

The Future of the Commons

Notes from a retreat exploring the potential of the commons to fight enclosures and build commons-based alternatives.

Twenty-one thinkers and activists from around the world gathered at Crottorf Castle near Cologne, Germany, on June 25–27, 2009, to discuss their shared interest in the commons as a new paradigm of politics, economics and culture. It was a meeting without an explicit agenda, yet one that yielded extraordinarily rich results: a clearer sense of how a new discourse of the commons might be developed; how it could be used to confront the savage pathologies of neoliberalism; and how it could serve as a proto-political philosophy for building more eco-friendly, humanistic forms of self-governance.

What follows is a selective and partial distillation of the discussions. It is compiled from my notes and memory, and therefore reflects my personal perceptions of the event. Quotations below have been reconstructed from notes, and not a transcript, so they are approximate and not necessarily verbatim. Because I wanted to keep this report fairly succinct and focus on the commons paradigm itself, I have given only brief treatments of many conversations that deserve lengthier treatments in themselves. These topics include the biotech industry's enclosure of seeds, nanotechnology and the privatization of basic elements of matter; the Google Books project that is digitizing the books of university libraries; the South African government's repression of squatters and other commoners; as well as the hopeful activities of the Solidarity Economy movement and the Transition Towns movement. I have also taken liberties in the ordering of topics and themes, which were not discussed in the same sequence of this text. A list of participants and suggested readings are included as appendices.

For those who wish to listen to actual conversations, the Crottorf dialogues have been divided into thirteen separate segments, which can be streamed from the Web or downloaded in two file formats (MP3 and Ogg Vorbis) at <http://www.archive.org/details/crottorf-commoners>.

Finally, it must be noted that this report does not purport to be an official statement of the retreat participants. It reflects my personal interpretations alone. That said, I have attempted to faithfully represent the proceedings in the hope that this report will be useful.

David

Bollier

July 21, 2009

1. Neoliberalism as the Catalyst for A New Commons Movement

There is a reason why so many diverse and unrelated people around the world are showing a keen interest in the commons: market enclosures are growing and intensifying. Much of this stems from the normal logic of neoliberalism, a particular kind of capitalism that took root in the 1980s with the ascension of Ronald Reagan and Margaret Thatcher. Over the past generation, neoliberalism has steadily expanded to become the default worldview governing economics, public policy and human aspiration more generally. It is a system that seeks privatization, deregulation, strict limits on government social programs, state action to protect capital, and debt-servitude for developing countries.

“Neoliberalism is directly intent on destroying the commons,” said George Caffentzis (University of Southern Maine), noting that it combines sophisticated human intelligence with great brutality in its primary mission – “the totalization of the commodity form.” In pursuit of this mission, neoliberal capitalism asserts its domination of nature and crushes social relations that would impede its ordering principles. See, e.g., “Promissory Notes: From Crisis to Commons,” a 2009 essay by the

Midnight Notes Collective and Friends (<http://www.midnightnotes.org/Promissory%20Notes.pdf>).

In its quest to commodify everything for maximum return on investment, neoliberalism frequently experiences crises, noted Caffentzis. One example was the mass resistance to globalization that arose in the 1990s, especially following the Seattle protests in 1999. Some crises, however, can threaten the very existence of capitalism as a system of power and social order. This occurs when neoliberalism is unable to achieve its primary aim, which is to make the commodity form a global reality.

This goal necessarily entails enclosures of the commons. There are limits to this enterprise, however. The Earth's resources are finite and the commoners tend to resist global capital's attempts to privatize and commodify our shared atmosphere, oceans, land, genes, cultural works and other resources.

After decades of enclosures, the various resistance efforts initiated by commoners are starting to coalesce. People are starting to self-identify themselves as commoners with a stake in the resources that neoliberal markets seek to appropriate. And so there is a gathering resistance to the neoliberal project. Commoners are now more able to name the problem and to identify its structural dynamics as a core feature of the neoliberal worldview and economics.

The symptoms of the great financial crisis are now being addressed, noted Caffentzis, but not its roots. Attacks on the commons will therefore continue. This will entail new attempts to criminalize the behavior of commoners for resisting enclosure – and this will result in various sorts of litigation, social conflict, repression, imprisonment and war. “Blood and fire,” unfortunately, is a recurring theme in the history of the commons, Caffentzis said.

Besides resorting to repression, the joint managers of the neoliberal project – capital and the state – will invariably attempt to coopt the commoners. They seek to tempt them to use the commons against itself. Sylvia Federici (Hofstra University, Hempstead, New York) noted that the

“common good,” “clean energy” and the “global commons” will be used as an excuse for expropriation and enclosure of local and regional commons.

The global North, for example, will invoke the “common heritage of humankind” as a justification for corporate exploitation of genetic biodiversity in the South. It will invoke the Amazon as “the lungs of the world” to inhibit self-determination of Brazilians and indigenous peoples there.

2. The Notion of the Commons

As neoliberalism intensifies its agenda, due in no small part to the current crisis, interest in the commons is growing. It offers both a powerful intellectual critique for naming the process of enclosure and a scaffolding for re-imagining economics and social order. David Bollier (Onthecommons.org, Amherst, Massachusetts) made a presentation about the potential of the commons discourse not just in confronting neoliberalism, but in imagining modern commons that enable people to live their lives and earn their livelihoods in new and better ways. The challenge is to devise commons regimes based on people’s participation and consent while establishing rules that assure the continuity of the commons itself over time.

The commons is appealing, Bollier argued, because it offers a new vision and worldview that is historically rooted, politically insightful, culturally attractive and practical. It is a new master narrative that can connect and coordinate many disparate, seemingly isolated campaigns. The commons can play a unifying role because it posits some general principles that apply to all commons:

- stewardship of a resource over the long term;
- equitable access and benefit for the personal (non-market) use of the commoners;
- transparency and accountability within the commons;
- the capacity to identify and punish free riders, vandals and appropriators; and

- the capacity to determine whether the resource shall be alienated for market use or not.

The most basic principle of commons governance, he said, is, “That which is generated by the commons must stay within the commons (unless the commoners collectively decide otherwise).”

Unlike a conventional ideology, which sets forth fixed principles that apply universally, the commons functions as a kind of scaffolding or meta-ideology, said Bollier. Its general principles can only be actualized within a specific context just as DNA is under-specified so that it can adapt to local conditions. A community’s specific history, local circumstances, cultural norms, social ethos, and the nature of the specific common resource, all matter. Particularity is a principle of the commons. There is no single inventory of commons or formulaic set of universal principles that apply.

The power of the commons discourse stems from its ability to speak not just to economics, public policy and politics, but to culture, ecological realities and everyday life. Implicit in the commons is a different epistemology and ontology than that implied by the neoliberal marketplace and state. The commons implies different ways of knowing and being that are based on the personal, the social, the historical and the tacit. To talk of the commons is to assert that all of these factors matter (notwithstanding the tendency of market transactions to declare that they do not matter because they might impede efficiency, profitability, etc.).

The commons discourse is provocative and potentially transformative because it helps us assert new relationships between ourselves and a given resource; between ourselves and the state; and between ourselves and our fellow human beings. It amounts to a different worldview.

The commons is thus both a discourse and a way of being in the world. Or as Peter Linebaugh has put it, the commons is about commoning. The commons is not just a noun, but a verb as well. We are not just discovering the commons; we are inventing it as well. We are

learning how to interact and take responsibility in ways that are both new and old. In a sense, after the long drama of the 20th Century and the consolidation of power by the state and corporations, we are rediscovering some more elemental ways of interacting and organizing social and economic life. We are resurrecting some forgotten traditions and cultural practices of commoning.

