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The Handbook of Peer Production

Chapter 30 – Be Your Own Peer! Principles and Policies for the Commons

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Foreword

As we were nearing the completion of the *Handbook of Peer Production*, the world experienced an extraordinary upheaval, due to the spread of the lethal Covid-19 virus. It would be ill-advised to venture from an April 2020 vantage-point predictions what this means for the future. We can only note, in no particular order, some facts which the crisis has made clear: human encroachment on nature causes epidemics; free public health is essential; in the "society of the spectacle," industrial production is effectively invisible; the consumption of mass commodities is a source of viral anxiety; social practices can change overnight; losing millions of jobs mandates wage subsidies; communication, support and solidarity are key to wellbeing. These points and their implications align with the practical proposals in this final chapter of the *Handbook of Peer Production*. The impacts of Covid-19 are profound, but will not last forever (though local infection pools may subsist in poorer countries for much longer than in the Global North). In contrast, the environmental crisis is here to stay. This chapter argues that significant social change is required to stave off climate destruction, and it makes the case that peer production can usefully contribute to necessary processes of "relocalization" and "degrowth".

1. Introduction

The governance of peer produced projects, one of the central aspects of the studies of peer production, aspires to the self-regulation of participants in autonomous collectives. This governance raises the broader issue of political sovereignty. The appeal of self-governance for peer production participants can perhaps be explained by the amount of strategic control most citizens in liberal democracies have over their lives and environment. This control has been drastically reduced by unaccountable global actors – e.g. financial markets, extractive

industrial interests, supranational trade agreements, and the list goes on – who influence and constrain the policy options of notionally democratic nation-states. In the early 2020s, racist nativism and authoritarianism are being embraced by some people in reaction to the failures of export-oriented, deregulated, and globalized neoliberalism. A way out of this political crisis is linked to a solution to the environmental crisis: we must head toward more democracy by *relocalizing* or *deglobalizing*, and towards more sustainability by *degrowing*, our economies.

As engaged researchers, we believe the *Handbook of Peer Production* needs to offer a response, however modest, to these political and ecological challenges. Addressing the macro-economic aspects of "deglobalization" would lead us far away from peer production, towards issues which would probably require a *Handbook* of their own.[1] Accordingly, we focus here on relocalization as it relates to degrowth (*décroissance*), the downscaling of over-production and over-consumption (Kiallis, 2019; Latouche, 2006). In a nutshell: unlimited growth and consumption are not sustainable, so we need more access to free public services, a shorter work week, and a turn towards climate-friendly industries.[2] In this context, Stefania Barca (2019) suggests that the one question that matters is that posed by self-governing workers: "should surplus value be reinvested in production, or not"? Yet since only a handful of firms and industrial sectors are run following so-called "holacratic" (i.e., communal or participatory) principles, degrowth must – in a first stage at least – be deployed in a piecemeal, hybrid manner. In the context of discussing the cooperative sector, Gibson-Graham (2003) suggest that if we perceive economic relations as already plural, then the

1 For example, what would less destructive purposes of global institutions such as the International Monetary Fund and the World Trade Organization look like (Bello, 2002)? And would removing national workforces, through increases in "protectionist" policies, from the antagonistic relationships with other national workforces forced upon them by unequal free trade, enable transversal forms of solidarity to emerge – so that paradoxically recognizing the national fact might enable a *class grammar* to have the better of a *nationalist grammar* (Lordon, 2011)? Etc.

