Challenges and potentials in collaborative management of urban commons

Peter Parker and Magnus Johansson

Malmö University

Author note

Peter Parker and Magnus Johansson, Department of Urban Studies, Malmö University.

Correspondence concerning this article should be addressed to Peter Parker, Department

of Urban Studies, Malmö University, SE-205 06, Malmö, Sweden. E-mail: peter.parker@mah.se

Abstract

Governance of shared resources has been intensely studied by Elinor Ostrom and colleagues.

There is a very rich body of work on the governance of shared resources such as fisheries,

watersheds, woodlands and the like, These authors have shown that common resources can be

managed effectively without recourse to privatization or direct government control. This paper

seeks to highlight key issues of how commons in urban settings have been studied in academic

literature with the purpose to develop an understanding of what, if any, characteristics are

specific or accentuated in the governance of urban commons. The paper begins with a brief

discussion of how the commons framework and its application in traditional commons and

proceeds to a discussion of urban commons. Subsequently we seek to delineate a small set of

characteristics that seem relevant in many of the studied cases and which seem to derive from

characteristics of the urban setting. We argue that a careful consideration of these characteristics

will provide input to a much-needed understanding of how shared resources in an urban setting

can be collaboratively managed and developed.

Keywords: urban commons, governance, collaborative management, public space

Challenges and potentials in collaborative management of urban commons

What characterizes a city we would like to live in? Perhaps many people would list, in response to such a question, things like good neighborhoods, good schools and a safe and healthy environment. We might also appreciate nice parks and squares where we could be out for a stroll and meet friends, streets with open-air cafés, libraries or other kinds of public places. We may also look for a creative and inviting atmosphere – those kinds of elusive aspects that make a city attractive. These things have in common, so to speak, that they are of shared resources in an urban setting. These shared resources may in turn be governed in variety of different ways.

In recent years there has been a great upswing of interest in the governance of shared resources. This interest has been fueled by Elinor Ostrom's seminal work that demonstrated, in the context of natural resources such as fisheries, watersheds, woodlands and the like, that common resources could be managed effectively without recourse to privatization or direct government control (Ostrom, 1999). These governance arrangements do not always lead to the sorry end foretold in the 'tragedy of the commons'. In certain circumstances collective management seems, on the contrary, advantageous in providing greater responsiveness to local needs and greater knowledge of local conditions and thus outperforming more distant government control. Collaborative management thus seems to provide an alternative when privatization of a resource is either impractical or undesirable.

In urban settings interest in the commons has undoubtedly been stoked by the privatization of public space and the widespread experience of what Sheila Foster calls

regulatory slippage (Foster, 2011). Regulatory slippage refers to a gap between regulatory

standards and the enforcement of these standards on regulated parties. In Foster's examples this

slippage occurs primarily in open-access public space such as parks and streets when cities or

regions lack the will or resources to maintain a previous or stipulated level of control. When the

gap becomes painful enough for parties there is an incentive for both government agencies and

other stakeholders to organize forms of collaborative and participatory management. Foster

argues that this kind of phenomena is so widespread that introducing a notion of urban commons

should be seen as an effort to bring theory to an already ubiquitous practice (Foster, 2011).

In general there is also a recognition that modern cities have given rise to numerous

shared resources: transportation systems, public parks and leisure areas, waste disposal facilities

etc but these have not been studied to a very large extent as commons (Bravo & Moor, 2008).

This gap between theory and available studies suggests that there may be problems in translating

an approach developed in the study of traditional commons to an urban setting (Harvey, 2011).

Such difficulties would not be surprising given that characteristics of the community in which

commons exist do form an important part of their governance (Ostrom, Gardner & Walker,

1994) and that the social life of cities may be understood to be different in very significant ways

to that of smaller communities (Jacobs, 1961).

This paper seeks to highlight key issues of how urban commons have been studied in

academic literature. The paper does not attempt a complete review of the field but instead seeks

to highlight key issues in how the approach has been applied to shared urban resources. The

purpose of the paper is to develop an understanding of what, if any, characteristics are specific or

accentuated in urban commons. This in turn is step in better understanding the particular

challenges and potential of collaborative management in an urban setting.

The paper begins with a brief discussion of how the commons framework and its

application in traditional commons. Thereafter we proceed to a discussion of commons in an

urban setting. Subsequently we seek to delineate a small set of characteristics that seem relevant

in many of the studied cases and which seem to derive from characteristics of the urban setting.

