

Introduction

Commons Research in the Twenty-First Century and Beyond

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This book grew out of a conference organized in 2018 to mark the fiftieth anniversary of Garrett Hardin's *The Tragedy of the Commons*, one of the most cited articles of the twentieth century. The conference was less a celebration of the substance of Hardin's essay than an acknowledgment of how it has shaped half a decade of research and theory. The conference, held at Georgetown University's Law Center in Washington, DC, brought together nearly fifty researchers from over twenty different nations to present their research on a wide variety of interdisciplinary and transdisciplinary perspectives on the "commons." The scope and depth of research presented at this conference could hardly have been imagined by Garrett Hardin when he published his essay in 1968. Nor could he have imagined that the first woman to win the Nobel Prize in Economic Science, Elinor Ostrom, would debunk the central assumption underlying his famous essay – that shared resources must be either privatized or heavily regulated in order to prevent their depletion. In many ways, however, Ostrom revived what might have been a waning theory and field by setting in motion a whole new line of inquiry and research empirically demonstrating the variety of ways that resource users and communities come together to cooperatively utilize and sustainably manage shared resources.

As this eclectic volume illustrates, the concept of the "commons" has dramatically expanded to include many kinds of shared resources, both physical and virtual, in addition to a variety of other topics, including the global atmosphere, cities and urban infrastructure, neighborhoods and community gardens, technology and software, knowledge sharing and data networks, civil society organizations and humanitarian aid, among others. The body of research that now broadly falls under the category of "commons literature" is, needless to say, both vast and diverse, defying traditional categories and even Ostrom's original conceptualization of the parameters of her research agenda.

For much of the latter half of the twentieth century, Hardin's *Tragedy* was the starting point for many researchers thinking about the social dilemmas characterizing depletable, open access resources. Hardin's stylized tale of tragedy unfolds in the context of a "pasture open to all" on which each individual herdsman is motivated by self-interest to continue adding cattle until the combined actions of all the herdsman result in overgrazing, eventually depleting the resource. While Hardin was not the first to note that self-interest can result in collective failure, he provided a memorable parable that elegantly illustrated how individualistic-minded motivations can destroy or deplete shared resources. As Hardin summed up his core insight, "freedom in the commons" – or unregulated and open access to a shared resource – "brings ruin to all." Absent a system of private enterprise or government control (i.e., allocation of use and other rights), it

would be difficult, if not impossible, to avert this tragic result. Individual users of a commons will always fully exploit their access to shared resources to their advantage, according to Hardin, while absorbing only a small fraction of the marginal cost of that use.

Since its publication, Hardin's article has gained impressive traction with a broad range of scholars from across the globe in diverse fields of study. For many years after its publication, the concept of the "commons" was consonant with Hardin's open pasture where everyone had rights of inclusion and no one had rights of exclusion. These "common pool resources," as they came to be known, are characterized by the difficulty of excluding users from them ("nonexcludability") and the potential for overconsumption ("rivalrousness"), meaning that one user's share or consumption of the good diminishes the availability of that good to others. Many scholars, and this is particularly true of legal scholars, have tended to hew very closely to these neo classical economic assumptions when analyzing resource dilemmas or problems through the lens of the commons. These scholars start from the idea that the commons, or common pool resource, is an unrestricted and unregulated open access resource that allows uncoordinated actors to overconsume or over exploit a resource. They then proceed to analyze the collective action problems that beset these resources and propose solutions to avoid "tragic" outcomes.

The year 2020 marks the thirtieth anniversary of Elinor Ostrom's seminal book, *Governing the Commons: The Evolution of Institutions for Collective Action*. In this influential work, Ostrom challenged the core assumption underlying Hardin's *Tragedy* by refuting the view that individuals cannot collectively come together and manage common pool resources sustainably without resorting to either a system of public regulation or private property rights. Ostrom's research revealed that many social groups and communities around the world, in entirely different contexts and focused on entirely different resources, have successfully averted the Hardinian curse pertaining to shared resources by developing and maintaining self-governing institutions. She identified a number of these self-organized resource governance regimes, including common lands governed by local village communities in Switzerland and Japan, irrigation communities in Spain and the Philippines, as well as other examples of fisheries and irrigation projects managed communally in Turkey, California, and Sri Lanka. Many of these have survived for multiple generations and involved the investment of significant resources by the participants involved, who together designed basic rules to structure their interactions and usage of the shared resource, created organizations to manage and oversee the resource, held each other accountable through collective monitoring, and enforced collectively agreed-upon norms to reduce the probability of free-riding.

