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Awakening to an Ecology of the Commons

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We live in a transformative moment in human history, at once on the precipice of crisis and simultaneously awakening into a new awareness of ourselves as commoners and planetary beings. For the individual, this transformative moment in human history feels more like a crisis than a transition—drawn out, full of dangers, obstacles, and growing pains. The moment, however, is the birth of the “planetary” as an element of human experience, and this transition is, according to our perspective, the transition from social orders based on exploitation to social orders based on generative mutuality. In this chapter, we explain the intertwined and integral emergence of the planetary and the commons as complementary fields of experience and their role in the reimagination of who we are.

1. The Commons as Mutualization for the Anthropocene

Much is now written about the so-called “Anthropocene,” a new epoch that signifies humanity as more than just a passive traveller on planet Earth. The Anthropocene signals humanity as a transformer, or a terraformer, of our planet—producing effects comparable to grand geological shifts.¹ For the purpose of this discussion, we can distinguish three “movements” of the Anthropocene.

The first movement is, of course, the significance of humans as a species with planetary impacts. This is the popular definition of the Anthropocene—humanity has become such a powerful aggregate force that we can assign a geological era to ourselves! If this was the only dimension of the Anthropocene, however, we would be no different than the species that generated the first planetary crisis approximately 2.5 billion years ago, anaerobic cyanobacteria, which led to the Great Oxygenation Event where the planet was literally poisoned by excess oxygen, a waste product of cyanobacteria.²

Fortunately, the Anthropocene also signifies an *awareness* of ourselves as a planetary species with planetary impacts.³ We are not just blindly having an impact on the planet, we are increasingly aware of our powerful and precarious effects. We have the power to reflect on who we are, to evaluate what it means to be human. While the first movement of the Anthropocene—human instrumental power—is far more advanced than the second movement—reflective planetary awareness—, this second movement is catching up with the first, for obvious reasons.

¹ Noel Castree, “The Anthropocene: A primer for geographers,” *Geography* 100, no. 2 (2015): 66.

² Lynn Margulis and Dorion Sagan, *Microcosmos: Four Billion Years of Microbial Evolution* (Berkeley: University of California Press, 1997).

³ William I. Thompson, ed., *Gaia, A Way of Knowing: Political Implications of the New Biology* (Barrington, MA: Lindisfarne Press, 1987).

Finally, a third movement of the Anthropocene closes the loop on the first two— reflexive planetary responses.⁴ Reflexive planetary responses signifies the capacity for humanity to leverage the second aspect (reflective planetary awareness) toward coordinated, intelligent responses to the challenges we collectively face. This third movement of the Anthropocene is by far the most embryonic, and yet ultimately the most crucial, without which we have little hope of any real long-term viability. These three aspects play out a classic action learning cycle: act—reflect—change, but at a grand scale that we have only begun to experience today.

The body of ideas and research on the commons is a critical part of the second movement of the Anthropocene—our capacity to interpret and understand ourselves in the current era; while the praxis of the commons, termed “commoning,” is critical to the third movement of the Anthropocene—our reflexive planetary responses.

The stakes are high. The Anthropocene is a crucial time for humanity, in which our very survival is at stake. In this chapter, we want to argue for a crucial link between the necessity to reduce the human footprint on the planet and its natural resources, and the modality of the commons, i.e., the pooling and mutualization of resources.

This hypothesis was one of the key reasons for the creation of the P2P Foundation, as from the very beginning, we gave the following analysis of the global *problématique*:

- 1) Our current political economy proceeds from the point of view of permanent and unlimited growth, something which is both logically and physically impossible on a finite planet. We called this the “pseudo-abundance” of the material world.
- 2) Our current political economy proceeds from the point of view that marketization and commodification are the best way to manage and allocate immaterial resources as well, via intellectual property. This creates an artificial scarcity for what are objectively abundant resources, especially in the context of a digital society and its means of cheap reproduction and distribution of knowledge. We called this “artificial scarcity in the world of immaterial resources.”
- 3) The two first mistakes are compounded by the fact that our economic organization produces more and more human inequality.

The solution to this state of affairs seems obvious. It must be possible to have a political economy that respects the carrying capacity of our planet, and it must be possible to share the knowledge necessary to do so. At the same time, these two conditions must be accompanied by economic forms that respect social justice.

But what is the link between this desire for societal and planetary transformation, and the specific modality of the commons?

Following Alan Page Fiske in *Structures of Social Life*,⁵ and Kojin Karatani’s⁶ historical vision of the evolution these modes of exchange, we can indeed distinguish four modes for allocating resources:

- 1) Communal Shareholding or Pooling, i.e., provisioning systems are considered as a collective resource, collectively maintained and shared by a particular community of stakeholders

⁴ Elena M. Bennett et al, “Bright spots: seeds of a good Anthropocene,” *Frontiers in Ecology and the Environment* 14, no.8 (2016): 441.

⁵ Alan P. Fiske, *Structures of Social Life: The Four Elementary Forms of Human Relations: Communal Sharing, Authority Ranking, Equality Matching, Market Pricing* (New York: Free Press, 1991).

⁶ Kojin Karatani, *The Structure of World History: From Modes of Production to Modes of Exchange* (Durham: Duke University Press, 2014).

according to their own rules and norms. This is the commons modality, which is both a shared set of resources, a joint activity, and a governance system.

- 2) Equality Matching, i.e., the gift economy as a system based on reciprocity, in which gifting and counter-gifting create social relations and maintain balance.
- 3) Authority Ranking, i.e., redistribution according to rank, which includes state-led redistribution. This modality becomes dominant with the emergence of class-based societies characterized by state formation.
- 4) Market Pricing, i.e., the exchange of resources according to “equal value,” which becomes dominant in the capitalist political economy.

Before creating the P2P Foundation in 2006, we had taken some time to study past societal transitions, and one of our findings was that mutualization had been an important element of the transition from the Roman system to the feudal system, which had a dramatically lower ecological footprint.⁷

Indeed, consider the mutualization of knowledge by the Catholic monastic communities, which were also the engineers of their time. According to Jean Gimpel in his book about the first medieval industrial revolution, Catholic communities were responsible for nearly all the technical innovations of that era.⁸ They effectively functioned to create commons across three co-related aspects. Firstly, the creation of a global European sphere of collaboration within the Catholic Church and its monastic orders through the mutualization of knowledge. Secondly, the collective property and distribution formats of monastic life, through the mutualization of shelter and shared units of production, the provision of shelter, culture, and spirituality, as well as a dramatically lower use of resources than that of the Roman elite.⁹ Thirdly, the relocalization of the economy around a subsistence economy based on feudal domains.

The resemblance to our own circumstances is uncanny. Faced with ecological and social challenges, we see a re-emergence of knowledge commons in the form of free software and open design communities; we see a drive towards mutualization of productive infrastructure, for example, the emergence of fablabs, makerspaces, coworking spaces and also the capitalist “sharing economy,” which is focused on creating platforms for underutilized resources; finally, we see new technologies around distributed manufacturing, prototyped in makerspaces and fablabs, which point to a re-organization of production under a “cosmo-local” model.¹⁰

We thus see strong resemblances between this and other historical patterns that correlate to our present-day situation. The importance of mutualization and commons-based strategies today is strengthened by our reading of long-term historical change. Another example of this is provided by Whitaker, who offers a comparative review of 3,000 years of civilizational overshoots in Europe,

⁷ Mathis Wackernagel and William Rees, *Our Ecological Footprint: Reducing Human Impact on the Earth*, Vol. 9 (Philadelphia PA: New Society Publishers, 1998). See also, Mark D. Whitaker, *Ecological Revolution: The Political Origins of Environmental Degradation and the Environmental Origins of Axial Religions: China, Japan, Europe* (Cologne, Germany: Lambert Academic Publishing, 2010).

⁸ Jean Gimpel, *The Medieval Machine: The Industrial Revolution of the Middle Ages* (New York: Penguin Books, 1977).

⁹ “The five-plus centuries after the fall of Rome (up to c.1000) have been called the Dark Ages, and witnessed a dramatic decline in the level of material civilization. Long distance trade shrank, the currency collapsed, the economy mostly reverted to barter, and the towns diminished in size. Literacy, and with it learning, all but vanished. Western European society was reshaped with the rise of self-sufficient estates (or manors), then of horse-soldiers (knights), and finally of feudalism”, <https://www.timemaps.com/encyclopedia/medieval-europe-economy-history#trade>

¹⁰ Vasilis Kostakis et al, “Design global, manufacture local: Exploring the contours of an emerging productive model,” *Futures* 73 (2015): 126.

