzerland and Japan (Ostrom 1990, 61-69), irrigation communities in Spain and the Philippines (Ostrom 1990, 69-88), as well as other examples of fisheries and irrigation projects managed communally in Turkey, California and Sri Lanka (Ostrom 1990, 144-78). Many of these have survived for multiple generations and involved the investment of significant resources by participants to design basic rules, create organizations to manage the resources, monitor the actions of each other, and enforce internal norms to reduce the probability of free-riding. Importantly, these groups successfully established and enforced their own rules without resort to external public agencies. (Ostrom 1990, 59). Her findings are consistent with similar research by others, such as legal scholar Robert Ellickson, highlighting the ability of small, or "close-knit," communities to solve disputes over land use through a system of informal social norms. (Ellickson 1991) Ellickson's study of ranchers and landowners in Shasta County, California found that, in spite of a well-developed system of legal rules that governed straying cattle and land disputes, the community had developed its own system of informal norms governing disputes and that the system was self-reinforcing. Ellickson's findings further support the idea that, at least in small homogenous communities, the existence of strong cooperative norms allows communities to govern themselves in the face of conflict without the aid of the state or other central coordinator. How much the size of a community of users and its homogeneity affect

the ability to organize and to self-manage a resource system is uncertain and requires more theoretical and empirical observation. (Poteete and Ostrom 2004, 2008).

For more complex and larger resources, however, Ostrom found that central regulators played a key role in helping to coordinate the interdependencies of smaller units of communitybased governance. (Ostrom 1990). Participants in complex resource systems, she argued, could benefit from being part of overlapping, "nested" organizational arrangements. For these kinds of arrangements, Ostrom's study of a series of groundwater basins located beneath the Los Angeles metropolitan area is illustrative. (Ostrom 1990, 103-142). In her findings, groundwater producers organized voluntary associations, negotiated settlements of water rights, and created special water districts to monitor and enforce those rights with the assistance of county and state authorities. State legislation authorizing the creation of special water districts by local citizens was a crucial element in encouraging users of groundwater basins to invest in self-organization and the supply of a local institution. Once a special district was created, it possessed a wide variety of powers. Those powers included the ability to raise revenue through a water pump tax and, to a limited extent through a property tax, to undertake collective actions to replenish a groundwater basin. Without such legislation, a similar set of users facing similar collective action challenges might not be able to supply themselves with transformed "micro institutions." (Ostrom 1990, 135). Ostrom viewed the relationship between the private water associations, public agencies, and special districts as illustrating how a governance system "can evolve to remain largely in the public sector without being a central regulator." (Ostrom 1990, 135) The basins became managed as a "polycentric" public-enterprise system that is neither centrally owned nor centrally regulated. As such, and in contrast to self-managed community resource use systems that operate mainly with social sanctions, resources that traverse many communities

and/or heterogenous user groups may require more complex institutional structures, often involving government coordination and enforcement. (Ostrom 1990, 1994).

Ostrom in the City

For our study of constructed urban commons, many of Ostrom's design principles and observations are clearly applicable while others are of limited utility or need to be modified to the urban context. As in Ostrom's examples, the ability of communities to collectively manage a shared resource, and to do so sustainably over time, can very much depend on community size and knittedness, shared social norms/social capital, community homogeneity, resource scale, and recognition and support of central authorities and external actors. Collaboratively managed urban resources typically have clear boundaries and rules that are collectively created, adopted, and enforced through either informal or formal mechanisms. Unlike many of Ostrom's case studies, however, collective governance of urban resources does not occur only (or mostly) in small, homogenous, close-knit communities with stable membership and high levels of social cohesion. Many small and large-scale urban resources ranging from large urban parks to community gardens to wireless broadband networks are being collectively managed by groups of heterogeneous users who access and depend on the shared resource. In addition to high group heterogeneity, many urban commons are accessible and open to transient users who are not part of a stable group of resource users who may be more geographically tied to the resource by virtue of their proximity to it. As Amanda Huron has noted, urban commons emerge in "saturated" spaces and often are constituted by the coming together of strangers. (Huron 2015). Relatively high densities of population on a relatively small amount of space means that people are forced to either share or compete for resources, as Huron argues, making the process of urban "commoning" more challenging than in rural and small-scale environments. This is even more so

in huge urban agglomerations that comprise growing core cities and expanding peripheries, including both formal and informal settlements.

As such, the role of central authorities, or the state, is even more present in the creation and sustainability of the urban commons and for reasons that differ in the natural resources context. As Ostrom argued, the effort by user groups to create new institutions for resource governance is a second order collective action dilemma. In addition to overcoming any obstacles to cooperation to create rules of access and use, resource users must invest tremendous resources to design institutional arrangements that incorporate the new processes and rules that will govern the resource over the long run. (Ostrom 1990, 136). This is why a small homogenous community is more likely to succeed at managing a commons than a larger and more diffuse one. Apart from Ostrom's study of collective management of groundwater basins, and the special water districts created to manage them, far less attention has been paid to the role of the state in the creation and support of user- or collectively-governed resource regimes. Ostrom's own work, as well as the work of others, suggests that central governments can play a significant role in supporting and potentially lowering the costs of user-managed resources. Government support can reduce the costs of cooperation and help relevant actors to leverage their efforts to achieve high economic and social payoffs from their collective action. This support might include regulatory changes, fiscal or technical support which remove barriers to cooperation or make it more beneficial or convenient for individuals to engage in cooperative behavior.

The supportive or enabling role of government in the collective management of shared resources is unavoidable on some level in the urban context. Many urban resources that residents or communities want to share and manage together are, at least formally, under the control of the state. In many cases, the local government typically retains regulatory control and, in some cases, proprietary ownership of these resources. Communities and other private actors are motivated to claim, utilize or preserve abandoned or underutilized urban resources as assets that can provide urban residents with essential resources such as affordable housing or commercial space, open and green space, among other goods. However, given that most of these resources are under government control and regulatory authority, they eventually need government consent and often government aid and financing to fully utilize the property. Thus, even for communitydriven, constructed urban commons the state role can be essential to the creation and sustenance of these user-managed resources.

Because of the way that urban resources are controlled and regulated by central authorities, creating urban commons also depends on a level of legal and property adaptation above and beyond what is required to collectively manage or govern natural resources. Ostrom's case studies of collectively governed natural resources, communities were managing true "commons" or communal property alongside some private property rights to access those resources. Those communal property rights in many cases were centuries old and co-existed with the development of private rights to those resources over time. (Ostrom 1990, 63). Most urban "commons" are constructed as opposed to pre-existing communal or common goods given the nature of the built environment. Cities are highly proprietary environments in which land and resources are "enclosed" by ownership and exclusion rights that tolerate empty, abandoned, and unproductive "surplus" property to sit un- (or under-) utilized for long periods of time. Creating urban commons most often requires changing or tweaking the way that public or private property is held and shared. As such, community gardens, urban farms, community land trusts, community "mesh" wireless and broadband networks, and collaborative housing arrangements must confront existing legal and property arrangements to create and sustain these resources. In some instances, they require changing local laws to recognize or allow urban land and infrastructure to be used in common or creating new institutions that disaggregate and redistribute property rights and entitlements. As such, collectively governed, shared resources emerge as sites where self-organization takes place through "experimenting with rules by which to govern particular pieces of land and tinkering with the possibilities made available by existing laws and the features of private property." (Ela 2016).

In addition to the role of central authorities and property or legal adaptation, many kinds of urban commons are a product of what we call social and economic "pooling." Scholars of the commons most often use the term "common pool resource" to denote the characteristics of an open access, depletable resources. (Ostrom 1990). In this conception of a commons, the "pool" is the sum of the units that constitute the resource—e.g. fish in a fishery or trees in a forest—and typically those units are limited and exhaustible. A common pool resource in economic terms is one in which many users can share simultaneously but the amount or availability of the resource diminishes by every unit an individual user subtracts. The pool is thus depleted or exhausted once too many unconstrained users take out of it, leading to the classic tragedy of the commons scenario. Our use of the term pooling is not to denote existing, open access, nonrenewable units. Rather, pooling is the combined effort and associated resources of different actors to construct and share common goods. We have observed many examples of urban pooling to create new kinds of shared, common goods in the housing, food, digital, energy and cultural arenas happening in cities all over the globe. Community gardens, wireless networks, cohousing and land trust arrangements are most often the result of pooling human capital, social networks, and existing urban infrastructure or public resources to create and or construct shared resources. These resources are then made available and accessible to a broader class of urban inhabitants,

many of whom are on the social and economic margins of growing cities. Resources become an urban "commons," or part of a common "pool," through these collaborative practices and ventures aimed at sharing existing urban resources, generating new resources, producing new public services, and coordinating urban networks across the city.