Ostrom's groundbreaking work spawned an explosion of research and a dedicated community of "commons" scholars following in her methodological footsteps. These scholars continue to test and extend Ostrom's "design principles," originally applied to successful commons institutions, to a range of new geographical and resource settings. They also utilize Ostrom's Institutional Analysis and Development (IAD) framework, which predated her work on common pool resources, to analyze collective action situations with a focus on institutions involving multiple actors. The IAD framework includes both "endogenous" (internal) and "exogenous" (external) variables that can influence how well individuals cooperate together, and act collectively, to achieve shared goals for both themselves and their communities in light of social dilemmas and biophysical constraints. The IAD framework was later expanded into Ostrom's social-ecological system (SES) framework, a fuller elaboration of the relevant contextual variables that contribute to collective action situations involving multiple actors. The IAD and SES frameworks continue to be used by scholars to examine case studies of lobster fisheries, forests, irrigation systems, grazing pastures, and other scarce, congestible, and nonrenewable natural resources.

The literature on collectively governed natural “common pool” resources has spawned, over time, further refinements of Ostrom’s methodological frameworks as scholars have sought to apply her insights to other communities and new situations across the world. Ostrom and others are credited with opening up a healthy cross-disciplinary conversation and embrace of multiple research methods, including the case and field studies used by Ostrom, in addition to laboratory and field experiments, game theory and agent-based models to test and understand the conditions under which cooperation between different actors is possible and can be sustained. There is now a robust literature on the commons building on the incredible legacy left by Ostrom, and her many collaborators, pushing the boundaries of old and “new” common pool resources and the challenges they face in terms of conceptual clarity, institutional design, technological advancements, and various kinds of new governance dilemmas. The emerging literature on the knowledge commons and urban commons, for instance, not only explore the ways that Ostrom’s design principles and IAD framework apply to different kinds of resources, but they expand and redefine our very understanding of “resources” anew. These newer interpretations and forms of commons challenge the characteristics of traditional CPRs. They can, for example, more closely resemble traditional non scarce, non rivalrous public goods (e.g., highways, transportation systems, public schools) than potentially endangered natural resources.

Applying commons theory to new and different contexts opens up a whole new range of theoretical and applied questions, in addition to highlighting new social dilemmas and institutional questions that give rise to new normative implications not previously considered or even imagined. Conceptualizing urban assets, neighborhood institutions, or civil society organizations as a commons, for example, raises important questions about the state’s role in incentivizing the production and governance of shared goods and services, and the nature and size of the community that engages in collective action. Thinking about data and information as pooled resources opens up a new set of questions about the role of producers of goods that are not naturally existing, and the interplay between open access resources and the role of property rights in designing well-functioning innovation systems.

Given the robust literature on the increasing heterogeneity of the commons, and the various ways in which researchers continue to expand Ostrom’s work beyond natural resources, one might wonder whether the conceptual boundaries of the commons have been stretched to their full potential, and perhaps even beyond the point of a coherent definition or methodological approach. We think not. This volume illustrates that the field continues to change and evolve without losing the core research questions that decades of commons scholars have wrestled with. At the same time, while the new and evolving contexts to which commons theory is applied and adapted may not stretch the original concept past its breaking point, they do enlarge the empirical and normative space in which researchers and practitioners locate new social dilemmas and identify new responses and solutions to those dilemmas. As such, we can now distinguish between two kinds of evolution, or innovations, in commons research, both of which are represented in this book. The first kind of innovation, as mentioned, involves the extension of existing commons definitions and methodological frameworks to different kinds of goods and resources, which involves adapting the original frameworks and principles to new challenges and dilemmas. The second kind of innovation, which is potentially more disruptive to the existing conceptions and frameworks, attempts to apply the original concepts to new social, political, and economic contexts that yield new dimensions to our understanding of the term “commons.”

