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Property, Commoning
and the Politics of Free Software



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“Caminamos Pregutando...”

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Preface / Volume 1: Property, Commoning and the Politics of Free Software.



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This is the first of a two volume Special Issue. Both volumes will have a focus on commoning and property. The essay in this first volume - divided in chapters, which can be read separately - is based on an inter-disciplinary PhD thesis titled “Property, Commoning and the Politics of Free Software” completed February 2010, by J. Martin Pedersen at Lancaster University. Volume 2 will further combine practical insights with theoretical perspectives.

(See the separate call for contributions for further details on the website.)

In legal and philosophical terms, property relations are relations between people with regard to things. In this way, the organisation of a commons is encoded in its property rules, which structure its use, access and decision-making rights and responsibilities accordingly. Property, then, is central to debates about commons and commoning: how do commoners relate to each other with regard to a given resource (land, code, rivers, forests, hills, cars) and how is a commons defined vis-a-vis the rest of the world? Questions such as class, gender and other hierarchies, environmental justice, sustainability and spirituality are relevant here. Most of these social dynamics – most of the time, even on the “outside of capital” – turn on property relations: who has access to what (tools, resources, land), when and under what conditions, who gets to decide and how are decisions made?

Often, however, property is juxtaposed to commons – as if commoning was a negation of property. Unfortunately, this view presupposes and consolidates a very narrow understanding of property, where the general is conflated with the particular. Property relations are not only exclusive, private property rights as instantiated within capitalist democracy (that is, a *particular* conception of property). As a jurisprudential concept, property can be used to understand, analyse, reflect upon and organise social relations with regard to things in any context (this is the *general* conception of property). The conflation of the general with the particular, which conceals the historical and anthropological fact that property can be and is understood (very) differently, takes on a further dimension in colloquial talk. We have come to accept that property is stuff: things that we own, and that we own exclusively. As a rhetorical device in privatisation arguments it is very powerful because it invokes feelings that are close to home, literally. We say things like “this house is my property”.

Similarly, privatisation arguments in the context of immaterial goods and resources invoke the same passions and feelings: this text or this source code “is the property of Microsoft”. Such a conception of property is not only a conflation, but furthermore hides the complexity of the social relations that property arrangements circumscribe and give rise to.

It is obvious that social, cultural and political practices define any given property regime, hence analytically exploring property relations gives us an insight into the relation between the socio-cultural and the law. It is precisely at this level that commons are created and organised - and through the language of property we can articulate practices of commoning into property protocols (rules and agreements) that can provide stability of the commons on the inside and protection against threats of capital’s enclosure from the outside. Self-determination and autonomy begins by taking the law into your own hands.

The purpose of this Special Issue is to instigate further debate about property, commoning and commons. In this first volume, the Free Software movement, which has autonomously constituted itself by articulating their social values in the GNU General Public License, is presented as an example of a commons, a commoning community, and critically analysed through the lens of property.

Doing so reveals that philosophical and political principles underlying the Free Software and the wider Free Culture movements fail to address the threat of enclosure at the most fundamental level, namely in the material realm. Without confronting ownership of land, its resources, and the means of production, the Free Software and Free Culture movements remain liable to the threat of enclosure.

After all, all immaterial things have a material base (space, energy, labour, resources, distribution) and exclusive control over these material underpinnings is de facto control over the immaterial goods that may spring from their potential.

It is consequently argued in Chapter 1 — “Free Culture in Context: Property and the Politics of Free Software” — that without a reorientation towards concepts of property and an alignment with social movements that struggle to resist enclosure in the material realm, the politics of Free Software and Free Culture reinforce existing private property rights, thereby ultimately serving capital interests. In this way, Free Software and Free Culture can be said to engage in “capitalist commoning”.

The insights that this analysis provides are built upon in Chapter 2 - “Properties of Property: A Jurisprudential Analysis” — with a view to re-animating the language and thinking around property in general, thus opening debate for wider reconfigurations of property relations in all realms.

Chapter 3 — “Free Software as Property” — contextualises the political economy of Free Software (and Free Culture) within a wider analysis of property relations.

Reanimating the language of property is useful because in critical political economy — and the discourses of “the left” and social movements in general — the term is mostly used to develop critiques of the social effects (outcomes/consequences) of existing, capitalist property relations. Little has been said about alternative configurations of property, but an analysis of Free Software in these terms provides an example of a successful autonomous (re)configuration.

With this Special Issue, therefore, we seek to open up debate about property, commoning and commons by beginning to think constructively: with a conceptual analysis of property as framework how can we better understand existing and emerging commons, and how can we give shape to commons in the future? Essentially we are asking: how can we — using the language of property — decode social relations that are defined by the measure of capital and recode them in the spirit of autonomous and other ways of commoning, based on other values and anti-capitalist practices?

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Introduction:
Property, Commoning
and the Politics of Free Software



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0 Introduction: Property, Commoning and the Politics of Free Software

0.1 Set and setting.

In this essay I pull together several strings of inquiry with reference to Free Software. Three different angles characterise my approach: firstly, the perspective of anti-capitalist movements combined with insights from what we can loosely call critical political economy is my anchor, normatively as well as analytically. The anti-capitalist demands for a dissolution of exclusive private property rights in land and its resources, and the means of production and distribution are a normative starting point. The analysis, in great part jurisprudential, proceeds from there. Secondly, I bring in philosophical literature on property, which is a desolate province in academic and colloquial thought alike, resulting in quite a lot of ground work needing to be covered. Thirdly, the inter-disciplinary study that I am presenting will take as a point of departure - and then *depart from* - liberal analyses of the “networked information economy”.

Free Software is an interesting technological phenomenon, it has implications for studies of property, law and social organisation (and many other fields) and it constitutes an unusually successful narrative for a social movement. In order to define a common ground for understanding what anti-capitalist movements are and what they need to do, and in order to see how Free Software is relevant in that context, I will begin by interacting with Massimo De Angelis's reading (2005) of John Holloway's “Change the World without Taking Power” (2002).

The key point for De Angelis is the “problematic of organisation”, which he sees as absent in Holloway's account.

This essay is about the role that property plays in social organisation.

Holloway's starting point for action is the scream: a loud multitudinous "NO" to the suffering caused by capitalism. Albeit not multitudinous originally, rather lonely and lost, it was such a NO that Richard Stallman, the founder of the Free Software Foundation and movement, screamed when he found himself without the commons that had defined the early era of hacking (see Section 3.3). Privatisation entailed the enclosure of code, which came hand in hand with those aspiring to fame and fortune taking the money and running to business upstarts. That left Stallman with almost only *the ideal* of the values of sharing and cooperating, but no one to share those values *with* and very little code to *cooperate on*. Stallman then asked himself one question: how do I revive the collapsed hacker commons? This historical unfolding precisely supports De Angelis's critique of Holloway, which turns on the fact that screaming NO out of helplessness really signifies a clash of values. For Holloway the scream is a beginning, a negative starting point that has quite some appeal – who is not angry with capital and authoritarian powers? - and the scream is for me somewhat reminiscent of Frantz Fanon's anti-colonial anger. The colonial subject for Fanon is in a mental and physical cage, angry and uprooted. To recreate herself - to find and realise her own values – she must violently break free of the violence of oppression.

To be without the freedom to express and to *live and share values*, of course, does not mean that one has no values. Rather it means that those values are not given space for their realisation. The practice of values has been denied. In other words, the premise for the negation of the freedom to practice your shared values is that you have such values in the first place. Values are expressed – in terms of social relations – in practices that arise

from “needs, desires, aspirations, affects and relations” (De Angelis 2005a: 237). The scream and violence as an impetus are often the last resort and for Fanon the violence is *necessary* for a liberation of the psyche of the oppressed (Roberts 2004). Through violence against the coloniser of land and mind the post-colonial subject finds itself. Yet, there seems to be something missing from a political programme that takes as a starting point total despair and helplessness, whether it be a non-violent or a violent starting point. What is missing is the realisation that helplessness and despair are results of a denial by capital of the practice of values. It should perhaps be noted for good measure that one could imagine situations and circumstances of life that are so desperate and helpless and have been deprived of space and freedom to practice values for so long, that those values have been forgotten. Nevertheless, as De Angelis explains:

“The scream might well be an expression of negativity, but this scream of refusal, this “NO” underlines the frustration of a multitude of “yeses”. Understood positively this clashing is a clash among value practices” (De Angelis 2005a: 237.)

Instead of a multitude of NOs emerging from despair, we can hear the scream as a multitude of yeses or a cry of a culture or a community. That mediately leads us to the questions: what culture or community? And what are (were) their values? It is from asking such questions that “the challenges, the alternatives, the contradictions, the horizons” (ibid: 235) to and of the screaming can be approximated. In the multitudinous screaming, as a starting point, the question concerning *how* that multitude came to scream in concert in the first place is absent. We do not know how the “we” that Holloway wants us to start from came

about and that for De Angelis is “the absence of the problematic of organisation” (ibid.).

The problematic of organisation concerns “the how”. We are screaming, because our “needs, desires, aspirations, affects and relations” are unmet, have been denied us. These are practices through which we exhibit our shared, common values and, hence, “starting from the multitude of yeses, [Holloway] could not have avoided posing the question of their *alternative articulation as the central problematic of revolution*” (ibid: 237). In the *absence* of capitalism, conversely, how would we organise our community and constitute a space and freedom for living out – to the best of our abilities - all our needs, desires, aspirations, affects and relations?

In the ensuing discussion De Angelis juxtaposes *power-over* with *power-to*, where the “seizing of power is the seizing of *power-over*, of the structure of the hierarchies and powers over the social body”, while the “struggle to liberate *power-to* is not the struggle to confront a counter-power, but rather anti-power”; and thus the objective of the anti-capitalist revolution is the abolishment of *power-over* through a process of “living relations of anti-power” (ibid: 238). If the scream is a cry for help in a world where people have become objectified and the nature of commodities is what rules society, then the *power-to* question concerns in part how to be able to see ourselves not as objects, submitted to the power of objects, but as a multitude of yeses with shared values. De Angelis asks, “since commodity fetishism is no illusion, but relations between people really do take the form of relations between things, how do we break with it?” (ibid.); and answers:

“To break the spell of commodity fetishism, relations between things need not only to be recognised as relations between people, but acted upon. To de-fetishise is to recognise that the only constituent social force of those many yeses is your articulation with the other, a relational dance that produces life” (ibid.).