Traditional commons

The concept of traditional commons refers to the kind of shared resources that have been

studied traditionally within the scientific work on commons. These arrangements are often also

traditional in the sense of having a reasonably long history. The duration over time of commons

has been an important part of the empirical argument as to their viability. Studies of traditional

commons are typically related to natural resources such as watersheds, fisheries, forests, grazing

lands, land tenure and use, wildlife and village organization (Hess, 2008).

A key feature of resources in traditional commons is that they are subtractible (rivalrous)

such that one person's use depletes the resource for others. The other key feature is that the

resource is difficult to divide into neat parcels (excludability). Thus for instance water for

irrigation from a river is not easy to divide beforehand but one person's use does detract from

others' use. Thus traditional studies of the commons are concerned primarily with what is termed

common-pool resources. Common-pool resources can be contrasted to other types of economic

goods as in table 1 below.

Insert table 1

The term commons is a shorthand to refer to goods that have the characteristic of being

difficult to package (excludability) but can vary along the dimension of subtractability from

being a purely public good to a being a common-pool resource. Perhaps the primary challenge of

governing traditional commons may be understood to be developing rules about who may use a

resource, how much, and in what ways and also rules regulating investments in sustaining or

developing the resource. There are then subsequent challenges of monitoring and sanctioning

non-compliance with these rules, as well as issues of how rules can be created and modified.

Elinor Ostrom's work demonstrated the empirical viability of governing shared resources

provided that certain criteria were met (Ostrom, 1999; Ostrom et al., 1994). Although this is a

rich body of work, perhaps key points of this research can be summarized in simple form.

Simply stated she demonstrates that if appropriators of a resource can communicate fairly easily

and create common rules of use, and if the appropriators can monitor each others' use without

too much cost then there is good reason to expect that they will develop locally appropriate rules

and put them in use. For the system to work appropriators should also have access to low cost

means of conflict resolution and their system of administration needs some level of recognition

by relevant external parties.

Starting points for a study of urban commons

It is necessary in starting this exploratory review to define some aspects of what we mean by urban commons. First, it should be clear that urban commons refer to shared resources in an urban setting. However we also wish to restrict the field further by specifying that the resource in question should be available primarily on a citywide or smaller scale. Thus the internet may provide valuable resources for many city dwellers but we would not include the internet as an urban common. Certain sites on the internet or channels of communication on social media may however be urban commons. Similarly the radio spectrum would not be conceived of as an urban common but a specific radio station might be.

In Charlotte Hess (2008) mapping of what she calls the new commons urban commons are not considered as a separate category but would be included in certain aspects of what she categorizes as knowledge, cultural, infrastructure and neighborhood commons. The notion of urban commons does not in any way contradict her categorization, which is based on broad types of resources. Our intent here is to elucidate a category that we believe has specific characteristics and challenges of governance despite variation in the type of resource and largely due to what has been called attributes of the community (Ostrom et al., 1994).

As noted previously a starting point of the research has been that we might expect shared resources in an urban setting to be faced with challenges that differ somewhat from those identified in traditional commons. For instance, a high level of mobility often characterizes

cities and this would seem to make agreeing on rules of how to use a resource more difficult to

establish and maintain, and rules about long-term investments harder to establish. It may also be

that urban resources exist on scale that makes internal communication among appropriators

difficult to achieve. Cities by their nature also set people in different ages, classes, ethnic groups

and interest groups in close relation to each other. This would seem to create potential challenges

when it comes to defining a resource and bounding a group to collaboratively govern it. An

overarching question of this review and exploration is thus: in what respects, if any, are the

challenges of collaboratively managing urban commons similar or different from challenges

related to governing traditional commons?

Methodology

The paper is a product of ongoing work to create an overview of research on urban commons.

The review is based on various general and more specific searches including the following:

1.   google scholar: search for "urban commons"

2.   digital library of the commons: free text search for "urban"

3.   back issues of the international journal of the commons

4.   snowballing of references

5.   google scholar searches using terms that might be related to urban commons but more

specific e.g. commons and social capital, public space, security, infrastructure

        As noted previously the review is still in process and we have not yet treated all the

materials available in these sources. However, we have made a first attempt to structure the

contemporary research around urban commons. Each case reviewed in the literature has first

been tested as to whether it can be considered an urban common according to the definition

above. Each qualifying case has then been coded in relation to the kinds of challenges that are

described in the case. For instance a case may illustrate challenges of maintaining boundary rules

or for a group of appropriators to gain recognition for their locally generated rules. We have

coded in such a way as to keep close link with the framework for understanding institutional

development (IAD) presented by Ostrom et al. (1994). Particular attention has been given to

challenges that draw upon what the IAD framework terms attributes of the community as this is a

key factor in differentiating urban commons from commons in smaller communities.