Japan, and China.¹¹ His central thesis is that elites in class-based societies overshoot their resource base, not as an exception but as a rule, and that the classes closely tied to actual production periodically revolt and create transformative social movements, which have historically taken a religious form.¹² Thus, what we thought we were seeing in the post-Roman European transition may not be an exception, and can also be found in Chinese and Japanese history. In each of these transitions, the mutualization of infrastructure is a key element of the transformation.

Additionally, William Irwin Thompson earlier identified the civilizational tendency for overshoot across Babylonian, Greek, Roman, and European civilizations, where a civilization's core growth comes at the expense of its peripheries, and where the overshoot ultimately undermines the viability of the core civilization itself. Thompson pointed toward a commons framework as a solution, an arrangement he termed *enantiomorphic*.¹³ Finally, Thomas Homer-Dixon's detailed analysis of energy use within the Roman civilization came to a convergent view: growth dynamics were earlier based on large "energy returns on investment" (the amount of energy needed to exploit new energy sources), but diminished over time as social and ecological externalities mounted up.¹⁴

As a civilizational crisis emerges, a number of related dynamics can also emerge: the image of the future that helped to animate the extant civilization may begin to lose power.¹⁵ Images of the future may become dystopian, and narratives that are civilization-contradicting emerge and serve to unravel the core belief and logics that have wedded people to the old system. A creative minority from a variety of perspectives produce new seed visions that attempt to offer solutions amidst crisis.¹⁶ Some of these may be "fantasy" visions and solutions that reiterate the core logic of empire without addressing its contradictions, giving people a false sense of hope. Some visions and solutions, however, are based on a square reading of their civilization's contradictions (e.g., in our context, growth) and invite new pathways that are outside of the epistemological orbit of empire.¹⁷

The merit of this comparative review is in providing an understanding of the non-exceptionality, or even regularity, of civilizational overshoot. For example, Whitaker's thesis and documentation argues that every class-based system founded on competition between elites creates a "degradative political economy" and an overuse of both internal and external resources.¹⁸ Against this, in predictable fashion, eco-religious movements arise that stress the balance between the human and the human, the human and the totality (the divine), and the human and the environment. These ideas, led by religious reformers but followed by people who directly face the challenges of production and survival, give rise to temporary re-organizations of society. It is these commons-based transformations that allow overshooting systems to find new ways to work within the

¹¹ Mark D. Whitaker, *Ecological Revolution: The Political Origins of Environmental Degradation and Environmental Amelioration: Patterns, Processes, Outcomes: A Comparative Study of Japan, China, and Europe* (Wisconsin: University of Wisconsin-Madison, 2008).

¹² Ibid.

¹³ William I. Thompson, *Pacific Shift* (New York: Random House, 1986).

¹⁴ Thomas Homer-Dixon, *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization* (Washington DC: Island Press, 2010).

¹⁵ Fred L. Polak, *The Image of the Future: Enlightening the Past, Orientating the Present, Forecasting the Future* (New York: Sythoff, 1961).

¹⁶ Johan Galtung, "Arnold Toynbee: Challenge and Response," in Johan Galtung and Sohail Inayatullah, eds., *Macrohistory and Macrobistorians* (New York: Praeger, 1997).

¹⁷ Elise Boulding, "Futuristics and the Imaging Capacity of the West," in Magoroh Maruyama and Arthur M. Harkins, eds., *Cultures of the Future* (The Hague: Mouton, 1978).

¹⁸ Whitaker, *Ecological Revolution*, book abstract. See also "Political Origins of Environmental Degradation and the Environmental Origins of Axial Religions,"

https://wiki.p2pfoundation.net/Political_Origins_of_Environmental_Degradation_and_the_Environmental_Origins_of_Axial_Religions#Description

biocapacity of their own regions. It is this dynamic—which until now has played out on local, regionally limited scales—that is now necessary on a planetary scale.

2. Thematic Arcs of Transformation

Based on such a reading of civilizational rise and fall, how then can we deepen our interpretation of the contemporary shift from an extractive and degradative political economy to a commons-based one? In other words, where are we in this second movement of the Anthropocene: our capacity to enact reflective planetary awareness? In this next section, we provide our reading of key thematic lines of transformation.

2.1 Capitalism

The first thematic arc we can draw is the growth trajectory of capitalism. From its inception in the fifteenth and sixteenth centuries, the core logic of capitalism followed the practice of the extraction of value and the externalization of costs. From the conquest of the Americas, to the East India Company, theft was at the heart of it. Early forms of primitive accumulation were superseded by more sophisticated forms—the invention of the modern corporation with its core entitlements: limited liability and legal personhood. While constrained for a time—following the post-war Keynesian shift, the New Deal, communism, and the construction of social democracies—the neoliberal turn from the 1970s onwards saw its resurgence. Today, the sheer scale of our ecological crisis, the perversity of legacy industries (e.g., fossil fuel and mining) with their retrograde influence on policy, and extreme inequality all combine to create a dead end. In short, any kind of decent future must, by definition, end current levels of extraction and externalization of costs.

A 500 year half-cycle saw the gradual and episodic emergence of modern-day capitalism from seed to dominant form. In its early period, amid conquest of “virgin” lands inhabited by hitherto unexploited peoples and ecosystems, its growth could continue. But when capitalism’s dominance achieves totalizing influence, it reaches a point of radical contradiction. To continue to grow requires the exploitation of the very people and systems that have been integral to capitalism’s functioning. Robinson discusses this shift as being a transition from extensive capitalism (planet-wide) to intensive capitalism, the commodification of life-worlds, and subjectivity. Capitalism has nowhere to go except to exploit the inner spaces of our relationships and personal mind-heart spaces, the “mental commons.”¹⁹ Meadows and colleagues, with the Club of Rome, discussed this early on as concerning the limits to economic growth on an ecologically-finite planet.²⁰ Finally, Beck has argued that the current capitalist-industrial system is typified by the continuous production of social risk that sits in fundamental contradiction to human welfare. As corporations innovate products and exploit markets, sheltering behind the protection of the legal convention of limited liability, the capitalist-industrial system intensifies social risk across issues as diverse as climate change, the impact of automation, artificial intelligence, GMOs and gene editing, the impact of chemicals, weaponization, etc.²¹

The second half of this cycle is therefore a reversal of the logic of extraction and externalization and a shift towards generativity and internalization. Thus, an integral part of the mantra for commons solutions in the contemporary era is stewardship for future generations, building the value of shared commons, and relational integrity—an ethos of care within an awareness of deep interdependence. Hence— today—the almost endless mantra to create a circular

¹⁹ William I. Robinson, *A Theory of Global Capitalism* (Baltimore, MD: John Hopkins University Press, 2004).

²⁰ Donella H. Meadows et al, *The Limits to Growth* (New York: Pan Books, 1972).

²¹ Ulrich Beck, *World Risk Society* (Cambridge: Polity Press, 1999).

economy. The emergence of the planetary as a category of mutual survival and wellbeing fundamentally underlines the future impossibility of endless externalization of costs. As Thompson has argued, there is no longer any “other” place or persons to externalize onto:

If we make such things as Agent Orange or plutonium, they are simply not going to go away, for there is no way in which to put them. If we force animals into concentration camps in feed lots, we will become sick from the antibiotics with which we inject them; if we force nature into mono-crop agribusiness, we will become sprayed by our own pesticides; if we move into genetic engineering, we'll have genetic pollution; if we develop genetic engineering into evolutionary engineering, we will have evolutionary pollution. Industrial civilization never seems to learn, from DDT or thalidomide, plutonium or dioxin; catastrophe is not an accidental by-product of an otherwise good system of progress and control; catastrophe is an ecology's response to being treated in an industrial manner.... Precisely because pollution cannot go away, we must generate only those kinds of pollution we can live with. Precisely because enemies won't go away, for the fundamentalists' process of inciting hate only creates enemies without end, we have no choice but to love our enemies. The enantiomorphic polity of the future must have capitalists and socialists, Israelis and Palestinians, Bahais and Shiites, evangelicals and Episcopalians.²²

2.2 *The State*

The second thematic arc we can draw is the growth trajectory of the state. The Peace of Westphalia in 1648 marked the birth of the modern state, and a roughly 400-year half-cycle has seen the gradual and episodic evolution of the modern-day state to its dominant form. For sure, the invention of the modern state solved many problems of its time, helping to create shared identity and community beyond religious lines, stabilizing borders, and ensuring more effective administrations of welfare for citizens. Major contradictions, however, have today emerged in the status of states.