Space and freedom to practice your shared values are certainly necessary, but in turn also presupposes a process of establishing those values: how did the screaming yeses that are deprived of the practice of their shared values get to share those values in the first place? Where, how and when did they create those values? For David Graeber that is the core of the political. Referring to the anthropologist Turner (1978) he notes that:

“The ultimate stakes of politics ... is not even the struggle to appropriate value, it is the struggle to establish what value *is*. Similarly, the ultimate freedom is not the freedom to create or accumulate value, but the freedom to decide (collectively or individually) what it is that makes life worth living. In the end then, politics is about the meaning of life” (2001: 88).

Graeber is looking for an understanding of value that begins with flow, process and action, rather than a fixed substance of objects. Social action is understood to be closer to the meaning of life, so to speak, than the mere things with which humans are surrounded (and which in capitalism are excessively foregrounded).

In order to make his point, Graeber tells a story of the Baining (2001: 69-71), which is a society in Papua New Guinea that

“appear as close as one is likely to find a genuinely simple society” (ibid: 69). A people with next to no social structures and no political structures at all. The main observable action that glues together their society is the sharing of things. Neighbours exchange food in same-for-same transactions all the time and the most prestigious act is “being a good provider to children, thereby turning them into social beings” (ibid: 70-71). For the Baining “sweat” is the most quintessential human activity, which is “conceived largely in terms of the generation of heat: fire or “sweat” in gardening, which in turn is seen as the quintessential form of work” (ibid: 70).

The basic “value template” (Munn 1986), then, is the “application of human labour to transform nature into culture” (ibid.), but the ultimate aim is not to create “the thing”, but to be able to give it away. To be able to feed your children, re-creating social beings, and to share with your neighbour and in that way to reproduce society is the point of gardening for the Baining. It is not literally the fruits of your labour that are the crux of the matter for the Baining, but rather *the actions of sharing to continually reproduce society* that the fruits of your labour *make possible*. While it might sound like the Baining are also somehow condemned to labour on things all the time for the reproduction of society, their motivations are paradigmatically different. The value that they see in their work is the action of socialisation, rather than the production of things as such. In other words, at heart the Baining society is a society for the production of people and relationships, not things.

Hence, the Baining do not need to *de-fetishise* their society, because their relational dance is not subordinated to a commodity form. However, their relational dance is certainly involving the use and circulation of things in a very important way.

In this essay I am arguing that our ability to articulate our “relational dance” is greatly facilitated by a basic and general understanding of property, as well as an analytical grasp of its particular specifications and variations. I see a better understanding of property as a necessary element in breaking with the commodity fetishism that defines the “thing-like nature of social relations in capitalism” (De Angelis 2005a: 239). The tune to which we perform our relational dance is written in the language of property, as I will show.

Time is certainly “ripe for posing the question of *how* ... we relate to each other on this planet (ibid: 242) and “strategic self-reflection on “our powers to” is a moment of our own empowerment” (ibid: 244) and we must “recognise that [our] organising is always affirmative, positive, constituent, relational”, because the “the axis of revolutionary thought is another world, other modes of doing, other ways to relate to each other, other ways of organising our reproduction as species on this planet” (ibid: 245).

However, this power-to based revolution is not a projection into the future, not an imagined community after the revolution, “not a model to conform to, but ... a social force emerging in the present” (ibid.). On that basis De Angelis takes note of how the revolutionary relation between means and ends is a “powerful loop”:

“The end: other ways of organising our webs of relations. The means: our organising webs of relations in the here and now” (ibid.)

In the work of De Angelis and Graeber in the context of value and the political question of the meaning of life, we have identified action and the making of people and relationships as a

substitution for the commodity. In their forceful arguments concerning relating subjects and associated questions concerning their relational modalities they have reinstated the basic organisational question: what kind of society do we want? Rejecting the commodity form (as *not* the meaning of life) rightly foregrounds social relations. Active relationships replace the all-encompassing power of the commodity and the associated technological advances that keep us spell-bound *and* bound to the nature of things, rather than bound to the nature of the social. This is an important step: philosophically engaged, politically significant.

In our next step, then, we take careful note of the fact that *the thing* of course is *not always a commodity*. The Baining might be the most simple society known, revolving around the making of people and relationships, and capitalism might be the most advanced society known, revolving around the commodity form, but what they share in common is that the flow of things – and the relations that the flow of things make possible or hinder – is the most fundamental movement in their respective societies. In other words, we can follow Graeber to the Baining and leave behind the commodity form as the core of our social organisation, but we cannot leave the thing behind, once we have realised how important the sharing of things really is in the reproduction of society. That is probably why the magic spell of capitalism is so strong: it domesticates the flow of things, which (otherwise) brings meaning to our lives.

In other words, we cannot simply background the thing, and that is where property comes into the picture. Property brings “the thing” back in to our discussion about the meaning of life and its political realities. We acquire a capacity to articulate relational modalities when we acquire the language of property and “it is in

the relational doing of organising that ... oppressions are overcome” (De Angelis 2005a: 246)

Things are objects that surround us. Commodities are also things that surround us, but they are things that are configured within – i.e. loaded with – a very particular mode of production¹. The commodity form through its circulation perpetuates the values of capitalism – mainly self-interest – but the removal of “the commodity” from our social relations can never amount to the removal of “the thing”. Human beings are tool users, sculptors, collectors and collaborators and many of our social and creative relations unfold with reference to, through the use of, and result in things.

An “anti-capitalist commons” will be full of things, but they will not be commodities into which the anti-social value of self-interest is encoded. Anti-capitalist things are objects of cultural and creative significance: objects of connection that manifest our shared values and our capacity to cooperate *to realise* those values. Things emerge in the expression of values to the external world.

1 We may here speculate briefly on the relation between a thing and how it is organised. Perhaps it could be argued that the values inherent in or expressed through property protocols “follow” or “attach to” the respective thing; meaning that the social values in questions are thus, potentially, perpetuated through the circulation of the thing. Hence, if we accept that speculative proposition, *sharing perpetuates sharing; self-interest perpetuates self-interest*. This allows us to also see property on a different level, since we can say that property is protocols - *into which social values are encoded* - for the purpose of organising the care, production, distribution/circulation of goods and resources; and the values with which they are organised circulate with those goods and resources. This – with regard to Free Software - will become evident in Section 3.5.

In this *expression of values through things* we can recognise our own imagination – see our selves – and thus in part constitute our individual identity, but also relate to others. Things are inter-subjective and closely associated with the formation of identity. Importantly, the *power-to* that we imagine here and now, rather than project to *after* the revolution, can manifest in things. In remembrance of our ancestors and for our children to see, many of our value practices are embodied in objects, which circulate among us as a testimony to the fact that value practices are a process through which things flow and through which values are refined, rewritten, discarded or reaffirmed.

However, although not all things are commodities, it does not mean that a thing which is not a commodity cannot be the carrier of repressive (or any other kind of) values. We can remove the thing from the realm of commodities, but we cannot remove the potential power of the thing to embody and perpetuate power relations. Fundamental social change, therefore, necessarily (but not sufficiently) involves foregrounding the role of things and the significance they play in our social realities and, in short, our lifeworlds.

In other words, the process of revolution – of stepping into our power-to, right here and now – is not simply a matter of organising our social relations, but to organise our social relations *with regards to things*. In turn, social relations with regard to things is the minimal definition of property that I adopt in this essay (as will be explained in detail in Chapter 2). I understand property protocols – in their most basic form – as articulations of social relations with regard to things. The power to articulate your own property relations is the power to write one of the most fundamental narratives of your community or society. Property is not equal to the technical code that organises

the flow of commodities. That is a very particular instance of property.

Understanding the screaming yeses in terms of property allows us to account for the things that surround us – in and through which we relate - in articulations of our needs, desires, aspirations, affects and relations. While our needs, desires, aspirations, affects and relations could be inscribed upon the world in many other ways (not using the framework of property) it is for its recursive impact that such an exercise of constituting commons in terms of property is especially valuable.

The commons might not need property directly as a means of organisation, other terms and frameworks could possibly be imagined, but the commons need to inscribe themselves upon property, understood as a body of thought. The province of property is desolate, but it is the language of the technical code which rules most of the tangible realm, particularly with regard to land and its resources, and the means of production and distribution. In order to decode the current ownership of land and resources – and as such give new shape to the material foundations from which our needs, desires, aspirations, affects and relations arise or are met – we need to speak the language of property.

Moreover, in order to reconfigure these instances of property we need the language of the commons, of the screaming yeses, because it is in their affirmative actions and value practices that helpful new contours of property relations – i.e. social relations with regard to things - can be found.

The question of how – the question of how to step into our *powers-to* – then becomes not simply a question of relational modalities between people, but a question of the relational

modalities between people *with regards to things*, or, as it were, *property*.

With that insight consider De Angelis's conclusion that there "is no defetishising without context and scale, there is no context and scale without affirmation, discourse, and engagement in the organising terrain of the "how". There is no revolution, not even the one in which power is not taken but is exercised, without strategy thinking" (ibid: 249). The next step, then, becomes obvious: there is no strategic thinking without a careful analysis of property.

The purpose of my essay is in part to present a version of property that can be useful in critiques of existing property rights, for self-organisation of social movements, for commoning, and for public policy analysis and advocacy.

As we shall see, this is an urgent task, because there is a widespread tendency to conflate property *in general* with property *in particular*. This conflation is significant of an "impoverished concept of property that has dominated our political discourse in the twentieth century" (Mossof 2005: 38).

Current debate in the context of indigenous peoples' struggles reflects the same problem, revealing the need to reinvigorate informed and informative debate on property. It has been argued "In Defense of Property" that there is an:

"...emerging view, in scholarship and popular society, that it is normatively undesirable to employ property law as a means of protecting indigenous cultural heritage. Recent critiques suggest that propertizing culture impedes the free flow of ideas, speech, and perhaps culture itself. In our view, these

critiques arise largely because commentators associate “property” with a narrow model of individual ownership that reflects neither the substance of indigenous cultural property claims nor major theoretical developments in the broader field of property law” (Carpenter, Katyal and Riley 2009: 100).

We can here simply substitute Free Software for “indigenous cultural heritage” and we have – in great part – the *raison d’être* of the present essay: rethinking property is highly overdue, especially for anti-capitalists.

The starting point for the essay is the problematic of organisation and the role that property, as a concept and a relationship, plays in that context. The purpose of the essay is to bring these together in an anti-capitalist vision of commoning through a critical discussion of attempts to resist enclosure in cyberspace.