Governing "Green" Urban Commons

One entry point in assessing whether and how Ostrom's approach applies in the urban context is to ask whether natural ecological resources are being collectively governed or managed in cities under conditions like those found in Ostrom's case studies of traditional common pool resources. These urban ecological resources or "urban green commons" -lakes, parks and urban gardens-can provide critical resources, such as food and recreational spaces, for urban populations that live near them. (Colding et. al. 2013) They can also be important spaces that strengthen social networks and facilitate social integration in dense, diverse, and often socially stratified urban environments. These resources can be as vulnerable and endangered as natural resources in rural environments, and perhaps even more so given urbanization patterns. For instance, urban green commons are frequently privatized, converted to built spaces, degraded or polluted. (Unnikrishnan and Nagendra 2015; Mundoli, Manjunath, and Nagendra 2015). Like traditional common pool resources, they are also subject to rivalry and conflicts with respect to their use, management, and ownership in urban environments characterized by rapid urbanization, migration, and landscape change. (Unnikrishnan, Manjunatha, Nagendra 2016).

Collective action to manage these resources in cities can mimic, at least at first glance, similar resources in the natural world or in rural areas. To test this, researchers have applied

Ostrom's framework for the study of the commons in cities by examining ecological resources such as lakes, rivers and forests accessed by urban local communities for traditional cultural and livelihood uses and/or by recent urban migrants for aesthetic and recreational purposes. (D'Souza and Nagendra 2011). Ostrom developed an Institutional Analysis and Development (IAD) framework to analyze collective action situations with a focus on institutions in which multiple actors are interacting. (Ostrom 2005a, 2011) The IAD framework includes both "endogenous" (internal) and "exogenous" (external) variables that can influence how well a particular resource is being collectively managed by a local community. (Ostrom 2005a) These include the biophysical characteristics of the resource, attributes of the community, rules-in-use, the action area or arena where participants interact and solve problems (or not), and information about specific actions situations and specific actors. (Ostrom 2005a). The IAD framework was later expanded into Ostrom's social-ecological system (SES) framework involving a set of 10 variables that include: These variables include the size of resource system, number of actors, leadership, social capital, importance of resource, existence of operational-choice rules, and existence of informal mechanisms for monitoring. (Ostrom 2007, 2009). The IAD and SES frameworks have been used by scholars, following Ostrom, to examine case studies of lobster fisheries, forests, irrigation systems, grazing pastures, and other scarce, congestible, nonrenewable natural resources. (Acheson 2003, Poteete and Ostrom, 2004). It has also been used, and adapted, to study collective governance arrangements for other kind of resources such as knowledge and cultural commons. (Frischmann, Madison and Strandburg 2014).

In the first robust application of Ostrom's approach to natural resources in urban areas, Harini Nagendra and Elinor Ostrom examined the challenges of collective governance of urban lakes on the periphery of Bangalore, India using the SES framework's social-ecological variables associated with self-organization in previous studies of traditional commons. (Nagendra and Ostrom 2014) These variables were applied to lakes of varying size and ecological quality (from lightly to very polluted) located on Bangalore's urbanizing peripheral areas to diagnose why some water bodies had been effectively restored and managed by newly forged collaborations between citizens and local government locations, while others had become ecologically deteriorated and/or failed to generate sufficient levels of collective action. Consistent with Ostrom's observations of traditional common pool resources, the study of urban lake commons found that endogenous factors were very important to the presence of collective management. Specifically, collective action was present in six of the seven lakes studied, where the following variables were present: a small or moderate number of actors, the presence of local leadership, relatively high levels of trust and social capital, lack of exclusion of socioeconomic groups, high resource importance to residents, and the presence of operational community rules and informal norms for monitoring the resources. Yet, those collective efforts alone were unlikely to have improved the ecological condition of the lakes, some of which were very polluted. Rather, the study found that it was the combination of endogenous and exogenous factors that correlated with a high level of collective action *and* high ecological performance. Notably, only two of the six lakes were characterized by *both* collective action and improved ecological conditions.

Most important for our purposes is the authors' conclusion that the challenge of cleaning up an urban lake in a quickly urbanizing area on the periphery of Bangalore required effective interaction or collaboration with various governmental units and other actors. (Nagendra and Ostrom 2014). Collaboration and networking with others are critical in the urban context, the study stressed, because of the complex legal, technical and political environment in which these lakes are located. For instance, lake restoration requires technical, financial, and manpower resources necessary for the tasks of dredging, bund building, and other cleanup activities that are beyond the scope of local resident groups to manage alone. Local resident groups must work with government agencies as well as technical experts (e.g. researchers, naturalists, etc) to successfully restore the resource to a level that can meet their local needs. At the same time, while government agencies have the legal authority to prevent unwanted activities and harmful use of the lake, they must rely on information from local residents to detect these activities and intervene in a timely manner. Collective action by local groups is not only critical in monitoring the process of restoration and ensuring that the lakes remain in healthy conditions after rejuvenation. Such collective action is critical also, the authors conclude, in strengthening downward accountability (ensuring the effectiveness of monitoring against infractions and sanctioning of repeat-offenders) because local officials are not always accountable to the residents they serve given the economics of urbanization and the imperatives for growth in many cities. As the authors note in this context, "local officials are often subject to governance incentives as well as incentives of political economy and rent-seeking that ensure that they are primarily accountable to higher officials or vested interests such as real estate agencies, rather than downward accountability to local communities or marginalized groups." (Nagendra and Ostrom 2014, 76).

Enabling Urban Commons

Much like ecological commons such as lakes and rivers, constructed green commons such as neighborhood parks, community gardens or urban farms must account for the political, economic, and legal complexity of the urban environment in which they are located. Endogenous efforts alone are rarely enough to maintain or sustain over the long run collective efforts to manage or govern even small resources such as community gardens and urban farms. These collective efforts of local users ultimately depend on some cooperation with central authorities—i.e., local government officials, administrative agencies, and others responsible for managing and governing different kinds of urban infrastructure. At the same time, local collective efforts to manage these resources are vulnerable to the larger urban political economy in which these efforts are situated. For these reasons, the economic and political complexity of cities, including rising social and economic inequality, means that governance of urban commons is often not just about communities governing themselves. Rather, the creation of new urban commons almost always involves some form of "enabling" or support from the local government or "state" and, in most cases, cooperation with other urban actors and sectors. However, what degree of state enabling is necessary for sustainable collective governance of shared urban resources and how vulnerable these resources are to capture by a narrow set of interests that are not fully accountable to the surrounding community, or cooptation by extractive market forces or private actors, is heavily dependent on local context.

Consider the example of community gardens, one of the most ubiquitous kinds of "urban commons" in cities around the world. The transformation of vacant or abandoned land into productive urban resources is initially an endogenous effort in which residents self-organize and self-manage these spaces as shared community resources. (Foster 2011). Residents manage to come together, clean up or restore the lots, and construct and maintain fully functioning urban gardens and farms. Local users collectively formulate their own rules of use and allocate resource units (e.g. plots of land) and shared infrastructure (e.g. water connection, greenhouse) without a formal organizational structure. (Rogge and Theesfeld 2018). Constructing and maintaining community gardens and farms often depends upon, and fosters, collaborative relationships and social ties among residents of different neighborhoods, racial and generational

groups. (Foster 2006). This social capital, and the norms that they generate, enable residents to cooperatively work toward common neighborhood goals and a shared desire that the space serve the needs of local residents—whether providing fresh vegetables, green space or recreational amenities. Moreover, there is evidence that these self-organized efforts tend to spread throughout urban areas through a "social influence" or "social contagion" process. (Ofry and Malcai 2019). In other words, the creation of community gardens at the micro level, or sublocal scale, enables and supports the diffusion of these efforts on a larger scale on a citywide basis. This diffusion and contagion occur through the interactions among individual participants or players from different community gardens facilitated by enabling nudges—positive reinforcement or supportive programs—from central authorities