2 See https://www.drawdown.org/solutions

revolutionary "project of replacement" can be modified into one of "strengthening already existing non-capitalist economic processes and building new non-capitalist enterprises," of establishing "communal subjects" (p. 157). Several chapters in the *Handbook of Peer Production* (see Braybrooke & Smith; O'Neil & Broca; Pazaitis & Drechsler, this volume) have discussed ways in which this "strengthening" has begun to occur at the municipal level. However, as noted by Adrian Smith (2014) in his account of London's early-1980s Technology Networks (community-based workshops which provided open access to shared machine tools, technical advice, and prototyping services), a "key lesson from this history is that "radical aspirations invested in workshops, such as democratizing technology, will need to connect to wider social mobilizations capable of bringing about reinforcing political, economic and institutional change" (Smith, 2014, online). In other words, the ecology around peer production must be nurtured. Further, adopting strictly local settings leaves the public policy terrain open to neoliberal and/or reactionary perspectives. In this final chapter we offer guiding principles and policy proposals which should not be read as fully-formed, but as the basis for discussions, and as needing to be combined with other initiatives and proposals, such as John Restakis' public policy proposals for a social economy (2015), and with the *Commons Transition Platform* more generally.[3]

2. Kicking It to the Next Level: Strategic Principles

If peer production is to have a significant impact on the world, it will need to expand its reach from the activist and academic fields into other spheres of public life. In other words, it will need to "go mainstream." There is a wide variety of possibilities when conceiving and enacting alternatives to the dominant model. For the sake of clarity, we have chosen to establish a somewhat arbitrary distinction between restricted and more widely

3 https://commonstransition.org/

accessible modes of peer production; reality is of course more complex, but political messaging mandates a degree of simplification. The differences between "elitist" peer production approaches which are only accessible to a small group and "mainstream" peer production approaches which have the potential to connect to a mass audience are summarized in Table 1.

Table 1. Be Your Own Peer: Principles

	"elitist" approach	**"mainstream" approach**
Purpose	Resist capitalism through alternative formations Advance towards post-capitalism through historically determined Marxist seed formation or Kondratiev wave	Prevent planetary extinction Live fulfilling lives, work less Propose concrete policies Recognize that peer produced objects cannot compete with economies of scale of industrial mass production
Language	"Peer production" "Cosmolocalism" "Connected subjectivities"	"Live the good life" "Commons" "Common goods"
Technology	Benefits of continuous technological growth	Develop and implement "slow" data (with a low environmental data footprint)
Short-term Tactics	Engage with municipalities, use civic tech Develop networks of cooperatives The need for global social movements to adopt these approaches	Degrowth agenda relevant to working-class people Socio-economic recognition of commons by governments Use of all media to foster the values of the commons
Long-term Strategies	Widely implement alternative systems such as collective control of new energy and digital systems	New cultural values for the commons Multi-level divestment from fossil fuel policy, proposals and implementations International laws that recognize commons

2.1 Principle: Have a concrete plan

Extreme weather events mean the environmental crisis is now plain to see. Apolitical members of the global population who are usually too complacent, or too resigned, are becoming aware that "business as usual" is no longer possible, and that radical changes are necessary for climate change to be reversed. The slowing down of global circuits of exchange because of the Covid-19 pandemic also offers an unprecedented opportunity to ask: do we want things to go on as before? What can we do without? What do we want more of? It would be naïve to believe that an economic "reset" button will appear thanks to the

pandemic. Yet it cannot be denied that progressive researchers and practitioners are being presented with a historic opportunity to advocate for, and work towards a reconfiguration of production and politics. From there, two observations can be made: first, this opportunity must be seized; second, proposed changes should always be framed as contributing to a reduction in our environmental footprint.

Our P2P Lab colleagues have done significant work in this space by proposing the "design global, manufacture local" (DGML) model which builds on open design and open hardware. Using the example of sophisticated objects such as prosthetic hands and small wind turbines, they show how digital commons of knowledge and design can be made to work with desktop and benchtop manufacturing technologies such as three-dimensional printers and laser cutters (Kostakis et al., 2018). We agree that this is a very promising model, which is being used to combat Covid-19.[4] However, the authors acknowledge that the communication networks and manufacturing technologies used in the process rely on resource extraction, exploitative labor, energy use, and planned obsolescence. Chris Giotitsas (2019) has documented the emergence of "low-tech" alternatives which attempt to circumvent these limitations. But in the main, for run-of-the-mill consumer items, production in Fablabs and Makerspaces does not constitute a realistic alternative, in terms of cost and availability, to industrial mass-production.