By asserting a collective interest in resources, the commons helps us call into the question the familiar justifications for private property rights. The commons helps us see that even private property rights are embedded in social and community relations, which must be given their due respect. The commons asserts a heresy – that there are limits to the claims that private property may make upon the community and upon the Earth.

The neoliberal polity has trouble acknowledging this fact. Indeed, capital typically resists efforts by even democratic polities to make it abide by certain social, ethical and ecological limits.

By opening up new ways to critique the scope of property rights and markets, the commons discourse helps us get beyond the contrived illusions and secret betrayals of neoliberalism. Neoliberalism promises freedom and respect for humanistic values, but only within the framework of “free markets” – and we already know where that ends up.

The commons discourse also helps the commoners assert a social solidarity among themselves. It re-situates the human species as a creature of the Earth. Culturally, the commons serves as a useful kind of “social signaling” cue that lets different sorts of commoners identify each other. This is an important function in the face of the fragmentation of so many resistance efforts today – and of the neoliberal order’s renowned capacity to coopt dissent and resistance.

Finally, the commons has great power because it is not merely reactive. It is not just a critique of what’s wrong. It is generative. It offers affirmative alternatives to markets and neoliberal policies. It offers bottom-up, self-organizing ways to manage resources democratically and sustainably, and to do so in ways that do not necessarily require a

direct government role. This reality has its purest incarnation on the Internet, where the commons is proving itself to be an effective vehicle for generating value in its own right, alongside the market.

It bears noting that the commons is neither communism nor socialism. It may have a kinship with those earlier efforts – e.g., a similar commitment to equality, community and freedom – but the commons is not chiefly about government and public policy. It is about the commoners, their resources and their social practices in managing them. The commons not only proposes a more holistic and sustainable economics, but very different models of political culture. It elevates very different visions of human fulfillment than communism, socialism or capitalism.

3. Aspects of the Commons

For Wolfgang Sachs, it is not necessary that we absolutely define the commons. “Instead we can look at the commons as a piece of wood to grasp as we drift in the ocean. It is a shared ‘problematique.’” One of its greatest values may be in helping to assert limits on human activity. It describes “a no-go zone.”

Sachs elaborated on this idea in the context of global warming: “The Earth is the single most important commons that we have; it is an immeasurable gift. That gift is of such complexity and beauty that you just don’t tinker with it. The task of any generation is to pass that heritage on. The commons in this sense serves as a secularized version of Creation. This is a powerful discourse for asserting limits on technology and markets.”

In China, for example, peasants are being pressured to relinquish their resources for Shanghai markets. Historically, this is of a piece: the commoners have always been forced into submission by market players who wish to exploit the shared resources. But to speak of the commons is to call this exploitation into question. It is to make a critique of development economics and politics, and of sustainability (or the lack thereof).

George Caffentzis went further: “The commons is a defense against the state and its criminalization of commoning.” Some participants questioned whether the commons is primarily defensive, asserting that it is also a realm of co-creation and generativity, as seen in free software and other online commons. But there was consensus that the naming of a resource as a commons helps in its defense.

The commons does not compete on price or quality, but on cooperation, it was noted. The commons “out-cooperates” the market. It does this by itself eliciting personal commitment and creativity and encouraging collective responsibility and sustainable practices.

Andoni Alonso (Laboratorio del Procomun, Madrid) described how his group has been developing an ontology for the commons using a new type of Semantic Web software.* Still in a beta format, the software proposes a taxonomy that divides the commons into four elemental categories – commons of the body, natural commons, commons of the polis, and digital commons. It divides these commons into “parts,” “functions” and “representations” of each commons. It also distinguishes “elements” of commons, “instruments” of their functioning, and “attributes.”

Nature, for example, has many parts (water, atmosphere, wildlife), and many functions (biodiversity, ecological laws), etc. Andoni concedes that his commons ontology could honor different types of distinctions than the ones it does, but the point is to provide a better cognitive approximation of the commons: “You don’t need to know exactly what life is to be a biologist.”

Other participants offered some arresting images and epigrams about the nature of commons:

- If the Invisible Hand assumes mutual selfishness – a kind of insect-driven behavior based on the crudest impulses – the

* The Semantic Web is a new “layer” of software code for the World Wide Web that uses “Uniform Resource Identifiers” (URI) to enable users to identify and organize a diverse range of Web artifacts – text, images, video, data – that are tagged with the URI. This allows for more powerful and precise forms of searching and organizing Web-based information.

commons values human intentionality and intelligence around shared values. It is not altruistic as such; individual self-interest is simply brought into alignment with collective interests and inscribed within the system itself. (Michel Bauwens, Peer to Peer Foundation, Bangkok, Thailand).

- The commons in our time differs from earlier commons by combining pre-modern collectivity with modern individuality. Contemporary online commons, for example, are both particularistic and collective. (Michel Bauwens)
- Our goal in designing commons should be to make moralizing superfluous, so that the system does not require altruistic individuals. “Reliability is a product of good design. So it is with the commons mode of production.” (Franz Nahrada, Vienna, Austria)
- One definition of “commons” in the Oxford English Dictionary is “a board upon which you have a meal.” Seen in this light, participation in the Christian ritual of the Eucharist can be seen as a form of commoning. (Peter Linebaugh, University of Toledo).
- For the late social critic Ivan Illich, the commons is less about the inalienability of a resource (i.e., its non-commodification) than about a lack of institutional control and the freedom that results. The commons is, for him, a “de-institutionalized zone.”

4. The History of the Commons and Why It Matters

Peter Linebaugh (University of Toledo) argues that the history of the commons is indispensable to understanding contemporary commons and the political threats they face. “So much of commoning depends upon memory, elders and precedent,” he said. The persistence of the commons over time has its roots in social sociality, the particularity of practices and the local. These things must be recognized so that other

senses of time and commitment – “when the memory of time runneth not” – can be honored.

Linebaugh noted that the commoners often do not even know their own history. By contrast, the bourgeois narrative of property tells people where they have come from and where they are going. People today do not realize that the Magna Carta emerged as a kind of armistice in a civil war between the commoners and King John. It and the accompanying “Forest Charter” constitute landmark statements of commoners’ rights.

Yet in the 1870s, the champions of Anglo-American capital recast the Magna Carta to justify their imperial ambitions and racist politics. Certain portions of the Magna Carta have been celebrated and enshrined while other portions – especially those dealing with commoners’ rights to the fruits of the commons – have been portrayed as feudal relics and local particularities.

Seen from this perspective, history is “a set of presences that are still around us,” said Linebaugh. The history of the commons illuminates the dynamics of dispossession, the political struggles to maintain control over shared resources, and the hostility to women which is associated with enclosures (as reflected in witch hunts and enclosures of women’s bodies and the knowledge of procreation).

So what does this history have to do with contemporary political struggles?

The crisis of human subsistence in today’s world – housing, food, water, knowledge – has a lot to do with the enclosure of the commons, said Linebaugh. We need to understand this history to understand the great crimes of the present that are destroying subsistence, and to see that we can overcome such criminality. Our history needs to be re-written root and branch, he said.

It helps to see the Magna Carta and the Forest Charter as living charters that are relevant even today. People have fought over the meaning of these charters in the past. Recognizing the great struggles of

the past invites us to look around our own world and recognize that people are still commoning today.

Iain Boal (University of California at Berkeley) noted how the deep history of the commons has been of great help in the struggles against enclosures of germplasm today. He cited Kett's Uprising in 1549, one of the last great peasant revolts seeking "the freedom of just conditions." Activists fighting genetically modified organisms in 1999 used the example of Kett's Uprising to inspire their own advocacy and defense of seeds as a commons. Boal argues that "commons language mobilizes social memory and invokes the political economy," citing Christopher Hill's book, *A World Turned Upside Down*, a history of the Diggers, Ranters and Levellers in the 17th Century.