The process of identifying relevant factors in the review has been inductive. The results

are dependent both on the sample of cases reviewed and our particular way of understanding and

grouping sets of interrelated factors that always characterize real cases. As reading of cases and

our categorization developed we have hermeneutically approached a minimum set of

characteristics. Further reading and use by others will determine the usefulness of these

categories. In identifying these characteristics that we feel need to be addressed in understanding

urban commons we are by no means arguing that these factors are always important in urban

settings or that they are unimportant outside the city context. We make no claim that the list of

factors is comprehensive. The point is rather that these characteristics are important to consider

in the study of urban commons and should facilitate use of a commons approach.

Urban commons

The study of urban commons covers a wide range of different types of resources and it is clear that cities create common resources such as public spaces for exchange, movement and recreation and infrastructure for water, waste and communication. However shared resources such as silence, clean air or ecosystem services may of course also be threatened as cities develop. Sheila Foster's (2011) recent work on urban commons makes the argument that many shared resources in the urban setting are not directly managed by government nor are these resources privatized. Instead there has been a growth of cooperative management forms where groups of actors step in fill a vacuum in governance.

The cases she uses to illustrate these forms of governance include:

1.   Community gardens where groups of residents come together to garden on underused or abandoned land and create in the process not only produce for those living in the area but also important social networks, common norms and direction.

2.   Citizen and non-profit involvement in park maintenance. This seems to very common and ranges from the extreme of The Conservancy that takes care of most of the upkeep in Central Park to informal participation by residents to maintain parks adjacent to their homes.

3.   Neighborhood crime patrols where informally assembled groups or organizations seek to augment and supplement police functions by means of patrols and organized mutual watchfulness. These range from international NGOs such as the Guardian Angels to informal neighborhood watch-like initiatives.

4.   Business improvement districts, where groups of businesses may cooperate for instance

on issues of safety and sanitation to improve the appeal of a particular business area.

Foster's examples illustrate collaborative governance and to an extent collective action

problems familiar to commons research such as resource degradation due to pollution, overuse or

undersupply. We concur with Foster that these examples do demonstrate that adequate forms of

collaborative governance of shared resources can be achieved even in urban settings despite

issues of scale, heterogeneity and mobility of the population. Collaborative management or urban

resources is thus an alternative that needs to be understood in terms of its various implications

for different groups.

However Foster's examples of urban commons also bring to light some intriguing

differences in relation to traditional commons. First, we may note that the shared resource itself

is often somewhat difficult to define. What exactly is the shared resource of a community

garden? Is there any sense in which this resource may be understood to be subject to traditional

dilemmas of collective action? If so, how does the activity of tending community gardens

address these dilemmas? Second, Foster's examples seem to demonstrate a relation between

increasing scale of a shared resource and an increasing role for formal organizations such as non-

profits and government. Consider the Conservancy in Central Park, the Guardian Angels or the

large business improvement districts. In cases of large-scale resources Foster notes that this

creates a potentially problematic distancing from the actual users (appropriators) of the resource

and thus potential deficiencies in adapting the institution to local circumstances and lack of

accountability. We will return to these issues in the subsequent discussion of characteristics of

urban commons below.

Large scale collective action and resource salience

In studies of traditional commons the shared resources are often unquestionably

important for people's livelihoods, such as fish stock for fishermen or irrigation for farmers. As

Charlotte Hess (2008) points out many of the shared resources broadly referred to as new

commons lack this kind of self-evident nature, and this creates certain challenges for their

governance. Collaborative management of a resource requires that a group of appropriators first

identify a resource as shared and valuable and then face the challenges of creating appropriate

institutional arrangements. However, commons in urban settings are not necessarily salient as

resources to the individuals that share them. Furthermore, in urban settings we expect issues of

scale, that is a large number of appropriators of a resource, to increase communication and

monitoring costs and thus make collective governance difficult (Gibson, Ostrom & Anh, 1998).