The line of argument presented in this essay is in great part inspired by my work with indigenous peoples and *campesinos* in Ecuador and Peru²: successful protection of the Free Software commons, similarly to successful protection of traditional medicinal knowledge, requires access to and use of the material foundations that make either of these types of cultural practices possible. There are thus clear conceptual parallels between the two: both are struggles for autonomy and over the configuration of property relations.

2 Between 2006 and 2008 I travelled extensively in Ecuador and Peru undertaking field research, working with social movements, communities and indigenous peoples’ NGOs and organisations to better understand property relations other than private property rights, which is a surprisingly under-theorised area in jurisprudence.

In the remaining part of this introduction, I will first present a map of the essay. Then I offer some notes on contemporary anti-capitalist movements, and provide a short narrative of the social history of enclosures of commons, which reveals perennial patterns of resistance to privatisation. The purpose is to locate the collective right of commoning – collective action based on shared values, particularly the principles of cooperation and self-organisation – as a counter-point to the kind of individual, private property rights that characterise capitalist democracy. This will help to orientate the discussion of the chapters that are to follow.

0.2 Map of the essay.

Chapter 1 – *Free Culture in context* - is a critical discussion of the way in which a number of key commentators are framing the politics of cyberspace. I argue that their framing of the debate is mistaken in two key ways. First, it conflates private property (a particular configuration of property) with the concept of property in general. Second, it relies on an untenable distinction between the tangible and intangible realm, which I examine in detail with reference to the commons of the land.

Section 1.2 – *Beyond property: promises of the networked information society* - introduces cyberspace in terms of libertarian values, the techno-social promise of a “single consciousness” in a “global village”, and the architecture of the Internet. It then discusses a liberal, economic conceptualisation of the novel co-creative social relations that cyberspace facilitates. The libertarian voices in cyberspace reject the industrial age governments, who have “no sovereignty where we gather”, and state that property does not apply to cyberspace, because it is a space without matter. A brief technical overview of the Internet reveals its end-to-end (E2E) architecture which

facilitates peer-to-peer (P2P) activities and ensures that all data flows equally through the Internet: the network is “neutral”, because all flows of data are equal before the law of the Internet. Network “neutrality” and E2E + P2P is seen as the foundation for a new mode of production of which the very successful example of Free Software is most significant. In his conceptualisation of Free Software, Benkler (2006) has coined the term “commons-based peer production”, which is a specific type of “peer production”, all of which he groups under the umbrella term “social production”. In presenting Benkler's work I also examine his sources of inspiration in order to locate his contribution within economic thought and hence illustrate how social production is framed and thus, to a significant extent, given shape.

Section 1.3 – *Information exceptionalism: protecting social production and the Internet commons?* - begins with a brief overview of the politics of intellectual property, which has become an important part of the global political economy. Next, I return to the two-fold claim that cyberspace has no matter and that property applies to matter only. It is a shared claim that defines the Free Culture movement, which has been inspired by the Free Software movement to protect the freedom to share and cooperate in cyberspace. This position with regard to property I refer to as “information exceptionalism”. While information exceptionalism sets out to protect social production and the cooperative potential of cyberspace, I argue that the insistence on a distinction between the “tangible realm” and the “intangible realm” has important political consequences. I show that information exceptionalism partly rests on a mistaken contrast between *property* and *policy*, and begin to develop the argument that understanding Free Software in terms of property is a recursive process through which the concept of property comes to be seen in a new light.

Section 1.4 – *Material foundations: on cables and machinery, food and shelter* – examines the material underpinnings of cyberspace to exhibit the effects and scale of material and energy use involved in information and communication technology. I illustrate how exclusive control and decision making authority over material foundations (given through private property rights) facilitates an extraction of wealth from activities unfolding in the intangible realm that is dependent on this materiality. I hence argue that the intangible realm is threatened by enclosure in the first instance *not* due to the expansion of private property rights into the intangible realm, but because of the existence of capital interests – based on private property rights – in the tangible realm. I thus conclude that the threat of cyberspace enclosure cannot be confronted simply by rejecting property rights in the *intangible* realm, because their existence in that realm is primarily an *effect*. It is also necessary to address the actual *cause* of enclosure as it exists in the *tangible* realm, and which arises from exclusive control over land, its resources, and the means of production and distribution. Moreover, by positioning themselves in this way, information exceptionalists fail to show solidarity with the commons of the land, that is, the real commons. The virtual commons are thus disembodied and left vulnerable to the exigencies of the material realm. Consequently, they are in perpetual need of a strong state for regulatory intervention in order to continuously limit the reach of capital.

Chapter 2 – *The properties of property* – is an analytical disentanglement of property in particular (as in the form of private property) from property in general (as social relations with regard to things). The purpose is to provide a framework within which the social relations of commoning can be understood alongside other variants of property relations, such as private or public property. The aim of this chapter is less normative than it is analytical: property is made up of

components that can be configured in different ways. Understanding the elementary structure of property facilitates its reconfiguration. While providing mainly a structural account of property, I nonetheless start from the normative assumption that private property can only be justified for real persons and only for a limited number of things. The institution of property distributes decision-making authority over access to and use of resources in societies. Private property invests such authority in individuals and quasi-individuals, such as firms, authorising their pursuit of self-interest. While private property as sovereignty might develop personal autonomy and identity, enable open-ended creativity, and constitute protection from external interference, in capitalist democracy, it primarily legitimises profiteering in the interest of shareholders. As against the popular myth of the “tragedy of the commons”, I hold that care for things such as land, its resources, and the means of production and distribution is best achieved collectively.

Section 2.2 - *Property in general, property in particular* – is an introduction to the complexity and elusiveness of the idea of property. It presents and relativises the idea of property as dominion: the absolute control of an individual over a thing of the external world. While this conception runs deep in much philosophical and everyday discourse, it is argued that no legal system has ever instituted property relations that were absolute in this sense. Limitations are part of all known property regimes. I will introduce the work of James Harris in this section, who has forcefully argued that despite the importance of limitations, the conception of property as dominion is presupposed in all legal systems.

Section 2.3 - *Property as social relations* - is an explanatory, gleaning journey through key texts and concepts in liberal jurisprudence. I begin this section with an exposition of W. N.

Hohfeld's matrix of jural relations which correlates rights and duties and powers and liabilities. Using an anthropological application of that matrix, and support from within liberal jurisprudence, I argue that property is *normative protocols guiding relations between people with regard to things*. Next I draw upon Harris's account of property as a mechanism for distributing control powers and use privileges with regard to resources. I adopt Harris's characterisation of private property as authorising self-seekingness in one's use of and control over things. While I agree with his view that all property relations in capitalist democracy are developments of the fundamental idea of dominion, I argue that it is crucial to begin an account of property with the open-ended idea of social relations with regard to things. To do so is to confront the hegemony of private property in political and legal theory, as a corollary of its confrontation in practice.

Section 2.4 - *A framework for property as social relations* – introduces three core variables of property as social relations with regard to things. The *relating subject* refers to the social unit within which property relations hold and are performed, usually a community; the *related-to object* refers to the thing or resource with regard to which property relations hold and are performed; and the *relational modality* refers to the way in which these relations are shaped through normative protocols, by guiding the behaviour of people with regard to one another and the use of things. I discuss these variables and their possible extensions at length, and argue that property relations are primarily about actions, and property protocols hence about enabling or constraining action. I also make the case that property protocols inhere in customary practices and values as much as in legal codes and otherwise articulated norms. This is important as I want to be able to account for commons, and traditional relations and practices of commoning, as property. I conclude that in order

to understand what it means to own something, an inquiry into the relational modality of any given form of property is indispensable.

Section 2.5 - *Specification of property: the configurations of relational modality* – is an examination of the elementary structure of private property. Following Harris, I show that basic private property consists of a collocation of legitimised control power and use privileges. Control power is legitimised in the sense that, short of contravening criminal and other law, whatever decision the owner makes with regard to the use of a thing is justified, simply by virtue of being *her decision*. I provide heuristic diagrams in order to bring to the fore the different elements which make up basic private property on the one hand, and capitalist private property on the other. Capitalist private property is characterised by a collocation of control power not only with use privileges, but also with wealth effects, or income rights. The collocation, however, is by no means a necessary one. Moreover, a justification of one of the elements (control power) does not amount to a justification of another element (wealth effects). I show by way of illustrative examples that changing the structure of private property, or *reconfiguring its specifications*, even if only in small ways, can lead to surprising transformations of the kind of community that this relational modality gives rise to.

Section 2.6 - *Property and commons* – discusses the ways in which *common property* forms are usually classified and distinguished from *private property*, and the ways in which commons can be understood as particular kinds of property configurations. I note that the values underlying private property are in important ways the *common values* of capitalist democracy. This points towards the view which I further develop later in this section, namely that capitalist democracy is, in some

not insignificant way, also a commons. A discussion of three different accounts of common forms of property (Benkler, Waldron, Harris), shows that the differences between different property forms are all differences in the configuration of, essentially, the same elements. The substitution of “social interest” for “legitimate self-seekingness” is identified as the key characteristic of non-private property forms. I argue that property protocols, whichever way they may be expressed, all provide answers to the question of who makes (or can make) decisions over the actions of people with regard to things, and by reference to what these decisions are legitimised. In order to develop an idea of a self-constituted commons within capitalist democracy, I use Harris's account of communitarian property, which he sees as a form of resource-holding that is recognised by, yet autonomous from, the wider legal system that surrounds it. I argue that the articulation of property protocols facilitate such self-constitution.

Chapter 3 – Free Software as property – is a detailed exposition of the Free Software movement, its history, practices, and legal innovations. I cast it as a commons that has autonomously constituted itself. The aim of this chapter is to show how and why it makes sense to understand Free Software as property. Not only is the central achievement of the Free Software movement the reconfiguration of core elements of copyright, that is, a transformation of property relations, but conceptualising the relational modalities of Free Software in terms of property also feeds back into the concept of property: mapping this understanding back onto the tangible realm reanimates debate about the range of possible property relations more generally.

Section 3.2 – *The nature of code* – provides a basic account of software in terms of how its code is written, developed, commented upon and finally converted into *executable* programmes that can be run on a computer. Because of the

inscrutability of *binary code* – readable only by machines – it follows that access to the *source code* – readable by humans – is a precondition for analysis, customisation and public scrutiny of software. Without this access to the source code, software represents a “black box” technology, the internal workings of which are hidden, and hence uncertain. Given that software is integral to many crucial systems, such as engines, brakes, flight control, ambulance dispatch, power stations etc., the creation of uncertainty constitutes not only a democratic issue, but a real danger.

