Open-Source Urbanism: Creating, Multiplying and Managing Urban Commons

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Introduction

In the current era of corporate-led urban development and the commercialisation of public space, critical architects, urbanists and citizen groups are exploring resistance strategies and ways to democratise the city. Within these groups there is marked interest in creating and safeguarding *urban commons* – spaces not primarily defined by their formal ownership but by how citizens use them. This may be manifested in the customary use of open fields as commons, despite these being formally owned by private entities, royal families, the military, etc., or by appropriating privately owned or abandoned spaces as commons and using them as urban gardens, sites for play and experimentation, etc.[1] One can, moreover, note a resurgence of do-it-yourself (DIY) tactics, in which groups of citizens and architects/designers/activists appropriate and transform private or public space into temporary urban commons.[2] For example, the US pavilion at the 2012 Venice Architecture Biennale dealt with such DIY tactics and presented examples of more than a hundred 'self-initiated urban improvements', such as guerrilla bike lanes, DIY roundabouts, de-paving actions, weed bombing, and apps for crowd-sourced city planning.

These urban interventions have been initiated by, among others, citizen groups, activists, artists, architects, designers and planners. Within this 'DIY urbanism', the creation of open space is regarded as a task not only for educated architects or urban planners but also for citizens and larger collectives. This development taps into Tatjana Schneider and Jeremy Till's argument that the potential of critical architects lies in their capacity to be 'agents of progressive politics' in collaboration with others, rather than in their status as individual authors of buildings.[3]

The spread of DIY urbanism is occurring in tandem with the contemporary economic crisis and the rolling-back of public responsibility for funding and managing infrastructure, parks and public spaces in the USA and Europe. Critics may argue that this low budget, do-it-yourself-urbanism unintentionally legitimises public withdrawal. Maroš Krivý and Tahl Kaminer argue that contemporary participatory architectural practices and platforms tend to have difficulties combating social inequality, sometimes even reinforcing it, and are part of a wider 'anti-statism'.[4] A similar criticism is that self-initiated temporary urban commons, despite being instigated with the intention of promoting social mixing, have often come to be used in city marketing strategies, contributing to rising property values.[5] This has been a heated debate, particularly in cities such as Berlin where strategies for self-initiated temporary urban use and participatory urbanism have a long tradition.[6]

These criticisms are indeed relevant since individual urban commons do have difficulties in challenging the wider dynamics of corporate-led urban development and capital accumulation. However, this paper argues for a more hopeful

perspective regarding the potential of urban commoning in contributing to a more equitable society. In this paper, I will argue that the production of urban commons can be understood as part of a larger movement of open-source 'commons-based peer production'; i.e., a form of production geared towards a more equitable distribution of power, knowledge and the means of production. Open-source modes of production are not only in use by hackers and civil society groups, but also by public authorities, as I will illustrate in this paper. Hence, urban commons, and, more precisely, groups that operate using open-source tactics, should not necessarily be interpreted as expressions of 'anti-statism' but rather as methods beneficial and useful to public authorities as well.

Two cases of spatial practice are examined here to illustrate the argument: the urban commons initiated by Atelier d'architecture autogérée (aaa) in Paris, and the Park(ing) Day movement initiated by the San Francisco-based group Rebar. In the analysis, I will outline a set of characteristics of open-source urban commons and argue that the abovementioned spatial practices can be seen to exemplify these characteristics in that their initiators use the same tactics as do open-source programmers: constructing practice manuals to be freely copied, used, developed in peer-to-peer relationships and shared by everyone, the results of which are not private entities but self-managed commons.

Other groups, such as Collectif Exyzt, Raumlabor, StudioBasar, Pulska Grupa, Stalker, and Stealth.Unlimited, work in a similar vein, also producing forms of urban commons, but not necessarily using open-source tactics. Rebar and aaa have themselves written about and theorised their work, at times referring to open-source tactics. In this paper, however, their practices are placed in the context of a broader theoretical argument about the potential and limitations of open-source urban commons. The material used is drawn from the manifestos, writings and lectures of Rebar and aaa.[7] The theoretical framework builds upon Elinor Ostrom's analysis of self-governing natural resource commons, Yochai Benkler's notion of 'commons-based peer production' in the digital sphere, and writings on open-source culture.[8]

The tradition of creating and struggling for commons is not new, though it is currently being reinvented and facilitated by the spread of digital technologies. Drawing on Benkler's assertion that open-source, commons-based production constitutes a 'third mode of production' beyond capitalism, socialism, and their blends, I will argue that open-source urbanism embodies a critique of both government and privately led urban development and is advancing a form of post-capitalist urban development that may, however, be supported by the public sector.[9] In the final sections of the paper, I will discuss critical questions arising from these urban commoning practices regarding who benefits from them, their endurance, institutionalisation, and potential reach in terms of structural change.