The first contradiction concerns ultimate authority. Over the last century the nation state has assigned to itself the status of ultimate authority. Today, the nation state is in crisis in part because it lacks the capacity to address many global/interstate challenges, and also because, importantly, its design often prevents it from acting beyond national interests.²³ Meanwhile, a variety of citizens' groups—some local and others transnational—have assumed moral stances that are transnational/global in character. This process is seeing the transfer of ultimate authority from the state to transnational citizen groups.²⁴

The second contradiction concerns the crisis in the democratic process or in structures of legitimate governance. It concerns the power of lobby groups, corporations and oligarchs, much of which is transnational in character, to influence and direct state policy in contradiction to the values and desires of national citizens.²⁵ Increasing citizen engagement and desire for devolved localized governance or direct/participatory democracy runs counter to the increasing closure of the political process.

These two contradictions give rise to the state's limitations in the governance and management of shared commons. The state's role in protecting ecological commons (oceans, rivers, beaches, groundwater, etc.) and building social commons (roads, services, libraries, etc.) is perpetually constrained. Firstly, the state's role is constrained by virtue of its own limitations within an interstate system where national interest is positioned above participation in a global

²² Thompson, *Pacific Shift*, 140-141.

²³ John Keane, “Cosmocracy and Global Civil Society,” in Gideon Baker and David Chandler, eds., *Global Civil Society: Contested Futures* (New York: Routledge, 2005).

²⁴ Mary Kaldor, *Global Civil Society: An Answer to War* (Cambridge, Mass: Polity Press, 2003).

²⁵ Jeffrey A. Winters, *Oligarchy* (Cambridge: Wiley Online Library, 2011).

community—creating a zero-sum dynamic in which global common concerns are merely add-ons or extensions of national interest. Secondly, the state’s role is constrained by virtue of the need to satisfy powerful state-producing interests (industries, investors, military, voters, media, etc.). The outcome of this power-brokering process creates winners and losers; the state “closes ranks” with these monied interests, rather than produce policy geared toward common interests. This dynamic is especially acute today, where transnational capital dictates a large part of national policy, and where investors are far removed from those concretely affected by such policies.

The second half of this cycle thus points towards the re-invention of politics, governance, and democracy. The substance of this is a shift from the political infantilization of majority populations to a new politics of commons-based governance, where everyone can be a commoner, participating in creating, protecting, and maintaining commons that matter to them. Rather than mechanistically-defined lines of state power, we envision a network of diverse commons governance units, some at local, urban, and bioregional scales, and others at global scales, coordinated, and forming new structural synergies of power.²⁶

Today, both capitalism and the state are intertwined in a structural synergy of power aimed at perpetuating the privilege of a “core” of wealthy and powerful people and groups at the expense of “peripheries.” This dynamic is visible both within states and also transnationally through a complex system of harmonization between elites in core states and elites in peripheral states,²⁷ or—what Robinson refers to as a transnational capitalist class.²⁸ The harmonization of elites from core to periphery is a form of political enclosure whereby the futures most humans in the world and the ecosystems they depend on are thrown under the bus.²⁹

2.3 Reimagining the Emergence of the Commons

These reorganizations help us to reimagine the re-emergence of the commons, and to posit a history and evolution of the commons, up to the current global challenge of reorganizing a planetary political economy. Here is the sequence that we propose:

- 1) The original format of the commons in both hunter-gathering and pre-capitalist class formations are the natural-resource commons, which connect the people to the land and its resources. Through conquest or enclosure, the commodification of land broke the relationship between traditional stewards and their commons.³⁰
- 2) Under capitalism the dominant form of the commons is the social commons, as developed by the labor movement to ensure its survival in solidarity, i.e., the mutuals, cooperatives, and other forms that were eventually taken over by the welfare state and bureaucratized.
- 3) Under cognitive capitalism, with the invention of digital networks for the co-production of shared knowledge, it is the knowledge commons which comes to the fore. However, without capabilities for self-reproduction being vested in the commoners, most of these knowledge commons are subsumed under the new forms of netarchical capital—the new fraction of

²⁶ Jose Ramos, “Liquid Democracy and the Futures of Governance,” in Jenifer Winter and Ryota Ono, eds., *The Future Internet, Public Administration and The Futures of Governance* (Dordrecht: Springer, 2016), 173.

²⁷ Johan Galtung, “A Structural Theory of Imperialism,” *Journal of Peace Research* (1971): 81.

²⁸ William I. Robinson, “What is Critical Globalization Studies? Intellectual Labor and Global Society,” in Richard P. Applebaum and William I. Robinson, eds., *Critical Globalisation Studies* (New York: Routledge, 2005).

²⁹ Galtung, “Structural Theory of Imperialism.” This is described more vividly towards the latter half of this chapter, in Scenario 3.

³⁰ Many traditional societies have no ownership relationship with land, operating effective commons-type relations with their world, and are thus more “stewards” than “owners.”

capital which directly exploits human cooperation (and relationality) and extracts value from it.³¹

- 4) Under conditions of capitalist crisis and global urbanization, urban commons (and other territorial commons) become the locus where precarious workers merge physical infrastructures with knowledge commons, and urban culture merges with networked cooperation culture. Urban commons are a response to market and state failure in maintaining and constructing the infrastructures of social life.
- 5) Urban commons infrastructures, such as fablabs and coworking places, are not only places where the culture of the commons become embodied, tackling social-ecological transition concerns through experimentation with new provisioning systems. It is also where prototypal forms of production are invented, which prefigure the coming productive commons mode. This vision of the centrality of the urban should not mean a sole focus on the city however, but rather invite us to a bioregional and territorial vision, centered on organizing the provisioning systems for territories in ways that are compatible with the carrying capacity of the planet and the specific regions involved.
- 6) This model is called “cosmo-local production,”³² or “Design Global, Manufacture Local.”³³ This mode of production and exchange combines global cooperation in knowledge commons, for example, open design; and local fabrication in distributed local factories. These knowledge and production communities increasingly experiment with open and contributive accounting systems,³⁴ with open and participatory supply chains, etc. They show the potential future of a more fully organized commons-based society and economic system.

Recently, we asked a team of associates to study the Thermodynamics of Peer Production, to see how the “open source stack,” (a systematic use of mutualization in physical production) could actually diminish the human footprint on ecological systems. Their findings have confirmed the link between mutualization and radical lowering of the human footprint.³⁵

So, to summarize our vision of the current conjuncture: we are now in a period of “phygital” convergence, i.e., the convergence of networked collective intelligence, which is expressed in global-local collaborations around all kinds of knowledge and their applications to local territorial contexts. However, we are at a point where citizen-commoners are starting to mutualize the use of resources,³⁶ but not yet the production of them. We are mutualizing the use of houses and cars, but not yet producing these physical resources in a commons-based fashion. This then seems to us the necessary focus of transition work, i.e., the strengthening of material-immaterial commons for provisioning, and the preparation of a better organized productive commons.

³¹ “Netarchical capitalism is a hypothesis about the emergence of a new segment of the capitalist class (the owners of financial or other capital), which is no longer dependent on the ownership of intellectual property rights (hypothesis of cognitive capitalism), nor on the control of the media vectors (hypothesis of MacKenzie Wark in his book *The Hacker's Manifesto*), but rather on the development and control of participatory platforms”,

http://wiki.p2pfoundation.net/Netarchical_Capitalism

³² Jose Ramos, “Cosmo-localization and Leadership for the Future,” *Journal of Futures Studies* 21, no.4 (2017): 65.

³³ Kostakis et al, “Design global, manufacture local.”

³⁴ Michel Bauwens and Vasilis Niaros, *Value in the Commons Economy: Developments in Open and Contributory Value Accounting* (Berlin: Heinrich Böll Stiftung and P2P Foundation, 2017).