Some peer production advocates paint detailed pictures of what a "post-capitalist" society would look like (for a summary see chapter 1, this volume; Euler, 2016). Yet when it comes to describing how the transition to post-capitalism will occur, things sometimes take a turn towards the abstract. For example in *Omnia Sunt Communia* (De Angelis, 2017), which has been described as "the most ambitious and promising concept of the commons" (Korczynski & Wittel, 2020), the author suggests that commons activists could connect with

4 https://opencovid.care/

other activists to constitute a hybrid movement whose centrifugally combined power would bring about social revolution, as these "are not movements of fragmented subjectivities sharing a particular passion, but movements of connected subjectivities whose connection is further increased by their social movement" (p. 387). We do not doubt this author's excellent intentions, but we believe that when it comes to long-term objectives ("prevent the Earth from becoming inhabitable") and to short-term solutions ("re-use as much as you can"), conceptual clarity and practical implementations are mandatory.

2.2 Principle: Use clear language

Social-scientific language can be socially exclusionary. It is necessary for the precise analysis of social processes, but counter-productive when communicating politically with broader audiences. The need for universal access to water, food, energy, tools, education, transport, etc., should be articulated in terms that express a clear purpose. Ecuador's slogan of *buen vivir* ("the good life") captured the desire to ensure a decent life for all. The concept of "commons" and "common goods" describe key non-state controlled and non-rival dimensions, so convey a clear political message (in contrast, "the common good" is a vague term with no clear political agenda). We are not by any means suggesting abandoning precise language; we are reminding ourselves to be mindful not to use exclusionary terms.

2.3 Principle: Challenge the technological fetish

Donna Haraway's early work (1991) pointed out that technology's extension of capitalist control over the globe signifies the translation of the world into a problem of coding, in which all resistance to instrumental control disappears, and all heterogeneity can be submitted to disassembly, reassembly, investment and exchange. This process has acquired its own logic, and has become a substitute for the world, or the only possible world,

irrespective of whether one envisages this world as articulated by capitalist accumulation. External references, the idea of nature for example, are irrelevant to the imperative of technological development. The balance has to be restored.

We can build on the lessons learned from, and continue the work of 1960s movements such as the British Society for Social Responsibility in Science in the UK and Science for the People in the US, among others (Benjamin, 2013; Werskey, 1988). These movements did not fetishize science and technology, but nonetheless affirmed their importance if performed with a conscience, and if centered around and towards global social justice. Conceptually and practically, they defined science and technology in relation to the common good and decried their application for capitalist accumulation, domination and war.

For Breton (2000) all hackers show, from an early age, a great interest in material objects, an interest which expresses itself through the desire to dismantle these objects, to see through them in order to understand how they function. This curiosity has been harnessed by the IT industry towards never-ending growth in computational power. Many peer production advocates also consider technological development as a remedy to the environmental and social harms caused by industrial capitalism (see chapter 1 of this *Handbook*). An early critic of the technological progress fetish was Gunther Anders (1956/2002), who wrote about the Promethean shame of people who are reduced to being interchangeable cogs within gigantic units of production and consumption. Most people, when they are confronted to electronic failure, a problem so beyond their power to resolve that it appears almost fantastic, become as helpless as a child with a broken toy. Hackers embody a symbolic reaction to this failure. So far they have been valued for creating ever-faster and more powerful tools; they now need to be found “cool” when they find creative ways to best repurpose existing tools. In other words their “political agnosticism” (Coleman, 2004) must be confronted.

2.4 Principle: Embrace all levels of political engagement

The anti-authoritarian roots of peer production lead to a focus on local or municipal political engagement.[5] The local level is key, but as Graham Murdock (2018) wrote in response to a proposal for a "post-capitalist commons transition" by Michel Bauwens and Jose Ramos (2018):

> The self-organization of grassroots urban communing clashed continually with the paternalism, bureaucratization and impetus to control animating the top-down administration of public goods, but it was state intervention that placed limits on commercial enclosure and ensured access to the spaces and resources which enabled communing. A democratic knowledge commons would not have thrived without the public library system and the universal right to education (2018, p. 346).