The role of central authorities or regulators can be important in both enabling and sustaining locally organized efforts both by providing modest support and assistance to these users. (Lehavi 2008, Foster 2011) Abandoned, vacant and underutilized spaces on which community gardens or urban farms are constructed, for example, are most often under the control of central authorities. They can only operate long term as community gardens or urban farms with the implicit or explicit consent of the local government. Sometimes city officials may passively allow the group to utilize land under the city's control and refrain from interfering in the group effort. Other times, city officials might transfer land to the group, either for a nominal fee or for a contractual term and may even provide materials and other critical resources to the gardeners, such as access to gardening equipment through city gardening programs. New York City's Green Thumb Program is an example of this kind of support, providing residents with technical support and materials. (Foster 2011). Local land use rules and zoning might have to be changed to allow for a change in the use of land from what was previously a residential or

commercial use to what is now an agricultural use. Residents might also need to take advantage of local rules and regulations on access to local water supply and other urban services or infrastructure required to engage in urban gardening or farming. (Ela 2016)

This enabling role grows more significant with the scale and complexity of the resource, involving the need for much more legal authority and/or financial entanglement than smaller resources require for collective management. A stronger state role is required when resources are not only larger but involve more heterogenous users and involves more legal or regulatory complexity. For instance, like community gardens, collective efforts to revitalize and manage neighborhood urban parks are largely endogenous efforts undertaken by abutting park neighbors or frequent users who lend their time, give money, or help raise funds to recover and maintain the park. These groups consist of volunteers, typically referred to as "Friends of Park [X]," who provide labor for park maintenance and assist in community outreach and park programming. They organize park cleanups and community events, build or donate simple infrastructure or facilities for community activities (e.g., small pools, sand pits, etc.), and patrol the park as a way of deterring criminal and other undesirable activities. (Madden et. al 2000). Many of these groups remain an informal collection of volunteers, while others have become more formal. The more formal groups establish themselves as a membership organization, elect board of directors, write bylaws, and apply for nonprofit status. (Lehavi 2004).

These community-based "Friends of Park [X]" groups tend to rely heavily on government assistance, and in some instances collective efforts are very much dependent on the government to coordinate, establish, and sustain these efforts. Local governments help to develop and nurture these groups by providing them with technical assistance, training, and funding. (Madden et. al. 2000). An example is New York City's Partnerships for Parks, a joint venture between the New York City Parks Foundation and the New York City Department of Parks & Recreation, which encourages the formation, and nurtures the development of, neighborhood parks groups across the city. The provision of training, materials and financial support to local groups willing to assume some responsibility for some park management functions can provide a powerful signal and incentive for individuals to pool and coordinate their efforts, as well as sustain the enterprise over time. Like community gardens, this state enabling role is crucial even where there are strong endogenous factors at play that enable communities to engage in collective action to care for a shared urban green resource. These efforts may not be successful nor sustainable over the long run, despite strong social ties and cooperative action, were they not assisted by local governments through local programs like those mentioned.

In our previous work we have observed that state enabling of self-organized, collective governance of shared urban resources exists along a spectrum. (Foster 2011). Enabling mechanisms range from offering *de minimis* support to largely endogenous collective efforts, as in the examples of community gardens and small neighborhood parks, to more significant support in which central authorities are essential to the formation of collective efforts. At the *de minimis* end of the spectrum, central authorities allow, either explicitly or implicitly, the collective to exercise management prerogatives over the resource and may offer them material support to start and sustain their efforts. The government has virtually no affirmative role in coordinating the collective effort or in establishing the group, although it may provide them with financial or other incentives to sustain their efforts. Further along the spectrum, there can be a closer relationship between central authorities and the collectivity in which the government shares its resources with the group and exercises some degree of oversight of the group's activities. Government enabling is an important stabilizing force for the group and the group

works closely with government officials. However, the relationship between the government and the group falls short of a fully realized partnership. On the far end of the spectrum are collective efforts that are very much dependent on the government to coordinate, establish, and sustain themselves. That is, the group takes its form only as a result of government support and entanglement and government support is a precondition to the existence of the collectivity.

Two examples of the latter kinds of larger scale state-enabled, sublocal governance arrangements are park conservancies and business (or community or neighborhood) improvement districts. "Park conservancies" are constituted of public and private stakeholders who maintain and manage, in partnership with city government, large urban parks. In contrast to park "friends" groups formed to support small neighborhood parks, park conservancies are nonprofit entities that raise significant amounts of money and co-manage large urban parks in partnership with the local government by collaborating on planning, design, and implementation of capital projects as well as sharing responsibility for park maintenance and operations and in some cases revenue. (Taylor 2009, Murray 2010). The prototype for park conservancies is the Central Park Conservancy in New York City, which was founded by several local leaders and groups that initially established the Central Park Task Force, an organization that began to encourage direct involvement of the public as park volunteers and donors, but later incorporated itself as the Conservancy. In a groundbreaking power-sharing arrangement, the Central Park administrator was appointed to serve as the chief executive officer of both the park and the Conservancy signaling the important role that the Conservancy would have in the restoration and maintenance of the park. The Conservancy is run by a Board of Trustees, which includes city officials and representatives from nonprofit organizations and private corporations, among other interests. It combines donations from individuals with corporate donations and government funding to fulfill its budgetary needs and build its endowments. A variety of public bodies have oversight over the Conservancy's management decisions, including include the Art Commission of the City of New York, five neighborhood community planning boards in the city, the Landmarks Preservation Commission, and the City Council. While Central Park Conservancy may be the most widely known of park co-managers, its model has been widely replicated with varying success in large urban parks around the United States. (Taylor 2009, 350; Rosenzweiz & Blackmar 1992, 524).

Agreements or partnerships between local governments and park conservancies serve an important coordinating and stabilizing function which enables disparate sectors and groups to cooperate to undertake significant responsibility for park management. Private involvement in the management of urban parks is a phenomenon stretching back to the early twentieth century. (Kinkead 1990). Neighbors that live near urban parks, as well as wealthy donors and residents, have long exerted some power over park management-providing donations, labor, advocacy efforts, and planning ideas. Often, though, these efforts have suffered from a lack of coordination and efficiencies of scale; without leadership to harness these private efforts, they often falter over time as old groups fade and new ones appear to renew the effort to resuscitate and improve park management. (Murray 2010). Agreements, such as the one between the City of New York and the Central Park Conservancy, both serve to establish important norms regarding the limits of the group's responsibility for the resource-i.e., reverse crowd-out protection that ensures public funds will not be replaced by private donations-as well as formalize the contours of the conservancy's responsibility for the day-to-day management of the park. These public-private partnerships have been widely credited for the revitalization of urban parks at a time when some cities had "all but abdicated their role as stewards of the public parks." (Taylor 2009, 346-347).

They have the virtue of being able to avoid the red tape, bureaucracy, and inaction in which city parks departments often become mired; they can make decisions faster, raise funds, save money, and serve as effective advocates for urban parks.

Similarly, partnerships between local businesses, property owners, and local governments are established to manage the neighborhood commons-i.e., streets, sidewalks, parks, and playgrounds. Business improvement districts (BIDs) are enabled by state and local legislation that allows a majority of commercial property owners in a defined neighborhood to vote to form a BID, agree to pay special assessments, and assume (at least partial) control and management (maintenance) of the neighborhood commons. BIDs are governed by local property owners in partnership with representatives from businesses, local governments, and sometimes neighborhood resident non-property owners. The key features of BIDs are that: (a) they cover a defined (and limited) geographic territory in which commercial property owners or businesses in the area are subject to additional assessments or taxes; (b) they typically fund supplemental street-level services and small-scale maintenance and capital improvements (e.g., street cleaning, garbage collection, landscaping, sidewalk widening, security patrols, etc.) over and above those offered by city government; and (c) they are granted the limited authority by legislation. (Briffault 1999). Similar districts have been established as community improvement districts (CIDs) or neighborhood improvement districts (NIDs), mostly to encourage and fund economic development and public improvements in defined neighborhoods through special assessments on property owners or imposing special sales or license taxes in the district. These special districts are now a ubiquitous feature of urban governance in many cities across the world, with varying governance and financial arrangements.

Because BIDs exist only by virtue of specific legislative authority, enabling legislation is what allows local commercial business and/or property owners to minimize free-rider and coordination problems in order to provide neighborhood services beneficial to the local environment. BID legislation (and similar legislation authorizing NIDs or CIDs) lowers collective action costs by arranging for the municipality to collect the mandatory assessment from property owners who then utilize the funds to provide services. The impetus for a BID creation typically arises from a significant portion of the property owners or businesses in the neighborhood, or representatives of one or more of those groups, that organize the BID and agree to assess themselves or impose a tax (e.g. sales or other tax) in order to fund the activities and services provided by a BID. BID formation is often costly in terms of time, energy, and money to coordinate and prepare the necessary groundwork—and it can take years before the process is complete. (Briffault 1999). BID legislation can enhance the capacity to achieve collective outcomes among diverse actors, even in the private sector, whose interests may not appear at first to be well aligned.