³⁵ Celine Piques and Xavier Rizos, *Peer to Peer and the Commons: A Path Towards Transition: A Matter, Energy and Thermodynamic Perspective* (P2P Foundation Report, 2017), http://commonstransition.org/wp-content/uploads/2017/10/Report-P2P-Thermodynamics-VOL_1-web_2.0.pdf

³⁶ Indeed, in a recent research project commissioned by the city of Ghent in northern Belgium, we found over 500 urban commons active in every area of human provisioning. The English executive summary of the report is available here at <http://commonstransition.org/commons-transition-plan-city-ghent/>

3. The Commoner as Emergent Political Subject

The transition that we are experiencing works both across the dimensions of social learning/collective awakening and of personal learning/subjective awakening. The dimension of social learning takes place within historical and even macro-historical time frames of change. Through time, societies have experienced cultural and even civilizational transformations. Such transformations are recorded as collective memory, imbued in song, poetry, art, stories, and histories. For the individual, it is as difficult to get outside their own time frame and to experience historical social change as it is difficult for an ant foraging for food to realize that they are in someone's kitchen. Machiavelli discussed this as the "incredulity of mankind, who do not truly believe in anything new until they have actual experience of it."³⁷

The individual, in dealing with the current planetary crisis, is likely to go through a number of phases.³⁸ First, utter confusion based on a litany of news and opinions. Second, powerful feelings of frustration, sadness, and even grief in the knowledge of the sheer magnitude of the crisis, the damage to ecosystems, the loss of species, de-humanization through inequality, and the threat of climate change. Thirdly, given this context, a person's sense of self—their identity—shifts. There are choices. A person may retreat to the old, strengthen the imperial self—the accumulator—in the face of existential threats. Or they may see how their fate and future is intertwined and interdependent with many others (indeed, that *they are* many others), and experiment with a new self and identity, as part of a commons. Fourthly, to be able to rise above fear and follow this higher self, individuals must be guided by empowering visions and pathways. There must be visible avenues based on grounded hope, reasonable analysis, and critical imagination. Finally, the individual enters the realm of action, enmeshed in new communities and networks co-protecting and co-creating the planetary commons at various scales and dimensions.

The awakening we require at a personal level, which has the power to re-orient us as change agents, is contingent on making sense of historical and even macro-historical changes, grasping grand shifts and our role in the transformation of society through time. Therefore, one of the challenges in the transition towards a commons-based sociality is just this conceptualization of social change, which cannot be experienced directly by an individual through life experience, but is manifest through collective historical memory and a shared sociological understanding of change connected to images of the future.

In other terms, we are dealing with the de-colonization of the self. The shift needed is from "neo-liberal man," the rational, self-interested, economic accumulator, to "commoner," a community member whose actions reflect an embodied understanding of interdependence with others at various scales and in multiple dimensions. The specific shift in individual and collective group identity we are suggesting is one that is no longer centered on the dynamics of labor *vs.* capital, which is a category of socialism-capitalism, but rather centred on the dynamics of generative citizen-commoners, producers *vs.* extractors. We believe there is a sociological grounding to this. First of all, certainly in Western countries, after the de-industrialization *cum* globalization that started in the 1980s, the industrial working class is effectively in decline. Yet, even the global proletarianization in the global South is not linked to a resurgence of socialism. On the contrary, different studies have shown an exponential growth of urban commons subsequent to the prior exponential growth of digital knowledge commons.³⁹ Contemporary precarious labor is very much linked to both an urban

³⁷ Niccolò Machiavelli, *The Prince*, edited by M. Viroli (Oxford: Oxford University Press, 2008).

³⁸ David Hicks, "Teaching about Global Issues, the Need for Holistic Learning," in *Lessons for the Future, the Missing Dimension in Education* (London: Routledge Falmer, 2002).

³⁹ Tine De Moor, *Homo cooperans. Instituties voor collectieve actie en de solidaire samenleving* (Utrecht: Universiteit Utrecht, Faculteit Geesteswetenschappen 2013), <http://www.collective->

context and to a generalized connection with digital networks. In our view, it is this ongoing interconnection and the participation in the creation of urban commons infrastructures, linked to state and market failure, that creates the conditions for a new post-capitalist subjectivity, which can drive the ongoing growth in the creation of commons.

Personal awakening is contingent upon connecting personal experience with an understanding of broader social changes of which one is part. To know oneself and one's place in the world is to understand a bit about the past, the present, and the future, and about how one fits into the greater scheme of things. Yet, there is undoubtedly a materialist aspect to this, i.e., to the degree that exaggerated extraction of common wealth is enclosed by oligarchic elites, and to the degree that the capture of institutions paralyze the state and the market's role in solving humanity's overshoot problems and the resulting social inequality, to that same degree, citizen-commoners are driven to commonify vital infrastructures, create parallel solidarity mechanisms based on mutualization, and to undertake the organization of provisioning systems that more adequately deal with the necessity of socio-ecological transitions. All this feeds and strengthens post-capitalist commons-based transition activities.

3.1 Commoning as the Third Movement of the Anthropocene

By virtue of this second movement of the Anthropocene—our capacity to see ourselves as interdependent with other people and species for our wellbeing and common futures—the third movement of the Anthropocene is brought forth. This is a movement of “implication,” whereby the person, through their emerging relational awareness, is “plied into” a shared concern. They become aware that they share with others a common interest. A commons has shifted from something implicit, real, but unidentified, to something explicit—its reality has been relationally formulated.

The explication of a commons, a domain of shared concern, is simultaneously the invocation of a community who must steward the good of that commons—commoning. A particular commons can only be as such because it is valued by a particular group of people. Because it is valued, that group tends to that commons—creating it, protecting it or extending it. In the case of a natural resource, it is the local inhabitants who want to protect such localized commons for their own use. These are the examples that Ostrom studied and gained fame for.⁴⁰

In the case of public and social commons, these are created by political entities such as municipalities, states, and federal systems, which are meant to extend a common good to a whole political community. Universal healthcare is one example of such a public commons, where a public good that a political community cares for is created. Peer-produced commons are created by networks of participants, such as with open source software or sharing networks. These are not pre-existing commons, but rather, are created by that community from their own activity. Because a particular community, for example the Linux community, cares about this shared commons, they work to develop and protect it.

Finally, in the case of planetary life-support systems, the value of this as a commons is fundamentally implicit—that is, it does not appear valuable to a community until it is activated by virtue of a contextual shift. When the ozone layer became threatened due to certain industrial pollutants, which in turn fundamentally threatened human well being, the ozone layer became a

action.info/sites/default/files/webmaster/_PUB_Homo-cooperans_EN.pdf; and see, Fleur Noy and Dirk Holemans, “Burgercollectieven in kaart gebracht,” *Oikos* 78, no.3 (2016): 69, <http://www.coopkracht.org/images/phocadownload/burgercollectieven%20in%20kaart%20gebracht%20-%20fleur%20noy%20-%20dirk%20holemans.pdf>

⁴⁰ Elinor Ostrom, *Governing the Commons* (Cambridge: Cambridge University Press, 1990).

commons for collective governance, an “object of commoning.”⁴¹ To enact ourselves as commoners is also to enact ourselves as protectors and governors of the commons in which we are implicated, and which we have explicated through language, speech, and practice.

For an issue as basic as climate change, the climate as commons represents the awakening of the individual to the fact that they/we share an atmosphere with seven billion others (and countless species) as a commons of concern. Through the accident of circumstance, such commoners have been “plied into” a shared concern. The planet’s atmosphere has thus shifted from an implicit commons to an explicit commons. Commoning as an act of governance mirrors this movement of self awareness—those who share this commons for their mutual wellbeing and survival must make a shift toward becoming active protectors, shapers, and extenders of that commons. This is the movement from a *commons-in-itself* to a *commons-for-itself*. In practical terms, with respect to our atmosphere, everyone is a commoner, and this implies a radical democratization of planetary governance. This third movement of the Anthropocene thus depends on both an emerging awareness of our shared commons and an emergent subjectivity that responds to this awareness through commoning as a relationally charged form of action.

The transformation of subjectivity in the twenty-first century, of the experience and the definition of self, is the reawakening of our embodied relationality in respect to multiple categories of the commons, and its expression through our emergent practices of commoning. This can be from our connection to our local community or the resources that the local community manages for its wellbeing. This can also be in connection to what we experience in relation to the future of Earth’s atmosphere and its suitability for human life— through which the community is a global one in which all of us, and our descendants, are all critical stakeholders.

4. Scenarios for a Commons Transition

We would like to offer three short scenarios that clarify the challenges we collectively face. For this, we employ a modified version of the integrated scenario methodology of Sohail Inayatullah⁴² and scenario archetypes developed by Dator.⁴³

The first scenario, “Catastrophe: Sleep Walking into Oblivion,” is developed as a continuation of the dominant system—the structural synergy of power across capitalism, the state, and consumerism. The logic of capitalism and state power continues unimpeded by anti-systemic challenges. It is a future of extreme inequality amid ecological collapse, extreme privilege buttressed by innovations in social control, violence, and entertainment.

The second scenario, “The disciple of the 100 schools,” explores and develops what the first disowns—the transformative, idealistic, and ideological variants surrounding the commons. Post-capitalist variants can be over-ideologized and puritanical, and various “schools” compete, creating an incoherent societal transition that is not able to support livelihoods in a post-growth and ecologically constrained context.

