16

COMMONS ECONOMIES IN ACTION

Mutualizing Urban Provisioning Systems

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Commons

We start this chapter by defining two key concepts—the commons and peer-to-peer production—and outlining a vision for a contributive economy based around them. Following the research by Elinor Ostrom, we define "the commons" as a set of shared resources that are maintained, created, or cared for by a situated community or group of stakeholders.[1] While the first part of the definition proposes that commons are something objective, the second adds a subjective element: commons are constituted by human beings, it is a choice a "we" makes as to how they manage a resource (natural or otherwise) and the allocations it can provide. The third stresses self-governance: around the commons, specific rules and norms are created. This clearly distinguishes it from the "dominium" principles of private property, but also from public goods that are managed by an external agent, i.e., the State.

Here we should stress that post-anthropocentric discourses question the definition of natural resources in terms of its ontological dualism between nature and culture. The definition of commons can meaningfully be deepened here by borrowing the notion of "web of life"[2] as an extension of the resources, their governance, and the (multi-species) communities involved. A key issue today is to move from the idea of human commons that manage "external" resources, to the idea of commons as an alliance or partnership between human and non-human communities and entities as interdependent agents and subjects. Many Indigenous cultures, more conscious of their interdependencies in the web of life, often achieved this through the sacralization of the forces of life and nature, and by declaring certain zones off limits to human exploitation. Today we could reinterpret this as a form of "sacred property." The commons, as a modern form of inalienable property, can be seen as a reiteration of that insight. Alan Page Fiske (1993) and Kojin Karatani (2014) both conclude that the commons was the primary mode of exchange in indigenous civilizations, and that it kept an important role in the subsequent scaled-up tribal federations, when gift exchange became a more

important modality of exchange. What is clear is that, historically speaking, the commons has been the primary regenerative human institution, able to balance and restore the harm done by market and state institutions, which have historically been extractive.[3]

It should be stressed that commons and commoning as normative claims to resources and their governance, already shared by many communities and struggles around the world and known under different names, are at their core a pluralist, or rather, *pluriversal* vision, which presupposes that many worlds, ways of knowing, being, and doing can coexist in both locally situated and planetary-scale interdependence. This last dimension is reiterated in this chapter through the idea of cosmolocalism, discussed later. This also means that the position we take in this chapter is not one of replacing every other economic form with a purely commons-based one, but rather that we advocate rearranging the relative priority, and hence the associated dominant institutions, of the various forms of governing and allocating resources.

Peer-to-peer Dynamics

Understanding contemporary commons also requires an understanding of the emergence of peer-to-peer dynamics. The term "peer-to-peer" (P2P) was popularized by the emergence of a new type of digital network, where computers can interact with any other computer, bypassing the need to go through centralized servers. To a substantial degree, the early liberatory ideology of the internet was inspired in its design by such principles. But more fundamentally it is a social dynamic, i.e., any dynamic where humans can freely connect, interact, and create value together, can be considered a P2P system, sometimes despite the fact that such a network can be privately owned. P2P has led to the emergence of global open-source and design communities that lie at the heart of new industries, such as free software and the shared designs of new electronics, but also self-management of mutualized urban resources (Bauwens and Niaros 2017). Citizens and private and public actors now have access to open collaborative ecosystems that are active at different scales. Commons can emerge from P2P interactions as contributors co-create and co-develop shared resources that need to be co-managed for common benefit.

Our vocabulary for this transformation, building on these P2P dynamics, therefore emphasizes the notion of a "contributive economy," composed of productive communities that create shared value around shared resources. A contributive economy sees people and communities co-creating shared resources, based on open-source or open–design principles; while people, teams, and communities create livelihoods around these. When we imagine this contributive and collaborative logic applied to cities, we are talking about the urban commons.

The Urban Commons

The praxis of the urban commons builds on these two ideas, the commons and the potential of P2P interaction and co-creation, to reimagine what a city is and can be. Sheila Foster and Christian Iaione, two of the foremost pioneers in the idea of the urban commons, provide this definition of what an urban commons is:

> The concept of urban commons is based on the idea that public spaces, urban land, and infrastructure ought to be accessible to, and able to be utilized by, urban communities to produce and support a range of goods and services important for the sustainability of

those populations, particularly the most vulnerable populations. The founding principles of this movement include sharing, collaboration, civic engagement, inclusion, equity, and social justice. Urban commons are created and managed by civic collaborations including participants from local communities, government, business, academic, and local nonprofit organizations. In this way, the city is a platform utilized and optimized by citizens from all backgrounds and social statuses.