The role of the state in protecting public and common goods has been under attack for 40 years. Because rich people cannot fully use their wealth to shield themselves from Covid-19 – in fact a cosmopolitan lifestyle put people more at risk – the pandemic has achieved in a few months what climate activists had failed to do for years: reassert this central function of

5 In recent years several cities have implemented news ways of engaging the public (see O'Neil & Broca, this volume). Barcelona's municipal government thus activated technology-based peer production projects for the commons. Ada Colau was elected Mayor of Barcelona in May 2015 as part of a political party named *Barcelona En Comú* ("Barcelona in Common"). Public participation through the democratic use of technology has been at the core of the Colau administration's goal to transform Barcelona into a smart and sustainable city, as well as a city of commons. Two examples stand out: (1) Procomuns.net is a platform which enables the co-creation of public policies for the collaborative economy and which adopted technical guidelines for building software platforms for commons-based peer production; (2) Decidim.org (Decide Barcelona) is a F/OSS platform for public deliberation and decision-making at the municipal level. As a result, new municipal policies have been suggested and voted on by citizens who have engaged with the platform, such as the design for street layouts. Barcelona has embraced the concept of technological sovereignty and digital rights. Its 2017–2020 *Digital Barcelona Plan: Transition towards technological sovereignty*, states that it is committed to "a more democratic use of technology. Boosting technological and digital innovation, for a more open government, as a tool for developing a plural economy that promotes social and environmental transformation and that promotes citizen empowerment" (2016, p.1). At a more practical level, the municipality is harnessing city data on housing to control the rising cost of rent and to lower the impacts of tourism.

the state. Whether one wishes to call the state a "partner state" (see Kostakis & Bauwens, Drechsler & Pazaitis, this volume) or not, any strategy for the commons will need to engage with the state in some respect, or risk remaining in elitist enclaves.

2.5 Principle: Work for cultural change

Policy changes require changes in attitudes, communicated through media or education. Progressive "alternative" media fight the good fight, but they are often enclosed within restricted circles. Most mass media have an advertising-driven commercial orientation, so they are not likely to embrace the commons. Social media is driven by similar epistemic partitioning as "alternative" media, and is further undermined by rampant misinformation. Under these circumstances, how are peer producers to get the word out? The answer is simple: we must use every opportunity, in every media, to link back to concrete policies and practices. Similarly, education systems must incorporate regard for the good life, common goods, and DIY principles, from an early age. How to be part of a cooperative should be taught alongside agricultural skills, for example.

Finally, the importance of reproductive work within peer production and the commons must be acknowledged. Peer production might be distinctive from the state and the market, but where does reproductive work fit into this equation? Asking this question points to the fact that this work is mostly done by women within a family unit, or performed by a disadvantaged domestic worker. These inequalities must also be redressed if more people are to participate in peer production projects. Indeed, strategies for expanding common goods that do not take into account "prevailing inequalities in access to core resources and capacities and address the possibly unequal impacts of proposed transformations" (Murdock, 2018, p. 347) will end up reproducing the social order's hierarchies.

3. Calling All Peers: Practical Proposals

At this point in time, a realistic assessment is that peer production's collaborative methods and ethic of transparency are – with the exception of F/OSS - anecdotal both in economic and ecological terms. They do however enable critical conversations about practical alternative solutions. We now present a range of concrete proposals (summarized in Table 2) aiming to put into practice the principles defined in the previous section. Some of these proposals can be achieved rapidly and independently (e.g., mapping common goods) but most will require years of concerted efforts (e.g., regulatory or education curricular changes).