From natural resource commons to urban commons

The commons traditionally referred to are natural resource commons, such as pastures, fishing waters and forests, on which the local populace relies for their subsistence and therefore needs to manage wisely. Well known, however, is 'the tragedy of the commons'; i.e., seas overfished and lands overgrazed and deforested, as theorised by Hardin, who outlined two responses to the problem: privatisation or state control.[10] Ostrom turned the question around by asking what characteristics are found in societies that have managed to sustain their common resources.[11] It was revealed that neither private nor state-owned entities were the answer; rather, it was local, self-organised forms of governing, or small units nested in multiple layers. Drawing on her case studies worldwide, Ostrom outlined a set of institutional design principles for

securing a lasting governing of commons. These include: clearly defined resources and users; congruence between appropriation, provision rules, and local conditions; collective rules constructed by the constituent units regarding production, use, and control mechanisms, and simple systems for conflict resolution.[12] Such regimes of decentralised, self-governing units organised around common local resources have been and are prevalent worldwide in indigenous cultures, cooperatives, and eco-villages.

In the 1990s and 2000s, corporate-led globalisation sparked heated debate over the enclosure of commons. The privatisation of land, water resources, urban public spaces, and the patenting of local knowledge by global corporations were often criticised.[13] Struggles over these globalisation-related enclosures are similar in many ways to those over the enclosures of commons in pre- and early capitalist societies.[14] Traditionally, the commons struggles, like Ostrom's analysis, focused on physical resources, typically *rural* land and resources. In recent years, however, the commons discourse has expanded to include *urban* commons – public spaces, urban community gardens and commons-based housing.[15] Writers and activists Chris Carlsson and Jay Walljasper describe the contemporary commons movement as including the promotion of public space and resources; for example, through reclaim-the-city actions, 'critical mass' bicycle rides, community gardening, open-source programming, and subsistence systems outside the money-based economy.[16]

It is also in terms of the commons, including all that is necessary for social production, language, and knowledge, that Michael Hardt and Antonio Negri outline a new post-capitalist global world order.[17] They claim that in the current urban era, 'the city is to the multitude what the factory was to the industrial class'.[18] In a comparative reading of Hardt and Negri and Edward Soja's *Seeking Spatial Justice*, Paul Chatterton argues that coupling the notion of urban commons with struggles for spatial justice is productive in the struggle for alternatives beyond capitalism:

> Bringing the idea of the common into play with a spatial justice perspective, then, allows us to sharpen our analysis of the task at hand – the decoupling of life in the contemporary city, the state and forms of governance from the reproduction of the logic of capital and capitalist work, and in its place a radical commonization of the production of urban space and everyday life in the city.[19]

Digital commons and the open-source movement

The contemporary commons movement, however, concerns not only rural and urban commons but also *digital commons*. In the struggles over digital commons, or the open-source movement, it is argued that information and non-rival goods should be available for anyone to use and redistribute.[20] This opens up the potential not only to copy and share, but also to collaborate and develop new common resources. In free open-source computer programmes, the code is transparent, enabling not only the programme's initiator to develop and use it but also others to use, modify and refine it, returning the derived work to the open common pool. Key proponents of the open-source movement, Eric Raymond and Richard Stallman, have outlined what is referred to as 'hacker ethics'; i.e., information sharing, tools for problem solving, and an overall philosophy of openness, distributed power and cooperation for the common good.[21] A central aim is to democratise access to information and the means of knowledge production, thereby critiquing proprietary capitalist production, corporate control of knowledge and tools for innovation.