Foster and Iaione 2020

Work on the urban commons is thematically diverse, e.g., shared mobility, housing, food and energy projects; many also feature open-source protocols, designs and infrastructures targeting the provision of specific services or service nexuses at the urban level, broadly understood. However, they can also be considered, as proposed by Foster and Iaione (2016), as a governance model for cities themselves, to the degree that a city can be considered as a kind of commons.

The emergence of a commons-centric urban ecosystem, i.e., the "commonification of public services" (Fattori 2013), necessitates a specific interface between the public sector and a new civic/citizen sector, which can take the form of "public-commons partnerships" or, potentially, public-commons–private partnerships (Ibid.; Milburn and Russell 2019). Foster and Iaione (2016) have proposed a "quintuple helix" model for urban collaborative governance which includes (1) businesses or similar entrepreneurial forces; (2) knowledge institutions such as universities; (3) government; (4) official civic organizations (NGOs); and (5) citizen-commoners themselves. As suggested in the introduction, the circle of moral obligation here can be meaningfully expanded to include non-human perspectives and concerns.[4]

At different scales, urban commons can take the form of hybrid property or governance arrangements, but it can also take the form of concrete "commons accords." The primary aim is to reinforce the capacity for the autonomy of citizens in driving commons-centric projects, and to provide them with resources and capitalization. Ideally, it strengthens the autonomy of projects, while the alliance with public actors injects the elements of the wider common good that individual projects cannot necessarily carry on their own. In terms of governance, they often combine a public authority agent, joined by a commons or civic association which represents the "commoners"—those citizens working in the common interest.

A recent commons transition initiative for the city of Ghent,[5] as well as examples of urban commons in Barcelona and a number of other cities, give substance and further contours to the case for contributive, commons-based institutions and economies. The following examples provide already running and prefigurative examples of these.

## Partner Cities: Lessons from Ghent and Bologna

In 2017, members of the P2P Foundation research network were commissioned by the city of Ghent in Belgium to map local urban commons, conduct conversations with founders of pioneering projects, and advise city authorities on adaptations of the city in favor of the commons-centric citizen initiatives. Figure 16.1 shows the underlying "value logic" of urban commons, which in Ghent grew from 50 to 500 projects in ten years.[6] These urban commons are most often grassroots efforts that create open contribution-based communities, i.e., they are not market, state, or even NGO models.
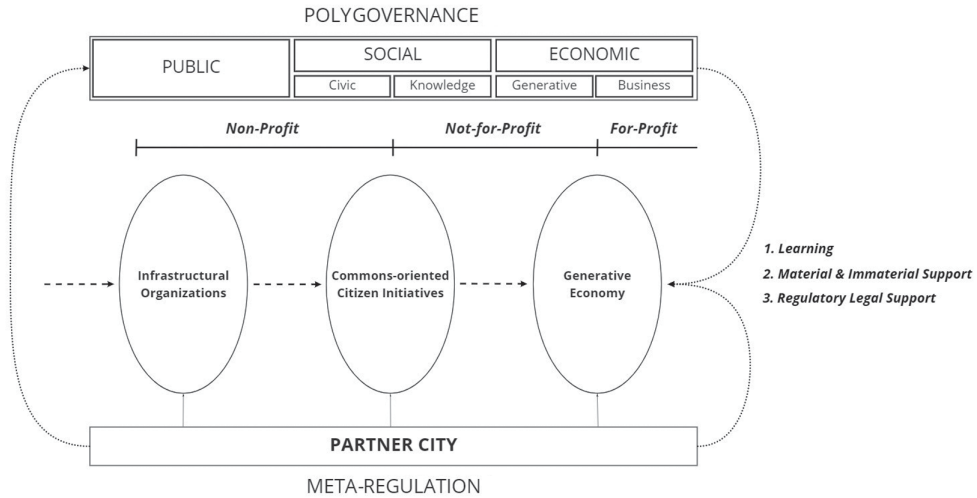
FIGURE 16.1 Synthetic overview of the urban contributive economy (Bauwens and Onzia 2017).