Section 3.3 – *A brief history of Free Software and its imaginary, scientific and cultural origins* – begins with an examination of how the science of computing is embedded in the scientific commons which predates the rise of modern science. I provide a detailed account of the enclosure of the hacker commons that began in the 1970s, the consequent resistance to this privatisation which led to the establishment of the Free Software Foundation (FSF) in 1985, and the political disagreements that led to the formation of the Open Source Initiative (OSI). I argue that at the heart of Free Software lies a principled philosophy of freedom and community building, discarded as “ideology” by OSI. Stripped of FSF’s political origins, Open Source is hence best understood as an engineering methodology for a market-based economy.

Section 3.4 – *The Free Software movement as a recursive public* – discusses the main points of a recent study of Free Software and its cultural significance. Free Software is understood as a “recursive public” that is “vitaly concerned” with the conditions of and possibilities for its own coming into being (Kelty 2008). While the Free Software movement remains a paradigmatic example of a recursive public, I argue that its recursive nature does not include the crucial recursive relation between the

tangible and the intangible realm, as noted in Chapter 1. The Free Software commons remains ideologically and practically separated from the commons of the land and its material resources.

Section 3.5 – *The GNU General Public License: copyright subversion and constitution* – is an analysis of the software license that articulates the common values around which the Free Software community has emerged. The shared desire and need to cooperate on computer code has been condensed into “four freedoms” of Free Software. Using the framework developed in Chapter 2, I show how this license, the GPL, is an articulation of these common values in the form of sub-clauses to existing copyright, which ensures that once a piece of software code has been published under the GPL, it remains freely available for anyone to use for any purpose except enclosure. This self-articulated relational modality hence ensures *reciprocity in perpetuity* and uses copyright subversively to both constitute the software commons, and defend it against enclosure. The creation and maintenance of a commons within capitalist democracy necessitates an interfacing with its legal, political and economic dimensions. The example of Free Software shows that the articulation of property protocols on part of social movements and communities can make innovative use of trespassory protection provided by the overarching legal system through conventional property rights, in a way that undermines rather than strengthens the logic of capitalist private property. I also argue that the GPL acts as a constitution of the Free Software community.

Section 3.6 – *Defending the GPL: a recursive public defends itself* – reviews a small number of key legal proceedings which establish that the GPL is indeed sanctioned by copyright law. I show in this section how a self-defence mechanism has emerged

spontaneously within the Free Software movement, complementing the protection that copyright affords. I maintain that the Free Software example provides an embryonic model for other voluntary associations to autonomously constitute and defend themselves against enclosure.

Finally, I conclude that solidarity between the real commons of the land and the virtual commons of cyberspace and a recognition of the interpenetration of the tangible and intangible realm, as well as an anti-capitalist vision of politics are necessary elements in a defence against the enclosure of cyberspace.

In the rest of the introduction I want to present some notes first on contemporary anti-capitalism, before turning to a social history of the perennial resistance to capitalism.

0.3 Social history: a foundation for a networked information society from below?

The history of anti-capitalism is also the history of defending the commons and in the patterns of resistance to capitalism the relational modes of commoning are often revealed. I first very briefly present the notion of contemporary anti-capitalism and then turn to a historical view, showing that resistance is perennial and that struggles against capital are interconnected and intergenerational..

Contemporary anti-capitalism is often called a “movement of movements”. This “movement of movements” has recently been mapped ethnographically by Marianne Maeckelberg in “The Will of the Many: How the Alterglobalisation Movement is Changing the Face of Democracy” (2009) following the “militant

ethnography” by Jeffrey Juris in “Networking Futures: The Movements Against Corporate Globalization” (2008):

“Last week marked the ten-year anniversary of the “Battle of Seattle”, when tens of thousands of protesters successfully shut down the World Trade Organisation’s ministerial meetings on its opening day. Taking negotiators and the media by surprise, the mass mobilisation of diverse groups, from environmentalists to trade unionists, effectively stalled trade talks that many critics suggest would have consolidated global corporate power at the expense of the world’s poor and marginalised. Hailed ... as the global justice movement’s ‘coming-out party’, many commentators view the protests as a major inspiration for the transnational mobilisations for social, economic and environmental justice that are now a regular feature at international policy meetings” (White 2009).

Participating in social movements in England one discovers that it is often taken for granted that June 18, 1999 - more than five months before Seattle, when the financial district of London was “transformed by carnival as the G8 attempt to meet in Cologne, Germany” (Dissent 2005) - was a defining moment in the birth of the movement. Others will consider the human chain around the conference centre hosting the G8 in Birmingham in 1998 a beginning point. That is precisely why it is a *movement of movements*: it is not a singular movement with a leadership or central committee, but a global network of movements who protest and organise against capitalism and “the negative aspects of globalisation”. Through my participation in radical social movements and in the Free Software movement, I am, with particular reference to *property*, “teasing out the hidden ... logics

that underlie certain types of social action; how people's habits and actions make sense in ways that they are not themselves completely aware of" (Graeber 2007: 305)³.

To illustrate the perennial nature of anti-capitalist social movements – it will be instructive to review some perspectives from social history about the foundations *for*, the transition *into* and *through* capitalism. The historical perspective serves three specific purposes. Firstly, it reminds us of the inter-generational reality of the struggle. We are fighting with those who fought before us and for those who will fight after us. This is not a signal to follow some dogmas laid down in the course of revolutionary history, on the contrary, it is a measure to avoid

3 “[O]ne always learns more about a movement by studying it from the inside. "Inside" can mean various things. Actual participation is best, but is not possible if one is studying a movement of the past or one from which one is excluded, or which one has no sympathy for, etc. ... [I]t is especially important for those who study, teach or write about social movements to try to get inside their skins, so to speak. Otherwise the study of social movements is likely to become one more academic sub-field, of little help to the movements themselves, either in terms of the analysis that is made or in terms of the likelihood of students in the field themselves becoming involved in progressive social movements” (Barbara Epstein in DeWitt 1998). My participation in contemporary social movements against capital – in addition to many meetings, parties, protests, organisation, mobilisation and getting beat up, shouted and shot at - has included reflection through cameras, interviews and analyses. Niko Apel, Nina Moeller and I, as Tortuga Films, made “genova città aperta” (2002 / 49 mins) and “DOGS RUN FREE” (2004 / 33 mins). The former provides impressions and expressions of the events that surrounded the Genoa Social Forum and the G8 meeting in July, 200, and has been shown widely at film festivals and social movement gatherings, as well as featured by an independent cinema in Frankfurt am Main, Germany and regional, public television. The latter is an analytical glance at the building of Fortress Europe through migration management, regulation, and control and the social movements resisting these processes. Used for teaching in various universities and shown at events organised by the No Border movement: www.noborder.org

just that. It is always good to know what battles have been fought. Secondly, it will reveal a crucial difference in the conception of rights. For the commoners, as we shall see, the concept of a right to – which essentially is an articulation of a *power-to* – is not an abstract ideal based exclusively on the legal concept of an “individual”. Rather, a right of commoning is a particular *collective power-to* with regards to some thing or resource. Thirdly, the value practices of anti-capitalist movements and their strong focus on access to land, resources and the means of production and distribution – if we assume common normative grounds in that respect – show us by implication that contemporary liberal, economic conceptualisations of Free Software and other forms of social co-production in the intangible realm are misguided. When economists such as Benkler (2006) posit the idea of agency and autonomy as achievable in virtual commons, but without specific reference to real commons, they are confining such agency and “autonomy” to the state and to capital. Without the body and the commons of the land, the virtual commons separated from the basic source of all wealth, namely the material realm, becomes a “capitalist commons”.

I begin with a brief introduction to the processes of enclosure, before turning to the way in which enclosure has been resisted.

Capitalist democracy has historically been justified - as well as criticised - through myths of “improvement” (Thompson 1993) and instituted by a central, coercive authority: the nation state.

“[We] should remember that the spirit of agricultural improvement in the 18th century was impelled less by altruistic desires to banish ugly wastes or – as the

tedious phrase goes – to “feed a growing population” than by the desire for fatter rent-rolls and larger profits” (Thompson 1963: 217).

Central to capitalist logic is the myth - understood both as a legend and as a falsehood (Christman 1994) - that “improvement” of the land and development of goods and resources are only optimal or indeed only realistically possible with the implementation of strong and strongly enforced exclusive, private property rights, given the natural, predominantly self-interested, rational character of the human being.

“The arguments of the enclosure propagandists were commonly phrased in terms of higher rental values and higher yield per acre. In village after village, enclosure destroyed the ... subsistence economy of the poor – the cow or geese, fuel from the commons, gleanings, and all the rest. The cottager without legal proof of rights was rarely compensated. The cottager who was able to establish his claim was left with a parcel of land inadequate for subsistence and a disproportionate share of the very high enclosure costs”. (Thompson 1963: 217)

Where the myths have been insufficiently persuasive, capitalist democracy has been violently imposed (Thompson 1977; Linebaugh 2006) and/or the power of persuasion inherent in the manifestations of material and technological progress has further

helped entrench private, industrial interest and solidify capitalist democracy by destroying commons⁴.

Enclosure and violence continue in particular in connection with extractive industries - timber, oil, gold, silver and other minerals. This is most visible in tropical forests and other resource-rich regions hitherto unexploited. The degradation of eco-systems – rivers, oceans, fish stocks, to name but a few major eco-systems – is severe, because “[c]apitalism as a growth economy is impossible to reconcile with a finite environment’ (Leahy 2008: 481). As John Urry writes:

“Capitalism is not able to control the exceptional powers which it itself generated, especially through new forms of excessive consumption that are changing climates and eliminating some conditions of human life and its predictable improvement” (2010: 3).

The detrimental social, economic and environmental consequences - by now well known - have generated movements of resistance that are increasingly globally networked in practices and ideas (Linebaugh 2008). Environmental problems are by

4 As noted above, informational flows have always played a central role in the spread of capitalism. Enclosure from within is an example hereof: the idea of the advantages to be gained from enclosure is an informational flow that reaches the commoner's imagination, who then decides to build a fence. Moreover, working with indigenous peoples in the Amazon teaches one about the power of the ideas and associated “needs of the city”, which are quickly taken on by people moving to the city from the forest. Enclosure from within, however, is driven by a very violent politics of privatisation. See Mo Hume's “The Politics of Violence: Gender, Conflict and Community in El Salvador” (2009) for an insightful case study on the violence of developmentalism.

definition global in nature and the ideas and the concept of “the environment” have the capacity to link together different forms of resistance in geographically different places, which is why, as we shall see in Chapter 1, the “cultural environmentalism” movement invokes the idea of the environment as a connective metaphor.