"If you don't have history on your side," said Sylvia Federici, "it will be used against you." She noted the work of the Bristol Radical Political History Group (<http://www.brh.org.uk>), a group of commoners in Bristol, England, who are dedicated to revitalizing and recreating the collective memory of their city and its connections to the commons, and people's resistance to enclosure and to the Atlantic slave trade.

Massimo De Angelis quoted from Linebaugh's *The Magna Carta Manifesto* to illustrate how an historical understanding of "commoners' rights" could help us situate our political struggles today:

Common rights are embedded in a particular ecology with its local husbandry. For commoners, the expression 'law of the land' does not refer to the will of the sovereign. Commoners think first not of title deeds, but of human deeds: how will this land be tilled? Does it require manuring? What grows there? They begin to explore. You might call it a natural attitude. Second, commoning is embedded in a labor process; it inheres in a particular praxis of field, upland, forest, marsh, coast. Common rights are entered into by labor. Third, commoning is collective. Fourth, being independent of the state, commoning is independent also of the temporality of the law and state. *Magna Carta* does not list rights, it grants perpetuities. It

does deep into human history. (The Magna Carta Manifesto, p. 45)

To understand this history is to understand that commons rights are a birthright entitlement, a reclaiming of our own identity through history. History is also a way of finding courage, through stories.

History can help us rediscover “the indigenous in us,” said Massimo de Angelis (University of East London). “We need to find and shape an identity rooted in history and an awareness of what has been taken for us, in terms of what we used to have.”

The goal is not to romanticize the commons, but to recover a collective memory that can help us recognize and name oppression in the moment as enclosure – and pierce the presumption that only elite managers and experts can govern. By claiming commons governance as a historical reality, we can defend our customary rights and assert the legitimacy the commons.

5. A Developmental Theory of the Commons

Stefan Meretz (Keimform blog, Berlin, Germany) proposed that the commons represents a qualitatively new step in history. The core problem is to overcome the classical market economy’s power to order most of life. Why should the formal economy, which governs approximately one-third of the world’s resources (by the reckoning of one study), control the other two-thirds of the world’s resources?

A central problem in modern life is that our economic relations to each other govern our social relations. Our identities as employees and consumers predominate, and so the marketplace becomes our primary source of social and personal meaning. Market production dominates society, and the value of anything is determined by the price it can command. The main question for any endeavor is whether its output can be sold, not whether it has intrinsic value to human or ecological well-being. Our relationships end up being indirectly mediated by products and things.

The commons paradigm challenges this paradigm of neoliberal capitalism by introducing direct social production. Individuals know their own needs, by themselves, and can self-select tasks that engage their talents and passions. Socially based production in this scenario becomes the basis of social relationships; the making of a livelihood (money from the market economy) blends with the making of a life (purpose and meaning).

Meretz bases much of his analysis on the social dynamics of free software development, a process that depends upon self-directed, passionate, voluntary engagement in a collective production process. Meretz sees this paradigm, which has been pioneered by free software, as the harbinger of an epochal shift in the economy.

He proposed a five-step process by which the current neoliberal regime could give way to a commons-based regime:

1. People begin to identify the seed forms of new modes of producing our livelihoods. This will occur in “secured places” where commoners can experiment and build new models without interference.
2. A crisis in existing production modes will allow the new seed forms of commoning to grow and become an historical force.
3. Niche modes of commoning will expand and become a relevant force in the economy and society at large.
4. New modes of commoning will become dominant and replace the old logic of neoliberalism with a new logic of the commons.
5. The new institutions and production practices will consolidate and realign themselves over time.

Meretz called attention to Stage 3 as critical. “Expansion requires that new modes of production be compatible with old modes. This is occurring right now. Some companies are using commons because it helps lower their costs and compete more effectively in the marketplace.”

Strictly speaking, commons used in a business context are not necessarily about maximizing profit. Yet they are valued nonetheless because they help companies “solve” their competitive challenges. Think of large tech and media companies that rely on user-generated content or free content to attract Web traffic, market their brands, and earn advertising revenues.

The commons, in other words, can be tolerated by profit-seeking companies, or in many instances, provide genuine competitive advantages. But what is significant from the commoners’ perspective is that commons-based production cannot be absorbed by the market system. It is a protected zone of endeavor.

As such, this stage represents a inflection point that allows the commons to take root in the neoliberal system without being violently rejected by it (which would otherwise be the expected response). Over time, the deficiencies of the old neoliberal system will become evident; the system will lose its strength and stability; and it will be supplanted by a commons sector that will out-perform it with its own, quite different logic. This is Meretz’s theory of how the commons can develop from within a hostile neoliberal environment.

At Stage 3, a shift in logic occurs, said Meretz. The market typically requires competition at the expense of others. My success in producing a higher-quality product or more productive process means a loss for someone else. This is not a personal thing. It is just a systemic feature of the market capitalism. It is a structural relationship that we cannot overcome individually.

By contrast, a commons allows value to be produced only if others are participating. This dynamic is based upon an elemental principle of human life: self-development requires other people, in the positive sense. Without a community, nothing is possible. Again, this idea is

grounded in the empirical realities of free software. One version of the Linux operating system is Ubuntu, an African term that comes from the phrase, “umuntu ngumuntu ngabantu,” which can be roughly translated as “A person is a person through other people” or “I am what I am because of you.” This principle is intrinsic to so much song, dance and music in Africa, where all individuals in a community are involved in the process of creation.

The commons induces a positive feedback cycle of “I need others and others need me,” said Meretz. This can be seen in numerous online communities. If others do not come forward to co-create, then it’s not a commons. George Caffentzis suggested that just as Machiavelli described the transition from feudalism to capitalism, so we may need “a new Machiavelli” for our times to help describe the transition from capitalism to the commons.

6. The Power of Peer Production

Michel Bauwens of the Peer to Peer Foundation (Bangkok, Thailand) made a presentation about the self-organizing capacities of people on the Internet, often known as commons-based peer production.

It is significant that Web 2.0 software took off just as the tech industry crashed, in April 2000, he said. Investors fled the field and refused to provide capital. Yet a single individual working without staff or capital, Bram Cohen, was able to build and launch BitTorrent, a peer-to-peer file-sharing software that has dramatically lowered transaction and coordination costs among people. BitTorrent has become a key tool for many legitimate scientific, business and commons enterprises (as well as illegal music file-sharing).

The success of BitTorrent and other commons-based systems implies “a revolution in organization and value systems,” said Bauwens. “We are not going back to pre-modern holism. Relationalism is the future.” By this, he means that “affinity-based communities based on a sense of belonging” are the archetype for the future. Production will become a goal-driven affair among participants who jointly negotiate understandings among themselves.

It is now customary for for-benefit associations to guide and assist the social/technological innovation of volunteer-driven communities, often by raising and allocating money to specific projects. Most of the major free and open source software projects – Linux, Apache, Ubuntu, Debian, Wikipedia, etc. – have affiliated software foundations. The foundations do not direct the course of software development, but they do provide critical funding for the infrastructure of cooperation. Yet another layer of institutions frequently arise “on top of” the software commons – an ecosystem of businesses that interact symbiotically and respectfully with the various communities.

Bauwens asserts that commons-based peer governance and production will tend to prevail over closed, proprietary business systems. He argues that companies that open up their organizations will out-compete and out-cooperate closed companies in the marketplace. Alliances of open projects will prevail against closed systems as well.