Table 2. Be Your Own Peer: Policies for the common good

Issue	**Problem**	**Solution**	**Policy**
Dominant ideology of individualism and competition	Lack of appreciation for cooperation and the commons	Increase societal recognition of contributions to the commons	Promote value of common goods and celebrate champions in school curricula Recognize and teach indigenous sovereignty (land, data, etc.) Map common goods
Industrial production and consumption Automation	Environmental costs; Exploitation Job loss	Develop circular economy Work less or less intensely Re-localize food production Localize energy production	Authorize local energy grids Include agricultural skills in school curricula Tax incentives for food and tool co-ops Develop microgrids
Dominant and alternative ideologies: necessity of technological innovation	Environmental costs Loss of autonomy	Promote re-use of objects Promote DIY skills "Degrowth" and "slow data" Discredit consumption of new goods	Tax incentives for the consumption of recycled goods Include practical re-purposing skills in school curricula
Voluntary production of common goods not recognized as socially or financially worthwhile	Crisis of measure: which contributions to the commons are meaningful?	Increase economic recognition of contributions to the commons Connect common goods sector to trade unions, civil society, political parties	Contributory activities enable contributors to acquire social rights or points Tax incentives for non-profits and cooperatives Universal Basic Income or free public services

Open source licensing	Enables free riding by commercial actors	Distinguish communal and commercial uses of commons and charge accordingly	Copyfarleft licensing
Practical knowledge on how to set up local cooperatives not readily available	Reliance on personal networks, social selection	Increase access to practical, legal and technical know-how	Establishment of websites gathering practical, legal and technical advice

3.1 Spreading new values

Change the curriculum

How can we increase the societal recognition of the worth of the commons? One way is to create new champions, whose contributions are valued and taught to school children and students alike. For example, Elinor Ostrom renewed economics by focusing on social and institutional forms which enable the sharing of common resources and rights. She contradicted how mainstream economists and international institutions conceived the world, a property and market-centric view that still dominate among Western elites and in our education system (Broca & Coriat, 2015). During early modernity (16th to 18th Century), by mixing law, technology and economics, "science" became normalized as the act of dissipating non-renewable natural resources (Capra & Mattei, 2015). We still live in a world where private property is better protected than common property: a concerted cultural shift, primarily disseminated through schools, must be made to change this value system.

Indigenous people were the First Nations of many territories prior to the arrival of settlers.[6] Indigenous peoples' territories have been taken away from them, and terrible violence, at times amounting to physical and cultural genocide, has been perpetrated. During colonization the justification for taking indigenous land was the doctrine of *terra nullius* which asserted that indigenous people were unsovereign, and therefore that their land held in common now belonged to the colonial power that discovered it. In a context of indigenous

6 Settler colonial states include among others Algeria, Australia, Brazil, Canada, Kenya, the USA, and South Africa.

resurgence, grave environmental concerns, and opposition to extractivism, it is time to recognize, respect and teach indigenous sovereignty – including indigenous technological and data sovereignty.[7]

Mapping common goods

Identifying and celebrating the material common and public goods around us, such as built ones (schools and libraries), natural ones (air and sunlight), as well as communal islands in family, friendship and cooperative circles, demonstrates that such goods are a foundational aspect of society. Mapping digital commons is also important. For example co-production networks of free and open source projects and firms have been traced (O'Neil et al., 2020), addressing the issue noted by Eghbalh (2016): "With better metrics, we could describe the economic impact of digital infrastructure, identify critical projects that are lacking support, and understand dependencies between projects and people" (p. 129). The extent to which the IT industry depends on F/OSS is not widely known, so increasing public awareness of this symbiotic relationship would help publicize the existence, benefits and economic significance of peer production and the commons.