One aspect of this problem relates to what Carlson (2001) denotes large-number, small-

payoff collective action problems. In these cases rewards for an individual investing in a

collective resource far outstrip economic benefits for the individual. The payoff as such is not

salient. The case Carlson discusses primarily is that of garbage recycling. Recycling requires

many people to participate, at some cost, in order to achieve benefits. However, these benefits

will accrue only to a very minor extent to those who have taken the effort to recycle. The

problem seems particularly intractable form a collective action perspective.

To explain the reasons why recycling does in many cases work quite well Carlson (2001) argues that it is necessary to take a broader view of the action situation. In particular she draws on a theory of norms where norms are understood to create psychological and social status costs (or benefits) over and above economic costs and benefits. There are also important aspects of user knowledge, legal structures, technical structures and of course economic aspects that impact on people's propensity to recycle. There is thus a range of different options available for governments to influence behavior on recycling. Carlson's work is not at odds with institutional approaches to collective action situations even though the introduction of norms does qualify this approach somewhat. Indeed, the finding that an effective means to promote recycling is by introducing system changes that lessen costs of recycling behavior for individuals is precisely in line with what should be expected.

Large-number, small-payoff situations exist for a number of different shared resources. Many so-called eco-system services would seem to fall into this category. Such ecosystem services could for instance be in the form of green areas or street trees that clean the air and regulate temperatures within the city (Steed & Fischer, 2008), or lakes and rivers close to the city that receive, and help to clean, wastewater (Borgström, Elmqvist, Angelstamm & Alfsen-Nordom, 2006; Steed & Fischer, 2008). Although preserving these resources might seem a difficult for the reasons discussed, these problems could also perhaps be addressed using the range of options outlined for stimulating recycling behavior. At least some studies point to that knowledge and norms have an important influence on individual behavior in relation to these

resources. Cooper, Dickinson, Philips, and Boney (2007) find for instance that participants in

citizen science projects related to ecology often develop an interest in conservation issues.

A further example lacking salience in large-scale collective action problems is provided

by a study of road use as a common resource. Gutscher, Keller, and Mosler (2000) describe two

cases of voluntary experiments to avoid traffic congestion and reduce speeds. They report some

short-term success in these experiments. However, it seems fairly clear that the broader range of

options for influencing aspects of the action situation outlined above might, in an appropriate

mix create better results.

The examples above illustrate problems due to lacking economic salience of a shared

resource but also varying degrees of success using a combination of different means to influence

the action arena. The examples above also illustrate another aspect of lacking salience, in that the

collective resources are diffuse and difficult to grasp. It is well established in work on commons

that governance is greatly facilitated if the shared resources are tangible, and measurable so that

individuals can organize around the resource and monitor their own and others behavior. Thus

one challenge represented in promoting collaborative management in these cases would be if it is

possible for individuals to understand their contribution, and monitor others in relation, non-

depletion of resources (recycling), strengthening ecosystem services or using roads in an optimal

way?

The point about making shared resources tangible or salient brings us back to a question raised earlier on the role of community gardens. Although community gardens clearly create valuable produce, and have been shown to increase property values in their proximity, it seems fairly clear that the value of community gardens often lie in creating social capital. Community gardens may provide tangible instantiation of social capital in a neighborhood but also an important focal point for developing cooperation on a broader set of community issues (Foster, 2006).

Problems of large-number, low-payoff problems are not specific to cities, nor are problems of relating to a diffuse nature of resources. However, we do expect that high-density living would accentuate problems of negative externalities (waste, noise, congestion) The collective action problems that these externalities give rise to will often correspond to large-number, low-payoff situations and perhaps often ones in which the shared resource is diffuse. The examples demonstrate that it is possible in these circumstances to create adequate collective governance if a wide approach is taken that considers interconnected aspects of resource salience, knowledge, norms and technical structures as well as concerns of how action arenas produce patterns of interaction and feedback.

Contested nature of the resources

A characteristic of urban settings is that people with different interests are set in close proximity. As a result common resources can be understood to be resources in quite different and often incompatible ways. In the reviewed literature it is possible to identify two different kinds of

recognition challenges for collaborative management of urban commons. The first kind is one

familiar to research on traditional commons and concerns the need for a certain level of

autonomy of appropriators to formulate and enforce rules concerning use of the common

resource. A second kind of recognition challenge appears when the resource is contested. A

resource would be contested for instance when owners and appropriators have different

understanding of the nature of the resource or when several groups of appropriators exist side by

side and have different views on the nature of the resource (Gibson et al., 1998).