It appears that conventional markets do not work well in a field of non-rival goods (“free information”) that is the norm on the Internet, said Bauwens. Such companies can only make money by working at the margins of open communities. Industry analysts point out that even companies with enormous market capitalizations such as YouTube, Facebook and Twitter do not earn substantial profits (yet).

Besides inaugurating a new organizational form, peer production has historic significance in the history of capitalism. “Capitalism cannot reproduce social relations or society any longer,” noted Franz Nahrada. The social order need not be entirely submissive to the masters of economic production; they have protectible commons.

This is the general theme of Bollier’s book, *Viral Spiral: How the Commoners Built a Digital Republic of Their Own*. The book describes how loosely federated tribes of commoners have built a quasi-sovereign system of technological infrastructure, legal licenses and social ethics to govern themselves. They are able to control and manage the resources that they generate. This can be seen in remix music and video mashup communities; in the many creative sectors and scholarly disciplines that

use Creative Commons licenses to create viable commons of creative works and information; in the proliferation of open education and open science project-communities; and in new forms of citizen affinity groups that self-organize to advocate their own causes.

7. A Divide Between Digital Commons and Physical Commons?

A number of participants questioned whether digital commons on the Internet truly have much in common with natural resource commons. After all, the “two cultures” -- digital and physical -- do not appear to have much to do with each other. Moreover, natural resources are finite or depletable, unlike digital resources, and so the management strategies and politics of these two broad classes of commons are quite different.

Richard Pithouse of Port Elisabeth, South Africa, pointed out that among the squatters and other urban activists with whom he works, “online practices are seen as exclusionary.” Most people do not have email accounts, and any collective projects require in-person meetings after work hours. Much of the global South does not have easy or cheap access to the Internet, and rates of Internet access vary even in industrialized countries based on one’s age cohort, ethnic background and income.

And yet the digital and physical commons are interconnected. The infrastructure of computer and communications lines are physical products that must be built, and that have environmental impacts. The two realms are integrated in another sense, through culture. We bring our cultural worldview and relationships to our dealings with the digital commons as well as with natural resource commons.

Significantly, there are some intriguing bridges being built between the two. Rainer Kuhlen of the University of Konstanz in Berlin, cited the case of community gardeners using electronic technology to manage their shared gardens. The Transition Towns movement is another example. More than 150 towns around the world are trying to re-invent their local economies and cultures in order to anticipate the coming

impacts of climate change and Peak Oil. These communities use digital technologies to communicate collaborate and share with each other.

Franz Nahrada of Vienna, Austria, founded the Global Villages Network in order to link together a worldwide community of eco-village innovators. The Network's goal is to pioneer new models of attractive, smaller-scale habitation and community design so that man and ecosystems can live together in harmony. The point is "to reinvent the city as global villages that combine all aspects of living with embeddedness and caring for natural environments. That's the only way to bring the mind back home." Nahrada cited instances of design visionaries trying to use digital technologies to improve the economic autonomy of communities while enabling them to live in greater harmony with the environment. Among the examples: The Acrosanti mini-city for 5,000 people within desert habitat¹; the "Sea Lily pad"²; the John T. Lyle Center in Pomona, California³; and the village town by Claude Lewenz⁴. For Nahrada, "integrated design is meta-politics that creates structure."

The Global Villages Network, which is dedicated to these sorts of projects, says in its founding declaration: "One of the most powerful potentials that we are just beginning to unleash, is the feeling that in a time of increased global competition, diminishing resources and growing uncertainty, we have to use our local resources more wisely and that we can increasingly do so with the access to global knowledge, the sharing of experiences, the division of mental labor and the local connectedness that new information technologies make possible." The Global Villages Network seeks to discover "the full potential of this combination between local resources and global knowledge."

Michel Bauwens gives a glimpse of the under-leveraged synergies of technology and local communities in an essay, "Russia and the Next

¹ <http://www.arcosanti.org/project/project/main.html>.

² <http://www.vincent.callebaut.org/page1-img-lily pad.html>.

³ <http://www.csupomona.edu/~crs/demobuildings.html>.

⁴ http://villageforum.com/index.php?option=com_content&view=article&id=50&Itemid=67.

Long Wave, and Why Its Agricultural Villages Are Important” (<http://globalvillages.ning.com/profiles/blogs/russia-and-the-next-long-wave>). Bauwens notes that the open design principles of free and open source software have profound implications for local communities as they try to gain greater control of their economic and cultural lives.

Citing the archetypes of Google, eBay and other Internet-based enterprises, Bauwens writes: “Companies will need to open up to co-design and co-creation, while the distribution (miniaturization) of the means of physical production, liberates the possibilities for smaller more localized production units to play more essential roles.” In particular, “software development can be generalized to the promotion of open design development, including applications in the field of farming and land use,” he writes. Bauwens summarizes his vision:

With the easy availability of carbon-based fossil fuels, it made sense to bombard the productive process with massive but wasteful energy usage, which has been the hallmark of the ‘western industrial method’. However, there is an alternative which will be particularly appropriate in the coming period. This alternative is based on the use of ‘smart renewable energy’, i.e. precision agriculture. Such agriculture would require intensive knowledge of the natural habitat, something which agricultural workers naturally possess, but interconnected with global open farming communities, so that knowledge can be exchanged on a permanent basis. In this way, the global knowledge of farming, can be applied to any locality.

Another vision for connecting the digital commons with the physical environment is set forth by Christian Siefkes in his 2007 book, *From Exchange to Contributions: Generalizing Peer Production into the Physical World*. Siefkes, a computer scientist from the Freie Universität Berlin, is Co-founder of the Keimform-Blog (<http://www.keimform.de>), which investigates how far the potential of commons-based peer production extends.

Siefkes' book offers an ambitious theoretical framework for building a "peer economy" in physical contexts by generalizing the principles of peer production. He addresses such basic issues as coordinating the producer side with the consumer side, resource allocation, decision-making, management challenges and maintaining peer production as a separate realm from the market economy.

8. Enclosures of Bytes, Atoms, Nano-Matter and Geology

Pat Mooney, Executive Director of the ETC Group, summarized some of the leading work that he and his colleagues are doing to fight enclosures of "bytes, atoms, nano-matter and geology," or what he expresses with the acronym "BANG." Mooney painted a sobering picture of just how far enclosures are proceeding as a result of corporate consolidation, cutting-edge technologies, stricter intellectual property laws and corporate-state partnerships.

"Industry concentration is driving a huge loss of biodiversity," he said, noting that 75% of seed stock diversity is now eroded. In 1977, there were 7,000 seed companies in the world. Now, only ten companies control almost 70% of the global seed market. Three companies -- Monsanto, Dupont and Syngenta -- control half of the market. This market consolidation has in turn greatly strengthened the political power of seed and agricultural companies, who frequently dominate legislative and regulatory debates that seek to contain the risks of these new technologies.

The ETC Group is concerned about a number of other profound enclosures-in-progress. These involve matter at the atomic level; the invention and ownership of new types of self-replicating lifeforms; and the integrity of basic geological conditions on Earth.

Nanotechnology, for example, is an attempt to build new types of matter, atom by atom. The idea is that synthetically engineered matter can be made more efficiently and with less waste than natural materials. Nickel might be altered to be a cheaper commercial substitute for platinum, for example, and sand might be modified to perform as a

cheaper substitute for copper (both developments that would be hugely disruptive to the economies of nations that now mine these metals). Already Harvard University holds patents on 23 elements of the Periodic Table to use at the nano-level, said Mooney. By 2015, Mooney estimates that there will be a \$2.5 trillion market for nano-engineered components.

What's worrisome about these developments is that even scientists do not really know the implications of altering the commons at the level of the Periodic Table. There are also potential weapons applications of the technology, such as a "nano bomb" that could explode nine city blocks, said Mooney.