Consider two examples in contemporary commons literature that illustrate the latter kind of evolution or innovation. The first example is the normative valence that the term “commons” is

associated with in certain academic disciplines and by some scholars and activists. The language of the commons has been taken up by activists, progressive thinkers, and scholars around the world to intervene in what many consider the excessive commodification and privatization of resources and goods. The language of the “commons” is deployed to bring under scrutiny the ways that modern capitalism has resulted in the enclosure by elites of many shared resources – i.e., public water or utility systems, vacant land, housing, information and data – that should be left in the public domain, accessible to the public, and not privatized. For example, the Italian movement known as “benicomunismo,” which roughly translates as “commonism,” was centered initially around a national referendum on “water as a commons.” This movement was triggered by a national government measure that would allow local public services and utilities (including the integrated water system) to be auctioned off on the market, where private corporations could bid on them. After the proposal’s defeat, the movement took further root throughout Italy through occupation by activists of abandoned and underutilized cultural structures, such as theaters. These structures, most famously the Teatro Valle in Rome, were inhabited and revived in an effort to retain these spaces for communal or public use. The occupations were in response to the state’s threat to privatize them; occupation of the structures by activists, academics, and others was intended to “recover people’s possession” of these public structures and “open up” these spaces for the flourishing of common goods like culture.

This more normative strain of the commons literature is particularly present in the burgeoning literature on the urban commons. Thinking of the city as a commons, argues architect Stavros Stavrides, supports the idea that urban dwellers should appropriate or reclaim public space as a commons through “collective inventiveness,” which requires resistance to the idea that cities are sites of capital production and surplus. The commons, according to these scholars, must be “wrenched” from the capitalist landscape of cities out of fear that collective resources are always susceptible to being co-opted by the market. The roots of progressive reformers’ commons analysis is traceable in part to the work of Michael Hardt and Anthony Negri (2009), who refer to the “common,” rejecting the term “commons” as a reference to “pre-capitalist shared spaces that were destroyed by the advent of private property.” Cities are “to the multitude what the factory was to the industrial working class,” they argue. In other words, it is the “factory for the production of the common,” a means of producing common wealth.” The commons thus becomes a collective claim to property in neighborhoods and communities as a response to the appropriation and enclosure of those places through private property rights. The poor have a right “not to be excluded” from the property of the city, argue property scholars who embrace this vision of cities as composed of common property. As such, they should be able to claim streets, parks, and buildings, among other resources, over which they have a legitimate interest.

The second example illustrating evolution of the term “commons” is the transformation of the word from a noun into a verb – “commoning” – to mark a turn away from the IAD and SES frameworks that Ostrom and many of her academic followers applied. Here we see a shift from a focus on studying collective forms of governance toward a focus on community and communal social development. For some scholars like Peter Linebaugh, “commoning” is a process – i.e., the social process of users in the course of managing shared resources and reclaiming to understand commons as socially produced. That is, commons are created, used, preserved, and managed by some collection of people in community with each other. In his words, “there is no commons without commoning.” Commons theorists David Bollier and Silke Helfrich further build out the idea of commoning to argue that the commons is an ongoing social process and practice involving human interaction and social relations within communities – whether they be physical or digital communities. They understand commons as a blend or co-mingling

of a physical (or digital or natural) resource with “social practice and diverse forms of institutionalization.” Commoning thus describes the bottom-up practice of collectively creating or constructing resources and begins with the internal work that a community of users must do to create new common goods. This conceptualization 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.

Amanda Hurons’ rich account of tenant organizing in Washington, DC to create limited equity, cooperatively owned housing, in response to displacement from their neighborhood as land values rise and landlords’ attempt to extract higher rent, is the first book length account to focus on “commoning” dynamics in thick social and economic contexts. For years, tenants across the city worked together to pool their money to purchase their apartment buildings so that they could remain in place and exercise control over the increasingly scarce resource of affordable housing. To create and sustain this collectively owned and controlled resource, however, residents who were often strangers to each other (and did not even speak the same language in some cases) had to create their own governing structures, negotiate with city officials, locate financing, work collaboratively to repair and remodel their aging buildings, write bylaws for making decisions, and decide on rules of access and exclusion (i.e., who is and is not allowed to buy into the coops). 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 community – united by the shared pressure and challenge of a housing crisis. Commoning is one option among a limited array of options, she argues, for people without access to capital and where pure economic self-interest is not driving the creation of the commons. Constructed commons, like those the housing coops described above, can create and support new kinds of collaborative economies that promote community stability, control, and affordability over the long term.