Clapp and Meyer (2000) have examined the conditions for large-scale development of

brownfields, that is, former industrial areas. They point out that in the present brownfields in the

U.S.A. often stay undeveloped as uncertainty about pollution levels and liabilities of the owner

block any parties from developing the area. The urban bad, the derelict area however also affects

third parties, those living proximate to the brownfield. Clapp and Meyer (2000) argue that there

are reasons to believe that allowing some degree of collective management of these 'urban bads'

might speed redevelopment and direct it to better serve those living proximate. The example

illustrates differences of interests between groups but also problems arising from differences in

understanding of the resource itself. In this case the understanding of a piece of property and

contamination on it or the wider issue of how derelict land affects adjacent areas.

A similar situation of how different understandings of a resource leads to difficulties in

governance is described by Stave and Armijo (2000) in the use the Las Vegas Wash. Stave and

Armijo describe how people in the urban area surrounding the stream, the Las Vegas Wash, use

both the channel and the area around it for many different purposes, spanning a range from

recreation to illegal trash dumping. Here the challenge lies in the need for different users to

recognize each other's perspective and need. In this case, over 20 local, regional and federal

entities, as well as local businesses and residents, have interests in the Las Vegas Wash

ecosystem, each identifying different system characteristics as desirable and different

management issues as problematic. In this case, the paralysis of governance is in some ways

mitigated by voluntary groups stepping in and taking responsibility for keeping the common

clean and valuable for recreation but these volunteers lack recognition from relevant authorities

(Stave & Armijo, 2000).

The issue of how different groups have different claims and uses to common resources in

urban settings has been developed extensively in studies of public space (Mitchell & Staeheli

2005; Low & Smith, 2006). Blomely (2008) describes a case of contested development in

Vancouver that set a group of homeless in conflict with real estate developers. The homeless

used a block of abandoned buildings in central Vancouver as their gathering point. The vacant

lots were an important common for the homeless. For the developers the property was something

that needed to be transformed in order to increase the value of the area (Blomely, 2008). In this

case, the homeless did not organize themselves as a group of appropriators, nor could they

effectively seek external recognition for management of this resource. Blomely's study though

raises important questions as to which groups should be given the rights to develop collaborative

management of different kinds of shared resources.

CHALLENGES AND POTENTIALS IN COLLABORATIVE MANAGEMENT OF
URBAN COMMONS

Foster (2006) discussed two cases of how social capital is connected to places in the city. The argument is that changes affecting these places have consequences far beyond the development of the particular piece of property. The first example concerns how residents fight the establishment of a Walmart superstore that residents argued would irreparably damage interaction and identity of the historic city center and undermine social capital in the community. The second example takes its starting point in a decision by New York authorities to sell a large set of vacant lots on which community gardens had been created. The example is interesting because for the community the garden is much more than a place to grow vegetables, but rather a place where social capital is built. The establishment of more and less illegal community gardens could be a valuable asset for the local community that affects the value of surrounding properties in a positive way (Voicu & Vicki, 2008). Herein lies a source of potential conflict between developers of vacant lots and those who actually use it.

The examples illustrate how different understandings of a resource create difficult interrelations between groups in these urban commons. Any group of appropriators needs to find recognition from diverse sets of other actors, like agencies, landowners or other groups of users of the same resource. In an urban setting such recognition may be hard to achieve as common resources are likely to be intensely contested. These conflicts impose costs on any group seeking to development a shared resource (Gibson, Ostrom & Anh, 1998). Thus situation of underinvestment is likely arise. Development of collaborative governance of shared resources in the urban setting might therefore hinge on finding low cost and effective means to mediate between groups with different understandings of what constitutes a resource.

Cross-sector collaboration

Collective action problems of a slightly different kind occur in other types of urban commons. For instance infrastructure has been discussed by Little (2005) as suffering from traditional collective action problems. Little puts forward the argument that critical infrastructure suffers from commons dilemmas. Private firms that supply most utilities like electricity use a common grid but lack incentive to maintain the grid on adequate levels. The profit maximizing focus of each individual firm leads to problems of maintenance and easily disrupted systems, vulnerable to collapse. The challenge in maintaining an adequate level of infrastructure is not only related to the number of different parties involved but also different types of organizations, public authorities and private firms, that are interlinked in complex ways that make overall management of the system difficult. The problems of collective action familiar to commons are exacerbated that these different types of organizations answer to different constituents or customers so provision of reliable infrastructure becomes linked in complex ways to 'games' in these different organizations.