Another finding is that even without formal policy from the city, public agents and other forms of support were present during all phases: infrastructural organization, incubation and functioning of commons projects, incubation of economic projects, and support for commons–centric economic activities. Therefore, in many cases city authorities must first of all recognize that they are already involved in supporting urban commons, but may want to develop a more coherent support of what is at once a newly emerging value regime, one that is based on contributions and not on either pure market activities nor as planned public projects. These projects advance the sustainable wellbeing of the urban populations, but may not always be directly measurable by Gross Domestic Product (GDP), to the degree that they do not involve the monetization of some or all of these activities. This highlights the importance of introducing new types of metrics (such as sustainable wellbeing[7] and local doughnut economics[8]) as well as redefinitions of work (e.g., to recognize and include socially and ecologically regenerative and reproductive labor).

Referring back to Figure 16.1, governance in this model is often polycentric, combining public, social–civic, and economic institutions and organizations, as well as non–profit (no profit allowed), not-for-profit (profit must be reinvested in a social goal), and even for–profit models, which can consist of networks of freelancers, small and big companies, or entities from the ethical, impact, cooperative, and solidarity economy. At the bottom, we place the "Partner City" model, where the city acts as a meta–regulator of the whole system. Figure 16.2 shows the new logic of cooperation that may emerge, once the existence of the commons, and of the public-commons relationships, are recognized. This takes the form of what we call "public-commons cooperation protocols." The first more sophisticated form of such cooperation likely originates in Italian cities, more precisely in the city of Bologna. The Bologna Regulation for the Care and Regeneration of the Urban Commons is based on a specific model that has been emulated in more than 250 other Italian cities and has by informed accounts mobilized around one million Italian citizens to take care of their urban commons.[9]
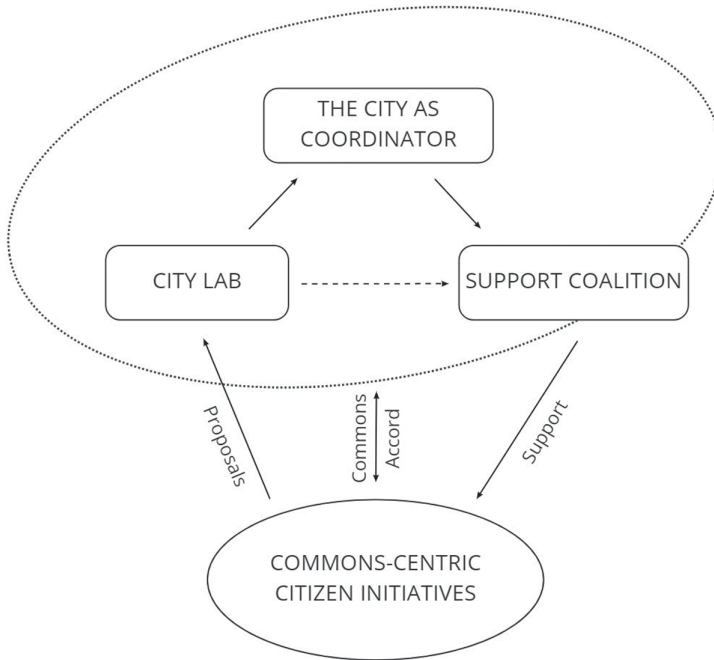
**FIGURE 16.2** Public–commons cooperation protocols (Bauwens and Onzia 2017)

A marker of this movement is a recognition of a right of initiative of the citizens, who can claim a commons, a "right to care." Many of these cities also initiate a "Commons City Lab," an institution where citizen-commoners can seek validation and legitimation for their projects. This is then formalized through a "Commons Accord," a mutual agreement between the citizen groups and the city, which specifies mutual duties of support.

This model also has very strong economic implications in the context of a potential new value regime that integrates the presently excluded externalities. First of all, in this model, what is primary is not the commodity value of goods/services or labor power, but "contributions," as defined and experienced by that particular community. Commodity prices and income may be involved, but they exist in hybrid arrangements around the core contributive logic of the specific community. As we found in a study[10] of 300 peer production communities, nearly three-quarters of them were involved in or have experimented with "contributive accounting," a way of keeping track of the variegated contributions that comprise a commons. This usually involves creating a membrane distinguishing the inner logic of the community from the outer logic of the existing market or governmental forms (prices and subsidies). In other words, the project may seek classic funding from external sources, but combine this with innovative forms of internal value definition and distribution. Second, these commons-oriented projects may seek the type of income and funding that maximizes their freedom of action and value regime. This is why we speak of an "ethical economy" or a generative economy surrounding their projects. This may take the form of an entrepreneurial coalition which has specific usage and reciprocity arrangements with the peer production communities.