The third scenario, “Catagenesis: Ecologies of the Commons,” develops an integration where the dominant system and the transformative/idealistic are interwoven, moving beyond the categorical purity and binary framing of the first two scenarios. It describes a protocol commons that interconnects and creates synergies across a variety of forms, institutions, networks, businesses, academia, etc. These three high level scenarios are a segue toward discussing more concrete strategies.

⁴¹ Susan Buck, *The Global Commons: An Introduction* (Washington, DC: Island Press, 1998).

⁴² Sohail Inayatullah, “Six pillars: futures thinking for transforming,” *Foresight* 10, no.1 (2008): 4.

⁴³ Jim Dator, “Alternative futures at the Manoa School,” *Journal of Futures Studies* 14, no.2 (2009): 1.

4.1 Scenario 1—*Catastrophe: Sleep-Walking into Oblivion*

The extreme inequality of the twenty-first century between an emerging class of the super-rich, and the majority living in conditions of precarity, not only continues but accelerates into the middle of the century. Alongside this widening gap in prosperity, the wealthy become ever more policy-rich and the precariat have become even more policy-poor—state policy is determined by the interests of oligarchs, multinational corporations, and cashed up lobby groups.⁴⁴ Thus, while a combination of automation, robotics, and artificial intelligence (AI) increasingly eliminate jobs, the profits from this form of technological rationalization are offshored into tax havens. AI and automation create efficiencies and technical breakthroughs, but powerful companies continue to starve the state of revenue needed for a social transition. Despite warning signs, and many voices calling for change, the transnational capitalist class (a combination of the rich and the political classes that serve their interests) close ranks around the system that has guaranteed their success—they decide that the system must survive at all costs.

Yet, this hyper-inequality is also a powder keg. Dissidents multiply in the face of harsher economic conditions. The legitimacy of the capitalist-state formula must be maintained, and hence greater emphasis is put on green capitalism, the celebration of the billionaire businessman, and the celebration of the capitalist-innovator-disruptor. Alongside this, the big platform capitalists of the early twenty-first century begin to close ranks with the oligarchic elite.⁴⁵ Companies increasingly use their deep understanding of social interactions and predictive profiling to help the state neutralize and eliminate dissident threats. Increasingly, any outspoken voices against the system are considered to be sources of potential terrorism. Anti-systemic movements for equality, ecologically-minded change, and transformation are deemed to be terrorist insurgencies and lead to state repression. Individuals who “awaken” are neutralized early: with algorithms determining who is and is not a threat, surveillance becomes terror against any unlucky person.

There is an ontology in this scenario: surveillance by the state and the large netarchical firms that own and control the platform economy clearly have a vision of humans as subjects, which are “subjected” to the control of the state and corporate sovereigns. While neutralizing political activism internally, there must be the facade of democracy—hence the demonization of “non-democratic” states around the world. In order to maintain ideological and cultural control, cheap entertainment takes precedence, which keeps people from their higher purposes as commoners and global citizens, and leads to widespread nihilism.

Yet, green capitalism in this scenario cannot adequately deal with its own contradictions. The logic of economic growth continues unabated, carbon emissions continue to rise, impacts on oceans, forests, and other bioregions deepen, and corporate industrial externalities are not dealt with.⁴⁶ Because of this, in the mid-2040s, as predicted by the Club of Rome,⁴⁷ we experience genuine ecological collapse. Extreme weather severely disrupts food production, coastlines are inundated, the world is awash in hundreds of millions of climate and economic refugees, and broken financial systems do little to support any meaningful social transition.

The rich have retreated into pristine enclaves, serviced by middle-class attendants content to have livelihoods, while the majority poor are left with diminishing ecological and social futures and

⁴⁴ Martin Gilens and Benjamin I. Page, “Testing theories of American politics: Elites, interest groups, and average citizens,” *Perspectives on Politics* 12 (2014): 564.

⁴⁵ Frank Pasquale, “Two Narratives of Platform Capitalism,” *Yale Law and Policy Review* 35 (2016): 309; Nick Srnicek, “The challenges of platform capitalism: Understanding the logic of a new business model,” *Juncture* 23, no.4 (2017): 254; Juliet B. Schor, “Does the sharing economy increase inequality within the eighty percent?: Findings from a qualitative study of platform providers,” *Cambridge Journal of Regions, Economy and Society* 10 (2017): 263.

⁴⁶ Piques and Rizos, *Peer to Peer and the Commons*.

⁴⁷ Meadows, *The Limits to Growth*.

radical inequality amid ecological collapse. Because of the extreme inequality, it is a world of both high structural and real violence. For the poor there is the constant violence of competition for survival. For the middle class, there is a perpetual tightening and increasing struggle.

4.2 Scenario 2—The Disciple of the 100 Schools

The legitimacy of capitalism and state power does not even survive the beginning of the twenty-first century. As wave after wave of financial crises hits, and an increasingly cash-starved state is unable to respond in any meaningful way, let alone to maintain its own coherence, the many social forces that had been waiting in the wings for decades come forth as contenders to guide social development.

Included in this are the many strands of thinking and practice disowned by capitalist industrial modernity: postcolonial, deep ecology, marxist, ecological economics, eco-feminism, anarchism, autonomism, socialism, etc. While each is an expression of a social ill and of social pain, the historical suffering that each represents does not become an opening and pathway to embracing a multiplicity of other types of suffering. Instead the pain closes out all other forms of suffering, magnifying its own.

Each of these social alternatives and social movements are thus marked by hard boundary-setting and a degree of ideological closure: each believes its anti- and counter-systemic solution is the true answer. Some completely disown any form of hierarchy or institutional power, others disavow any connection with markets and profit-making, others any male leadership, others any inclusion of “white people.” There are many prophets preaching a disciplined adherence to a new way of life. Purity of body, mind, and relations is central. People don’t want to appear “dirty” by being associated with various forms of “the enemy.” These dynamics make internal conflict across the ideological divide commonplace and any kind of coherent social transition more difficult. For many, the historical legacy of capitalism and state power, and the many abuses in their names, are simply too great to forgive.

Instead of articulating the commons as a metalanguage, commons advocates attempt to create an ideologically consistent form of thinking and practice— a type of “commonism.” This too makes the commons merely one of a number of other contenders in this new open space and contestation for change.

People have also retreated from commitments to nationhood and to a national community/identity. Rather than being stewards of the social commons, nations lose their status to other social groups that have formed new bases, trans-national affiliations and localized development. But this shift makes it impossible to campaign for the reintroduction of the state-based social commons of the mid-twentieth century (e.g. social democracies), for example: through new forms of Universal Basic Income or Assets. There are rich commons and poor commons—high social capital communities (in metro-cities) have the time and resources to create “their” commons, while poor communities are stuck in cycles of survival.

In this scenario, it can be seen that everything, taken to its absolute, runs the great danger of becoming oppressive. While this was true of the totalitarianism of the state form, historically represented by fascism and the Soviet system, we also must face the potential totalitarianism of the market, and yes—even of the commons.

One of the stronger movements of ideas, which is also well funded, is libertarianism—or more specifically, anarcho-capitalism—which finds many adherents amongst those that design, initiate, and use blockchain and cryptocurrencies such as Bitcoin, and which have conducted massively successful Initial Coin Offerings. This current of thought and practice designs technological systems to allow for “distributed markets” that allow any individuals, without

centralized mediation, to exchange with each other directly and to make agreements based on smart contracts. It is a worldview that only sees individuals, atomized in their relations, but who are able to make agreements that are validated by blockchain technology. This political point of view is fundamentally technocratic, seeking solutions in technology because it lacks trust in human governance—hence the quest for, and support for, “trustless” systems.

We also know, as every child who has played *Monopoly* knows, that competition for scarce resources through market mechanisms leads to oligarchic results. Competition leads to winners and losers who, at each round, can accumulate more resources than their opponents and consequently have more chance of winning the longer the game goes on due to the reliance on greater and greater resources. Hence, an egalitarian-sounding idea: “let’s all start as equal traders over blockchain systems,” is a recipe for hyper-capitalism and for the near-total commodification of social life. Furthermore, this development is internally hostile to any measure that can rebalance the distribution of power and wealth, for example, through mechanisms arrived at by democratic governance and which would balance the natural outcomes of these exchange mechanisms.