The social history of resistance to capitalism, whose marginal voices presented alternatives to the bourgeois revolution that actually took place, has been well documented since the 1960s. Christopher Hill has argued that the radical voices of the seventeenth century:

“...speculated about the end of the world and coming of the millennium; about the justice of God in condemning the mass of mankind to eternal torment for a sin (if anyone) Adam committed; some of them became sceptical of the existence of hell. They contemplated the possibility that God might intend to save everybody, that something of God might be within each of us. They founded new sects to express these new ideas. Some considered the possibility that there might be no Creator God, only nature. They attacked the monopolization of knowledge within the privileged professions, divinity, law, medicine. They criticized the existing educational structure, especially the universities, and proposed a vast expansion of educational opportunity. They discussed the relations of the sexes, and questioned parts of the protestant ethic. The eloquence, the power, of the simple artisans who took part in these discussions is staggering” (1975: 362).

Those voices – in their particular contemporary formats – can still be heard in social movements today, reflecting the often used motto: “the struggle continues”. The struggle over ideas of organisation and the flows of information that spread the word repeats itself.

The way in which social history literature, as established by Hill, E. P. Thompson and those who were to follow, has served to connect past and current social struggles cannot be underestimated. Silvia Federici has argued convincingly that the transition into capitalism involved and presupposed the repression of women, including religious burning of witches, men and women, and the confinement of the woman to the house of a nuclear family as a basic reproductive unit (2004). Although writing from a marxian feminist perspective, her work can be read for the purposes of connecting spiritual ideas and practices with anarchistic feminism and contemporary social movements. Moreover, Federici has also shown that the “development of capitalism was not the only possible response to the crisis of feudal power” (2004: 61) and that throughout “Europe, vast communalistic social movements and rebellions against feudalism had offered the promise of a new egalitarian society built on social equality and cooperation”, and she observes that by 1525 “their most powerful expression, the “Peasant War” in Germany or ... the “revolution of the common man,” was crushed” (ibid.). E.P. Thompson has systematically revealed the contours of enclosure and thus the origins and character of capitalist democracy:

“For example, in the enclosure of Barton-on-Humber, where attention *was paid* to common rights, we find that out of nearly 6,000 acres, 63% (3,733 acres) was divided between three people, while fifty-one people were awarded between one

and three acres: or, broken down another way, ten owners accounted for 81% of the land enclosed, while the remaining 19% was divided between 116 people. The average rental value of the arable land enclosed rose in five years (1794-9) from 6s. 6d. To 20s. an acre; and average rentals in the parish were more than trebled” (Thompson 1963: 217; emphasis added).

That enclosures fomented resistance, riots broke out and uprisings were attempted repeatedly throughout the realm is hardly of surprise. Neither is it very surprising that consequently repression intensified and social life turned tumultuous. “The profession of a soldier was held to be dishonourable” (Thompson 1963: 81), and “[r]esistance to an effective police force [instituted as a preventative force of control and surveillance, deterrence and threat] continued well into the 19th century (ibid.). A very wide range of new “thanatocratic” laws to manage the side effects of enclosure – vagrancy, poverty, despair, homelessness, hunger – were enacted. These processes have been covered in Peter Linebaugh's “The London Hanged: Crime and Civil Society in the Eighteenth Century” (Linebaugh 2006; particularly 42-73). In very brief, these draconian laws to keep the poor in check further show the origins of capitalist democracy:

“The year 1661 saw the promulgation of the first slave code in English history, enacting that human beings become “real chattels” ... Also in 1661 the thirty-six Articles of War were promulgated ... twenty-two of which provide the death penalty ... Besides that thanatocratic code, discipline in the navy was maintained by “customs of the sea” [including]: the spread eagle, ducking, mastheading,

keelhauling, marrying the gunner's daughter, and the cat-of-nine-tails. In addition to the slave codes, the military codes and the Irish penal code, the criminal code with its “new” capital offences formed the characteristics of this era of substantive British law” (Linebaugh 2006: 53).

This is the background setting: capitalist democracy is violent and expansive. I now look at some of the ways in which it has been creatively resisted.

Driven from the destroyed commons as a consequence of enclosure, or leaving the commons before they were destroyed in search for urban promises, many drifted and due to legal and economic pressures went into ships and into factories. On board the ships, many of the wretched sailors began to establish a global solidarity and became pirates to fight for their cause. They began to recreate commons.

The history of anti-capitalist piracy unfolded mainly between 1650 and 1730 and culminated in “The Golden Age of Piracy” (1716-1726), during which an estimated 2.400 vessels were plundered and captured by pirate ships with a multinational motley crew - or “multiracial maroon community” (Linebaugh 2008: 107) - creating “a crisis in the lucrative Atlantic system of trade” (Rediker 2004: 9; see also Linebaugh and Rediker 2000). Pirates, slaves, and revolting labourers established egalitarian alternatives to abysmal conditions of the working classes upon whose labour the modern world was founded and they, we may say, hacked the transatlantic network of capitalist expansion, recreating commons or establishing practices of *commoning* (explained below):

“Pirates and Buccaneers, are Princes to [Seamen], for there, as none are exempt from the General Toil and Danger; so if the Chief have a Supream Share beyond his Comrades, 'tis because he's always the Leading Man in e'ry daring Enterprize; and yet as bold as he is in all other attempts, he dares not offer to infringe the common laws of Equity; but every Associate has his due Quota ... thus these Hostes Humani Generis as great robbers as they are to all besides, are precisely just among themselves; without which they could no more Subsist than a Structure without a Foundation.” (Barnaby Rudge, 1799, in Rediker 2004: 60).

It has been shown specifically how slaves began to develop a notion of global solidarity in the bottom of the ships that were the essential engines of growth “in the rapidly growing Atlantic system of capital and labor” and that these ships “linked workers free, and unfree, and everywhere in between, in capitalist and non-capitalist societies on several continents” (Rediker 2009: 348).

The notion of global solidarity, or an anarchistic union of peasant, poor and working classes, has also been explored by Benedict Anderson (2005). He traces the origins of global solidarity – and the imaginary of the current global social movement of movements for globalisation from below - through anti-colonial fiction and non-fiction literature and correspondence between key figures in particularly the struggle for independence in the Philippines in the 19th Century. Anderson shows how this anti-colonial imagination not insignificantly was shaped by experiences in the “mother countries” and the association with the “transnational libraries” or “la république

mondiale des lettres” (ibid: 28)⁵. The anti-colonial imagination emerged by weaving contemporary narratives from avant-garde literature with sensibilities, tactics and strategies formed by anarchist movements into a revolutionary consciousness with a global perspective. A melting pot in the undergrowth of the global village. The global dimension to this emerging revolutionary global force from below - thrown together in factories, ships and colonies - took obvious inspiration from the realisation that the majority of all people around the world were subjected to the power of the few in very similar ways: it was realised that this was not just a question of race. Indeed, the suffering of the peasants and working classes in the mother countries were in many cases even worse than that suffered by the colonial subjects, thus giving shape to global networks of resistance from below:

“My dear fellow, I have myself gone to see an iron foundry, I spent five hours there, and believe me, no matter how hardhearted a person may be, the spectacle that I witnessed there made the deepest impression upon me. Despite all the evil that the friars commit over there, our compatriots are fortunate compared to this misery and death. There was a workshop there for grinding up sand and coal, which, converted into the finest dust by the action of the milling machine, swirled up in huge black clouds, and the whole room seemed swathed in smoke. Everything there was filled with dust, and

5 Whether pamphleteering or blogging, the arrival of new information technologies is almost always marvelled at by political commentators, or decried as a terrible fall from values.

the ten or twelve workers busy shovelling the coal and sand into the machine looked just like corpses” (José Rizal, 1891, in Anderson 2005: 106).

Having taken note of the perennial and global nature of resistance to privatisation I now explore the difference between rights of commoning and the private property rights that replaced them and continue to replace them worldwide. This difference will have implications for our efforts to understand commoning as property in Chapter 2.

In the latest addition to the social history library, Linebaugh makes his best effort yet to connect movements of old and today around the concept of the commons in “The Magna Carta Manifesto: Liberties and Commons for All” (2008). Linebaugh sets on par, rightly so, the mainly peasant and indigenous experiences of contemporary enclosure with the experiences of those whose lands – whose commons – were enclosed in the transition into capitalism, especially from the 13th century onward. He lists the leader of the indigenous peasants of Chiapas, Subcomandante Marcos, the Nigerian women who in outrage in 2003 occupied a Chevron oil terminal, women of the upland communities of Vietnam, whose forest reserves are enclosed with consequent suffering, the Native Americans of the Adirondacks, the seventeenth-century conquest of Ireland, colonial Kashmir, and Amazon rubber tappers:

“The red and green threads connecting these regions and historical moments are environmental havoc, expropriation, and ordinary peoples’ struggles to protect common rights, resources, and social norms” (Epstein 2009: 701).

In doing so, “Linebaugh extracts tendencies toward enclosure and environmental destruction in the name of commercial profit, the substitution of petroleum products as the world's base economy, and the expropriation of indigenous people” (Aldous 2008: 1) and presents this dark side of “capitalist democracy” as a fall from grace inherent in the political reality of the separation of the Magna Carta and the Charter of Forests. These two Great Charters of Liberties (hereinafter the Great Charters), when understood and interpreted together had a direct relation to “a world of use values” (Linebaugh 2008: 42-43) in that the common rights, the rights of the commoners, were “laid upon the land” (Thompson 1993). That is to say that the customs of the people, the customary practices that they had in common and that they practised when *commoning* were articulated in the Great Charters, thus integrating the political organisation and activities of the commons and establishing a freedom for the commoners outside of the state. “*Commoning*” is a verb, meaning what commoners customarily do “on the commons” (Linebaugh 2008). De Angelis in this regard writes:

“Commoning, a term encountered by Peter Linebaugh in one of his frequent travels in the living history of commoners’ struggles, is about the (re)production of commons. To turn a noun into a verb is not a little step and requires some daring. Especially if in doing so we do not want to obscure the importance of the noun, but simply ground it on what is, after all, life flow: there are no commons without incessant activities of commoning, of (re)producing in common. But it is through (re)production in common that communities of producers decide for themselves the norms, values and measures of things” (De Angelis 2006).