Urban Commons and Contributive Democracy

Urban commons prefigure a new political contract, in the dynamic multi-actor agreements for collaborative governance and the co-constitution of a city. Urban commons thus express an emerging logic of "contributive democracy" (see Figure 16.3). Democracy can exist in different forms such as representative democracy, in which people choose representatives, and participatory democracy, in which public institutions actively seek direct input from citizens. Contributive democracy functions differently. It recognizes that citizens that already contribute to vital tasks in active ways, must have their voices heard in active ways, and this can be done, for example, by including such engaged and contributive citizens, into the transition councils that determine policy in the context of ecological transformation.

Urban commons are neither pure representative democracies, nor participatory democracies, as these modes are not sufficient to carry forward the transformational dynamics of polycentric governance and multi-actor commoning. Representatives are highly sensitive to their sources of funding and financial support, while so-called participatory models are often top down and seek the opinion of citizens, but not transformative citizen contributions. (A merely representational model based on existing civil society dynamics may invite in the municipal actors whose main goal is actually to slow down required transformative actions). This, then, is what contributive democracy brings to the table; a necessary counterweight of already transformative agents. In the case of the city food council "*Ghent en Garde*," it integrated not only citizen participation, but invited in civic actors who were already successfully carrying out transformative activities that the city needed. In other words, the legitimacy
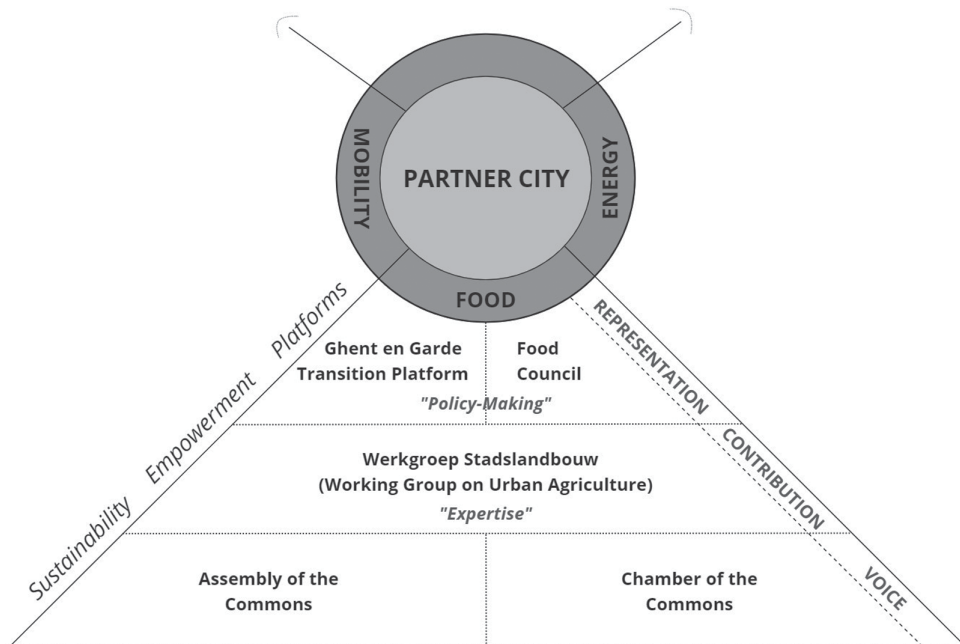
FIGURE 16.3 An example of contributive democracy: the food transition council in Ghent (Bauwens and Niaros 2017)

comes from citizens already expressing in practice the legitimate political goals of the representative regime. This is indicated, in Flemish, as "Working Group on City Agriculture" which represented these new actors.