These two examples of the kinds of innovation in commons research and theory demonstrate the wide lane available for scholars who find new arenas, and new dimensions, to collective action and shared resource challenges that could benefit from the insights of the rich literature on the commons. This book demonstrates that innovation in commons scholarship need not mean stretching the concept of the commons beyond the core research questions that traditionally defined it, and fueled Ostrom’s own work. The authors in this volume instead represent the kind of influence that both Hardin and Ostrom continue to have on understanding the variety of resource dilemmas that exist in different contexts, and the conditions for effective collective action to overcome those dilemmas through social norms, rules, and institutional arrangements. In other words, while the research questions remain much the same, the contexts in which scholars and researchers are asking them, as this book illustrates, continue to evolve.

In Part I of the book, *Revisiting the Origins and Evolution of Commons Thought*, the contributing authors offer unique perspectives on Hardin, Ostrom and their contributions over time and as applied and understood today. William Blomquist argues that innovations in commons research and extensions of the commons framework have moved far beyond the archetypal village grazing pasture. The dynamism of the field may therefore prompt some reflection on what “commons theory” or “the commons framework” means in non-territorially bounded commons. Fortunately, the origins of Elinor Ostrom’s framework are compatible with

such innovations and extensions; indeed, reexamining the line of inquiry that gave rise to the Ostrom framework may benefit those working now on the field's research frontiers. A political scientist, Ostrom was principally concerned throughout her career – and acutely in the period leading to *Governing the Commons* – with how people manage (and sometimes fail) to organize the governance of anything by creating and modifying institutional arrangements for coordinating their behavior and pursuing shared goals. In this chapter, those original questions that animated Ostrom's work are reconsidered for the insights they can provide for current innovations in commons research.

Andrew P. Follet, Brigham Daniels, Taylor Petersen unpacks Garrett Hardin's *Tragedy of the Commons* by explaining how the controversial views of its complicated author and the explosive time in which Garrett Hardin wrote his landmark essay. They note that Hardin is a complicated figure. His core argument in *The Tragedy of the Commons*, often excerpted out of many anthologies, is an argument for population control. While others advocated for population control, Hardin's particular views veered from the mainstream, and incorporated aspects that both at his time and today would be considered racist and xenophobic. Given the controversial author taking on a challenging subject, it is quite surprising that the essay got the reception it did. In addition to the essay's merits, it had great timing, launched precisely when the environmental movement neared its tipping point and just before his most controversial idea – population control – was about to enter the public realm as a serious matter of debate.

Haim Sandberg challenges a key precondition for sustaining commons institutions – tight-knit communities. This is the kind of “kinship” that seems to be present in so many of Ostrom's examples of successful commons institutions. The chapter explores kinship and the Commons through the lens of Israel's Bedouin Experience. Sandberg argues that the gradual transformation of traditional nomadic societies into modern urban societies reflects a major change that has weakened the ability of kinship relations to serve as a social incentive to support sustainable common property regimes resulting in the fostering of a modern urban tragedy of the commons. The scholarly debate between Hardin and Ostrom on the most effective form of regulation of common property, he argues, is an effort both to identify and to influence the path of human evolution. The chapter illuminates this debate by analyzing both theories of social evolution and examining closely the urbanization processes undergone by Bedouin society in Israel. It highlights the link between strong tribal kinship relations and sustainable management of the commons, showing how the weakening of blood ties reduces the incentive to cooperate. It raises the question whether societies in which kinship ties have become less powerful can still produce strong enough incentives for collaboration.

Part II of the book, *Averting New Tragedies*, considers previously unexplored or particularly vexing common pool resource dilemmas that could lead to tragic outcomes, and novel ways to potentially avoid those tragedies. Greg Bloom explores the way that community resource directory data comprises information about the accessibility of health, human, and social services that are available to people in need. Such services are provided by a disjointed landscape of governments, non profit organizations, contractors, and other civic institutions. A market of “infomediaries” aggregate this information manually, for private use in their proprietary channels, making it available for other uses only as a commodity to be sold. The result is a digital anti-commons, in which resource data is simultaneously overproduced and underutilized. This tragedy causes various kinds of systemic dysfunction across the so-called safety net. He outlines strategic interventions pursued through the Open Referral Initiative – including development of data exchange standards, open source infrastructural tools, a community of practice, and

sustainable business models and associated methods of pre-competitive cooperation that can effectively provision community resource directory information as open data.