Instead of copyrights and patents, people espousing the open-source philosophy use other forms of licences, such as the General Public

Licence or Creative Commons Licence, enabling creators to register work so that anyone can legally copy, develop and share it for non-commercial purposes.[22] Benkler has theorised these contemporary forms of open-source production and termed them 'commons-based peer production'.[23] According to Benkler, this form of production differs from property- and contract-based models, whether these are market-based, planned socialist production, or any of their blends.[24] Drawing on Benkler and peer production theorist Christian Siefkes, one can summarise commons-based peer production by the fact that it is: (a) based on contributions rather than the notion of equivalent exchange; (b) motivated by fulfilling needs, innovating, or a desire to work together rather than profit; (c) conducted by peers in non-hierarchical networks, sometimes requiring reciprocal contributions and sometimes not; and (d) based on an ethic of sharing and common ownership rather than competition and private property.[25] Furthermore, the intention of the peer economy is to work together to fulfil needs and desires *directly* rather than to earn money that is *then* used to fulfil needs. Siefkes argues:

> Peer production cuts out the middle layer – the need to sell so you can buy. This change goes very deep, since in capitalism the apparently harmless middle layer (the need to make money) takes over and becomes the primary goal of production, shifting the original goal (fulfilling people's needs and desires) into the background.[26]

To Benkler, this form of production emerging in the digital world enables a shift from a hierarchical mass-mediated public sphere – where central governments and/or large corporations are in control – to a participatory, networked information world.[27] He writes:

> Some of the time that used to be devoted to the passive reception of standardized finished goods through a television is now reoriented towards communicating and *making* together with others, in both tightly and loosely knit social relations.[28]

This indeed applies to contemporary media content produced by the blogging, tweeting, and sharing of news, analysis and stories, and also potentially to the co-production of content in the physical realm.

Commons-based peer production in the physical realm

Benkler argues that commons-based peer production is the beginning of a larger societal transformation, shifting away from twentieth-century industrial and proprietary forms of production, capitalism, planned socialist economies and their hybrids. He furthermore argues that peer economies based on open access to information and tools for innovation, together with low-cost technology, can generate commons-based innovation, not only in the fields of social media and non-rival digital goods (endlessly reproducible) but also of rival goods such as food, clothes, equipment and other products.[29] Carlsson, Siefkes and Walljasper have described contemporary peer production in the provision of food, energy and transportation, thus forming embryos of commons-based economies.[30] As David Bollier has noted, natural resource commons and digital commons are often treated in different scientific fields and social fora and are seldom analysed together.[31] Their rationales and ethics are nonetheless similar, and the two fields are often linked in the everyday practice of producing commons and struggling against enclosure. The concept of commons-based peer production has hitherto rarely been applied to urban space, although Benkler's arguments could indeed be extended to urban space, which, as I will illustrate here, can be peer produced using open-source tactics. The outcome is spatial commons that are both collaboratively designed to fulfil needs and desires rather than to produce profits, and self-managed by their users rather than owned by private or public entities. A few writings do treat open-source architecture and

urbanism – Saskia Sassen, for example, has argued that open-source technology could be increasingly used in urban planning.[32] Philipp Misselwitz, Philipp Oswalt and Klaus Overmeyer have jointly argued that urban planners ought to learn from open-source programmers.[33] Mark Wigley has furthermore noted that open-source modes of working are influencing the role of the architect, and the architect Alastair Parvin has developed an open-source construction set called 'WikiHouse' with the aim 'to allow anyone to design, download, and "print" CNC-milled houses and components, which can be assembled with minimal formal skills or training'.[34]

One can note that the open-source movement's ethics and practices of sharing information and pooling resources to solve common problems are 'breaking out' of the digital realm and into the physical world, not only in urbanism but also in schemes for sharing goods and space.[35] A study of the sharing economy has demonstrated that online sharing facilitates offline sharing; furthermore, practices of co-producing and sharing physical resources may very well contribute to the ethics of digital sharing.[36] In this way, the digital commons movement and struggles over physical urban commons can strengthen each other. As has been suggested by Karin Bradley and Chris Carlsson, the open-source ethic, the critique of corporate domination, and the environmentalist ethic are coming together in what can be called a 'do-it-yourself' or 'maker culture', characterised by doing things oneself and/or collectively, such as growing food, building bikes, self-organising work, or creating urban commons in terms of open space or common pool resources. Today this ethic may be practised only by the few, but nevertheless it mirrors a desire to move away from mass-consumerist corporate society.[37]