Synthetic biology is another frontier enclosure. In this case, patents may not even be able to control the proliferation of homegrown DNA-splicing because there are "open source" methods that are evolving. This raises the question of whether "Do It Yourself (DIY) DNA" could be adequately policed by its participants. Here again, the biggest chemical and energy companies are heavily involved in developing this technology. It has been calculated that "only 23.8% of the Earth's biomass is capable of being commodified at this point," said Mooney; synthetic biology aspires to expand industry access to the remaining three-fourths of the commons is not yet technically accessible.

Yet another frontier of market enclosure is geo-engineering, which is increasingly being considered as a way to deal with global warming. Some scientists are proposing changing the surface of the oceans to make them less reflective, for example. Another proposal would blow salt into the stratosphere to create a "solar screen" to ward off the sun's heat. The obvious dangers are tinkering with the Earth's basic ecosystems; no one really knows what might happen if the basic processes of the oceans and stratosphere were altered.

The commons may be a useful concept to defend against these and other enclosures, said Mooney, because it offers a defense against the primitive accumulation of those in power. It helps assert the intrinsic value of such elemental commons as food crops, biodiversity, the stratosphere and the Periodic Table of matter.

9. Hermann Hatzfeldt on Sustainable Forestry

During an afternoon break at the retreat, Hermann Hatzfeldt led the group on a walk through a forest preserve adjacent to Crottorf Castle. Hatzfeldt pioneered the a number of sustainable forestry practices on the 7,000 acres of nearby forest that he owns, the third largest privately owned forest in Germany. He explained that his management philosophy is to work in partnership with nature rather than trying to dictate to nature -- because the results are more stable and productive over the long term. Hatzfeldt's enterprise is essentially about the sustainable management of a common pool resource by a private owner.

Conventional forestry management requires planting, cultivating and harvesting. A monoculture of trees is typically planted in rows to maximize the efficiencies of performing these tasks. But such Fordism is more costly over the long term, said Hatzfeldt, and it results in a more fragile ecosystem. In sustainable forestry, by contrast, the goal is to cut and tend the forest to enhance its natural inclinations, a process that also renews and improves the forest. So, for example, trees that fall to the ground are allowed to stay there. This will allow more moss to grow, which elevates the humidity of the forest, which aids forest growth. Mushrooms can grow on the forest floor, and their later decomposition improves the soil. And so on. A general lesson that might be drawn: sustainable management can elicit "hidden economies" that only manifest themselves over time, and may elude direct measurement.

It would appear that many commons, by encouraging sustainable management of resources, may also create value in counter-intuitive, "hidden" ways. The most obvious example is free software. The proprietary industry never imagined that personal passions, social collaborations, shared ideals and other "soft" factors could be so consequential in building complex software programs. The Native Americans in New Mexico who manage precious supplies of water under the acequia system have a similar counterintuitive approach to managing the commons of water. They do not try to capture every last drop by putting concrete floors in irrigation ditches; instead they let some of the water seep into the ground, which in turn allows trees to grow nearby,

which shields the fields from the wind, helps preserve topsoil, creates shade and lowers temperatures.

By honoring the organic integrity of a resource and its own natural propensities, the commons helps cultivate a “value proposition” that the neoliberal markets cannot understand or capture.

10. The Global South and the Commons

The commons has a special importance to people of the global South, many participants agreed. Nicola Bullard (Focus on the Global South, Bangkok) declared that there is “a profound crisis of the commons in the global South,” citing the many enclosures of seeds, minerals, ethnobotanical knowledge and much else.

Corporate enclosures of the South are so extreme that “capitalism is trying to resurrect the commons in its own image,” said Prashant Iyengar (Alternative Law Forum, Bangalore, India). “The commons is used in the sense of a presumed space of freedom with no traditions or rules -- to convey the feelings of early settlers,” he said. The commons is associated with open source software, which is only available to those who can afford computers and have access to electricity. In Indian culture and history, by contrast, the commons is far more organically rooted in the timeless dimensions of the natural world and in spirituality.

In recent years, the global South has been developing a number of commons-based responses to enclosures. The Solidarity Economy movement is one example. This movement originated in Brazil in the 1990s, said Andreas Exner of Klagenfurt, Austria, an ecologist who works closely with the Solidarity Movement. The idea behind the Solidarity Economy, said Exner, is to use bottom-up social cooperation and sharing to build new types of institutions and practices for performing needed work.

Examples include fair trade organizations and cooperatives that help farmers get fair prices, trade unions, open source software projects, local currencies, and “free shops” where there is no exchange or prices to obtain goods. “The goal of the Solidarity Economy is to change the

relations of production,” said Exner. “We need to break the market’s role in mediating production and build up new production chains within the Solidarity Economy, and then link the different parts together.”

In Durban, South Africa, Richard Pithouse reported on how squatters are re-appropriating urban spaces, creating new types of commons in the process. They are not “traditional” commons, but they are certain commons in the sense of being self-governed collectives managing a shared resource for the benefit of its participants.

A particularly striking feature of some South African commons, said Pithouse, is the insistence of the commoners are “asserting the right to be intellectuals” who can interpret their circumstances directly, in their own voice. “We are the professors of our own suffering,” said one protest banner. Another said, “Talk to us, not of us.” The point is to avoid a movement struggle led and defined by experts, and to enable everyone participating in the struggle to be a peer.

Another initiative emerging from the global South is a “Reclaim the Commons” manifesto issued by the World Social Forum, launched in January 2009. (Link: <http://bienscommuns.org/signature/appeil/?a=signer&lang=en>) Miguel Vieira, a planner with the World Social Forum (São Paulo, Brasil), explained the origins of the manifesto at the organization’s January 2009 gathering, and urged individuals and organizations to formally sign the manifesto. The document reads:

Humankind is suffering from an unprecedented campaign of privatization and commodification of the most basic elements of life: nature, culture, human work and knowledge itself. In countless arenas, businesses are claiming our shared inheritance – sciences, creative works, water, the atmosphere, health, education, genetic diversity, even living creatures – as private property. A compulsive quest for short-term financial gain is sacrificing the prosperity of all and the stability of the Earth itself.

And the manifesto concludes:

This Manifesto calls upon all citizens of the world to deepen the notion of the commons and to share the diverse approaches and experiences that it honors. In our many different ways, let us mobilize to reclaim the commons, organize their de-privatization and get them off markets, and strengthen our individual initiatives by joining together in this urgent, shared mission.

11. The Dark Side of the Commons

A number of participants proposed that the commons is not necessarily a wholesome, constructive force. For example, there are communities of “open-source biologists” who are trying to create their own “do it yourself” genes, which could wreck catastrophic disruptions on nature. The residents of the black “homelands” of South Africa once govern themselves as commons, but the government strictly limited their sovereignty and resources.

As mentioned earlier, nations that invoke the “common heritage of humankind” often do so to justify the expropriation of resources from others. The workers of a factory may interact on the shop floor as a commons and yet still be subject to corporate management. And the “care economy” of child-rearing and housekeeping that women participate in may be a gift economy functioning outside of the marketplace – but it is clearly more exploitative than emancipatory. A gift implies a choice, but these commons are often marked by coercion.

Sylvia Federici also pointed out how the World Bank “discovered” the commons in the 1990s as a way to domesticate its possibilities in Africa. Neoliberalism came to recognize the commons, but took steps to ensure that it would evolve in ways compatible with the larger market agenda.

It was pointed out by Wolfgang Sachs, however, that historically most commons have not involved choice. And gift economies have power and rules notwithstanding the exchange of “gifts.” Another participant pointed out that many if not all of these scenarios are not truly commons. They resemble open-access regimes (or tragedies of the commons) in

which the commoners do not truly govern themselves or establish their own rules and sanctions; they are failed commons.