The challenges of cross-sector collaboration are not specific to infrastructure but seem rather general to urban commons. As we noted earlier the increase in scale of common resource seems to give rise to an increasing need for formal organization. We would expect that such large common resources also must be regulated and monitored by public authorities to some extent. Thus at least in cases of highly valued and large-scale common resources we would expect elements of cross-sector collaboration to be important. Particularly it is reasonable to

expect that citizens, some kind of non-profit organization and governmental organizations must interact effectively to govern these commons effectively. This has been the case in many of the examples previously discussed. Consider the case brought up by Foster (Foster, 2011) concerning the Guardian Angels. It is not a trivial problem for citizens, local police on different levels and an international non-profit organization to collaborate in ways that ultimately benefit the development of a sense of safety in specific area. The situation is one involving asymmetrical roles, limited local autonomy for organizational actors and limited local accountability.

Cross-sector collaboration can also sometimes pose significant problems even if all parties are local. Delshammar (2005) describes the evolution of collaborative development and maintenance of a municipal park. In the example a group of mostly elderly neighbors begin to manage a park that has been left undeveloped. This involvement grows as more and more neighbors begin to help out. When the municipality discovers the situation though problems arise as the municipality now feels that is now responsible for maintaining the park but lacks resources to do so. In this situation the municipality tries to reach a contractual agreement with the residents stating that they are responsible for the park's maintenance. This is however turned down by the volunteers who state that they cannot possibly as a group take on this kind of responsibility. The situation thereafter evolves with informal collaboration such that the park is maintained but there are still issues of inadequate forms for interaction between these different kinds of managing parties.

CHALLENGES AND POTENTIALS IN COLLABORATIVE MANAGEMENT OF
URBAN COMMONS

The challenges implied in cross-sector collaboration in the governance of a shared

resource should not be taken to imply that effective governance cannot be achieved under these

circumstances. Ostrom (2000) describes the need to conduct a balancing act so as not to crowd

out civic engagement by overmuch governmental presence yet maintaining enough governmental

control to avoid pitfalls of lack of accountability. It seems also that if such a balancing act can be

achieved then there is reason to believe that government can support and enable effective

collaboration for instance by supporting access to relevant knowledge and in monitoring of rules

and thereby decreasing costs of coordination and monitoring (Ostrom, 2000). In certain areas

collaborative management of resources and cross-sector collaboration offers hope of increased

knowledge input and responsiveness in governance. This would seem particularly important for

instance in the case of resources such as ecosystem services which require broad knowledge

creation and action.

Conclusions

Despite the fact that there is a highly developed body of theory and empirical research on

traditional commons such as fisheries, watersheds and the like, urban common resources have

seldom been viewed in this light. Our review thus far has shown the diversity and breadth of

urban commons and so this seems to be an important field for further research. The institutional

approach to studying problems of governing the commons provides a strong theoretical base that

may help to re-conceptualize many aspects of the urban environment and address pertinent issues

of participation and collaboration in urban policy. For instance there would seem to be a strong

potential for the approach to help flush out clarify potentials an implications of different

management structures in ambiguous public and private space. There is, at present however very little research that seeks to explore the characteristics of urban commons and contrast this with more traditional commons so as to uncover if there are specific challenges or potentials in an urban setting.

This paper has sought to glean what characteristics, if any, set urban commons apart their traditional counterparts and to relate this to a framework developed in the study of traditional commons. In this explorative overview we have identified three main characteristics of urban commons that we have argued to be relevant for their governance and that derive from characteristics of the urban setting particularly the scale of shared resources, and the juxtaposition of diverse groups and different kinds of actors. We conclude that it is important to understand in studying urban commons or in developing policies take into account characteristics such as scale and resource salience, the contested nature of urban resources, and the need for cross-sector collaboration.

These characteristics create challenges for collaborative management of urban commons but they also create opportunities. We hope that a careful consideration of these characteristics will provide input to much needed understanding of how shared resources in an urban setting can be collaboratively managed and developed.