Blake Hudson argues that the resource management complications posed by “Temporal Commons” – the common pool of time shared by present and future generations when making resource management decisions – are understudied in the literature. The chapter describes their nature, before detailing how the typical solutions to the tragedy of the commons – private property, government regulation, and Elinor Ostrom’s successful collective action model – fail to adequately account for temporal commons. The chapter also explores some factors that distinguish temporal commons from traditionally studied commons, making them subject to a potentially more inevitable form of tragedy. The chapter concludes with initial thoughts on avenues for better addressing the dilemmas created by temporal commons.

Bryan Burns analyzes the transformation of climate dilemmas from tragedy to cooperation through application of the prisoner’s dilemma game, which provides an elementary two-person model of the social dilemma situation at the heart of the tragedy of the commons, where incentives discourage cooperation that could be better for everyone. The chapter explores solutions for “changing the game,” turning a social dilemma into a win-win situation, and the implications for crafting cooperation in commons. He proposes that solutions to commons problems can work by changing a Prisoner’s Dilemma incentive structure into a Stag Hunt where cooperation is a win-win equilibrium. However, Stag Hunt is still a social dilemma with an assurance problem where choosing the cooperative option risks getting the worst outcome, if the other person does not also cooperate. So, distrust and a desire to avoid the worst outcome (maximizing the minimum payoff) could lead to an inferior equilibrium where everyone is worse off than they might have been. Changes that switch the rank of the two lowest-ranked outcomes turn Stag Hunt into a harmonious game of Concord, also known as No Conflict, where all the incentives align to encourage cooperation.

In Part III, *New Forms of Contested Commons*, the authors probe new social and economic dilemmas attendant to some forms of shared but contested resources. In each of the chapters, the authors utilize insights from the commons to intervene in tensions between private and public roles, and individual and community interests, in managing shared resources. Andrea McArdle applies commons theory to public housing in the United States, which, despite decades of disinvestment and mismanagement, remains a significant community asset serving affordable housing needs. Using New York City’s embattled Housing Authority (NYCHA), the nation’s largest public housing agency, as a case study, the chapter argues that public housing, though not a classic common pool resource, serves a broad swath of vulnerable urban residents and can be reimagined under an urban commons framework. Doing so ensures that, in a time of transitioning uses of public housing assets, residents have meaningful input concerning disposition of space within public housing campuses. The democratizing implications of commons theory respond to NYCHA residents’ essential exclusion (despite requirements in federal law) from revenue-driven decisions increasing private developers’ control over NYCHA properties through long-term leases and public–private partnerships. Grounded in residents’ urban knowledge, experience, and need, and informed by the social function of property theory, applying commons principles adds normative and theoretical heft to residents’ equitable stake in decisions concerning public housing’s increasingly threatened spaces.

Michelle Reddy extends the concept of the commons to humanitarian aid as a shared and contested common resource. Acknowledging that much of the commons literature focuses on collaborative governance of environmental resources, she argues that due to the pressures of climate change, the number of natural disasters will only increase, and humanitarian crises are

already on an uptake. She cites as an example the 2013–2016 West Africa Ebola Epidemic, which occurred along the border of three countries with different institutional histories. Drawing on interviews with 100 civil society organizations and domestic NGOs, Reddy illustrates how top-down management of the 2013–2016 Ebola Response by governmental and international organizations led to policy failure, only until local organizations were involved. Ebola unveils the inefficiency of neglecting local actors, typical in international humanitarian response. In addition, contestation of humanitarian aid resources viewed as “commons” by recipients and “private” by international aid organizations fuels tensions in the aid relationship, and particularly during a crisis where local buy-in is essential.