The paradigm of “compromised commons” can be seen in many online spaces such as Facebook and MySpace. On such sites, the host company’s “terms of service” contracts are the real governance rules for the “community.” Bollier calls these commons “faux commons.” Lawrence Lessig has called them instances of “digital sharecropping,” a kind of debt-servitude that occurred following the American Civil War, in which African-Americans paid for use of farming land by paying their white landlords with a share of the crops they grew.

Do these compromised forms of collective governance constitute commons or not? These are theoretical and definitional issues about the commons that deserve greater exploration.

12. The Future of the Commons: Unresolved Issues

Needless to say, there are many unresolved issues in moving a commons agenda forward. Much of the conversation focused on how to shape the commons as a viable political project.

Institutionalizing a commons strategy and agenda. “We are beyond the period of window-shopping for new master narratives,” said Wolfgang Sachs. “These Crottorf discussions may be a place to show the complexity of the commons discourse to the outside world. But we need some institutionalization to bring together the isolated pockets of commons work.”

Sachs continued: “World society is about to give itself political institutions [to deal with climate change and the financial/economic crisis]. How can we affirm protection for the commons without falling into the trap of expert-run planetary management? Since the age of unlimited economic growth is coming to an end, what are other sources of well-being? How can we foster sources of well-being that are not exclusively monetary? What is the politics of fostering well-being instead of GDP? We must find ways to secure rights and well-being with less money than before.”

A key strategic issue, therefore, is to locate the places in which the commons can be deepened. George Caffentzis suggested that we must study how commons come into being. Often, they arise as a result of tragedies of the commons or enclosures. One difficult task is to mobilize the social and political energy and imagination to build new commons. We must prod people to go beyond their usual norms and sense of the possible.

This will pose special challenges for the global South, Richard Pithouse (Durban, South Africa) pointed out. Any changes sought by the North must include a commitment to global justice for the South; the invention of new types of alternative livelihoods; and a recognition that a no-growth economy will be disastrous for the South.

Wolfgang Sachs sees four possible responses to the scarcity that lies ahead: 1) Use social exclusion to limit access and benefits from scarce resources; 2) Expand the means of production at any cost (through nuclear, biomass, genetic and biotech engineering, etc.); 3) improve the efficiency of energy use; and 4) revise our collective goals and aspirations so that an ethic of “sufficiency” can take root.

From the commons perspective, the first two choices – social exclusion and increased production – are not solutions at all, from the commons perspective. The third choice, greater efficiency, will not work because aggregate growth will simply eclipse whatever efficiency gains are introduced. Only the fourth choice is promising, and that is where the commons could be an important part of the solution. “Our only hope is to make economic power that is based on fossil fuels less attractive,” said Sachs. “We also have to de-couple well-being from economic power.”

The state and the commons. One unresolved issue involves the role of the state with respect to the commons. It has already been noted that the commons discourse offers a defense against the state. But it remains unclear how the state should interact with the commons. What degree of sanction and support should it provide, and what degree of independence? Caffentzis noted that the Zapatistas have embraced the

commons as a constitutional matter; the Bolivians are considering constitutional changes that would recognize common property; and Ecuador has adopted a new clause in its constitution explicitly recognizing the rights of the environment.

But the risk is that a commons would be seen as state-managed property. This would undermine the commons because people would have no direct sense of responsibility for collective resources; authority would be delegated to government and politicians, and familiar patterns of capture and corruption would re-appear.

Any discussion of the commons raises the issue of whether it is a means of defensive resistance or a pro-active strategy. Different participants aligned themselves with one or the other perspectives, but Stefan Meretz pointed out that the two are really the same: “We produce our own commons and we defend them. Some of us are ‘dam-builders’ and some of us are ‘ship builders.’”

The digital commons and natural/physical commons. Another issue is the relationship between the emerging digital commons and the “physical” or natural commons. One reason the former function so well is because their resources are intangible and non-rival; they do not get “used up” and so the politics of allocating use and benefit from them are much easier. There is a “cornucopia of the commons” rather than a “tragedy of the commons.”

And yet even though the resources and politics of the two classes of commons differ greatly, they are not entirely different beasts with nothing in common. Digital tools are often used by commoners to help manage and improve natural and physical commons. People in poor, rural areas in developing countries may find valuable knowledge, assistance of coordination of work through the Internet. Franz Nahrada cited his experiences with the Global Villages Network, which is a worldwide community of villages that use the Internet to promote economic and social innovation. His experience is that digital technologies can help increase collaboration with nature.

On the other hand, the denizens of the digital commons are generally oblivious to the material bases of computer production and its environmental effects (the mining of minerals, the disposal of old computers, etc.) And in many countries, the “digital divide” between rich and poor remains a significant fact. In such circumstances, reliance on online commons is seen as exclusionary.

What is needed is a critical perspective on material basis of new technology and its designed-in behaviors. We also need to explore the ways in which digital commons and natural commons interact.

There are, of course, many other unanswered question. How should the commoners engage in the battle of ideas with neoliberalism? What venues or issues are most promising? Which people and organizations can help advance these goals?

Another key issue that deserves more attention: How can the commoners generate income for commons advocacy, networking and innovation? Funding for building commons infrastructure is much-needed and highly efficient. So is funding of salaries for people engaged in commons advocacy and have no “day job” to support their work. By leveraging the energies of the commoners, such people, using commons infrastructure, can unleash surprising amounts of social engagement and economic value. To take one example, the Wikimedia Foundation, which supports Wikipedia and several other wiki projects, has an annual budget of only US \$2 million a year and a small staff.

* * *

It is no exaggeration to say that the three-day Crottorf retreat represented one of the most intensive and sophisticated dialogues about contemporary commons ever held. It was distinguished by its diversity of perspectives from academics, activists and irregulars from many disciplines and policy arenas. Although many vexing issues remain, there was a consensus that the commons offers many attractive possibilities for those commoners wishing to confront the pathologies of neoliberal capitalism. It also offers the inspiration and legitimacy of history, and many successful models of commoning.

This, truly, may be one of the most important contributions that the commons may make: helping us to learn new ways of knowing and being, and new ways of interacting with each other and with the Earth. Politics and economics are not something that occur in a zone apart; they exist in our consciousness and culture. The commons speaks to all of these realms, and therefore offers some hopeful paths toward the future.

Appendix A: Retreat Participants

- **Andoni Alonso**, Madrid, Spain
- **Michel Bauwens**, Bangkok, Thailand, is an active writer, researcher and conference speaker on the subject of technology, culture and business innovation. He is the founder of the Foundation for Peer-to-Peer Alternatives and works in collaboration with a global group of researchers in the exploration of peer production, governance, and property. He has been an analyst for the United States Information Agency, knowledge manager for British Petroleum, eBusiness Strategy Manager for Belgacom, as well as an internet entrepreneur in his home country of Belgium. He has co-produced the 3-hour TV documentary Technocalyps with Frank Theys, and co-edited the two-volume book on anthropology of digital society with Salvino Salvaggio. Michel is currently Primavera Research Fellow at the University of Amsterdam and external expert at the Pontifical Academy of Social Sciences (2008). In February 2009, he joined Dhurakij Pundit University's International College as Lecturer in Bangkok, Thailand, assisting with the development of the Asian Foresight Institute. Main site at <http://p2pfoundation.net>; Bibliography at http://p2pfoundation.net/Bibliography_of_Michel_Bauwens; Wikipedia http://en.wikipedia.org/wiki/Michel_Bauwens
- **Iain Boal**, Berkeley, California, USA, is an Irish social historian, half educated in England. He has been resident in Berkeley since 1985. He is associated with Retort, a group of antinomian writers, artisans and artists based in the San Francisco Bay Area. He was co-editor of *Resisting the Virtual Life: The Culture and Politics of Information*, City Lights Press, 1995, and one of the authors of *Retort's Afflicted Powers: Capital and Spectacle in a New Age of War* (2nd edn, Verso, 2006), which Michael Hardt described as a "venomous and poetic book" and Harold Pinter as "a comprehensive analysis of America's relationship with the world. No stone is left unturned. The maggots exposed are grotesque." In 2005/6 he was a Guggenheim Fellow in Science and Technology. He is affiliated with the Geography Department and the Institute of International Studies at UC Berkeley, and the Community Studies Department at UC Santa Cruz. Areas of Special Interest: The social history of science, technics and medicine; luddism and anti-modernity; science and visual culture; commoning and communalism; language and the technics of