These special institutional arrangements mimic to some extent Ostrom's findings on management of regional water basins through special water districts. Special water districts were legislatively enabled to make possible collaborative water governance involving groundwater producers, residents, and state and county authorities. As in her findings, the state, or central authorities, play a key role in helping to enable and coordinate theses "nested" units of resource governance for larger and more complex resources. In the case of park conservancies, the local government helps to establish and them becomes part of a formal partnership to collectively manage the resource with private and (sometimes) community-based actors. In the case of BIDs, the state must enact special enabling legislation to establish BIDs, including defining their authority and fiscal responsibility over common, shared neighborhood resources. However, one difference between the natural and urban context is the political and economic context in which state and enabling occurs. In urban environments, they occur in an often highly unequal context with race, ethnicity and/or class segregation and stratification. As such, while the role of state in enabling collectively managing large parks and neighborhood common spaces is largely seen as a positive, they have also come under criticism for the ways that these nested institutions exacerbate distributional inequalities in public goods and services.

Our view is that these kinds of self-professed "public-private partnerships" can carry costs for urban communities least able to participate in the stewardship of these common resources that they manage. Park conservancies, for example, have been criticized for imposing many of the costs that attend to the (at least partial) privatization of any public good-i.e., enabling gentrification, exacerbating ethnic and class tensions, and creating a two-tiered park system which disadvantaged parks in less affluent neighborhoods. (Taylor 2009, Murray 2010). Enabling the partial privatization of large urban parks or entire neighborhood common areas might result in the creation of different tiers of common resource stewardship, depending on the demographics of those who live closest to the resource and/or frequent it the most. Although local government "enabling" is available to any group of private actors able to overcome freerider and other collective action obstacles, the scope and success of the management or stewardship effort will depend in no small part on the assets of those individuals involved (as well as their ability to attract additional assets). While park conservancies are celebrated for raising and dedicating private funds toward the improvement of larger, prominent city parks they often create a two-tiered park system which disadvantage parks in less affluent neighborhood. One cost of their success is that parks and playgrounds in poorer neighborhoods are often left underfunded and relatively unattended. (Taylor 2009, 302).

In a similar vein, BIDs are widely credited with making small-scale improvements to streets, parks, and other common areas which have led to the revitalization of once deteriorated urban commercial areas like New York City's Times Square. However, BIDs raise concerns about the extent to which they exacerbate the uneven distribution of public services. BIDs in low-income neighborhoods tend to have less fiscal and human capital (because of lower property values) to dedicate to street level services and capital improvements than do those in highincome neighborhoods. (Gross 2005, 184). Less central or popular parts of the city, without the support of wealthy private partners or commercial businesses paying premium tax rates, suffer from underfunding because of the success of other, more visible areas of the city. The result is that the BIDs in these neighborhoods provide a very limited range of services, typically that tend to address the most visible aspects of urban decay (e.g., graffiti, sanitation, and sidewalk maintenance) and fall far short of the kind of major capital improvements that characterize BIDs in central downtown or wealthier neighborhoods. The governance structure of BIDs has also been challenged, both in academic commentary and in the courts, for lacking democratic accountability and in part for its exclusion of non-property owner residents from participating in BID management of their neighborhood. (Foster 2011). Moreover, once they are established, there is very little oversight of them in fact, even though most BID legislation provides the authority for oversight by politically accountable government officials. (Briffault 1999)

Bottom-up vs. Top-Down Urban Commons

Park conservancies and BIDs are one form of urban commons, or collectively governed shared urban resource. They represent, however, a top-down institutionalized, state-enabled form of collective resource governance. They are top-down because they are initiated and come into being only through government authority or action, as is the case of large Park Conservancies and BIDs. Many other kinds of urban commons emerge, on the other hand, from bottom-up efforts of residents or resource users who are motivated to overcome traditional collective action problems and to collaborate to construct new goods and services that many urban communities lack or find inaccessible to them. The issue for bottom-up urban commons is not only determining what is the best ways to manage or govern existing resources like parks, land or existing urban infrastructure. Rather, the issue is how new forms of urban commons can emerge from those resources that are already under some form of legal ownership and control, whether public or private. The challenge is how communities can access and utilize existing resources and urban infrastructure to *construct* new resources and goods that respond to community needs but that are neither under exclusive public nor private control.

Cities are highly proprietary environments, as we have previously noted. Land and structures that are not privately owned are public property of some sort, meaning that they are under the control of the state (local government or higher levels of authority). Public property can include streets, roads, squares, parks, cultural institutions, and other structures dedicated to public use. However, one question that arises in cities all over the world is whether private or public property that is abandoned or vacant should be potential sites for urban commons. As we mentioned in the previous chapter, cities and neighborhoods characterized by growth and those characterized by shrinkage and decline contain significant amounts of vacant land and empty or underutilized structures. Land or structures in cities become vacant or underutilized for many reasons depending on whether the resources are public or private property. In some cases, public buildings owned by the state may fall into disrepair or disuse due to lack of public moneys to take care of them. In addition to underutilized or vacant public land and structures, private land and structures can end up in the public domain when owners default on their tax obligations or otherwise abandon the obligations of property ownership. Local governments in many cities assume responsibility over these parcels, sometimes actively through tax foreclosure and sometimes by default. They become, at least temporarily, a form of "public" property while in the public domain.

While in this transitory state, moving away from a past use and towards a future use that is unknown and unplanned, vacant land and structures are quite vulnerable to contestation of uses. Conflicts often emerge regarding present vs. future uses and different possibilities for future use. These conflicts exist between present owners of the land and the local government, and between the surrounding community and the local government, which may be hoping to sell abandoned property to private developers or investors. There are also conflicts among various users who have or gain access to the property and who may have in mind competing uses for the property. In some communities, residents are treating vacant land or abandoned structures as an open access resource to be shared broadly and utilized to produce goods for the community. As such, community members may begin to treat the property as an open access resource, utilizing it in ways that add value to the surrounding community and/or which produce goods for that community (as in the case of community gardens or urban farms or using abandoned homes to house the homeless). In other instances, public users conduct illegal activities (dumping, crime, etc.), which clearly does not add value to the surrounding community. In fact, as we have previously argued, the "rivalry" in these spaces could lead to an urbanized version of "tragedy" in which open access leads inevitably to further degradation or destruction of the "shared" resource.

Pushing against this tragedy narrative for vacant and abandoned spaces is another narrative rooted in the language of the commons. Unlike Hardin's tale of tragedy in these spaces, opening up access to abandoned or vacant property instead can enhance and capture positive value for the community by virtue of using the property to create goods (both tangible and intangible) that can be shared. This narrative, or argument, characterizes several social movements in the United States and abroad in which activists occupy vacant, abandoned or underutilized land, buildings and structures. These movements are responding to what they view as market failures and the failures of an urban development approach that has neglected the provision of goods necessary to human well-being and flourishing. The tactic of occupation is a form of resistance against the enclosure-through private sale or public appropriation-of these assets or property in transition. Occupation is also a way of asserting that the occupied property has greater value or utility as a good either accessible to the public or preserved and maintained as a common good. For example, in many parts of the United States, as well as in countries such as Brazil and South Africa, activists occupy and squat in foreclosed, empty, often boarded up homes and housing units (including public housing units) as a means to convince municipalities to clear title and transfer these homes and units to limited equity forms of ownership in order to provide long-term affordable housing for neighborhood residents. (Alexander 2015). This "occupy" or "take back the land" movement is a response to the displacement of homeowners and tenants brought on by the confluence of the housing/ mortgage crisis and the forces of gentrification. Rather than leaving these homes vacant and blighted, local public officials often

condone the occupation and transformation of these structures by community members who aim to return the asset to productive use in ways that beautify and improve the properties and, by extension, the surrounding neighborhood. (Alexander 2015, 271).