In fact, the refusal to take into account any democratic governance mechanisms paradoxically leads to authoritarian outcomes once conflicts arise. Furthermore, these systems are also designed to be opaque to external controls and are used to massively evade taxation as a redistributive mechanism. For all these reasons, and despite the utopian charge of such movements, they work as a preparation for even more totalizing neoliberalism, i.e., the absolute domination of market forms, enhancing their control to ever more detailed and microscopic levels. Hence, the seemingly utopian efforts, based on the anarcho-libertarian assumptions behind the blockchain, paradoxically lead to further enclosures as whole life worlds and the ecologies they are embedded in are ensnared into “smart” contracts.

The commons too may have its own radical absolutization and generalizations. Commonism becomes the tendency to want everything as a commons and to be radically opposed to any market or state form.⁴⁸ Moreover, these points of view come with a predilection for the assembly format of decision-making and full consensus, creating lowest-common-denominator effects, enforcing a radical collectivism that runs counter to individual preferences and freedoms, but also imposes very heavy processing costs. (This is one of the reasons that assemblies often do not last very long, because participants get exhausted, or assemblies lead to the tyranny of structurelessness, i.e., to the domination by a minority of strong leaders who can sway the collective consensus.)⁴⁹

Both the right-wing capitalistic form of anarchism, and the left-wing version, where collectives instead of individuals make agreements to constitute society, tend to ignore the societal field in which they operate, which limits the sphere of choices. There is no conception of a common good across a territory, which sets a framework on the coexistence of different value communities, and no conception of common good institutions, which may be necessary to guarantee common freedoms (and restraints). This results in the rejection of the democratic-state form and a refusal to think through its further democratization. Anarcho-capitalism and the value-sensitive design of the blockchain points to an ontological vision of humans as traders or as micro-capitalists, but otherwise, excludes a re-assembling of the social based on protocols of commoning.

Between the ideological purity of post-capitalist movements and the anarcho-capitalism of the blockchain, there is little coherence across communities and sectors, and building collaborations and powerful synergies is too hard. There is not enough “gravity” or “glue” to bind or stop the

⁴⁸ The emerging literature on the urban commons supports the notion that commons are constructed across domains of state, markets, citizens, and other domains, see: Christian Iaione, “The CO-City: Sharing, Collaborating, Cooperating, and Commoning in the City,” *American Journal of Economics and Sociology* 75, no. 2 (2016): 415.

⁴⁹ Jo Freeman, “The Tyranny of Structurelessness,” *Berkeley Journal of Sociology* 17 (1972-3): 151.

powerful centrifugal forces from pulling apart. Because of this, in the context of degrowth economies and ecological constraints, standards of living drop significantly, and people live lives of frugality and discipline supported by the networks and groups to which they belong.

4.3 Scenario 3—*Catagenesis: Ecologies of the Commons*

In the mid-2030s, in the wake of major financial crises that crashed economies throughout the world, and which states could not find a way through, intensive cosmo-localization strategies are initiated ubiquitously. The first quarter of the century lays the groundwork for this through the creation of a “metalanguage” for the commons. Such metalanguage allows people to see how they are implicated in a number of commons, and helps to overcome the lack of political and cultural coherency experienced by twentieth-century movements. This is followed by the development of practical frameworks for generating synergies of the commons, a strategy that is early on termed “Ecologies of the Commons.”⁵⁰

The diversity of commoning activity is established early on.⁵¹ Based on the experience of urban commoning from around the world,⁵² which conceptualized a quintuple-helix strategy,⁵³ those behind building the framework and strategy for a commons transition abandon notions of “essential commoning” (that there is a “true” way for commoning), and instead focus on appreciating the broad variety of commoning strategies from around the world, and on creating practical mechanisms for exchange between ontologically distinct commoning entities, processes, and projects. This new approach expresses an understanding that synergies are possible between anchor institutions, universities, governments, businesses, and citizen-based groups and projects, even while each is quite different in form and purpose. Efforts are made to construct a language and body of concepts that can be understood by a variety of projects and organizations, which allow them to “talk to each other” in the language of commoning, and which enable processes of meta-systemic co-design—the development of new commons-based synergies.

Ecologies of the Commons dovetails with efforts to create an ecology of the left, where different social projects, movements, and ideologies can see how they are part of a broader process of social change.⁵⁴ Rather than a factionalism, people see themselves as part of an ecology of knowledges and of a “knowledge democracy,”⁵⁵ each knowledge forming an important aspect of how the new world needs to be constructed, but in relation to the variety of other knowledges and their contextual application.⁵⁶

As these strategies mature and their positive effects are experienced, people begin to talk about the “protocol commons,” the complex metalanguage and architecture required to form commons-based synergies—which in itself must be protected and extended. The protocol commons

⁵⁰ Michel Bauwens and Jose Ramos, “Re-imagining the left through an ecology of the commons: towards a post-capitalist commons transition,” *Global Discourse* 8, no. 2 (2018): 325.

⁵¹ David Bollier and Silke Helfrich (eds.) *The Wealth of the Commons: A World Beyond Market and State* (Amherst, Massachusetts: Levellers Press, 2012); David Bollier and Silke Helfrich, *Patterns of Commoning* (Amherst, Massachusetts: Commons Strategy Group and Off the Common Press, 2015).

⁵² Neal Gorenflo, ed., *Sharing Cities: Activating the Urban Commons*, Vol. 1 (San Francisco: Shareable, 2017).

⁵³ Iaione, “The CO-City”.

⁵⁴ Boaventura de Sousa Santos, *The Rise of the Global Left: The World Social Forum and Beyond* (London and New York: Zed Books, 2006).

⁵⁵ Boaventura de Sousa Santos, *Democratizing democracy: Beyond the Liberal Democratic Canon* (London: Verso, 2007).

⁵⁶ Lonnie L. Rowell and Eunsook Hong, “Knowledge Democracy and Action Research: Pathways for the Twenty-First Century,” in Lonnie L. Rowell et al., eds., *The Palgrave International Handbook of Action Research* (New York: Palgrave MacMillan, 2017); also see this “bricolage” based approach, <https://www.ecologyandsociety.org/vol22/iss2/art31/>

helps in the reinvention of the nation-state as a community—indeed it saves it.⁵⁷ State-created social commons are still seen as fundamentally critical in providing basic support across populations; however they are not seen as completely exclusionary, as nations have to see themselves as part of a community with other nations to support the development and protection of our global commons (for example, atmosphere and security). The role of the state transforms—now it is seen as the partner state or a partner city charged with supporting citizens as innovators, protectors, and maintainers of a variety of commons.⁵⁸ The protocol commons allows the state, and the various institutions embedded within the state, to understand the language that describes how the state sits within a broader ecology of societal transition, as well as the architecture that governs this system. This transformation is driven by new institutions that are in charge of public-commons cooperation at all scales, converging with the players responsible for regenerative market forms.

While it was just an experimental form in the early part of the twenty-first century, by mid-century, the partner state becomes a nuanced and powerful approach to creating synergies between a diversity of citizen-initiated projects and the enabling structures that allow this diversity to thrive and to create value. Institutions are reimagined as structures that exist to enhance the agency and creative potential of the variety of actors within civil society. This hyper-diverse and complex composition of structures, groups, individuals, and technology creates mutant synergies of the commons unimaginable years earlier. The ecologies of the commons are ever more diverse, complex, resilient, and generative—they cannot be pigeonholed into one category or another.

This vision stands for the human as citizen-commoners (or inhabitants-commoners, if we want to avoid the exclusionary character of national citizenship). Indeed, in this vision, citizens become productive commoners who contribute to the common good. We envisage a society where the core are productive civil societies, where citizens belong and co-produce all kinds of commons; where they are members of economic entities which create livelihoods in an ethical market; and where the infrastructural organizations that support digital and urban commons are reflected in a new vision of the state as enabling a “partner state.”

The protocol commons—the metalanguages for the commons, architecture and citizen-network-institutional synergies that generate value—begins by articulating a “cosmo-local production infrastructure” across four layers:

a) *Layer 1—Protocol Cooperativism Governance*

The first layer is based on protocol cooperativism, which creates dynamic synergies between cities, networks, institutions, and civil society organizations. Protocol cooperativism generates the possibility of a cosmo-local institutional layer. We imagine global for-benefit associations which support the provisioning of infrastructures for urban and territorial commoning. These are structured as global public-commons partnerships, sustained by leagues of cities which are co-dependent and co-motivated to support these new infrastructures and to overcome the fragmentation of effort that benefits the most extractive and centralized “netarchical” firms. Instead, these infrastructural commons organizations co-support MuniRide, MuniBnB, and other applications necessary to commonify urban provisioning systems. These are global “protocol cooperative” governance organizations.