communication. http://en.wikipedia.org/wiki/Iain_Boal

- **David Bollier**, Amherst, Massachusetts, USA, (www.bollier.org) is an American author, activist, blogger and consultant who spends much of his time studying the commons as a new paradigm of economics, politics and culture. He pursues this work as an editor of Onthecommons.org and Fellow at On the Commons, in collaboration with various U.S. and international partners. Bollier is the author of three books on different aspects of the commons: *Silent Theft: The Private Plunder of Our Commons Wealth* (2002) is a far-ranging survey of market enclosures of public lands, the airwaves, creativity, scientific knowledge, and much else. *Brand Name Bullies: The Quest to Own and Control Culture* (2005) documents the vast expansion of copyright and trademark law over the past generation at the expense of the public domain. And *Viral Spiral: How the Commoners Built a Digital Republic of Their Own* (2009) describes the rise of free software, free culture, and the movements behind open business models, open science, open educational resources and new modes of Internet-enabled citizenship. Bollier is Senior Fellow at the Norman Lear Center at the USC Annenberg School for Communication and co-founder and board member of Public Knowledge, a Washington policy advocacy organization dedicated to protecting the information commons.
- **Nicola Bullard**, Bangkok, Thailand
- **George Caffentzis**, Portland, Maine, USA, is a member of the Midnight Notes Collective and a coordinator of the Committee for Academic Freedom in Africa. He has taught in many universities in the US and at the University of Calabar (Nigeria). He is presently a Professor of Philosophy at the University of Southern Maine in Portland, Maine, USA. He has written many essays on social and political themes. His published books include “Clipped Coins, Abused Words and Civil Government: John Locke's Philosophy of Money”, “Exciting the Industry of Mankind: George Berkeley's Philosophy of Money”; “No Blood for Oil!” (an e-book accessed at <http://www.radicalpolitics.org/>). His co-edited books include: “Midnight Oil: Work Energy War 1973–1992”; “Auroras of the Zapatistas: Local and Global Struggles in the Fourth World War”; “Thousand Flowers: Social Struggles Against Structural Adjustment in African Universities.”
- **Massimo De Angelis**, London, England, *1960, currently lives with his family in a small village in the Apennines in the province of Modena (Italy) where he is learning the ways of rural commoners while teaching music at the local nursery school and exploring the possibility of forms of

association promoting commoning in those areas worst served by public services. As a teenager he participated in the revolutionary ferment of the the 1970s Italian movimento and ever since cannot consider himself whole without some engagement in meaningful emancipatory projects. He is also professor of Political Economy of Development at the University of East London. In 1995 he obtained his PhD in Economics at the University of Utah, Salt Lake City, USA. He has published two books, Keynesianism, Social Conflict and Political Economy (2000) and The Beginning of History: Global Capital and Value Struggles (2007) as well as numerous articles. He is the editor of the web journal The Commoner (<http://www.thecommoner.org>) which he founded in 2000. His current research is centred on the relation between capitalist crises and commons.

- **Andreas Exner**, Klagenfurt, Austria, *1973. Academic studies in ecology, research of vegetation ecology, social work. Former militant activist within the ecology movement, former attac-activist, former member of the network for a basic income. Currently crossbench councilor in the chamber of labour for the Green and Independent Unionists in Kärnten (www.grueneug.wordpress.com). Editor of "Streifzüge" (<http://streifzuege.org>) and member of SINET (<http://social-innovation.org>). Activist at <http://solcom.ning.com>, <http://transitionaustria.ning.com>, <http://transitioneurope.ning.com>. Books: together with Lauk & Kulterer "The limits of capitalism. How we fail on growth" (Ueberreuter, 2008, in German); together with Rätz & Zenker: "Basic income. Social security without work" (Deuticke, 2007, in German). Main focus of activities: Resources and capital, SolidarityEconomy; present in Facebook.
- **Silvia Federici**, Hempstead, New York, USA, is a long time feminist activist, teacher and writer. She was a co-founder of the International Feminist Collective, the New York Wages For Housework Committee, the Radical Philosophy Association Anti-Death Penalty Project and the Committee for Academic Freedom in Africa. She has taught at the University of Port Harcourt (Nigeria) and Hofstra University. She has authored many essays on feminist theory and history. Her published books include: "Caliban and the Witch. Women, the Body and Primitive Accumulation"; "Enduring Western Civilization: The Construction of the Concept of Western Civilization and its Others" (editor); "Thousand Flowers: Social Struggles Against Structural Adjustment in African Universities" (co-editor). http://en.wikipedia.org/wiki/Silvia_Federici
- **Hermann Hatzfeldt**, Crottorf, Germany, <http://de.wikipedia.org/wiki/>

[Hermann_Graf_Hatzfeldt](#) (German)

- **Silke Helfrich**, Jena, Germany, has studied romance languages and pedagogy at the Karl-Marx-University in Leipzig. Since mid of the 1990s activities in the field of development politics, from 1996 to 1998 head of Heinrich Böll Foundation Thuringia and from 1999 to 2007 head of the regional office of Heinrich Böll Foundation in Mexiko City focusing on globalisation, gender and human rights. She is running the German-speaking CommonsBlog at <http://commonsblog.de>
- **Prashant Iyengar**, Bangalore, India, is a Technology/IP lawyer, academic and a new media activist based in India. He runs a free database of Indian Supreme Court cases (OpenJudis), and is currently a researcher with the Alternative Law Forum, Bangalore. He has also previously (2006–07) been an International Policy Fellow with the Open Society Institute.
- **Rainer Kuhlen**, Berlin, Germany, http://de.wikipedia.org/wiki/Rainer_Kuhlen (german)
- **Peter Linebaugh**, Toledo, Ohio, USA, http://en.wikipedia.org/wiki/Peter_Linebaugh
- **Stefan Meretz**, Berlin, Germany, *1962. Ph.D. in material science, diploma in computer science, webmaster at german united services union (ver.di), managing free software projects. Research of political economy of free software and member of the Oekonux (Economy & GNU/Linux) network. Teaching German Critical Psychology. Co-founder of the Keimform blog (<http://keimform.de/>), a blog investigating germ forms of a new commons-based society. Running several web projects (<http://meretz.de/>), member of Facebook.
- **Pat Roy Mooney**, Ottawa, Canada, Executive Director. For more than thirty years, Pat Mooney has worked with civil society organisations (CSOs) on international trade and development issues related to agriculture and biodiversity. Mooney has lived most of his life on the Canadian prairies. The author or co-author of several books on the politics of biotechnology and biodiversity, Pat Mooney received The Right Livelihood Award (the "Alternative Nobel Prize") in the Swedish Parliament in 1985. In 1998 Mooney received the Pearson Peace Prize from Canada's Governor General. He also received the American "Giraffe Award" given to people "who stick their necks out". Pat Mooney has no university training, but is widely regarded as an authority on agricultural biodiversity and new technology issues. Together with Cary Fowler and Hope Shand, Pat Mooney began working on the "seeds" issue in 1977. In 1984, the three

co-founded RAFI (Rural Advancement Foundation International), whose name was changed to ETC group (pronounced "etcetera" group) in 2001. ETC Group is a small international CSO addressing the impact of new technologies on rural communities. ETC has offices in Canada, the United States, and Mexico; and works closely with CSO partners around the world. http://en.wikipedia.org/wiki/Pat_Roy_Mooney