In a similar way, the Italian movement for "beni comuni" (common goods) has utilized occupation to stake public claim to abandoned and underutilized cultural (and other) structures in an effort to have these spaces either retained as, or brought back into, public or common use. (Bailey and Mattei 2013). The most famous of these occupations occurred when a collection of art workers, students, and patrons occupied the national Valle Theatre in Rome in response to the fear that City would sell it to a developer as part of a larger project for a new commercial center. (Bailey and Marcucci 2013). The theatre had become largely defunct as a result of government cuts for all public institutions, and the Italian Cultural Ministry transferred the management of the theater to the City of Rome. Out of fear by many that the City would then sell it to a developer as part of a larger project for a new commercial center, a collection of art workers, students, and patrons occupied the theater. This occupation was followed by similar occupations of theaters and cultural institutions that were subject to privatization in cities all over Italy. In each case, the occupants' aim was "to recover people's possession of under-utilized" structures and "open up" these spaces for the flourishing of common goods like culture. (Bailey and Marcucci 2013, 997).

While not explicitly using the language of the "commons," these contemporary "property outlaws," (Penalver and Katyal 2010) are very much staking claim to vacant, abandoned, underutilized land and structures as common goods that should be accessible to urban dwellers to create essential resources for their communities. As Peñalver and Katyal's work has demonstrated, those excluded from property often respond in ways that end up reshaping legal norms on property ownership and use. From "illegal" lunch counter sit-ins during the civil rights movement to selective online copyright infringement, "property outlaws" often strengthen the role that property should and can play in changing the legal and social order. Although the creation of urban commons does not turn per se on "outlaw" activity, the claiming of underutilized land, structures and other urban assets challenges the public/private binary of property ownership in which either the state or private actors have sole and exclusive dominion over urban property. In other words, occupation becomes part of an effort to transform a strictly private or public good into a "common" good, made accessible for sharing and possession by a group of local inhabitants.

Consider the way that a collective group of artists in Milan has drawn public attention to the amount of unused and underused spaces in the city and helped to push the city council to recognize the value of utilizing abandoned private and public property to meet community needs. (Delsante and Bertolino 2017). By squatting in abandoned property and re-making those spaces for everyday cultural and artistic activities, the underlying goal of this collective has been to "promote a dialogue with institutions to recognize the process by which an abandoned space could be considered a common-pool resource and thus be made available to the community" and "directly managed by self-organised groups of what it calls 'active citizens' through processes of participatory democracy." (Delsante and Bertolino 2017, 53). On the heels of these occupations, and following substantial political debate, the city provided the collective access to some vacant properties and issued a larger call for proposals to temporarily use available spaces around the city. This was a precursor to the passage in 2012 of a city ordinance setting out criteria allowing the "re-use of vacant spaces" and unused buildings, both public and private, for "for the development of artistic, social and economic activities." A broad class of users, both public and

private, could take advantage of this ordinance. The ordinance specifically identified on an "experimental basis" a list of spaces proposed by any citizen, or group of citizens, to be used in the public interest free of charge for a maximum of three years with the possibility of renewal. (Delsanti and Bertolino 2017, 52). What happened in Milan is reminiscent of Ostrom's observation that successful user- or collective governance of a shared resource is recognition and respect by higher level authorities. As we discuss in the next chapter, several cities have adopted policies or regulations that acknowledge, even enable, the use of publicly controlled or owned land or buildings for the creation of common goods and services by a collective group of citizens or users. This willingness is particularly evident in Italian cities but is spreading to other cities on the European continent through policy diffusion—learning from the experience of Italian cities and adapting those policies within their own legal, social, and economic contexts.

"Commoning" in the City

Policies such as the one developed in Milan recognize that those involved in the creation of urban commons are not simply creating new kinds of resources but also new communitybased institutions for sharing those resources. In this respect these policies recognize, at least implicitly, the value of what many scholars refer to as "commoning." As prominent commons theorists David Bollier and Silke Helfrich argue, the commons is not only about resources, goods and things, but also about an ongoing social process and practice involving human interaction and social relations within communities—whether they be physical or digital communities. (Bollier and Helfrich 2015). Bollier and Helfrich understand commons, as we do, as a blend or co-mingling of a physical (or digital or natural) resource with "social practice and diverse forms of institutionalization." (Bollier and Helfrich 2105, 6). Creating new commons, or commoning, is about a set of practices, and sometimes institutions, that aim to de-commodify resources and resist traditional norms through collaborative organization and decision-making. (Bunce 2015). Commoning thus describes the bottom-up practice of collectively creating or constructing resources that can be shared with others and that meet concrete user needs. It requires not only a resource around which to common, but also a community that has access to and can take care of, manage, and steward the resource over the long run. Commoning begins with the internal work that a community of users must do to create new common goods and then expands to develop the capacity for collective management of existing resources based on strong cooperative norms and shared goals. In this sense, commoning is highly pragmatic, involving the establishment of rules and conditions, and in some cases institutions, for collectively sharing resources among a defined social group or group of users. The practices and patterns of "commoning" vary, of course, depending on the resource, the nature of the community of users, and the social or cultural context.

It is easy to romanticize the idea of "commoning" and of communities coming together to form relationships, or build on existing relationships, and collaboratively create and then govern resources they require to flourish and improve their communities. This is time-consuming and hard work, sometimes exceeding the capacity and/or the desire of communities and users to undertake it. As Ostrom's research demonstrates, commons are not solutions for all social problems; nor can they exist or function sustainably under all circumstances. As her design principles reflect, the hard work of commoning may only be possible under certain conditions such as small homogenous communities and resources with clear boundaries. Even with state enabling, as we have described above, local actors need incentives and sometimes significant external support to engage in collective governance, constructing and creating new resources out of existing ones, and then managing them sustainably over time. This can seem even more daunting, but not impossible, in urban environments that are large, dense, socially heterogenous, and economically competitive.

Amanda Huron's rich account of tenant organizing in Washington D.C. to create limited equity, co-operatively owned housing is a telling example of some of the dynamics involved in urban commoning. She recounts the story of hundreds of residents across the city who found themselves faced with eviction notices to make way for the razing of their structures in order to build tall luxury condominium apartment buildings in a quickly changing city. The D.C. residents, mostly low- or moderate-income African Americans and other minorities, were vulnerable to eviction a time when middle class residents were returning to centrally located, historic city centers. (Huron 2018). For years, tenants across the city worked together to fight their evictions, pool their money to purchase their apartment buildings, remain in place and to exercise control over the increasingly scarce resource of affordable housing. To ensure the affordability of these buildings for future low- and moderate- income persons, the current residents created limited equity co-operative ownership structures. This structure allows apartment dwellers to purchase shares in the co-op for little money, to pay low monthly co-op fees, and then to sell their shares for the same amount that they bought it plus a small amount of interest. To create and sustain this collectively owned and control resource, however, residents who were often strangers to each other (and did not even speak the same language) had to create their own governing structures, negotiate with city officials, find financing, work together to repair and remodel their buildings, write bylaws for making decisions, and decide on house rules and rules of access and exclusion (i.e., who is and is not allowed to buy into the coops). Despite the seeming barriers of culture and language, these "strangers" were able to claim and create a common resource together—in some instances, even holding all of their meetings in as many as three different languages. (Huron 2018, 87)

Huron describes the creation of these urban commons as "unintentional" in the sense that the residents involved were not seeking to create common interest communities nor to create a new institution to democratically govern themselves and their shared resource. These were essentially strangers coming together-tenants who happened to live in the same communitythat were compelled to respond to a housing crisis under intense pressures of time and money. "It is about creating spaces not just for the people members know and love-though, as seen, this is certainly an important part of it—but for people they don't yet know, perfect strangers tossed their way by the currents of urban life." (Huron 2018, 160). They did not start out with necessarily wanting to engage in "commoning" or even appreciate what is involved. They came together for pragmatic reasons and sustain the practice out of collective need. Commoning is one option among a limited array of options, she argues, in cities that have become sites of intense capital accumulation. Traditional home ownership is not an option for this class of residents. As such, she argues, for people without access to capital commoning is rational economic behavior. Although, clearly, LEC members are benefitting financially, their economic self-interest is not driving the creation of the commons. Rather, constructed commons like these create and support economies that are collaborative in the sense that community stability, control and affordability are important elements as well.