Figure 16.3 shows the institutional arrangement that the city created to facilitate the food transition efforts in line with climate objectives, with some of the extra proposals that were forwarded to the city administration. The figure also refers to "Assemblies" and "Chambers" of the Commons. These are not public-commons institutions but proposed autonomous institutions of the Commons. The Assemblies of the Commons federate citizens that are actively engaged in the creation and protection of urban commons in a particular city or region, while the "Chambers of the Commons" is a proposal for creating links with the generative enterprises that work with commoners and commons. An Assembly of the Commons was pioneered by Lille in northern France and has been informally operating for several years, a model that is being emulated under various names (e.g., *Fabrique des Communs*). The city of Grenoble has been supporting a permanent assembly of this type. One of the outcomes has been the presentation of public policy proposals to candidates in the municipal elections of France in May 2020. The initiative Remix the Commons has compiled a *Politiques des communs: Cahier de propositions en contexte municipal*,[11] an overview of commons-oriented policies proposed for the municipal level.

Contributive Democracy and *Patrimoni Ciutadà*

One of the best examples of contributive democracy in an urban commons comes from Barcelona, where the city has initiated a so-called communitarian management framework called *Patrimoni Ciutadà*. This regulation enables citizens and neighbors to manage citizen heritage projects, mostly referring to old urban voids (vacant land and dis-used buildings) and important historical buildings.

After the major social mobilizations of 2011 and the election of a commons-oriented coalition, the city of Barcelona created new urban institutions to support the development of a commons-oriented economy. This entailed the collaboration with a knowledge coalition of experts with a focus on the commons (BarCola29), new communication platforms (Procomuns) as well as experiments with in-depth forms of citizen participation (Decidim. barcelona). The city created an open-source Municipal Action Plan which relates to the local commons-based collaborative economy, specifically recognizing it and supporting it with an ambitious investment plan (Impetus Plan30). Using the urban commons and the logic of contributive democracy, Barcelona has generated significant innovations and achievements, including:

- Becoming the first European city to implement a Solar Thermal Ordinance (STO), making it compulsory to use solar energy to supply 60 percent of running hot water in all new buildings, renovated buildings, and buildings changing their use (Puig 2008);
- The Open Digitisation Programme from Barcelona City Council's Office for Technology and Digital Innovation, a government measure for open digitisation, free software, and agile development of public administration services (see Bria, Rodrıguez, and Bain 2017);
- The Barcelona City Data Commons initiative raised the question of how citizens can make the most out of data by putting the digital right of the citizen at the core;

- The creation of Barcelona Activa, a new department inside the local development agency which aims to encourage alternative economies;
- The Barcelona Commissioner for Cooperative, Social and Solidarity Economy and Consumption is tasked with promoting and visualizing the social and solidarity economy in order to create new commons-oriented policy directions in the City Council;
- The Impetus Plan for the Social and Solidarity Economy in Barcelona;
- Barcelona Initiative for Technological Sovereignty (BITS).

A similar participatory framework was voted on by the Lisbon City Council in 2010 in order to promote neighborhood preservation and improvement, which benefits 77 Priority Intervention Neighborhoods and Zones. These and other notable examples are collated in the European policy brief prepared by Generative European Commons Living Lab (2020).

Reimagining Urban Agentic Variety

How can diverse socioeconomic, ethno-cultural and newcomer communities have equal access to engaging in and benefiting from these commons? Contributors to commons-centric citizen initiatives are not exclusively reserved to legal citizens, but often involve all inhabitants of a city. Nevertheless, local commons are not necessarily entirely mixed and many factors can have effects on the willingness and capacities of inhabitants to cooperate, the shapes this cooperation takes, and how open or exclusive these spaces are. In our observations in the case of Ghent, there were two types of commons that emerged in that context.

The first type of civic commons observed is theoretically open to everyone, but they might in practice be led by the longer-established populations, and especially by the so-called urban elite, which may lead to a reluctance of more recent migrant communities to participate. The second type of commons are ethnic and religious commons, which are theoretically closed but may in practice be better able to attract poorer inhabitants of the city.

This contradiction is not easy to resolve but public policy and framing may play a role in creating more hybridity in their cooperation. Geneviève Perrin, a French doctoral researcher, has written about how to converge the commons governance orientation of Elinor Ostrom with the capacity-building orientation of Amartya Sen. She proposes the idea of "commons of capabilities" as one of the duties of the "partner cities" that are interested in promoting and assisting the expansion of urban commons (Perrin 2019). Some approaches may be conducive to fostering intercultural cooperation. In Ghent, for example, a project by the non-profit Wervel, aimed to provide organic food to the five million public school meals needed annually. This system brought together the local organic farmers, the zero-carbon cargo bike transport solution, the hiring of cooks in the school, cooperation with the parents and, in addition, the use of technically savvy experts to maintain the technical infrastructure. In this way, the various sectors of the population were brought together as contributors in an integrated system.