Case 1: The parklet as a new form of urban commons

In 2005, the urban design-art-activist group Rebar decided to transform a parking lot in San Francisco into a small temporary park – this in a city and district where the vast majority of open space is dedicated to motorised vehicles. They paid the parking fee, put out green grass, a tree providing shade, a park bench, and a sign saying 'Park open'. They then observed from a distance how this space was used over the course of a few hours. People sat down on the bench, read a paper or rested, and then moved on. When the temporary lease of the space ended, they removed the park equipment. Rebar documented the experiment, which they called 'park(ing)', and posted a photo and some explanatory text on their website.[38] The story and image went viral on the Internet, spurring massive interest from others. Blaine Merker, landscape architect and co-founder of Rebar, describes the process:

> Without much explanation, other groups disposed to guerrilla intervention quickly grasped the basic tactic. Still, the amount of interest Rebar received warranted some codification of the idea, so we posted a short 'how-to' manual on our website to help others get started. The essence of the tactic was to legally claim a parking space using materials that were symbolically associated with parks: trees, lawn, and a bench. Rebar treated the idea itself as open source and applied a Creative Commons license: as long as it was not used for profit, we encouraged people to replicate and reinterpret it.[39]

The park(ing) practice spread, and people sent their stories and images back to Rebar. In 2006 Rebar initiated a coordinated Park(ing) Day, encouraging groups in various cities around the world to take part, which they did in forty-seven cities. Merker explains why Park(ing) Day became so widespread: 'The event effectively operated within an undervalued niche space and successfully exploited a legal loophole – a tactic at once radical but superficially unthreatening to the system of spatial commodification it critiqued.'[40]

Since 2006, a worldwide Park(ing) Day has

been organised on the third Friday of September every year. [fig. 1] In 2011, Park(ing) Day interventions were reported in 162 cities in thirty-five countries – from Taipei to Johannesburg and Tehran – and the temporary micro-parks were filled with varied content: dinner parties, dog parks, Ping-Pong matches, chess games, urban micro farms, free health clinics, political seminars, free bike repair workshops, etc..[41] [fig. 2] Rebar point out that they simply provided a framework that different communities can fill with varying content, depending on what local groups consider is needed: spaces in which to socialise, play, rest, organise, or to pose questions in order to draw attention to issues such as workers' rights, local elections, health care or equality in marriage.[42] Merker further explains the rapid spread of Park(ing) Day by noting that it utilises humour and guerrilla tactics, yet is at the same time generally legal: you simply lease the street space, but instead of parking a private car, some form of social commons is set up there.[43] In many cities this appears to be legal, whereas in others the only activity allowed in these spaces is parking vehicles. Irrespective of legality, Park(ing) Day illustrates what these vast, single-purpose open spaces *could be*. As the Rebar website explains:

> In addition to being a quite a bit of fun, Park(ing) Day has effectively re-valued the metered parking space as an important part of the commons – a site for generosity, cultural expression, socializing and play. And although the project is temporary, we hope Park(ing) Day inspires you to participate in the civic processes that permanently alter the urban landscape.[44]

Rebar have continued to coordinate and inform about Park(ing) Day, refining the manual and providing a website where users can share experiences, tips, and images, find locals with whom to collaborate, and place descriptions and pins on a Google map, forming a 'DIY planning network'.[45] Rebar have also formulated a Park(ing) Day Licence under the Creative Commons template, allowing anyone to use the concept and call the event Park(ing) Day. The licence 'is designed to limit the commercial exploitation of the event, and keep participation focused on the principles of community service, creativity, experimentation, generosity and play'.[46] In their manifesto, Rebar describe their ethos: 'We "give away" our work (that is, set up situations for people to use and enjoy, or to fulfil an unmet need).'[47]

The many practical examples of how parking spaces can be transformed into small neighbourhood parks have come to influence institutionalised public planning in cities such as San Francisco, New York, Philadelphia, Chicago, and Vancouver. The acting manager of the City Design Group in the San Francisco Planning Department has described how the city, in response to Rebar's initiative and the spread of Park(ing) Day, established planning procedures for creating so-called *parklets*; i.e., on-street parking converted into micro-parks that are open to anyone, permanent but at the same time removable.[48] Just as Rebar used an open-source logic to share knowledge with other citizens/activists/designers, the San Francisco Planning Department has compiled a *Parklet Manual* illustrating the goals, policies, procedures and guidelines for creating parklets, in this way sharing its parklet planning procedures with other cities and authorities.[49] [fig. 3]