Moreover, commoning also means a community-based form of ecological sustainability. In practice and political reality, the Great Charters established that “the people”, i.e. the commoners, had a right to farm the land and hunt animals for food, use the forests for fuel, and as such be, largely, self-sustaining and independent of the economy of the nobles. That is how Linebaugh can claim that the Magna Carta, when considered with its companion, the Charter of the Forests, “goes deep into human history” (see below), because the freedom and liberties involved in customary practices of commoning included all aspects of human survival: food, fuel and building materials in an intimate relationship with the land to which they belonged. What concerned commoners were not abstract rights, but practical approaches to life, that nevertheless could be articulated into property relations with regard to land and natural resources. A commoner would not ask “What is my individual right?”

Commoners first think not of title deeds, but 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 goes deep into human history” (Linebaugh 2008: 45).

This *belonging of commoners to the land* stands in sharp contrast to the post-enclosure arrangements where *land belongs exclusively to individuals*. Nevertheless, they refer to the same

organisational questions concerning social relations with regard to things: access and use of resources. And for a long time they co-existed as we shall see. The transition into capitalism, however, spells the end of commoning⁶.

Understanding Linebaugh's argument is helpful for an understanding of the transition into capitalist democracy and thus sets the scene well for this essay. In a time where most of Europe was in the thrall of war and conflict the Great Charters articulated peasants' demand for the right to their custom of control over their own existence; they delimited the brutishness of royal authority: "the sovereign power of the king could be bound and held accountable" by means of the Great Charters. However, Linebaugh makes explicit note of the ways in which the Magna Carta also protected the rights of the rising mercantile classes. Quoting from Chapter 41 of the Magna Carta, he writes that "All merchants shall be able to go out of and return to England safely and securely and stay and travel throughout England, as well by land as by water" to make it clear that the emerging capitalist market also took shape from the charter; and from Chapter 35 to note that in addition to providing freedom to exercise market relations the charter also defined the basic units (or parameters) for commodities, without which the industrial, contractual market relations and the commodity could not be imagined: "Let there be one measure for wine throughout our kingdom, and one measure for ale, and one measure for corn, namely 'the London quarter'; and one width for cloths whether dyed, russet or halberget, namely two ells within the selvedges.

6 Or, as we shall see, in Section 2.6, capitalism itself is based on a form of commoning – since all production is social – but it is a qualitatively different form of commons upon which it rests; indeed, to speak of a "capitalist commons" is somewhat oxymoronic.

Let it be the same with heights and measures” (Linebaugh 2008: 30).

There are therefore two different movements emerging from the Great Charter and the transition into capitalism can be understood as an ever narrower interpretation of the charters on a path toward the establishment of *exclusive private property rights* – privatisation - substituting for *collective rights of commoning*. While exclusive, private property rights are imposed, collective rights of commoning are emergent properties of the relations between commoners.

The American Declaration of Independence is in part a narrow interpretation of the Magna Carta that neglects “its pastoral and woodlands underpinnings” (Linebaugh 2008: 124), thus making it possible for American independence [to be] conducted in the name of Magna Carta [and to] occur in the midst of Atlantic expropriation of commons lands” (Linebaugh 2008: 135). The Magna Carta was a “document of reparations, returning the forest, whereas the declaration is a document of acquisition” (Linebaugh 2008: 124). In other words, the era between the Magna Carta (1215) and the American Declaration of Independence (1776), can be seen as an important period of the transition into capitalist democracy, where *the individual rights to property* came to override *the customary and collective rights to land and subsistence* that in great part had provided the inspiration for the democratic ideals of capitalism. The American Declaration of Independence and the founding fathers made explicit reference to the Magna Carta, but *not* to the Charter of Forests. Over time the Magna Carta became a document of individual freedom and liberties, while the rights of commoning were conveniently forgotten.

The American Declaration of Independence, therefore, is a milestone in the transition into capitalism, on Linebaugh's account. That is because the American Declaration of Independence justifies the power of the state and articulates *the right of an individual to private property*, while the Great Charters put limitations on sovereign powers and articulate *collective rights of commoning*. It is exactly this development - from an articulation of customary practices of commoning, i.e. collective rights to land access and use, to an abstract articulation of the individual right to private property - that defines the transition into capitalist democracy. It also defines the subjugation of people – thus rendered legal persons, citizens with abstract rights – to the nation state. The commoners' collective autonomy was lost in this process.

In this essay I explore how commons can be recreated with particular reference to property relations and social movements. By doing so, I begin to establish a framework for an anti-capitalist conception of property. Such a conception, I hold, is indispensable for social organisation beyond the nation state. My discussion starts with an exposition of the Free Culture movement, which shares important political views with the Free Software movement.

Chapter 1
Free Culture in Context:
Property and the Politics of Free Software



J. Martin Pedersen

1 Free Culture in Context: Property and the Politics of Free Software

“And, as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name.
Such tricks hath strong imagination,
That, if it would but apprehend some joy,
It comprehends some bringer of that joy;
Or in the night, imagining some fear,
How easy is a bush supposed a bear!”
(Shakespeare, *A Midsummer Night's Dream*, 5.1.7).

1.1 Introduction.

We have seen how anti-capitalism and notions of global solidarity and egalitarian forms of resistance are as old as capitalism and refuse to disappear. In this chapter I consider the dynamics of social movements that have emerged in cyberspace and which are related to Free Software. With social movements that have emerged in cyberspace I do not mean for instance a feminist networking website, but specifically social movements that have given birth to *and* been born into cyberspace.

I explore those dynamics in cyberspace through the lens of number of key commentators, whose ideas are best described as a mixture of liberal economics, libertarian views, an enthusiasm for the public domain⁷, and technological fetishism. Common

7 Copyright and patent law are forms of property relations with the specific view to balance the rights and benefits between individual (or group)

among them is the refusal to address the crucial aspects of ownership in the tangible realm – land, resources, means of production and distribution. They *do* embrace the values of sharing and cooperating, but confine them to the intangible realm: ideas, knowledge, information. For that reason I call them information exceptionalists.

The purpose of this chapter is to show how and why information exceptionalism is incompatible with anti-capitalism. It is incompatible because it takes for granted that whatever powers are given by the existing private property rights regime in the tangible realm need no questioning, or, at best, that any inequalities that *do* exist in that realm can be addressed through commoning in the intangible realm.

In other words, the distinction between the tangible and intangible realms that is assumed in economistic thinking and information exceptionalism is rejected. It is presented as a misleading starting point for thinking about the world, because it is detached from the moral, political and social concerns that arises in the tangible realm. The most obvious problem of treating cyberspace as part of an intangible realm that is separate from the tangible realm is that no virtual space exists without a

creators and the general public. The public domain is at bottom a *consequence* of copyright: whenever my exclusive right to copy runs out, the creation to which I had such exclusive right enters into the public domain in order that society at large can benefit from it through their own uses, not just through my controlled (or withheld) circulation of the creation. Copyright *temporarily* delimits individuals as creators from the public who become ultimately the benefiting party to the arrangement: I get to exploit my great idea for some time, and in the end we are all happy in the public domain. The relation between copyright and the public domain, which is one of complementarity, has been widely explored and is an uncontested position (but see, e.g. Dusollier 2007).

material underpinning. The more deep-seated problem is that control over the material foundation - by extension - is also control over the intangible realm that can be based upon it. It follows that a conception of the world in which such a distinction is assumed as basic to social organisation cannot account for the interpenetration of the tangible and the intangible realms, neither can it account for the environmental impact of those material foundations. It can only ever tell half the story and that story is always liable to be subverted unexpectedly by the other half.

Free Software as an example of technology that is socially embedded and socially *controlled*, shows us how technology can be liberating⁸. As a commons, the Free Software movement, as we shall see, has taken control of the development of a resource, which shows how technology can become a common project, where transparency and public scrutinisability are embedded in the relational modalities and community building processes of the commons. It is a commons that grows and that is self-governed, *and* which governs a technological resource that is free for all to use (without leading to a free-for-all). Hence, Free Software has a subversive potential. I will show that the concept of property is central to an understanding of these political and

8 In the context of globalisation questions concerning technology are central, because “technology drives globalisation and globalisation drives technology” (Novotny, Mordini, Chadwick, Pedersen, Fabbri et al. 2006). Technology is not neutral or autonomous, it does not determine social realities, but it gives shape to our lives *to the exact degree* that we need to invest agency in its development and use in order to stay in charge. Technology is like a playground, at best, or at worst our second nature, an environment in which we are condemned to live. Technology is a very social and material part of human reality and the way we interact with it has a great impact on our social relations, our mind and being, and the natural environment. Technology thus serves as a good general starting point for an inquiry into contemporary politics.

technological processes and that realising the subversive potential turns on accepting a social analysis of property, which does not reject property in the intangible realm, but seeks its reform conceptually *and* in the tangible realm.

This chapter, then, is a critical investigation of information exceptionalism and social relations in cyberspace. My discussion will focus on the concept of property and – recursively – ask critical questions about the ways in which the concept of property is often (mis-)understood.

Seeing how contemporary analyses deliberately conceptualise property in a misleading manner and how this approach largely leaves ownership in the “tangible realm” unquestioned will lead us to Chapter 2. Here I will present a definition of property that draws upon cultural anthropology, legal positivism, liberal jurisprudence and social movements to reanimate philosophical debate about the role of property. I will do so with a view to providing social movements – especially anti-capitalists – with an embryonic framework for understanding property relations. In turn, such an understanding can be integrated into the political programme of radical social movements that are rejecting the nation state and the private ownership of ideas, knowledge, information and, most importantly, land, its resources, and the means of production and distribution.

If in the introduction the revolutionary question was “How?”, which we answered was a process of self-articulation and organisation, then one of the first questions that follow is “With what?”. The answer to that is property.

1.2 Beyond property: promises of the networked information society.

“A Declaration of the Independence of Cyberspace: Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather ... Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are all based on matter, and there is no matter here.” (Barlow 1996).

1.2.1 Cyberdreams: like fire, like air.

I begin with a brief, selective overview of what we can call the visions of cyberspace, before turning to the technical aspects of the Internet.