The Bin-Zib "co-housing" communities in Seoul, South Korea similarly illustrates the dynamics and work of creating urban commons in dense and heterogenous environments as opposed to the small homogenous ones that were the focus of Ostrom's studies. It also hints at the potential for urban commoning to scale across a city, through networks of strangers

motivated to work together towards a more collaborative and regenerative social and economic system in their city. Founded in 2008 by three people in their early thirties, Bin-Zib started as a communal living experiment in a three-bedroom apartment open to share with other "guests" for any length of stay. (Han and Imamasa 2015). After purchasing the apartment, the founders invited others to live there and disavowed any "ownership" in the house, but accepted contributions by those who passed through according to their ability to pay (although everyone paid an equal amount for shared living expenses). There were no rules for membership in Bin-Zib, allowing people to come and leave as they wanted, for any length of stay. As the number of "guests" increased, so did the number of rented houses that became part the Bin-Zib network of houses, which grew to over 20 houses over the years (although many of these have been disbanded). (Han 2019) The Bin-Zib has grown not only in size but also in its impact. The inhabitants open new houses when the existing ones become congested, and each house is managed or governed according to the social norms and relations of its occupants.

Bin-Zib is a unique, and potentially replicable, example of commoning in a heterogenous, congested urban environment. Because these houses are open to anyone, they attract a cross-section of people with different motivations, ideologies, and sensitivities. There is documented conflict, but also "convivial socialization"—including frequent online discussions, parties, and collective events—that promote relations between community members and allow for the constant re-articulation of what Bin-Zib means to the community. (Han and Imamasa 2015). Notably, Bin-Zib has no articles of association, maintains a flexible structure in which everything is decided by discussion, and intentionally keeps the community as open and heterogenous toward the aim of preserving its egalitarianism. (Han 2019, 181-182). Ben-Zib's development has been a process of trial and error in which "[t]he community has changed

through solving specific problems residents have encountered, and the ways of solving problems were, in many cases, spontaneous." (Han 2019, 177). Bin-Zib has grown into a network of houses around Seoul, but also includes community café and a community bank that supports Bin-Zib communities and several other co-housing communities around the country. (Han and Imamasa 2015; Han 2019). In some of the communities where Bin-Zib exists, its residents actively network with other local actors—individual artists, religious groups, merchants' committees, etc—to support the emergence of a more collaborative and regenerative local economy. (Han 2019, 186-187).

The Bin-Zib example highlights another unique aspect of urban commoning, and what we refer to as social and economic "pooling." Pooling recognizes the capacity of multiple urban and local actors— city inhabitants, civil society organizations, local businesses, social innovators, and knowledge institutions—to access and use existing urban infrastructure to generate new resources (goods and services) that meet community needs. (Iaione and De Nictolis 2017). By mixing and matching social and economic resources dispersed across the city, pooling expands the capacity of these existing resources, and of participants involved in sharing them. Social and economic pooling blends individual and organizational capabilities and occurs across economic and institutional boundaries, often filling the spaces or voids in the access and delivery of essential goods and services. We will return to the ways that pooling can be supported and enabled by city policies later in the book.

Legal and Property Adaptation

What ultimately makes the creation of new forms of shared and collectively managed urban goods challenging is the cost and access to urban land and infrastructure. Urban land and various kinds of urban infrastructure are increasingly a vehicle for high investment returns and the target of public and private efforts to capture and exploit their market value. Gaining and/or retaining access to these resources often involves a struggle or effort to recognize something akin to a collective property right to those resources for the urban poor (Blomley 2008). As the opening anecdote in Chapter One on the vulnerability of community gardens reveals, the specter of rising land and real estate values threaten to displace longstanding communities from the material and immaterial resources, such as social networks, they depend upon. This threat looms even for newly constructed communities like Bin-Zib that are beginning to see rising rents in their neighborhoods. (Han 2019, 186). The same pressures face a group of local residents in Dublin who have collectively acquired buildings to facilitate affordable, "independent spaces" for work, art, or socializing and "frequented by a wide variety of people, from trendy artists to asylum seekers, from working class ravers to anarcho-punks, and from community activists to isolated young people and those with mental health difficulties." (Bresnihan and Byrne 2015, 8). These spaces, acquired in part as a response to rapid urban development, increased rents, the commercialization of street life and the privatization of public space are now vulnerable to those same forces.

As a response to gentrification pressures, urban communities and "commoners" are pushing to transform the legal status of the land and buildings they utilize and/or occupy to place them under community control through legal and property mechanisms such as limited equity cooperatives (LECs) or community land trusts (CLTs), previously mentioned in Chapter One. LECs and CLTs are designed to allow communities to self-govern, and steward, urban land and buildings and to keep them affordable and accessible to future users. Land and buildings managed and governed as an LEC or CLT are dedicated to low-cost housing and commercial spaces as well as urban farming or community gardens. LECs, for instance, differ from traditional housing cooperatives in that they ensure long-term affordability by removing the housing from the speculative market, limiting the resale amount, and collectively subsidizing low-income owners.

CLTs operate most uniquely as a steward of shared resources by removing land from the speculative market and separating land ownership from land use. The original CLT was created to be "a legal entity, a quasi-public body, chartered to hold land in stewardship for all mankind present and future while protecting the legitimate use-rights of its residents" (Swann et al., 1972, p. 10). The CLT operates as a nonprofit entity that holds legal title to the land and enters into long term "ground leases" with those who utilize the land for apartments, homes, commercial buildings or green space. In some cases, instead of ground leases, land users receive a warranty or surface rights deed that secures their right to use the land and to pass it along to their heirs. However, the CLT maintains ownership of the land underneath any building or structure and thus controls the future use of that land, including its affordability. Individual users own the buildings or structure on top of the land and enjoy all the benefits of that ownership-including using, improving, excluding others from it, and mortgaging it. The buildings on top of land can also be transferred or sold by users for an amount determined by the resale formula set forth in the ground lease or deed, allowing a small profit to be made from the sale but otherwise keeping the land affordable for the future purchasers. The CLT may also retain a first right of refusal to purchase the building or unit whenever it is being sold. The terms of the ground lease and all other conditions of land ownership/use are set by tripartite board of directors, which governs the CLT.

CLTs and LECs resonate with what property scholars refer to as "governance property." Governance property characterizes many (if not most) forms of private property ownership today in that such property is shared with multiple owners or users collectively making decisions and rules about access, use, enjoyment, and transfer of property. (Alexander 2012). Governance property is a departure from the prevailing property ownership model, characteristic of Western legal culture, which aggregates all legal rights and entitlements in one owner. As property scholars have begun to recognize, the dominant Western model of property and resource ownership—the "fee simple"—looks more and more ill-fitting for the urbanized, interdependent world in which most people live. Endowing owners (public or private) with a monopoly on urban land and resources, this form of legal ownership "misses most of how urban property creates value" through spatial relationships that result from the density and proximity characteristic of urbanization. (Fennell 2016, 1460-61).

To meet the demands of contemporary urban land use instead requires a mix of approaches to mediate access to resources, particularly for those who have much less of them. It requires, at the very least, embracing approaches that recognize relational property interests and resource governance in ways that advance access to urban resources for the most vulnerable and marginalized communities facing resource uncertainty and precarity. More to the point, it is possible to adapt and unbundle the legal entitlements to access and use property to fit the normative aims of the "commons" that satisfies various commitments to social inclusion and distributive justice. (Marella 2017). Those legal entitlements can be re-allocated to different owners/users and/or limited through legal restrictions that make possible the inclusion of different classes of rights holders. In other words, the bundle of legal entitlements or rights need not be aggregated in one owner (or even a collection of owners) and need not be without internal limits or restriction.

LECs and CLTs place internal limits on the right to hold and sell property; limits that go against the rights that owners would have in traditional private property arrangements in which the owner or owners have total freedom as to how to use, sell, or transfer property subject only to external constraints such as zoning or environmental regulations. In return, limited equity owners gain sustainable wealth building opportunities and lasting affordability. CLTs are governed collaboratively by the users of the property, typically low-income residents, along with the larger community and representatives from government and often the private sector to construct and sustain the buildings, infrastructure and maintenance over the long terms. The traditional governing board of a CLT "tripartite"—an equal number of seats represented by users or people who lease the land from the CLT, residents from the surrounding community who do not lease land from the CLT, and the public (represented by a variety of stakeholders such as public officials, local funders, non-profit providers of housing or social services, and others). CLTs are rooted in a desire for community control over land, to remove land from the speculative market and to facilitate sustainable uses that benefit disadvantaged communities, (DeFilippis, Stromberg, & Williams 2018).