Contributive democracy suggests a transformation of the role and indeed definition of "citizen," as the urban commons generates agentic complexity and dynamism far beyond traditional notions of the citizen:

- At the core of this new value regime is an active value-creating (and diverse in itself) civil society, which actively participates in commoning, and cares for the shared resources that it needs for the common good;

- Around this core civil society exists an ethical and generative market system, which creates livelihoods for the citizens, but acts in a generative capacity toward the human communities and the web of life in which they are embedded;
- Facilitative common-good institutions, the *res publica* acting as the "commons of the commons" defend the integrity of the whole system in a "partner state" configuration which augments the capability of its citizens to participate fully in the creation of common value;
- The more-than-human—as embedded in the web of life and validating the critical idea of urban planetary boundaries, the variety of other species and non-human agents that are required to co-generate the common good.

Urban Commons and the Cosmolocal Shift

Cities are not just nested into the context of the global neoliberal economy, but are active creators of it. Cities are where economic and political power have consolidated from the time of great empires to the present. Many cities have historically expressed an imperial core-periphery dynamic (Homer-Dixon 2006). Thus, while we contend with a climate crisis that requires urban transformation, the perverse logics of neoliberal growth are seemingly "baked into" the DNA of many cities.

The new dynamics of urban commoning, which involve the characteristics of being open collaborative systems and contributive democracies, allow us to finally introduce an important concept, that of cosmolocal production. Cosmolocal production is the planetary mutualization of knowledge, in which localities benefit from and contribute to all other localities through open design, open hardware, open technology, and open knowledge, which can transform the logic of cultural, digital, and material production. Two key purposes of cosmolocal production are:

1. To open up opportunities for the majority world (those most in need) to generate livelihoods from a global knowledge/design commons;
2. To create the conditions for a sustainability revolution whereby we, the people of the Earth, are solving our mutual sustainability problems.

A cosmolocal mode of production can exponentially accelerate our ability to address the great sustainability challenges of our era, as one locale solves a problem (e.g., reducing its carbon footprint), by keeping the solution open, it potentiates any other locale to do the same. Likewise, as designs and ideas circulate in an open collaborative system, it allows projects and enterprises to access these to generate livelihoods. These ideas already have proof of concept in dozens of examples (see Ramos, Bauwens, Ede et al. 2021). While the cosmolocalism described here focuses on a new mode of production, the project of cosmopolitan localism more broadly crucially brings in post-colonial, post-development and pluriversal perspectives (Manzini 2015; Escobar 2015).

Cosmolocal production in urban settings presents obvious and important synergies. Cities have scale: large populations, professional expertise, markets, and the proximity needed to produce complex goods and services. We can envision urban citizens harnessing the potential of cosmolocal production to support transitions toward sustainability goals as well as generate jobs and livelihoods. The Fab City Global Initiative is a network of cities that aim to produce

everything they consume, thereby dramatically reducing waste and eliminating a large pro-portion of transport in goods.[12] The emerging ecosystems for urban commons may also have a natural affinity with cosmolocal production. Research conducted by Bauwens and Onzia (2017) on the city of Ghent discovered a proto-cosmolocal ecosystem there with production based on an open contributive system already mature in substantial and diverse niches. Every provisioning system in Ghent already offered a choice in public, private, and commons-oriented ecosystems.

Frontiers in Cosmolocal Value Accounting

A key challenge cities face, as nexuses of dynamic flows and exchanges, is a transition from competition of closed entities that prioritize their own survival and dominance to open ecosystems that operate on a cosmolocal basis. In this new model, material production is max-imally localized based on the principle of subsidiarity of material production, thus minimizing the matter–energy expenditure. However, the knowledge cooperation becomes trans-terri-torial and flows through the ecosystem as a whole, wherever the entities are located. In the old system, the role of regional and national authorities is to attract financial capital. In the cosmolocal economy, the role of territorial authorities is to attract global knowledge flows, so that they can enrich and support local territorial development.