3.2 Develop the circular economy and microgrids

A circular economy aims to eliminate waste by turning goods that have reached the end of their service life into resources for other purposes, closing loops in industrial ecosystems. This implies a change in economic logic from production to sufficiency: "reuse

7 This means that indigenous people should have the power to decide how to govern their land, but also how to govern their networks and their data (Duarte, 2017). In *Indigenous Data Sovereignty: Toward an Agenda*, Kukutai and Taylor (2016) suggest that as data sovereignty "has been dominated by national governments and multinational corporations"(Kukutai & Taylor, 2016, p. 2), the data of indigenous peoples in relation to the "collection, ownership and application of data about their people, lifeways and territories" (Kukutai & Taylor, 2016, p. 2) have not been respected, and need to be. Recognizing and respecting these rights strengthens the integrity of a people and their governance and furthers digital and physical commons.

what you can, recycle what cannot be reused, repair what is broken, remanufacture what cannot be repaired" (Stahel, 2016). The connection between a local community's vitality and sustainability and the development of a local food economy was long assumed to be self-evident (Feenstra, 1997), yet the environmental benefits of localizing food production are unclear. Sustainable agriculture expert Gareth Edward-Jones's (2010) review of the evidence found no support for claims that local food is universally superior to non-local food in terms of its impact on the climate or the health of consumers, for example. This probably stems from local food production in the Global North being for the most part a restricted activity, in which consumers perceive self-produced and self-processed items as "authentic" (Autio et al., 2013). Localizing food production would thus require a complex ensemble of policy innovations, including reducing working hours, valorizing community work, and tax incentives: members of a French cooperative who co-produce open source tools with farmers, point out that in France purchases of new tools are tax deductible, whereas building one's own tools, or investments in maintaining existing tools is not (Giotitsas, 2019) An even partial localization of food production would also mean confronting the power of the ultra-productivist agribusiness industry and its allies.

Localizing energy production and distribution involves a different set of challenges. The concept of distributed energy emphasizes small-scale generation, consumer accessibility and end-user participation (see Dafermos et al., 2015, for an overview). The building of resilient community microgrids means energy is produced in close proximity to where it is being used, instead of relying on large power plants that send electricity through the grid. Roof-top solar panels are one such example of a decentralized system. Bangladesh has pioneered both micro-finance and micro-solar initiatives, leading to a boom in so-called "swarm electrification" – the development of local nanogrids and microgrids that allow solar home-ownwers to sell surplus electrical power directly to other microgrid participants via

peer-to-peer networks (Peters, 2018). These Global South systems and their "conscious" counterparts in the Global North, such as Brooklyn Microgrid, are currently organized as energy marketplaces for peer-to-peer electricity trading.[8] However nothing prevents these microgrids from being organized and shared as common goods, as advocated by Dafermos et al. (2015), once regulatory hurdles to more autonomous energy distribution have been overcome.

3.3 Promoting re-use and discrediting misuse

The easiest way to make localization economically viable is to focus on what is already there, on fixing broken objects rather than replacing them with new ones. A challenge will be to engage with the performance-increasing fetish of computer engineers by suggesting that the Internet is fine as it is; that processors are fast enough; that we need to take a moment to reassess what we want to achieve. Another way to put it would be to suggest: "We have built a nice house; we don't need to build a hundred other houses on top of it. Let's make our house more robust." At the regulatory level, we need tax breaks for the consumption of recycled goods. At the educational level, we need to include the ethical and practical value of repurposing engineering skills in school curricula. And at the societal level, we need to discredit the consumption of new rival goods; to make this consumption seem odd, and only appropriate in exceptional circumstances. The manufacturers of planned obsolescence and their media promoters will fight this tooth and nail; let them, historical necessity is on our side.

There also needs to be a recognition that not all uses of free services should be equal. Paul Ariès (2007) asks why a cubic meter of water used for domestic work should cost the same as a cubic meter used to fill a private pool? The idea that there are "mis-uses" of

8 https://www.brooklyn.energy/

commons needs to be popularized. Good uses should be free, bad uses expensive. And to prevent the wealthy from simply buying wasteful misuse, nothing prevents us asking whether a maximum income should be debated alongside a universal basic income?

3.4 Expanding the recognition of contributions to the commons

Towards a society based on contribution

Radical or Autonomous Marxists are traditionally impatient with the state, with so-called reformist or social-democratic parties and with labor unions' focus on wage-relations, so they emphasize the importance of loosely organized bottom-up political movements as sites of anti-capitalist struggle. Capitalism appears to have contained the impact of this tactic without too much difficulty, so we propose a different approach: connecting the world of labor unions, wage-relations, civil society, and political parties to the commons sector. This can take several forms.