By 2013, around forty parklets had been created in the city of San Francisco and forty new ones were underway.[50] [fig. 4] The parklet has become a new urban typology – a micro urban commons that can be initiated, constructed and managed by citizen groups or by private or public organisations, though on the condition that it is open to anyone and reserved for non-commercial activities.[51] The parklet should have a visible sign that says 'Public Parklet – all seating is open to the public.' Worth noting, however, is that it was socially well-organised urban areas that were the first to initiate parklets.



Fig. 1



Fig. 2

Fig. 1: Park(ing) Day poster. © Rebar
Fig. 2: Park(ing) Day in San José. Source: iomarch

Moreover, as the manager of the City Design Group at the San Francisco Planning Department self-critically noted, the parklet typology has become associated with latte-drinking white hipsters.[52] However the parklet has since been appropriated by less resource-rich communities, and loaded with other contents.[53]

Instead of opposing these guerrilla interventions, public officials at the San Francisco Planning Department regarded them as civic assets that could make the city more open and less car-oriented. The interventions also suited the city in the current situation of economic constraint in which public spending on parks and open space improvements was lacking.[54] In this way, Rebar's documentation and conscious use of open-source logic has not only generated a worldwide park(ing) movement but also influenced the institutionalised public planning practice.

In their manifesto, Rebar describe their work in terms of *tactical urbanism*, which they define as 'the use of modest or temporary revisions to urban space to seed structural environmental change'.[55] In this way, small and, at first glance, minor interventions are thought of as tactics, exploiting the gaps or cracks in the larger system in order to gradually change its deeper organising structures.

Case 2: The urban commons of aaa

Atelier d'architecture autogérée (aaa) is a collective platform working with spatial interventions. The founders, Doina Petrescu and Constantin Petcou, are both practising architects as well as researchers and educators.[56] Their work concerns how to activate underused spaces and encourage self-managed architecture, often in the form of mobile and reversible projects. They describe their work in terms of urban tactics and as micro-political actions to make the city more democratic and ecological.[57] Through working with self-managed architecture, they hope to promote 'new forms of association and collaboration, based on exchange and reciprocity'.[58] In this way, their architecture is less concerned with products in terms of buildings or public spaces than with social and collaborative processes that shape common spaces.

In 2001, aaa initiated an urban garden on a large abandoned space in the area of La Chapelle in northern Paris, a culturally diverse, low-income neighbourhood in need of dedicated public spaces. The garden, known as ECObox, developed successfully, and a growing number of people joined in coproducing the space with activities such as gardening, cooking, playing, holding dance parties, fashion shows and cultural debates. [fig. 5] aaa constructed a simple module of wooden pallets providing a frame to delineate a gardening plot, while the wide frames of the pallets in aggregate constituted a communal surface. They also made drawings and prototypes of other 'micro-urban devices' – a mobile kitchen, media module, beehive, mobile library, bench, etc. – all made of recycled material and easy to construct, move, and dismantle.[59] [fig. 6] This gave local residents an idea of what could be done on the site and of how they could easily construct these devices themselves. The garden turned out to be widely used by local residents, functioning like an outdoor living room and of significant importance for people living in small apartments.[60] It has been argued that what made the ECObox garden successful in terms of benefits for its users was the long-term, everyday presence and mundane, collaborative, practical work of aaa.[61]

After some years, the urban gardeners were evicted; however, the garden and the mobile devices could be dismantled and moved to another site. Many of the users successfully learned how to build the devices and also how to negotiate with the local authorities, so the first ECObox garden multiplied into several similar gardens, self-managed by their users. After some years, aaa left the project;