John Powell explores the economic system as a “co-created” commons. He argues that while we all share the institutional arrangements that generate economic benefits, neither the wealth generated by the system, nor the negative impacts, are shared equally. The result is an economic system focused on the privatisation of shared resources that generates inequalities around the globe. His chapter brings together two broad strands of literature on commons: one arising from the public trust doctrine, and the other based on the economic characteristics of a good or service in terms of its access (“excludability”) and consumption (“subtractability”). Powell links these concepts with more recent work on “productive commons,” where shared resources are generated through collaborative activity, and ideas from evolutionary economics, which explore the economic system as a process and structure of rules, rather than as a series of transactions based on the allocation of property rights. Evidence is provided to support the argument that commons are an integral element of the economic system, and as a result account for some of its efficiencies and, where rule structures fail, for negative impacts on socio economic and ecological systems.

Part IV, *Urban Landscape and Infrastructure as a Commons*, is dedicated to exploring an emerging and robust literature on the urban commons and the idea of the city as a commons. Can we conceptualize some urban assets and shared resources in cities differently and, if so, how might it change the management and governance of those resources and the democratic character of cities themselves? Rebecca Bratspies embraces the urban forest as an urban commons – a site of public contestation, agency and public management. While forests are among the most classic common resources, urban forests are generally not thought of as forests or even as collective goods. Instead, street trees are typically perceived as individual trees, separate and atomized from each other. She notes, however, that some urban policymakers manage their trees as a publicly owned, publicly designed forest and that the value of trees in the urban context support this view. Urban trees are increasingly viewed as mitigating some of the most negative environmental impacts of urbanization, in addition to their positive aesthetic, psychological, sociological, and spiritual impacts. Bratspies concludes that it is past time to think of the urban forest as a commons. This chapter begins that task by laying out the case for rethinking the urban forest, treating it as a unified public commons, and involving citizens in managing that commons.

Elena De Nictolis and Christian Iaione offer an empirical assessment of the City of Bologna’s groundbreaking regulatory experiment on enabling urban commons throughout the city. The “Regulation on public collaboration for the Urban Commons” proposed the creation of “pacts of collaboration” between the local government and different actors and sectors in the city for the care and regeneration of a variety of urban resources. The regulation produced more than 400 signed pacts of collaboration and spurred a regulatory race to adopt its framework by, to date, more than 180 Italian cities. The chapter presents an empirical assessment of 280 pacts signed between 2014 and 2016. The authors’ analytical approach to this investigation is rooted in the

literature on political economy and the literature on the quality of democracy. Their analytic approach is designed to assess whether a model of co-governance of urban assets as commons impacts on the democratic qualities of equality and rule of law at the urban level. In their final analysis of the historic regulation, they suggest that Bologna may have missed an opportunity to create multi stakeholder partnerships and collective economic institutions, at the neighborhood level and throughout the city, aimed at promoting sustainable and inclusive economic development in distressed areas of the city. They conclude that legal recognition of the urban commons is not sufficient if not coupled with an integrated policy program and more political and financial investment in urban commons as neighborhood collective economic units

Sofia Croso Mazzuco investigates how the urban commons “scene” has been developing in different parts of Brazil, through a systemic analysis of three distinct urban design and architectural projects. Mazzuco outlines challenges and opportunities from the perspectives of stakeholders’ and the outcomes achieved in each project. The first project analyzed is an innovative school that was co-designed and will be co-built with, and for, an outskirts community in Sergipe, northeast of Brazil. The second project is a public space collective regeneration in a shantytown in Santos, Brazil’s biggest harbor city. The third project, a network of ten public spaces for children, was co-designed and co-built with primary and nursery schools in its hosting community in Campinas (a country town of São Paulo). All projects are contextualized before, during, and after their common interventions, illuminating strategies to strengthen urban commons capacity in Brazilian and similar cities.

In Part V, *Reassessing Old and New Institutions for Collective Action*, the chapter authors focus on the kinds of institutions and organizations that could be viewed as sites of collective action around governance of shared, common governance. They assess, or reassess, these institutions using the analytical tools of commons researchers, including but not limited to Ostrom’s IAD framework. Alexandra Flynn’s Chapter focuses on Business Improvement Districts (BIDs), a hybrid public/private entity, that some consider to be an example of a CPR institution. Flynn reviews the scholarly treatment of BIDs in relation to the urban commons, both in regard to the property that they govern, and in the multifarious governance networks that result among them and other bodies. Her chapter lays out squarely the tensions raised by property law and legal geography scholars who question whether BIDs are examples of or in conflict with the urban commons. In the final analysis, Flynn advances a typology that focuses on decision-making, representation and accountability as normative measures of the urban commons. Using this typology, she inquires whether the language of the urban commons can be used to understand BIDs, or whether this characterization embeds, legitimates, and privileges these bodies within city decision-making to the detriment of other claims.