A Declaration of the Independence of Cyberspace is written by the American libertarian celebrity, John Perry Barlow. Barlow was one of the main lyricists for the legendary counter-cultural, psychedelic rock band, called the Grateful Dead. The declaration is rooted in the American Dream and should be understood in the context of the rest of Barlow's body of work. For instance, he is a co-founder of the Electronic Frontier Foundation, which is a not-for-profit NGO that promotes digital rights and public policy analysis that furthers the free flow of information and ideas. The EFF also provides support in litigation that touches upon constitutional liberties and freedoms of speech and communication.

Two years before declaring the independence of cyberspace, Barlow wrote an article in which he set out the metaphysical “otherness” of informational flows in cyberspace, as opposed to the metaphysics of tangible things. The world of material things, for Barlow, is defined by “*substance*”, whereas cyberspace is defined by “*flow*”; or conversely, as Barlow notes, cyberspace is a “world made more of verbs than nouns” (1994). The article was called “The Economy of Ideas: A framework for patents and copyrights in the Digital Age. (Everything you know about intellectual property is wrong)” and was published in *Wired Magazine*, which gained a good reputation for cyberspace hype (see Turner 2006). Commencing with a since then oft quoted statement by Thomas Jefferson, one of the Founding Fathers of the Land of the Free, Barlow wants to make sure that the reader understands that he has a historical grounding of his position that reflects the values of freedom and liberty. The Jefferson quote ends by stating:

“[t]hat ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density at any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property” (ibid.)

Barlow also integrates another tradition in his writing, namely cybernetics, which had become part of the counter-cultural imaginary through the works of multi-multifarious thinkers like Gregory Bateson and the networking skills of Stewart Brand

(Turner 2006). In that way Barlow connects libertarian ideas with the promises of systems that were self-organised and argued - in extension of Bateson's famous statement "information is a difference which makes a difference" - that in cyberspace "information only really exists in the Delta. The making of that difference is an activity within a relationship. *Information is an action* which occupies time rather than a state of being which occupies physical space, as is the case with hard goods. It is the pitch, not the baseball, the dance, not the dancer" (Barlow 1994; emphasis added).

The novel terrain of cyberspace embedded in a "liquid architecture"⁹ (Novak n.d.) was indeed a new electronic frontier where technological yeomen were staking their claims and expanding the horizon of what is possible. These frontiers were perhaps first conceptualised and popularised by Marshall McLuhan, who in 1968 coined the term "global village" (McLuhan and Fiore 1997) to suggest what impact new media and communication technologies were having upon the human kind. McLuhan pondered and probed what it meant to be living in an inter-connected global village - in the active relationship that information as a flowing movement entails. He suggested that it would have a profound impact on the very way people think, communicate with and understand each other and the world. He wrote:

"...might not our current translation of our entire lives into the spiritual form of information seem to

9 "Marcos Novak defines liquid architectures ... A liquid architecture is an architecture whose form is contingent on the interests of the beholder; it is an architecture that opens to welcome you and closes to defend you; it is an architecture without doors and hallways, where the next room is always where it needs to be and what it needs to be".

make of the entire globe, and of the human family, a single consciousness?” (McLuhan 1994: 61)

In a sense, Barlow's declaration is written from the point of view of such a “single consciousness” of cyberspace explorers. McLuhan foresaw what most could not see yet, but when the World Wide Web began to popularise the Internet in the 1990s many returned to read McLuhan, whose hitherto wild, probing and provocative assertions had originally passed many by or had simply been written off as technological determinism or unsubstantiated hype. Barlow in a sense added an explicitly libertarian angle to McLuhan's thought.

Such are the origins of current visions in cyberspace. I turn now to the architecture of the Internet and the way it enables a diversity of agency.

The World Wide Web is a technical layer that runs on top of the Internet. It is basically a protocol for data exchange, called the Hyper Text Transfer Protocol, which is why the addresses, so-called URLs (Uniform Resource Locator) or URIs (Uniform Resource Identifier), that you see in the top of your Internet browser, most often commence with “http://”. In his own account, “Weaving the Web: The Past, Present and Future of the World Wide Web by its Inventor”, Tim Berners-Lee writes about his addition to the Internet, which continues to network the homes and consciousness of millions of people:

“The fundamental principle behind the Web was that once someone somewhere made available a document, database, graphic, sound, video or screen at some stage in an interactive dialogue, it should be accessible (subject to authorisation, of course) by anyone, with any type of computer, in any country.

And it should be possible to make a reference – a link – to that thing, so that others could find it. This was a philosophical change from the approach of previous computer systems (Berners-Lee 1999: 40).

Before the Web, computers were largely separate storage spaces in the way that we think of a box in the attic. We know which box contains what, but we do not have a virtual box through which all our things can be accessed. Today it is almost impossible – unless you were there – to imagine computers that cannot be connected to the Web, which potentially connects them to all other computers in the world. This is a qualitative shift in information and communication technology that transcends the perceived passivity associated with television watching.

As Lawrence Lessig the famous constitutionalist and Internet lawyer notes, the Internet and its additional layers, such as the Web, which he in sum refers to as Cyberspace, supplemented “the old one-to-many architectures of publishing (television, radio, newspapers, books)” and thus created a peer-to-peer (P2P) architecture “where everyone could be a publisher” (Lessig 1999: 4)¹⁰. Later he notes that this “end-to-end” (E2E) architecture of

10 Lawrence Lessig is also the founder of the Creative Commons (<http://Creative Commons.org>), which is a licensing platform that permits you to configure your own license for your culturally creative work and then release or publish that work in various media. You can pick and choose different sub-clauses and thus define the conditions under which you are freely sharing your work with other commoners and legally defending your work against enclosure. A very large amount of media is now available freely online and the concept – as derived from Free Software – is spreading to other domains. See for instance the associated Science Commons, which “was launched with the goal of bringing the openness and sharing that have made Creative Commons licenses a success in the arts and cultural fields to the world of science” available at

the Internet is a “a stand-in for a commons” (2001: 89). It is because the underlying technical protocols of exchange are based on open standards and principles that the Internet is a commons. HTTP is not a closed protocol that you have to buy a license to use.

In practice people began to create websites with all kinds of information – from pictures of their pets through recipes to poetry and prose – and a new kind of information culture emerged. As McLuhan presciently stated, the “process of knowing will be collectively ... extended to the whole of human society” (McLuhan 1994: 3-4) and “it is [now] possible to store and to translate everything; and, as for speed, that is no problem. No further acceleration is possible this side of the light barrier” (McLuhan 1994: 58). The Internet and in particular the Web and Email layers have begun to circumscribe the “human family” and create a global village and consciousness. The world is networked – at least for those who can access it.

The architecture of the Internet, then, is open-ended and based on open standards and principles that facilitate exchange. The network, as it were, is neutral (see Section 1.4.2).

In the remaining part of the section I want to uncritically and briefly consider the “democratic” promise of the diverse agency that the Internet permits.

The practices that perhaps best illustrate the foundation for a “single consciousness” operating at “the speed of light” resonant of McLuhan's vision *and* which promise to be more democratic

<http://sciencecommons.org/about/details/>. Creative Commons is inspired by the GNU General Public License, which will be analysed in detail in Section 3.5.

than those offered by television and corporate news papers are found in the “blogosphere”. A “blog” is an abbreviation of Web Log, which is to say that it is a website where someone keeps a log of something. A blog can then be accessed, i.e. viewed, by anyone else with access to the web *and* be commented upon. The blogosphere is the space and sum of these actions, that is, the shared space in which people are “blogging” and cooperating on critiques and analysis of each other's blogs and the mainstream media, as well as social, cultural and political events in general. It is a space that has grown phenomenally fast, there “... are already over 30 million blogs, most starting in the past two years” (Carlsson 2008: 208).

In the words of celebrated cyberspace analyst, Yochai Benkler, Co-Director of the Berkman Center for Internet and Society at Harvard Law School, the blogosphere is a space in which “filtering for both relevance and accreditation has become the object of widespread practices of mutual pointing, of peer review, of pointing to original sources of claims, and its complement, the social practice that those who have some ability to evaluate the claims in fact do comment on them” (Benkler 2006: 12). A novel psycho-social realm, in a way, and a digital addition to the public sphere.

Blogging, for Benkler, is more than just the ability for each individual to become a digital pamphleteer: it makes possible a highly complex and non-centrally coordinated “synthesis of public opinion” through a “synthesis of clusters of individual opinion that are sufficiently close and articulated to form something more than private opinions held by some number of individuals” (ibid: 184). Tagging with keywords of blog entries, sophisticated search engines and techniques have given rise to unprecedented retrieval speeds of related information from geographically dispersed, but proximal topics and themes,

leading to new social groupings that were previously too small to thrive in their respective localities as a subculture. The blogosphere is a foundation for a critically engaged global civil society.

In cyberspace, it seems, ideas and knowledge spread like fire, like air, and new frontiers of the human mind are revealed in experimental social practices and co-production that promise a new way of life in a global village.

1.2.2 Social production.

In this section I explore the phenomenon of “social production” (Benkler 2006), which is a term developed as part of a project to understand how the diverse agency that has emerged in cyberspace can be made economically productive. I start with a familiar example.

Wikipedia is a freely accessible, Web based encyclopaedia that has taken many by surprise. It began January 10, 2001. By January 25 it counted 270 entries. By October 2001 more than 17,000 entries had been created by volunteers in cooperation without any leader. It has since then been growing very fast and now exists in more than 250 languages. In the main English language version there are 3.14 million entries (Wikipedia 2010a), cross-referenced by 32.1 million links, and with an average of 435 words per entry. By comparison the Encyclopaedia Britannica has 65,000 entries with an average of 650 words per entry (Wikipedia 2010b).

How did it happen? Yochai Benkler, in his main work “The Wealth of Networks: How Social Production Transforms Markets

and Freedom” (2006), has provided a detailed analytical account of these and related processes, for which he has coined the term “social production”. For Benkler these novel processes indicate a new phase of the economy that is made possible by significantly declining prices of computer hardware and networking technologies. The continually falling prices facilitate social production – in part because excess capacity (discussed below) increases as material availability of the new technology increases – and he calls it the “networked information economy”:

“What characterizes the networked information economy is that decentralized individual action—specifically, new and important cooperative and coordinate action carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies—plays a much greater role than it did, or could have, in the industrial information economy” (ibid: 3).

In the networked information economy, which replaces the “industrial information economy that typified information production from about the second half of the nineteenth century and throughout the twentieth century” (ibid.), social production becomes possible.