- **Franz Nahrada**, Vienna, Austria, *1954, academic studies in sociology, philosophy and political science, which lead to intensive studies of university politics and critique of current science in the context of various marxist political approaches. The discontent with both neglectiveness of theory and the need for social alternatives led to a quest how both can be reconciliated. In the meantime, on the professional side, because of the refusal to work towards an academic career, several factors converged: involvement in tourism (management of the family hotel), software development (same reason), work for Apple Computers 1987 – 1992 (HyperCard developer support), knowledge organisation. Experiences with the destructive social impact of tourism in Greece led to ideas of new integrative village development (alliance of nomadic knowledge workers and traditional village population = Global Villages). In seven field trips to California and other states (1988 – 1995) both technology development and the social innovations that make them meaningful were the main subject (for example Arcosanti). Tried to apply this strand in Austria, succeeded with the Global Village conferences (1993 – 2000) and the Cultural Heritage in the Global Village (CULTH) conferences (1998 – 2002). Founded the Global Villages Network to create a worldwide community of village innovators. Worked on redefinition of locations: Electronic Cafés, Monasteries, Libraries. On the political side: working on New Work movement for radically facing permanent unemployment and nonmonetary economies, studied patterns of emerging civil society, worked with Oekonux and co organized the third conference, studied traditional native council wisdom and timeless cultural patterns with several teachers. Still seeks to build up a research institution ([GIVE – Laboratory for Global Villages](#)). Currently working with Andreas Exner and others on Transition Austria and [SOLCOM](#), with Andrius Kulikauskas on a global learning & life maintenance community called Worknets, with others on Open Source Ecology, and is also president of ECOVAST (European Council of Villages and Small Towns) in Austria. Currently working on a book "invisible intelligence" (following a conference organized together with Peter Weibel) to foster theory–culture that connects serious analyses, bold visions and diligent practice. Currently

working also on a "pattern language for the postindustrial society" in general and a "pattern language of the solar age" in particular.

- **Richard Pithouse**, Port Elisabeth, South Africa, is an activist, academic and journalist from South Africa. He is currently focussing his energies on popular struggles for the right to the cities and is interested in exploring the idea of the urban commons. He teaches political philosophy at Rhodes University.
- **Christian Siefkes**, Berlin, Germany, *1975. Ph.D. in computer science from the Freie Universität Berlin; works as a freelance software engineer. Co-founder of the Keimform-Blog (<http://www.keimform.de/>), a blog investigating how far the potential of commons-based peer production extends: Is a society possible in which peer production is the primary mode of production, and how could such a society be organized? Book: "From Exchange to Contributions: Generalizing Peer Production into the Physical World" (Berlin, 2007, <http://peerconomy.org/>), German translation: "Beitragen statt tauschen" (Neu-Ulm, 2008).
- **Wolfgang Sachs**, Wuppertal, Germany, author, university teacher, journal editor. 1966–1975 studies in theology and social sciences in Munich, Tübingen and Berkeley. Since 1993 Senior Fellow at the Wuppertal Institute for Climate, Environment and Energy. Head of research on globalization and sustainability. Honorary Professor at Kassel University and regular lecturer at Schumacher College, England. Member of the Club of Rome. Research areas: Globalization, development, environment, new models of wealth. Recent books in English: "Planet Dialectics. Explorations in Environment and Development", London: Zed Books, 1999. „Slow Trade–Sound Farming“ (ed.), Berlin: Misereor/Heinrich Boell Foundation, 2007. „Fair Future. Resource Conflicts, Security, and Global Justice“, (ed with T. Santarius) Zed Books, 2007. Website: <http://www.wupperinst.org>. http://en.wikipedia.org/wiki/Wolfgang_Sachs
- **Miguel Vieira**, São Paulo, Brasil, is a researcher in the field of access to knowledge, currently preparing a master's dissertation on the subject of "Intellectual commons and commodification", at the University of São Paulo (Education Faculty, department of Philosophy of Education). He has graduated in Communications (minor: Publishing) and Philosophy, both also at the University of São Paulo, and has a specialization degree on intellectual property (the course was promoted by UBV, SAPI and OCPI — respectively: Bolivarian University of Venezuela, and the Venezuelan and Cuban intellectual property offices). He has published some texts on the subjects of intellectual property and, more recently, collaborative

production and the commons. Other academic interests include philosophy of science and technology, marxism, democratization of communication and the publishing industry. (Although right now focusing exclusively on the graduate studies, pursuing a professional career in the field of publishing.) He is also involved with access to knowledge through political activism. He is part of a brazilian collective called Epidemia, which keeps an eye on the intellectual property-related agenda, and has been active in the planning of the Science & Democracy World Forum (a side event to the WSF 2009) and in the demonstrations against "Projeto Azeredo" (a brazilian proposed law that would endanger privacy and threaten the existence of open wifi).

Appendix B: Suggested Readings

- A Letter to the Commons (2006), <http://icommons.org/articles/a-letter-to-the-commons>
- Michel Bauwens (2005), The Political Economy of Peer Production. CTheory, October 2, 2006. Retrieved from <http://www.ctheory.net/articles.aspx?id=499> ; Re-published Post-Autistic Economics Review, issue 37. Retrieved from <http://www.paecon.net/PAERReview/issue37/Bauwens37.htm>
- Michel Bauwens (2008), The Political Implications of the Peer to Peer Revolution. Knowledge Politics, Volume 1 Issue 2 (April 2008), pp. 1-24 . Retrieved from <http://www.knowledgepolitics.org.uk/kpq-1-2-Bauwens.pdf>
- Michel Bauwens (2008), The social web and its social contracts. Re-public. Retrieved from <http://www.re-public.gr/en/?p=261>
- Iain Boal (2007), Feast and Famine: A Conversation about Scarcity, Apocalypse, and Enclosure, Retort Pamphlet Series #4
- David Bollier (2002), Silent Theft: The Private Plunder of Our Commons Wealth.
- David Bollier (2009), Viral Spiral: How the Commoners Built a Digital Republic of Their Own.
- Lawrence Liang, Prashant Iyengar, Jiti Nichani (2009), Commons for the Commoner in Asia. How Does an Asian Commons Mean. Paper available from Prashant Iyengar.
- Peter Linebaugh, Marcus Rediker (2000), The Many-Headed Hydra: Sailors, Slaves, Commoners and the Hidden History of the Revolutionary Atlantic.
- Peter Linebaugh (2003), The London Hanged. Crime and Civil Society in the Eighteenth Century.
- Peter Linebaugh (2008), Magna Carta Manifesto: Liberties and Commons

for All.

- Thomas Paine (2009), *Rights of Man, Common Sense, and Agrarian Justice*, with an introduction by Peter Linebaugh (proposing to understand Paine through his commoning and anti-enclosure experiences).
- Christian Siefkes (2009), *The Commons of the Future. Building Blocks for a Commons-based Society*. <http://www.commoner.org.uk/?p=78>
- Christian Siefkes (2007), *From Exchange to Contributions: Generalizing Peer Production into the Physical World*. <http://peerconomy.org>.