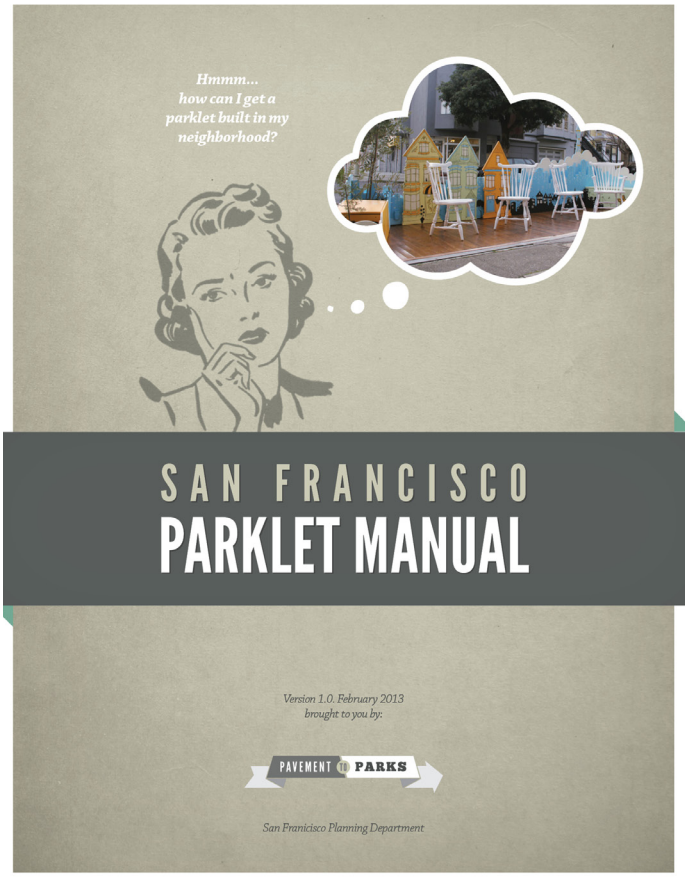


Fig. 3



Fig. 4

Fig. 3: The cover of the San Francisco *Parklet Manual*. Source: San Francisco Planning Department
Fig. 4: A more permanent parklet in San Francisco. Source: San Francisco Planning Department

however, the urban gardening and social organising skills had been passed on to many others who could continue to practise, spread, and develop these skills. aaa surveyed ECObox users regarding their motivation in participating, which ranged from cultivation, recreation and culture to political organising.[62] The surveys noted that some participants who had initially described their interests in terms of recreation or cultivation, after some years became more politically motivated, particularly when the garden faced eviction.[63]

Armed with experience from ECObox and other participatory projects, since 2011 aaa has been engaged in the long-term renewal of the suburban town of Colombes outside Paris. The project is called R-urban and is conducted in partnership with the city of Colombes and the art and architectural practice Public Works, in collaboration with local residents, students, researchers, and a cooperative and social bank. The project is constructing a set of resident-run facilities: an urban agriculture unit with community gardens, educational spaces, and devices for energy production, composting and rainwater recycling (AgroCité), [fig. 7] a recycling and construction unit for work on eco-construction and retrofitting (RecycLab), and EcoHab cooperative housing, partly self-built and incorporating experimental units and community spaces.[64] These facilities are described as examples of urban commons collectively managed and run by their users, encouraging more socially and ecologically resilient forms of production and consumption.[65] The facilities, processes and project as a whole are framed as a prototype that others can use, learn from, and develop.[66] The charter of the R-urban project, called 'R-Urban commons', states:

> Starting from our own experience, we propose a draft of possible principles, collective rules, frameworks and operational modes, which could, in a similar way to the Creative Commons rules, constitute an open source proposal for the planning and use of urban, suburban and rural space, according to the criteria of commons. This could evolve (through numerous exchanges) into a charter of commons for urban, suburban and rural areas.[67]

The intention is to collaboratively develop a charter and catalogue of urban commons with explanatory concepts as well as practical examples. For this purpose, a wiki has been set up with draft texts and instructions so that anyone can participate.[68] It is too early to assess and analyse the outcomes of the R-urban project, but its declared intention is to become a model and source of inspiration for the future retrofitting of post-war suburban areas in Europe and elsewhere.[69]

Characteristics of open-source urban commons

Based on the writings of Benkler, Siefkes and Stallman, I will outline below a set of characteristics of open-source or commons-based peer production and relate these to the practices of Rebar and aaa.

- *Based on contributions*. Commons-based peer production is based on contributions rather than the capitalist notion of equivalent exchange, usually in the form of payment. In the urban commons initiated by Rebar and aaa, people who can and want to, are able to contribute skills and time for building, developing prototypes, cultivating, communicating and documenting work on the wiki, etc. However, non-contributors can also use the urban commons, parklets or digital commons catalogues without a demand for a reciprocal contribution.