Deregulators wanting to privatize public services such as healthcare and education need to be opposed whilst efforts to make services such as public transport, public housing, as well as public health and education free should be supported. New institutional arrangements may be necessary, resulting in a "commonification of public services" (Bauwens & Kostakis, 2014). Finland has, for instance, inaugurated the co-production by institutional and cooperative actors of public services including education, neighborhood associations, and support for drug and gambling addicts, home care, etc. (Botero et al., 2012).

That some capitalist firms are "free riding" on the volunteer labor of F/OSS project contributors who are not firm employees raises the question of the fair sharing of the benefits of this free labor. More broadly, the articulation of the commons sector to the rest of the economy is under-developed. From a state policy perspective, contributions to non-rival common goods are not well recognized. A relevant example of a state recognizing and

valuing (rival) contributions to social care is Japan's *Fureai Kippu* or "ticket for a caring relationship," an alternative currency system where an hour of labor helping an elderly person is converted into a credit held in an online clearing house. This credit can then be drawn upon when needed, for example to pay for insurance premiums, or passed on to a relative (see Masahi, 2012 for an overview of the scheme). Can the economic model of commons-oriented peer production be similarly articulated to social rights and social welfare? In 2014, a report on the "Digital transformation of the French economy" produced by Philippe Lemoine called for the creation of an "Individual Right to Contribution". Radical economists such as the *Economistes Atterrés* (Appalled Economists) and philosophers such as Bernard Stiegler have proposed variants of "social drawing rights" and "common labor rights" which would enable people who contribute to the commons to then earn points, or access to social services (Maurel, 2019).

Universal Basic Income or free public services?

Waged labor is not necessarily the best way to deal with peer production involving thousands of contributions. The basis of wages is expropriation from the fruits of labor, but this labor needs to be measured before the expropriation occurs. The symbolic or reputational rewards earned by participants to F/OSS projects effectively remedy the failure of capital to measure this kind of labor. This *crisis of measure* can be summed up with a question: what is the impact of one line of code on the whole of Red Hat?

This in turn raises the issue of a Universal Basic Income (UBI). The much-debated new wave of automation (Casilli, 2019; Frey & Osborne, 2013;) has prompted approving parliamentary reports on a Universal Basic Income in France and Australia; UBIs have been tried out in Canada, Finland, the Netherlands, and Scotland. Their embrace by some conservative politicians and high-profile technology entrepreneurs could lead us to suspect

that UBIs are a plot to remove social benefits for the most vulnerable by replacing them with a single income. There are concerns that a UBI would ultimately reduce the breadth of social protection, especially in countries where Welfare States emerged during the Fordist era (Alaluf & Zamora, 2016). UBIs might also have contradictory impacts on reproductive labor: on the one hand, they could operate as a feminist advance since "having children markedly intensifies gender inequities in time allocation by increasing specialization and women's workload" (Craig, 2006). A UBI would be particularly useful for single mothers, whose income is the most adversely impacted by childbirth. It would address a longstanding concern of Marxist feminists such as Mariarosa Dalla Costa and Selma James (1972) who identified the vast amount of monetarily unacknowledged but economically essential household labor done for free. Without the invisible (to male theorists) unpaid or reproductive process of caring, cooking, etc., paid labor power would not be ready for work in the morning. But on the other hand, UBIs might encourage women to give up employment and return to traditional housework.

Degrowth must be accompanied by reductions in the length of the working week, or by measures allowing people to work more slowly and with less pressure (Mair et al., 2020). The question of whether a UBI is preferable to an expansion of free public services, which would lessen the need for money, is very much in debate: should provisioning be socialized (by public services), or should demands be made solvent (by a UBI)? Spain's introduction of a UBI in 2020 will enable large-scale data to be collected and may generate some answers.