⁵⁷ Whereas scenario one sees a false construction of national community as a bulwark against anti-systemic movements, and in scenario two we see the weakening or abandonment of the idea of nationhood; in this scenario the state is seen as a critically important platform for commoning, but as relationally embedded.

⁵⁸ Jose Ramos, Michel Bauwens and Vasilis Kostakis, “P2P and Planetary Futures,” in Debashish Banerji and Makarand R. Paranjape, eds., *Critical Posthumanism and Planetary Futures* (New Delhi: Springer India, 2016).

b) *Layer 2—Open Design Commons*

The second layer consists of the actual global depositories of the commons applications themselves, a global technical infrastructure for open sourcing provisioning systems. They consist of what is globally common, but allow contextualized local adaptations, which in turn can serve as innovations and examples for other locales. These are the actual “protocol cooperatives,” in their concrete manifestation as usable infrastructure.

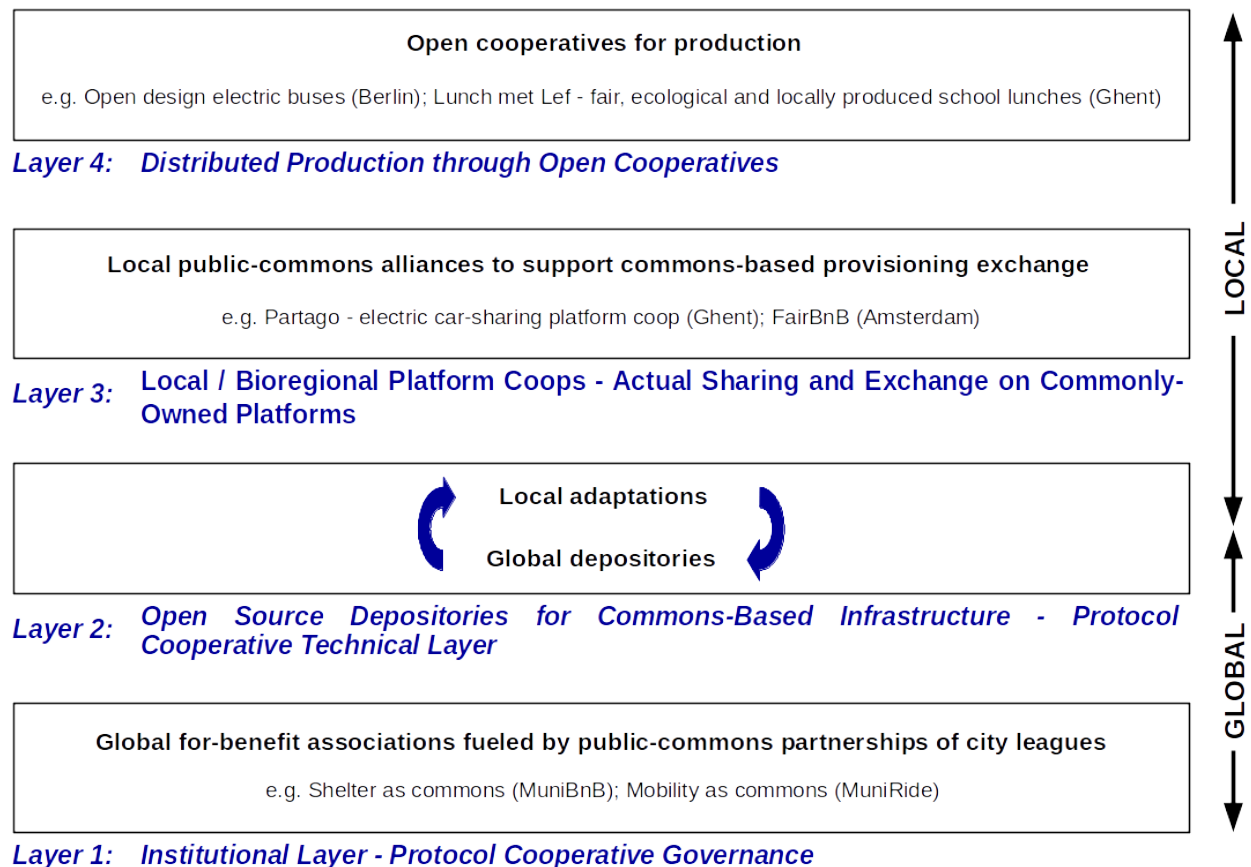
c) *Layer 3—Localized Platform Cooperatives (and others commons-based platforms)*

The third layer are the actual local (urban, territorial, bioregional) platform cooperatives, i.e., the local commons-based mechanisms that deliver access to services and exchange platforms, for the mutualized use of these provisioning systems. This is the layer where the Amsterdam FairBnb and the MuniRide applications of the city of Ghent, for example, organize the services for the local population and their visitors. It is where houses and cars are effectively shared.

d) *Layer 4—Open Cooperatives*

The fourth layer is the actual production-based open cooperatives, where distributed manufacturing of goods and services produces the actual material services that are shared and mutualized on the platform cooperatives.

Figure 1: City-supported cosmo-local production infrastructure



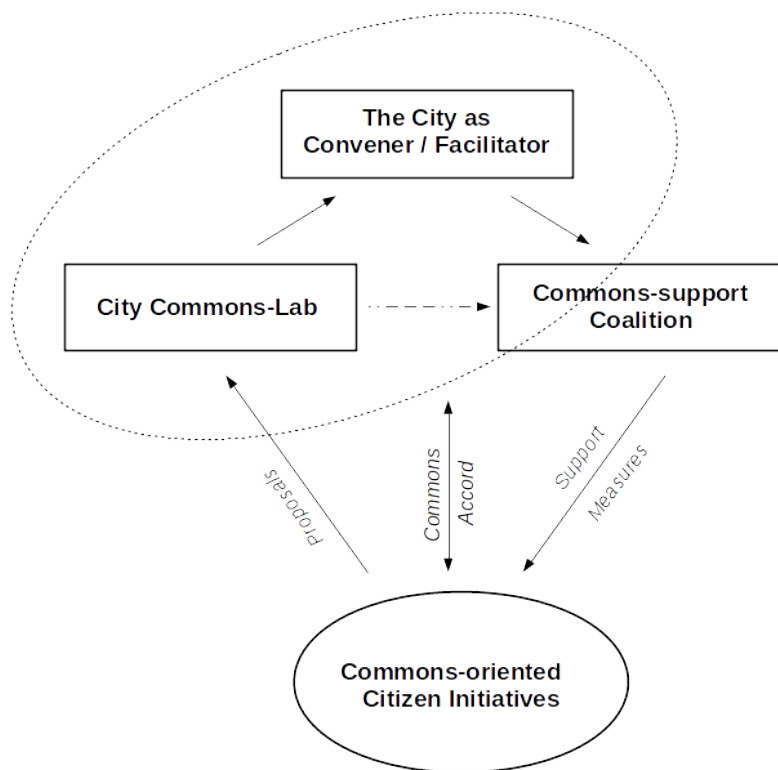
5: Institutional Design for a Commons-Centric Transformation

5.1 Towards a Public-Commons Framework for the Anthropocene

To close our heuristic loop for this chapter, we can consider a third movement of the Anthropocene— the planetary-coordinated response to an emerging awareness of ourselves as commoners, through some specific strategies for how we enact cosmo-local commoning. We see cities as a critical strategic locale of transformation to enact public-citizen commons synergies and transformation. While this does not exclude the multifaceted dimensions of commoning, the general logic of our proposals is to put forward realistic but important institutional innovations that can lead to successfully achieving basic ecological and social goals of general equity and wellbeing. For this, we conclude with specific strategies for the further progress and expansion of the urban commons, which can then be extended outward. We propose public-social or public-commons-based processes and protocols to streamline cooperation between the City and commoners in every field of human provisioning.

The following figure shows the basic collaboration process between commoners and the public-good institutions of the “partner city.”