- *Transparent code*. The transparent code of open-source software is comparable to the spatial and procedural prototypes developed by Rebar and aaa – the parklet format, 'how-to' manuals or mobile devices – all of which can be accessed digitally, copied, used, and developed by others.

- *Motivated by fulfilling needs or desires*. The work



Fig. 5

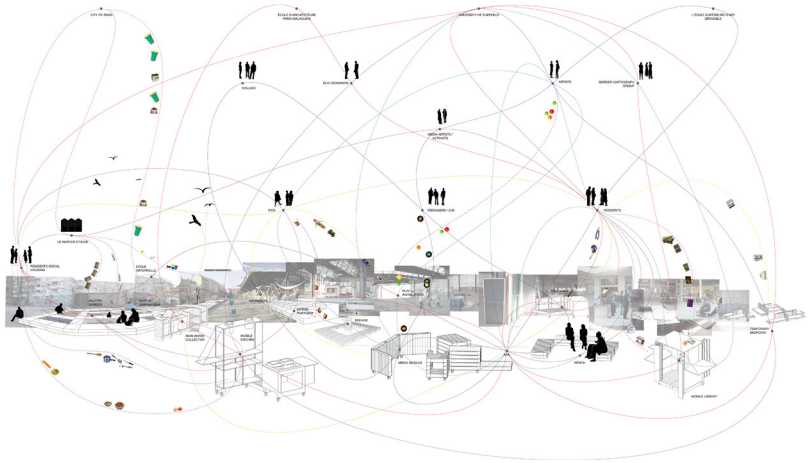


Fig. 6



Fig. 7.

Fig. 5: The ECObox garden in La Chapelle, Paris. © aaa
Fig. 6: Actors, devices, and networks in the ECObox project. © aaa
Fig. 7: AgroCité: the agro-cultural unit. © aaa

of Rebar and aaa, like that of many other critical practices, is not motivated by profit but by a desire to promote societal change and fulfil needs or desires. Rebar summarises their ethos in terms of 'inspir[ing] people to reimagine the environment and our place in it' and 'giving away' their work. In their writings, aaa explains that their aim is to promote social and ecological resilience, the self-management of urban spaces, and, by micro-political interventions, collaboratively transform larger societal structures.[70]

- *Conducted as peers*. Commons-based peer production is conducted by people working as peers rather than following commands in hierarchical structures. However, peer production also includes initiators and moderators who establish the rules of production, mediate innovation and feedback, and coordinate development and protocols. In the cited examples of urban commons, aaa and Rebar act as initiators and mediators, though they are not 'bosses' who demand and control the work of others; instead, they encourage others to collaborate and co-produce.

- *Based on an ethic of sharing*. Just as open-source computer code is transparent and treated as intellectual commons, the projects of aaa and Rebar are based on a desire to share and disseminate their practices. The outcomes are not artefacts of which the architects claim private ownership: yes, they are the official initiators, but the outcomes are treated as collective properties. In the case of Park(ing) Day, the concept is licensed under the Creative Commons to protect it from being commodified. In this way, the initiators can ensure that the use and development of the entity remains in the commons.

All of the above cases can be understood as examples of 'open-source production of urban commons'. Through using open-source tactics, critical spatial practices can go beyond being mere singular pieces of architecture situated in specific locales and become practices inspiring wider social movements in which the spatial tactics and architectural prototypes can be copied, multiplied and developed by a multitude of users in different locales. This spatial tinkering and DIY culture may be perceived as threatening the authority and role of the architect or spatial professional.[71] However, this new ethos can also be regarded as encouraging spatial professionals to act in a wider sociopolitical space as 'agents of progressive politics' – as suggested by Schneider and Till.[72] In this role, the architectural knowledge of prototyping, using and coordinating multiple forms of knowledge comes into full use, though the process is increasingly collaborative and the outcome is democratised and 'owned' by many.

Concluding remarks on the societal impact of open-sourcing urban commons

Though the production of open-source urban commons may indeed have the potential to democratise urban development, critical questions need to be raised. How enduring are such urban commons? Who benefits from them? Who/what might be marginalised? And how far can these commoning practices reach in terms of transforming larger societal structures?