3.5 Distinguishing communal and commercial uses of commons and charging accordingly

Free public services also raise the question of the type of licenses which best support common goods. Capitalist firms' embrace of open source software enables them to free ride

on the labor of others, as shown – among numerous other examples – by the legal use that Amazon made of the open source database Redis (re-branded as Amazon Web Services Elasticache) without giving back to the community of developers (Moody, 2018). The use of open source licenses also risks enabling firms to delocalize contributor communities, and to prevent the generation of resources, much in the same way that countries with low environmental and social regulation drive labor costs down. This is because open source licenses refuse to translate their values into operational criteria that would enable the classification of actors either according to their nature, or according to their behavior, and thus potentially restrict the authorized uses of the software (Broca, 2018). Such criteria would be in stark contradiction with the commitment to open access, shared both by Richard Stallman and by most actors in the open source community. However, the absence of this "moral" or "political" distinction appears as one of the key obstacles preventing the development of a society based on contribution.

Kleiner (2007) argues that the General Public License ("copyleft") does not sufficiently address ownership. His Peer Production License ("copyfarleft") model distinguishes between commercial usages enacted by communal organizations where profits are equally distributed amongst workers, and those of capitalist enterprises based on the exploitation of wage labor. In contrast to noncommercial licenses, Copyfarleft attempts to favor communal organizations by allowing the cooperative economy to commercially exploit the commons, whilst the wage-labor based one cannot. Copyfarleft excludes entities from using nonrival goods, therefore going against the wider public good, so Said Vieira and De Filippi (2014) propose instead a commons-based licensing model that restricts commercial usage according to how much the user has contributed to the common pool. Their Commons Reciprocity License attributes commercial rights according to contribution, based on four criteria. However, this type of approval process raises issues such as the measurement of

heterogeneous contributions to a common, the conversion of these contributions into different rights of use, and the control of the rate of exchange (Broca, 2018). The advantages of a general license are lost in favor of case by case decisions. Kleiner's Peer Production License risks treating massive transnational firms with limitless resources and small commercial organizations in the same way; but its ontological distinction (to be or not to be a cooperative, that is the question) has the merit of clarity.

3.6 Increase free access to practical, legal, scientific and technical know-how

Not everyone knows how to avoid pitfalls when setting up tool co-ops, local manufacturing, and the like. We call on peer producers to create *Whole Earth Catalogues* for the 2020s: websites collating practical, legal, scientific, and technical how-to guides on localizing production, making production more transparent, using modular designs, setting up mesh networks, etc. They could include links to sustainable and autonomy-oriented projects such as (for example) *L'Atelier Paysan*[9] which create tools, *Wikihouse*[10] which releases construction plans, or *preciousplastic.com*[11] which makes freely available templates of machines that recycle plastic and transform it into construction material. Once again, it is important to recognize that most local commons-based peer production projects cannot compete in terms of cost with industrial production's economies of scale, so they run the risk of reproducing class-based divisions between "enlightened elites" who can afford rare peer objects and "mystified masses" who consume industrial items – unless they are so widely available that their cost decreases dramatically.

4. Conclusion

[9] https://www.latelierpaysan.org/
[10] https://www.wikihouse.cc
[11] https://preciousplastic.com/

We finish with two caveats. We recognize that this chapter reads more like a wish-list of policy proposals than an actual how-to guide on achieving social change. Our response to this justified criticism is the following: as many of these proposals as are deemed worthwhile should be proposed to assemblies, groups, parties, and administrative bodies; if met with approval, they should be implemented. Second, this concluding chapter of a volume published in a "Media and Communications" series has barely mentioned the role of the media; we shall do so now. The policies of far-right activists are abhorrent, and those of neoliberal apologists are abject failures. Yet both groups have pugnacious or sophisticated media relays which convey the impression, through repetition, intimidation, and the lack of alternative solutions, that these abhorrent and failed policies have validity. We must therefore find allies not only in the public policy sphere (such as political parties, governments, unions, and civil society) but also in the various media spheres. We invite peer producers everywhere to disseminate, critique, improve, and put into practice the policies we have outlined.

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