The traditional governance structure of the typical CLT notably differs from the kind of closed, private governance of condos, coops and other "common interest communities." LECs in many ways are akin to common interest communities like condominiums and traditional coops. A cooperative is governed by a board but consists only of private property owners. Unlike a traditional coop, however, in an LEC the owners can restrict the resale and equity gains to keep the housing affordable. They do so by private agreement among private property owners. Those owners can change this agreement at any time to make private gains from speculation, as occurred in the hundreds of cooperative agreements in NYC that converted to market rate units.

CLTs, on the other hand, transform what might otherwise be a collection of individuals owning property, as in a traditional housing cooperative, into a collaboratively governed nonprofit institution which creates a form of collective ownership for the common good through its democratic governance structure.

Both CLTs and LECs are conceived as a way to ensure that critical urban resources remain accessible to individuals and communities by adapting private property entitlements to the norms of a common good. They maintaining affordability, and hence accessibility, of the resource by limiting the amount of equity that can be extracted from these goods so that future generations can share in their use and by creating stable property rights for those who occupy and use the good; by a governance structure that maintains control over the good or service within the community served. As Lisa Alexander has written, property stewardship is created by removing the profit motive and by allocating rights and responsibilities in a way that gives stewards decision-making control over resources in a manner similar to ownership, but without the emphasis on sole dominion and the individual exchange value of property. (Alexander 2019, 402). In other words, stewardship grants control of and access to resources without formal "fee simple" title, without wealth maximization as a goal of property access, and "connects stewards to economic resources and social networks that maximize their self-actualization, privacy, human flourishing, and community participation." (Alexander 2019, 404).

Stewardship encourages co-management, co-development, and construction for the common good. It is not anti-development nor anti-wealth building. It discourages economic development in the absence of community building. It privileges the right to be included in community over the right to exclude from collective resources. It favors collective, community wealth building over individual wealth maximization. Although it can create a path for both.

Consider a recent 2019 study of 58 shared equity homeownership programs and 4,108 properties over the past three decades in the United states analyzed the characteristics of households owning shared equity homes and the performance of these forms of property ownership across the nation. (Wang et. al. 2019). The study focused on the three most common types of these programs-- CLTs, LECs, and deed restricted homes. The study found that limited equity models of homeownership serve predominantly first-time homeowners that tend to be members of vulnerable populations, particularly low-income racial and ethnic minorities, and female-headed households. Limited equity homeownership not only provides stable and affordable housing, across generations, but it also provides for financial security and mitigates risk during times of economic turmoil (e.g. less home foreclosures). More specifically the study found that this form of homeownership can be a pathway to entry to the larger market for homeowners. Six of ten limited equity homeowners used their earned (though limited) equity to eventually purchase a traditional market rate home.

To appreciate the potential of CLTs as a stewardship model, a closer look at the famous Dudley Street experiment, discussed in Chapter One, is instructive.¹ Dudley Street, located in Roxbury, Massachusetts was one of the most economically distressed neighborhoods in the Boston metropolitan region in the late 1980s and early 1990s. After cleaning up many of the vacant lots that littered its neighborhood (a mix of city-owned and privately-owned parcels), Dudley street residents incorporated as a nonprofit (DSNI) and embarked on an ambitious plan to create an "urban village" that would develop the neighborhood without resulting in any displacement of the existing residents. (Medoff & Sklar 1994). To do this, DSNI, along with its community partners, approached the Boston Redevelopment Authority and requested eminent

¹ The source of information that follows is, in part, obtained from an interview by LabGov staff with Juan Leyton, Former Exec. Dir., Dudley St. Neighborhood Initiative (May 18, 2018).

domain authority, which was granted by the City of Boston with the support of the newly elected Mayor of Boston, Ray Flynn. With this authority, the DSNI assumed control of over 1,300 vacant parcels and created a community land trust (Dudley Neighbors, Inc.) that would own and secure that land for long-term affordability.

The once vacant land has been transformed into more than 225 new affordable homes, a 10,000 square foot community greenhouse on the site of a former auto body shop, two acres of community farms, playgrounds, gardens (which today total more than 70), commercial space, and other amenities of a thriving urban village. (Smith and Hernandez 2020, 288). The housing now includes 97 homeownership units, 77 limited equity cooperative units, 55 rental apartments, and 96 individually owned homes. Consistent with its neighborhood plan, the majority of housing units are targeted for families making between 30-60% of the area median income, approximately \$30,000-\$60,000 for a family of four. Individuals or families who wish to purchase one of Dudley's affordable homes participate in a lottery system in order to ensure equal and fair access to the homes that come available. And once purchased, the homeowner pays a small lease fee for the land that the house sits upon, which continues to be owned by the CLT. The homeowner also agrees that if the home is ever sold, which is rare in the Dudley area, that the home must be sold at a cost determined by the formula used by DSNI's CLT. The sustainability of the Dudley model has been proven in part by the fact that during the economic crisis, in 2008-2013, there were no foreclosures of DNI homes even as the surrounding neighborhood had more than 200 foreclosures. (Smith and Hernandez 2020, 290).

The DSNI CLT is democratically governed, organized and run so that each culturalethnic grouping present in the Dudley community gets an equal voice. The Board has 35 seats and of those 35, 20 are reserved for community residents including an equal number of representatives of the four main ethnic groups inside the community. Of the 20 community seats, 4 seats are for Black residents, 4 are for Latinos, 4 are for residents with a Cape Verde heritage, 4 are for white residents, and 4 are for youth (ages 15-18) living in the community. Of the remaining seats: 2 are for community development organizations, 2 for local religious organizations, 7 for partner organizations, and 2 for small businesses in the community. Once in place, these 33 members then elect 2 additional members from those who wanted to participate on the board but were not elected, for a total of 35. Residents alone vote on who gets to serve on the 2- year board term. Campaigns are door-to-door and face-to-face so that all residents get the opportunity to meet the members of their board. Once elected, the Board approves all decisions made by DSNI. All projects and campaigns must be vetted and approved by the Board, but such decisions are always open to community input and participation.

The Caño Martín Peña CLT in Puerto Rico, which includes more than 270 acres of land across seven neighborhoods in an informal settlement, has a slightly different governance structure that is smaller but equally as representative of the collective interests in the land stewarded by the CLT. The 11-member Board of Trustees consists of representatives of CLT users, the larger community, private entities, and state and local government. Of the 11 members, 4 are residents whose homes are located on the land owned by the CLT, 2 are residents of the surrounding communities (designated to serve by the eight organizations which formed the CLT), 2 are non-residents of the District and selected by CLT Board members based on the skills and knowledge they can contribute to the CLT, and the remaining 3 seats are occupied by representatives of state and local government consisting of appointees from the local development corporation, Mayor of San Juan, and the Governor of Puerto Rico. The governance Martin Peña neighborhoods in a participatory process which resulted in a local regulation that established the legal basis for the CLT, including its governance, rules and procedures community stewardship of the land in perpetuity. (Hernández-Torrales et.al. 2020, 198-199).

"Nested" Urban Commons and Polycentric Governance

The question raised by CLTs is whether and how much they can "scale" from a site or location to a citywide or even region-wide network of stewarded and co-governed land and resources. Recently, we have begun to see that they can scale through networking and with the support of local policies and public resources. The use of community land trusts to protect and sustain access to affordable urban goods such as housing, commercial space, and green resources are expanding to protect these resources at the neighborhood level and even across an entire city and region. For instance, building on its successful model, Dudley Street Neighbors and ten other neighborhood groups from across that city in 2015 launched the Greater Boston Community Land Trust Network to expand the CLT model even at a time when acquisition of urban land has been made more difficult because of rising land values and rapidly gentrifying cities. This network has supported and seen the rise of 5 new CLTs—the Chinatown CLT, Somerville CLT, Boston Neighborhood CLT, and the Urban Farming CLT— across the Boston metropolitan area, and is beginning to push for municipal policies and public resources to support their expansion and growth. (Smith and Hernandez 2020, 294).