For commons to be enduring, Ostrom has pointed out that they need to be self-governed in the form of local entities or entities nested in layers, and that there need to be clear rules as to the resources included, who can use them and how. In the case of Rebar, the Creative Commons licence has been used to establish clear rules for Park(ing) Day. The San Francisco Planning Department's *Parklet Manual* functions in a similar way, defining what a parklet is, how it can be used and managed, and what happens if it is misused. aaa has perhaps not worked with such formal rules, but are suggesting that the R-urban approaches to creating urban commons should be set up as a Creative Commons. In line with Ostrom's principles of governing the commons, both Rebar and aaa actively work for the self-governing of the commons. An important factor

influencing the endurance of urban commons lies in how the various users appropriate these commons sites and skills, and hence develop a sense of collective ownership.

Krivý and Kaminer, however, critically note that contemporary participatory architectural practices and platforms tend to have difficulties combating social inequality.[73] They even argue that 'often, the creation of participatory platforms reproduces the inequalities against which they were tailored'.[74] It is, however, unclear what participatory platforms Krivý and Kaminer are referring to and how they have assessed their impact on social inequalities. Indeed, participatory architectural projects may have little effect on overall societal inequality, since inequality stems from the larger socioeconomic organisation of society. Though some participatory architectural projects might indeed reproduce inequalities, other projects in fact challenge them.[75] The parklets, which occupy space reserved for social and non-commercial activities, can be evaluated against the previous spatial use; i.e., reserves for car owners. The ECObox garden, which functioned as an urban living room and later multiplied and spread to other parts of Paris, can be evaluated against the former derelict site and lack of public space in the district of La Chapelle. In these cases, aaa and Rebar have consciously chosen to work in areas underserved by public or common space and have encouraged local users to appropriate and adjust the spaces to suit their needs. One could perhaps imagine even more egalitarian and democratically accountable processes and forms of urban space; nevertheless, the examples cited here have indeed helped people to reimagine open space and politicise how, by whom, and for whom space is produced, reserved, and managed.

As mentioned, the welcoming of tactical urbanism and DIY practices by public planning departments, for example in San Francisco, can be interpreted as a way to soothe citizens in situations characterised by lack of public capital and the absence of strong municipal urban planning. As pointed out by proponents of DIY tactical urbanism, these self-initiated temporal and low-budget spatial interventions cannot, however, replace long-term public (or common) investment and planning.[76] They should instead be seen as experimental approaches that can be taken up by longer-term formal planning. Through tactical urbanism and temporary urban commons one can test and illustrate how institutionalised and democratically accountable planning could be renewed and developed. The institutionalisation of the parklet is a good example of how a guerrilla action became a social movement, which in turn became incorporated into official public planning that then set rules to make parklets or other forms of urban commons enduring, transparent, democratically accountable and organised to serve a wider population in the city.

Open-source urban gardens and Park(ing) Day interventions are easy to like and, as Merker points out, are 'superficially unthreatening to the system of spatial commodification […] critique[d]'.[77] One can question whether commons-based open-source architecture and planning are desirable, or indeed possible in the case of more complex forms, such as metro lines, public buildings or energy infrastructures. Micro urban commons do not challenge the overall capitalist production of urban space, infrastructure, property values and speculation, but nevertheless they constitute small acts of generosity, encouraging social interaction beyond private consumption and competition, while having the potential to function as sites of wider social and political organisation. aaa noted that the ECObox project activated political engagement among its participants, some of whom became skilled in political and social organising when facing evictions. Rebar consciously encourages Park(ing) Day actions to be used to shed light on issues important to local communities, and although these may be political and structural issues that go far beyond the

specific use of urban space, the temporary micro urban commons can help make these concerns visible.

The tradition of creating and struggling for commons is not new; however, it is being reinvented in the era of global capitalism and, as illustrated above, potentially facilitated by the spread of digital technologies and open-source tools. Drawing on Benkler's assertion that open-source commons-based production constitutes a 'third mode of production' – beyond capitalism, socialism and their blends – one can regard open-source urban commons as embodying a critique of both current government and privately led urban development, advancing a form of post-capitalist urban development, though with the help of current as well as new institutional arrangements.

Notes

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Biography

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