Barbara Bezdek queries whether a community land trust (CLT) is a commons, either metaphorically or in actuality. This inquiry is motivated by the ubiquity of CLTs in equitable development movements: reclaiming commons for the commoners in contexts of vacant disinvested housing held away from people needing it for housing by its private and State ‘stewards.’ CLTs are part of nearly every progressive response to today’s affordable housing crisis because they decommodify housing, taking it out of the speculative market, and securing land for permanently affordable housing. Although the CLT offers an intermediate form of land ownership and control between the speculative market and the State, Bezdek argues that its distinct tenure and shared equity legal structure is not sufficient, alone, to merit a commons analysis. The chapter considers emerging CLTs as a form of urban commons and contributes to the contemporary turn of commons literature beyond its origins regarding natural common pool resources, toward the influence of commons models in additional areas of policy making and

forms of resource management that avoid overly individuated ownership and control by the speculative market and the State. The author concludes that the legal form of community land trust recognized in American law maps onto the common property spectrum, in weak and robust degrees, within the commons frame of the pioneering work of Elinor Ostrom and her colleagues. The CLT-as-Commons analysis here emphasizes two characteristics of enduring commons: self-governance and the transgenerational resource preservation inherent in the concept of commons “management.”

Anthony DeMattee and Chrystie Swiney apply Ostrom’s Institutional Analysis and Development (IAD) Framework to the institutional arrangements that structure and organize the operating environments for civil society organizations (CSOs). They begin by defining what is meant by “civil society” and “CSOs,” and highlight their essential attributes. DeMattee and Swiney then discuss the importance of the legal and regulatory frameworks that underlie the existence and operations of CSOs. They assess the role of CSOs in preventing commons tragedies from emerging. After presenting the types of rules that inform every IAD action situation and applying them to the existing research on CSO laws, the authors conclude by reconceptualizing CSO regulatory regimes through the lens of Ostrom’s IAD framework and analysis.

Erik Nordman considers through the lens of polycentric governance the 2030 District Energy Program, which twenty cities across North America have joined. To join the 2030 District resource conservation program, building owners in participating cities voluntarily pledge to reduce CO₂ emissions from building energy use and transportation, as well as water use, by 50% by 2030. The 2030 Districts range in size and climate. In the absence of robust climate change regulations, the 2030 Districts’ voluntary, non regulatory approach is a novel way to reduce resource use. However, it is unclear whether participating buildings are reducing resource use and what methods are most useful in holding the participants accountable for meeting their voluntary goals. Therefore, Nordman uses the Institutional Analysis and Development (IAD) framework to build a conceptual model of the 2030 District program. Using Grand Rapids, Michigan, as a case study, his analysis finds that the IAD framework is an appropriate tool to understand the complex relationships among a 2030 District’s biophysical attributes, network of actors, and energy systems. The analysis suggests that the 2030 Districts may be able to achieve their goals if they meet certain conditions, such as having strong participation incentives, clear performance standards, compliance monitoring, and reduced free-riders.

Part VI, *Managing and Restoring the Commons*, explores the ways that communities and individuals work together, often with government entities, to manage traditional natural resource “commons” to avoid tragedies and even to restore degraded common pool resources. Pradeep Kumar Mishra explores the way that traditional common pool resources (CPR) in India, on which rural communities depend for their livelihoods, have degraded significantly in the past few decades. Considering that a number of funded projects have been implemented for their revival, Mishra notes the important role that facilitating government agencies play an important role. However, he argues, the extant literature on CPR institutions does not put much emphasis on facilitated institutions where an external agency plays critical roles. His chapter tries to fulfil this gap by understanding how facilitating organisations have engaged with local dynamics and influenced the outcomes. Based on a qualitative study of CPRs in 19 villages facilitated by 11 agencies in India, the study found that CPR development interventions are context specific and often go through iterative processes. The facilitating organization does not play the role of a catalyst, rather it actively influences the decision making process through a set