References

Blomely, N. (2008). Enclosure, common right and the property of the poor. *Social & Legal Studies, 17,* 311-331

Borgström, S. T., Elmqvist, T., Angelstam, P. and Alfsen-Norodom, C. (2006). Scale mismatches in management of urban landscapes. *Ecology and Society, 11*, URL: http://www.ecologyandsociety.org/vol11/iss2/art16/

Bravo, G. & Moor, T.D. (2008). The commons in Europe: from past to future. *International Journal of the Commons, 2*, 155-161.

Carlson, A. E. (2001). Recycling norms. *California Law Review, 89,* 1231-1300

Clapp, T.L. & Meyer, P.B. (2000). *Applying Common Property Frameworks to Urban Environmental Quality: The Case of Brownfields.* Working Paper prepared for the 8th IASCP Conference May 31-June 4, 2000, Indiana University, Bloomington, Indiana

Cooper, C. B., Dickinson, J., Phillips, T. & Bonney, R. (2007). Citizen science as a tool for conservation in residential ecosystems. *Ecology and Society, 12*, URL: http://www.ecologyandsociety.org/vol12/iss2/art11/

Delshammar, Tim (2005). *Kommunal parkverksamhet med brukarmedverkan.* Alnarp : Sveriges lantbruksuniv., Acta Universitatis agriculturae Sueciae, Doctoral thesis. In Swedish

Foster, S. (2011). Collective Action and the Urban Commons. *Notre Dame Law Review, 87,* 1-63

Foster, S. (2006). City as an Ecological Space: Social Capital and Urban Land Use, *Notre Dame Law Review, 82,* 527-582

Gibson, C., Ostrom, E. & Ahn, T-K. (1998). *Scaling issues in the social sciences. A report for*

the international human dimensions programme on global environmental change.

Working paper no. 1, IHDP, Bloomington: Indiana University

Gutscher, H., Keller, C. & Mosler, H.J. (2000) *Roads as New Common Pool Resources, Speed*

Reduction as a Public Good--Two Case Studies in Organizing Large-Scale Collective

Action, Paper presented at the 8th IASCP Conference May 31-June 4, 2000 Indiana

University, Bloomington, Indiana

Harvey, D. (2011): The Future of the Commons*, Radical History Review, 109,* 101- 107.

Hess, C. (2008) *Mapping the New Commons*, paper presented at the 12th Biennial Conference of

the International Association for the Study of the Commons, University of

Gloucestershire, Cheltenham, 14-18 July.

Hess, C. & Ostrom, E. (Eds.). (2007) *Understanding knowledge as a commons: From theory to*

practice. Cambridge MA: MIT Press

Jacobs, J. (1961). *The death and life of great American cities*. New York: Random House

Low, S. & Smith, N. (Eds.). (2006) *The politics of public space*. London: Routledge.

Little, R.G. (2005) Tending the infrastructure commons: ensuring the sustainability of our vital

public systems. *Structure and Infrastructure Engineering, 1*, 263-270.

Mitchell, D. & Staeheli, L. A. (2005). Turning social relations into space: Property, law and the

plaza of Santa Fe, New Mexico. *Landscape Research, 30*, 361-378.

Ostrom, E. (1999) *Governing the commons: The evolution of institutions for collective action*.

Cambridge MA: Cambridge University Press.

Ostrom, E. (2000) Crowding out citizenship. Scandinavian Political Studies, 23, 3-16.

Ostrom, E., Gardner, R. & Walker. J. (1994). *Rules, Games, and Common-Pool Resources.* Ann

Arbor: University of Michigan Press.

Stave, K.A. & Armijo, L.R. (2000) *The Las Vegas Wash: A changing urban commons in a*

changing urban context. Paper presented at the 8th IASCP Conference May 31-June 4,

2000, Indiana University, Bloomington, Indiana

Steed, B.C. & Fischer, B. C. (2008). *Street trees: Are they a misunderstood common-pool*

resource? Retrieved April 30, 2010 from http://hdl.handle.net/10535/2320

Voicu, I. & Vicki, B. (2008). The Effect of Community Gardens on Neighboring Property

Values. *Real Estate Economics, 36*, 241-283.

CHALLENGES AND POTENTIALS IN COLLABORATIVE MANAGEMENT OF
URBAN COMMONS

Table 1: different types of economic goods, from Hess and Ostrom, 2007

	Low subtractability	**High subtractability**
Difficult to exclude	Public good	Common-pool resource
Easy to exclude	Club good	Private good