Such new models of production will require wholly new systems of accounting, bringing into the foreground not just territorial fiat moneys but an ever-evolving diversity of intel-ligent tokens that express the new requirements to respect ecological boundaries. We see a possibility here for scientific bodies and public-science collaborations to evolve to determine these "thresholds and allocations," whereby accounting gains the capacity to represent actual material realities (see Bauwens and Pazaitis 2019). Perhaps the most interesting work being done in this direction, next to Amsterdam's Doughnut Coalition, is the "global threshold and allocations infrastructure" proposed by the Global Commons Alliance and R-30.org.[13] In this system, a global "magisterium of the commons," i.e., a council of scientists would keep track of all commodities, identify their negative pivots, and set annual limits to their usage, which would be embedded in globally accepted accounting ledgers.

Emerging post-blockchain distributed ledger technologies may actually represent an essen-tial infrastructure for this leap in modes of planetary accounting and potentially, a global coordination of production, spanning not only digital but also physical production of value (Fritsch, Emmett, Friedman et al. 2021). With the establishment of an internet of transactions, accounting models become concerned about actual resource dynamics in terms of phys-ical flows and thermodynamics. In this new model, the so-called "externalities" are fully accounted for, both the contributions of many participants who are presently uncounted, but also the negative impacts that such production entails for the web of life.

Concluding Reflections on Activating Urban Commons

Cities will require models at different scales that can draw on the institutional cooperation of various partners. Cities interested in the mutualization of their provisioning systems, for example, could set up a four-layered system of collaboration, as outlined below.

The idea of the urban commons opens the city to a new ontological reality for those who can engage creatively in shaping the city, and for whom a city is shaped. The underlying

and implicit nature of cities is both diverse and complex, but this creative groundswell often gets marginalized or ignored. The first "layer" to consider in activating urban commons is to acknowledge the rich existent collaborative complexity that is already engaged in commoning, and to develop the meta-networks and prefigurative meta-formations that can begin to mutualize and extend what is latent.

The second layer in activating urban commons is, as discussed earlier, to bring together the coalitions of support (e.g., the idea of the quintuple helix), which can be supported by a (Partner) city. Accords and agreements play a critical role in formalizing the relationship between a city and "commoners," establishing a new sociopolitical contract. This contract mobilizes legitimacy, public resources, and establishes a new narrative context for action/agency.

The third layer in activating the urban commons is in a city explicitly creating a synergy between a global open design, knowledge collaborative process (cosmolocalism) where a city uses open design to transform its own cultural, digital, and material production, and where what a city creates remains open to any other locale (e.g., other cities) to use for their benefit, creating a virtuous cycle. As mentioned, the Fab City global initiative is pioneering such city visions and experiments.

Finally, a fourth layer in activating the urban commons is, more hypothetically, creating alliances or leagues of cities that can practice city-to-city mutualization, yoking multiple urban commons into synergies where urban commons in various parts of the world work for each other's benefit; addressing the challenge of scale and the inherent competition with capitalist globalization.

Notes

1 There is no singular agreed-on definition of the commons, but many authors acknowledge the tripartite definition listed here. For a comprehensive study of competing definitions of the commons and the social practice of commoning, see Euler (2015). We have collected various definitions of the commons at https://wiki.p2pfoundation.net/Commons.

2 "Web of life" is described as a succession of organisms in an ecological community that are linked to each other through the transfer of energy and nutrients. See the book-length treatment in Capra (1997); on the web of life, capital accumulation and human non-human co-production, see Moore (2015).

3 The dynamic between expansive market–state systems, leading to resource exhaustion, and the periodic revolts of local popular alliances with spiritual reformers that advance a return to commons-based institutions, is documented by Mark Whitaker, who presents various case studies from ancient China, medieval Japan to post-Roman Europe; see Whitaker (2010).

4 For important work on "post-human" urban commons and economies, see, for example, Metzger (2015) and Schönpflug and Klapeer (2017).

5 Further details on the case study may be found in the report by Bauwens and Onzia (2017).

6 This figure comes from our own mapping exercise and the associated timelines of founding dates. The database is privately available in Timelab, Ghent and was previously accompanied by a public wiki.

7 See, for example, Gough (2017) and Buchs and Koch (2017).

8 See the Doughnut Coalitie (https://amsterdamdonutcoalitie.nl/) and the implementation of the doughnut economy in Amsterdam, the Netherlands.

9 The figures come from a conversation by one of the authors with LabSus (www.labsus.org/) members.

10 See P2P Value, https://p2pvalue.eu/.

11 See platform Politiques des communs (https://politiquesdescommuns.cc/).
12 See https://fab.city/.
13 See www.r3-0.org/gtac.

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