The city-wide NeighborSpace land trust in Chicago is another example this kind of scaling. Neighborspace is an independent, nonprofit land trust that preserves urban land throughout the City of Chicago for community gardens and open space. Created in 1996 by three government entities – the City of Chicago, the Chicago Park District, and the Forest Preserve

District of Cook County - Neighborspace now oversees 115 land-based sites located in 33 wards across the city, many of which are involved in community gardening projects. Neighborspace's primary goal is to preserve and protect community-managed open spaces, particularly in areas where open space is lacking or vanishing, which tends to occur in underserved areas. The idea for NS was first conceived when city leaders became increasingly concerned about the lack of open space in Chicago and the vanishing number of vacant plots being bought by private developers. In 1994, a consortium of the three sub-state government entities named above brought together community leaders, residents, and nonprofit organizations to brainstorm possible solutions to this ever-growing problem. From these efforts, Neighborspace was born, which was inspired by a recognition that many community members were, on an informal and ad hoc basis, already working together to revive, enjoy and preserve vacant or blighted land in their communities. In an example of social and economic pooling, Neighborspace continues to receive the active support of the city government, the broader Chicago community, the many foundations and philanthropists that provide donations, and the teams of gardeners, composters, and other community actors that perform the day-to-day work on the land. Because of such support, Neighborspace continues to grow in scope and impact; indeed, each year, it acquires between 3 to 5 new land plots, which are then redirected to the dedicated community members and groups that maintain them.

Neighborspace is unique among land trusts because it represents the kind of "nested" and multilevel governance structure that Ostrom found was often present in community management of large-scale common resources. Managing shared resources at a complex, in this case citywide, scale can involve self-organized small units or groups of users acting relatively autonomously but within a federated system which links them together. In the case of Neighborspace, once a land grant is established, the government generally relinquishes operational control to the land trust, which itself transfers most of that control to the local gardeners and community groups that act as "stewards" over the land. In effect, Neighborspace operates as a higher-level authority, while the real control and management over day-to-day affairs is handled by local members and groups in the community where the land is located. Neighborspace, the land trust, handles the land purchases, performs environmental assessments and title work, holds the titles, easements or leases that it acquires, provides liability insurance and legal defense, and works to secure a dedicated water line for every parcel of land that it obtains. It also provides some guidance and other forms of support, "including a signage template, a list of gardeners' rights and responsibilities, and a tool lending library," and it acts as the liaison between the government and the participating community groups. However, it is not involved in the day-to-day management of the land plots, which is left to the community, and plot users, in what is described as a "non-hierarchical" governance structure that prevents the centralization of power in any one individual's (or one group's) hands. The rules of the land trust requires collective governance over the acquired plots, which are prohibited from having a single lead gardener or overseer, but must have multiple leaders overseeing its development, as well as community support and buy-in.²

Ostrom referred to this kind of nested system as "polycentric" to capture the idea that although higher level governments or officials might take the lead on a large-scale problem, the care and responsibility for shared goods can operate at different levels. (Ostrom 1990). While the central government authority remains an essential player in facilitating, supporting, and even supplying the necessary tools to govern shared resources, in polycentric systems multiple

² Based on an interview with Neighborspace Staff by LabGov researchers as part of the Co-Cities database.

governing entities or authorities operate at different scales with a high degree of independence to make norms and rules within its own domain. (Ostrom 2010a). According to Ostrom, the two organizational forms for commons management theorized in the mid-twentieth century-the market and the state, the first for the production of private goods and the second for non-private goods-do not "adequately deal with the wide diversity of institutional arrangements that humans craft to govern, provide and manage public goods and common-pool resources." (Ostrom 2010b, 642) A polycentric approach to local governance locates commons institutions in between the market and the state. As Ostrom scholar Daniel Cole has argued, to understand the polycentric approach is to understand the distinction between *government* and *governance*: governance is not just 'what governments do' because governance is not a function limited to the State; rather, myriad non-governmental organizations, local neighborhood associations, individual property owners, etc. can (and already do) play an important role in governing resources. (Cole 2011, 397). The autonomous nature of smaller governing units-whether individual community gardens or community land trusts—is possible because of the pre-existing relationships and trust established before the larger entity which nests them is formed.

Polycentric systems can unlock what Ostrom 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 without privatizing those goods. (Ostrom 2005b). All the actors in a polycentric governance regime can realize activities for the urban commons, coordinated and enabled by the public authority. The role of the State becomes that of providing them necessary tools (including appropriate public policies packaged as collaborative devices) and connecting the several networks of actors. Instead of trying to solve a large (and diffuse) issue alone, governments look for allies at different hierarchical levels to facilitate the initiatives of proactive citizens who, individually or in groups, are willing to take direct care of the commons. In a sense, the government is looking to share the responsibility of caring for common goods with an active citizenry. This sharing implies that citizens are willing to become *city-makers* rather than just *city-users*. Some have argued that this kind of active citizenship constitutes a "third sector" of both informal and formal organizations (or collections of individuals) outside of the state or market, capable of providing goods and services for the wellbeing of citizens, even as it risks putting too much pressure on residents. (Bang and Sorensens 1999). We do not mean to equate polycentric governance with devolution of responsibility by local authorities over the provision of basic public goods and services to city residents. Rather, the principle is intended to reorient public authorities away from the central state to an active citizenry willing to collaboratively govern common resources.

Nevertheless, there are reasons to be critical or cautious about offering up nested or polycentric governance resource regimes, even as a partial answer to rising inequality of resources in cities today. The dangers of any decentralization are certainly present—the capture of government officials by economic elites, or the enclosure or privatization of public goods and spaces. Other shortcomings include the coordination and information sharing failures, aggravation of structural inequalities, balkanization of resources, the exclusion of certain individuals and communities, entrapment of others, among other potential drawbacks. For example, there are signs that not all CLTs are created the same, particularly in respect to the quality of democratic governance and the goal of equality of representation, particularly for those vulnerable to exclusion from the governance and management of public assets (users- or communities). For one, the traditional "tripartite governance" structure of CLTs is not always followed. (Miller 2013, 5). Many newer CLTs are may be falling prey to the public-choice

capture danger in which land use and development decisions are made by a group of elites that invest in projects serving their own interests which do not always align with the public interest. Others bemoan the loss of "community" in CLTs and the loss of community control of land and resources. (DeFilippis et. al 2018). As DeFilippis et. al. note, the "community" of this CLT was originally conceptualized as a nested set of relations, involving a resident community living in the trust, a wider community of residents and others who represent the broader community that would benefit from a restructuring of land ownership practices. Today, however, some CLTs have moved away from these overarching aims and have simply become a tool to provide affordable individual homeownership in expensive markets. The focus on individual ownership, however, detracts from the attention on utilizing CLTs to empower disadvantaged communities and for community control of land and neighborhoods. (DeFilippis et. al 2018).

Some of these drawbacks, however, have less to do with the idea of polycentricity than the conditions under which it can flourish. In other words, the design of well-structured governance institutions and rules that are put in place can prevent against some of these drawbacks through clear procedures for entry and exit, democratic governance rules to ensure that strong representation from the most vulnerable stakeholders, and establishing clear normative values (such as community control) that guide these institutions. For this reason, the Dudley Street CLT has been held up as a model of what legal scholar Anna di Robilant has called "democratic deliberative" property (diRobilant 2014). This form of governance property promotes its public-oriented character through decision making, enforcement, and monitoring by "multiple actors affected by the use of resources that implicate public values and collective interests." (diRobilant 2014, 306). The idea of democratic deliberative property maps nicely onto the notion of property stewardship in that "decisions concerning the use and management of resources that implicate fundamental public interests" are not made by a single owner, even if a public official or agency, but rather "through a more deliberative democratic process in which representatives of affected parties participate as equals and give one another reasons that are mutually acceptable." (diRobilant 2014, 304-305). The challenge, however, is how to manage this design, or co-design, processes so that the dangers and risks attendant to allowing these autonomous institutions to flourish and govern common resources reflect deliberative democratic values and accountability to the communities they are set up to benefit.

What stabilizes the kind of collaborative institutional ecosystem that we envision in the next few chapters is the role of the public authority, which becomes ones of an enabler and facilitator of the creation and maintenance of urban commons and ultimately of political and economic redistribution. In the next chapter, we will turn to the emergence of city policies that enable, facilitate, and support urban commons and allow them to "nest" within the governance infrastructure of the city. While communities, and other stakeholders, organize themselves autonomously as potential collaborators that can collectively manage urban resources, city officials and staff are tasked to assist, collaborate, and provide technical guidance (data, legal advice, communication strategy, design strategies, sustainability models, etc.) to those efforts. The governance output that emerges from implementation of these policies is the co-design of a variety of urban commons as well as the co- production of community goods services at the city and neighborhood level. These very sophisticated processes and institutional architectures are new and complex to design, as we shall see, and do not always function as they should in an ideal world. However, these policies are window into out an alternative vision of city governance in which heterogeneous individuals and institutions can come together to co-create or co-govern the city, or parts of the city, as a commons.

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