Figure 2: The basic processes for public-commons collaboration

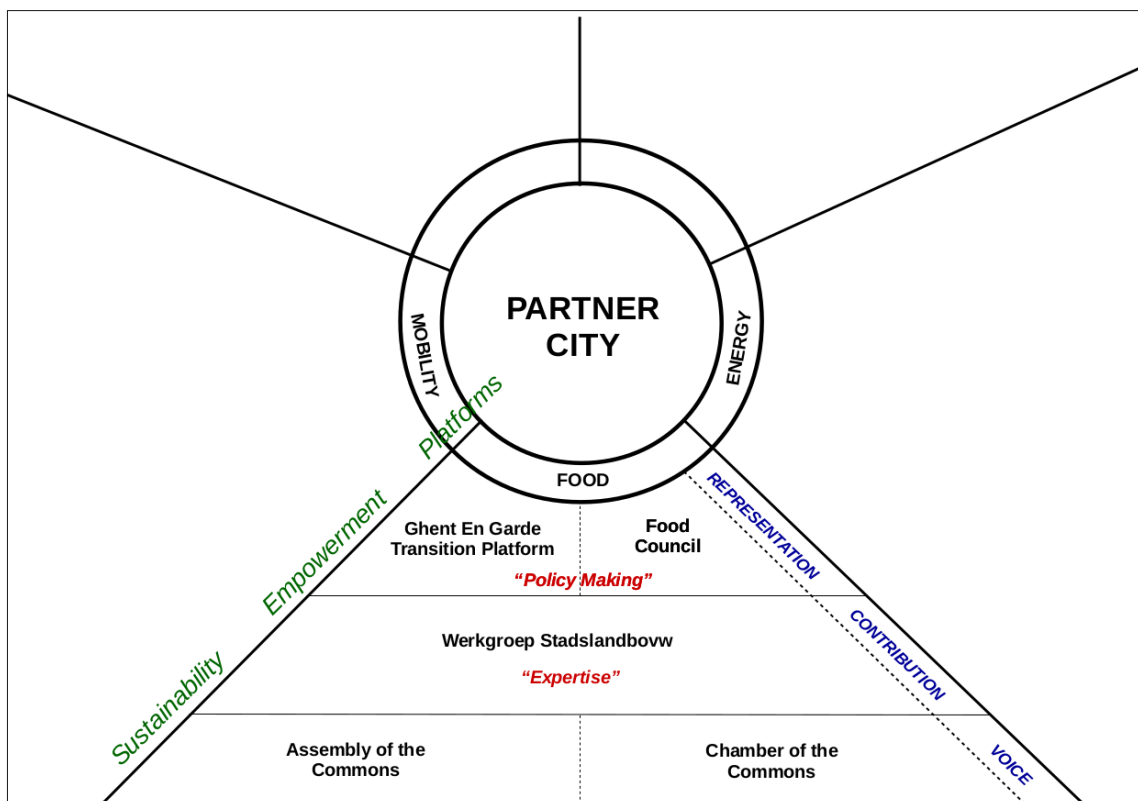


As we can see, commons initiatives can forward their proposals and need for support to a City Lab, which prepares a “Commons Accord” between the city and the commons initiative, modeled after the Bologna Regulation for the Care and Regeneration of the Urban Commons. Based on this

contract, the city sets up specific support alliances which combine the commoners and civil society organisations, the city itself, and the generative private sector, in order to organize support flows.

This first institutional arrangement described here allows for permanent ad-hoc adaptations and the organization of frameworks to enable more support for the common-based initiatives. But just as importantly, this support needs to be strategized in the context of the necessary socio-ecological transitions, which is the purpose of the second set of proposals, as outlined in the following figure:

Figure 3: A public-commons institutional design for the social and ecological transition



This figure describes a cross-sector institutional infrastructure for commons policy-making and support, divided into “transitional platforms,” or as we call them on the figure, “Sustainability Empowerment Platforms.” The model comes from the existing practice in Ghent around food transition, which is far from perfect but nevertheless has the core institutional logic that can lead to more successful outcomes in the future.

The city of Ghent has created an initiative called *Gent en Garde*, which accepts the five aims of civil-society organizations active in food transition (local organic food, fairly produced) that works as follows: the city has initiated a Food Council, which meets regularly and contributes to food policy proposals. The Council is representative of the current forces at play and has both the strength and weaknesses of representative organizations, but it also counts in its membership the “urban food working group,” which mobilizes those effectively working at the grassroots level on that transition. The group follows a contributive logic, where every contributor has a voice. This combination of representative and contributive logic can create a super-competent Democracy+

institution that goes beyond the limitations of representation and integrates the contributive logic of the commoners. This model mixes representative logic and its legitimacy, and the expertise available in public institutions, but, crucially, augments them with the contextually-rich experience and expertise of the grassroots experts. The model is further augmented with the expertise of the generative businesses that are engaged in the necessary socio-ecological transitions.

But how can the commoners exert significant political weight so that political and representative institutions will actually “listen” to them? This requires “voice” and self-organization. We therefore propose the creation of an Assembly of the Commons for all citizens active in the co-construction of commons, and a Chamber of the Commons for all those who are creating livelihoods around these commons, in order to create more social, economic—and ultimately political—power for the commons.

This essential process of participation that we have seen in food transition can be replicated across the transition domains, obtaining city and institutional support for a process leading to Energy as a Commons, Mobility as a Commons, Housing, Food, etc. These “transition arenas” or “sustainability empowerment platforms” integrate the goals and values necessary for a successful socio-ecological transition and allow for a permanent dialogue amongst all the stakeholders involved.

With this, we conclude, the model provides the minimal generic structures that we believe a partner city needs in order to support a transition towards commons-based civic and economic forms being integrated in democratic structures of representation, enriching the city and complementing its structures, while stimulating the individual and collective autonomy of its citizens organized as commoners.

5.2 A Three-Pronged Strategy Involving the Simultaneous Transformation of Civil Society, the Market and the State Forms

But how do we get from the current market-state and market-city configurations to commons-centric institutions? We believe that the model of the *Energiewende* in Germany shows a strategy for social, political, and institutional change that has been shown to work. We therefore propose a strategy in three phases:⁵⁹

- The first phase is the emergence and formation of alternative commons-based seed forms that solve the systemic issues of the current dominant political economy. For example, the carbon-producing activities of fossil fuel extraction need to be replaced by a strategy focusing on the development and expansion of renewable energy. We are seeing that successful transitions, such as those in Germany, depend on a large element of civic mobilization around commons-centric models of provisioning, such as the emergence of community-owned energy cooperatives. In this first phase, the focus is on promoting commons alternatives and their interconnection into integrated sub-systems, first of all within and then across provisioning systems. This emergence and expansion of commons-based alternatives is matched by the

⁵⁹ This strategy is a simplified version of what is described in the “multi-level perspective” literature of social change, a heuristic model distinguishing and articulating the complex dynamics between the “niches,” “regimes,” and “landscape” levels of “socio-technical systems.” Frank W. Geels, “Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective,” *Research Policy* 39 (2010): 495.

necessary growth of social, and eventually, political power. For example, in the case of *Energiewende*, the growth of energy co-ops was matched by the political power of the Greens, and Merkel's realization, after Fukushima, of the dead-end and dangers of nuclear power.⁶⁰

- The second phase is a regulatory and institutional phase in which the right frameworks are put in place. Without proper frameworks and supportive regulations, the commons-centric model would have remained marginal and grown much more slowly. But once the feed-in tariff was in place, the new models could expand to the broader population, as they were “facilitated” by incentives that made the commons-based alternative economically interesting for non-idealistic citizens.
- The creation of the proper regulatory support and new institutional design creates the basis for the third phase, i.e., the normalization of the new practices from the margins to become the new normal. In this phase, generative market forms support the continuing expansion of commons-centric practices, with support from the institutional frameworks of the partner state or partner city.

6. Conclusion

Our era asks for no less than for us to collectively reimagine the way that we live our lives, our cities, polities, and our political economies. The hollow argument that “there is no alternative” is both callous in its disownment of future generations, and blind to the creative and generative power of citizens and communities forging new paths by walking them. Indeed, the seeds of change that demonstrate the powerful logics of commons and commoning are no longer confined to obscure pockets of “alternative” and “pre-industrial/pre-modern” forms. Actually, today they are globally distributed, networked, and highly visible. Our challenge is straightforward. At a cultural level, we need to “slip into” and to support communities and organizations that provide the emotive platforms for commoning, and to support others to make this emotional and cultural transition. Economically, we need to use and develop new mutualizing strategies that entwine relocalism with global knowledge commons and solidarity—cosmo-localization. And politically, we need to build a protocol commons that can allow the myriad movements, organizations, and communities to see how they/we are implicated into Ecologies of the Commons that provide both practical value and the basis for human flourishing. Our world has outworn the old clothes; but into the future, we will take our core—the human dignity that emerges when we see the truth of who we are, others in us and us in others—even as we sew our new garments by hand.

⁶⁰ Tazio Mueller, “Diversity is Strength, the German *Energiewende* as a Resilient Alternative” (*Source Network*, 2017), <http://thesourcenetwork.eu/wp-content/themes/showcase-pro/images/Diversity%20is%20Strength%20-%20FINAL.pdf>