This new mode of social production, according to Benkler, is characterised by *not* unfolding within the most powerful and important existing modalities of production, defined by the institutions of the state, property, the firm and the market. Social production does not involve an employment contract, which is to say that it is a voluntary effort without monetary remuneration. Neither is social production organised by means of property, where property is understood as a legal arrangement that entitles someone to exclusive access to some thing and thus “constrains

actions” (ibid: 24). Instead, “what is special about our moment is the rising efficacy of individuals and loose, nonmarket affiliations as agents of political economy” and that “the market [and] the state will have to adjust to this new emerging modality of human action” (ibid: 16). Social production, in other words, is initially defined in terms of what it is *not*. Social production, we may say, unfolds as voluntary associations in global civil society, without private property incentives and beyond the state.

That was a brief overview of social production in general. I now go into details about how Benkler conceptualises particular instances of social production.

In the networked information economy Benkler has identified a particular mode of production, which exhibits certain characteristics. These are: “radically decentralized, collaborative, and nonproprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands”(ibid: 60). This is a particular form of social production which he calls “commons-based peer production” and which is a “socio-economic system of production that is emerging in the digitally networked environment ...[f]acilitated by the technical infrastructure of the Internet” (Benkler and Nissenbaum 2006: 394). It is emerging through the “collaboration among large groups of individuals, sometimes in the order of tens or even hundreds of thousands, who cooperate effectively to provide information, knowledge or cultural goods without relying on either market pricing or managerial hierarchies to coordinate their common enterprise” (ibid.).

The term commons-based peer production can be broken down into its constituent parts. ““Commons” refers to a particular

institutional form of structuring the rights to access, use, and control resources”, which for Benkler means that it is the opposite of “property”, because property “determines one particular person who has the authority to decide how the resource will be used. That person may sell it, or give it away, more or less as he or she pleases” (ibid.). In commons, on the other hand, “no single person has exclusive control over the use and disposition of any particular resource in the commons” (ibid: 61). Anyone within some more or less defined group has access to the resources of a given commons, according to “rules that may range from “anything goes” to quite crisply articulated formal rules that are effectively enforced” (ibid.).

For Lessig, the term commons refers to “a resource for decentralized innovation”, which “create the opportunity for individuals to draw upon resources without connections, permission or access granted by others”, which is to say that commons “are environments that commit to being open” (2001: 85), according to which “the Internet forms an innovation commons... protected by an architecture that forbade discrimination” (ibid: 23). In this sense, commons do not have a singular, clear definition, but share a family resemblance – we know one when we see one – in that they are to some degree open and free, exhibiting commonality in a way that life within firms and the market do not.

Commons-based for Benkler's purposes, more precisely, denotes a mode of production that is *not* based on the “asymmetric exclusion typical of property” (Benkler 2006: 62), while “peer production” is a particular kind of commons-based production, in the way that “commons-based” is a category within the wider concept of social production. Peer production obtains “when individual action ... is self-selected and decentralized, rather than hierarchically assigned” (ibid.). In other words, Benkler

understands “social production” as an umbrella term for various new modes of production that are “commons-based”, some of which, in turn, can be further identified as “peer production”.

That was a brief explanation of commons-based peer production in general. The most famous example of commons-based peer production is Free Software, which has:

“... played a critical role in the recognition of peer production, because software is a functional good with measurable qualities. It can be more or less authoritatively tested against its market-based competitors. And, in many instances, free software has prevailed” (Benkler 2006: 64).

The foundation of much of the Internet, the World Wide Web and the blogosphere is Free Software. More than half of the web servers on the Internet run on Free Software for instance, as do Google's numerous and huge server farms and, of course, Wikipedia (Netcraft 2009a).

We saw above how Benkler makes sense of social production. I now consider the framework from within which he operates, the discipline and language, thus the mindset, with which he approaches the task of making sense of such phenomena as Free Software. I aim to show Benkler's contribution to his own discipline, economics.

The motivation for Benkler's work is to explore the social dynamics inherent in these co-productive processes with a view to consolidating them, because they represent an economically interesting and novel mode of production:

“Commons-based peer production presents a fascinating phenomenon that could allow us to tap substantially underutilized reserves of human creative effort. It is of central importance that we not squelch peer production, but that we create the institutional conditions needed for it to flourish” (Benkler 2002: 446).

Benkler's conception of social production takes as a point of departure the puzzle that the phenomenon of commons-based peer production poses for elaborations of the theory of the firm that Ronald Coase presented in “The Nature of the Firm” (1937). Coase understood firms “as clusters of resources and agents that interact through managerial command systems rather than markets” (Benkler 2002: 372). Coase argued that *transaction costs* in the organisation of production determine the emergence of firms and their limits. Transaction costs are the costs involved in trading in the market place. For instance, in order for me as an individual to bring a software programme to the market place for the main purpose of profiting economically, it will be useful to analyse the existing market, identify competing products and their pricing, before actually producing the software. If I choose to produce and sell software I should also calculate what costs there might be in, say, hiring a lawyer to instigate litigation in case my customer breaches the contract of sale. Indeed, on Coase's terms, to be economically sound, I should calculate *all* my transaction costs, which can be divided in categories, such as search and information costs, bargaining and decision costs, policing and enforcement costs (Dahlman 1979). Next, I should also calculate what the costs of organising my production within a firm would be. A firm entails a managerial structure that might include price analysts and contract lawyers. On the basis of these calculations of costs and benefits, I should choose the most

profitable solution. That is, I should balance transaction and organisation costs. Coase states that:

“Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur-co-ordinator, who directs production” (Coase 1937: 388).

As Benkler accordingly summarises, people “use markets when the gains from doing so, net of transaction costs, exceed the gains from doing the same thing in a managed firm, net of organization costs. Firms emerge when the opposite is true. Any individual firm will stop growing when its organization costs exceed the organization costs of a smaller firm” (Benkler 2002: 372).

On the basis of Coases's work a more elaborate economics discourse emerged in the 1970s and 1980s in the work of institutional economics, which is the study of the relationship between markets and managerial hierarchies with reference to the organisation of production. In this economic framework, which is part of the theoretical foundations of corporate management thinking, it is assumed that the dynamics of (economically significant) production can be explained in terms of the differences between the market and managerial hierarchies with reference to transaction and organisational costs. Commons-based peer production does *not* unfold directly within the “the market”, conceived of as a sphere where individual agents trade on the basis of private property rights and contract law. *Nor* does it rely on the hierarchical management systems of a firm where someone has the authority to tell someone else what to produce.

In other words, Free Software hackers “participate in free software projects without following the normal signals generated by market-based, firm-based, or hybrid models (ibid: 373).

In the analysis of the networked information economy, Benkler in essence assumes a liberal understanding of individuals as autonomous and rational beings, but he does not assume that individuals are acting mainly out of self-interest in the way that neoliberal economists do. By way of a review of literature on the intersection of psychology and economics (Deci and Ryan 1985; Frey and Jegen 2001; Benabou and Tirole 2000) complemented by sociological narratives about social capital (Granovetter 1974; Lin 2001) brought into economics by Coleman (1988), Benkler makes his position clear: “...individuals are not monolithic agents”:

“[In] any given culture, there will be some acts that a person would prefer to perform not for money, but for social standing, recognition, and probably, ultimately, instrumental value obtainable only if that person has performed the action through a social, rather than a market, transaction” (Benkler 2006: 96).

“While it is possible to posit idealized avaricious money-grubbers, altruistic saints, or social climbers, the reality of most people is a composite of these all, and one that is not like any of them. Clearly, some people are more focused on making money, and others are more generous; some more driven by social standing and esteem, others by a psychological sense of well-being” (Benkler 2006: 98).

The theoretical foundation for Benkler's conception of motivational factors of individuals is grounded in literature that draws upon “field and laboratory experiments, econometrics, and surveys” (Benkler 2006: 94) and he concludes that the exact details are not important for his analysis. It is taken for granted that in addition to money as a motivational factor there is “some form of social and psychological motivation that is neither fungible with money nor simply cumulative with it” (ibid: 96) and that the “relative relationships of money and social-psychological rewards are, then, dependent on culture and context. Similar actions may have different meanings in different social or cultural contexts” (ibid: 97).

Combing the narratives of these sets of literature to form a basis for his own economic analysis of social production is another contribution to economic science. It makes it possible to analytically understand motivational factors outside of the simplistic model of self-interest, which is not applicable in the context of social production. In that way economistic thinking is rejuvenated by its contemplation of social production, which in turn fuels the economy and fulfils expansionary needs:

“We need to assume no fundamental change in the nature of humanity; we need not declare the end of economics as we know it ... behaviors and motivation patterns familiar to us from social relations generally continue to cohere in their own patterns. What has changed is that now these patterns of behavior have become effective beyond the domains of building social relations of mutual interest and fulfilling our emotional and psychological needs of companionship and mutual recognition. They have come to play a substantial

role as modes of motivating, informing, and organizing productive behavior at the very core of the information economy” (Benkler 2006: 91–2).

With these enhancements to the economic framework, the productive force of social production can better be harnessed by institutions that operate on such logics. Benkler provides economics – which is the knowledge tool of privatisation – what it needs to be able to understand phenomena like Free Software in order to profit from them. Economics, in other words, needs to expand its vocabulary. Benkler has chosen – or is obviously trained within – a discipline that is known as foundational to private interests. Benkler’s analysis is a market and firm based analysis, expressed in terms that are familiar to corporate strategists.

We have seen how Benkler conceptualises social production, particularly commons-based peer production and the disciplinary framework within which his conceptualisations unfold. Because commons-based peer production does *not* fit the standard economic model, Benkler understands it accordingly as a mode of production that does not rely upon the elements of that model, namely firms, the market and private property rights. His analysis is a major contribution to liberal economics in that he is pushing the boundaries of what can be understood within that scientific discipline and hence begins to explore how firms can adapt their managerial structures to “tap into” commons-based peer production as a new mode of production.

But what energy drives social production – where does the force come from that makes the wheels of social production turn? That is our next question.

In Benkler's analysis the force of social production arises from “excess capacity”, which is central to the notion of the productive potential of the “networked information economy”. A simple, mundane example of freely sharing excess capacity in everyday settings is, for instance, if I possess some information about directions that a passer-by in the street enquires about and then give it to her without asking what she is going to give me in return. I simply share that information with her. Similarly, I might pick up a hitch-hiker, because I have extra space – i.e. excess capacity – in my car and I have the time needed to stop and ask where they are going. To engage in social production you need some skill or tool, information or knowledge, time and willingness to share them without a direct promise of immediate, calculable return. Although these everyday practices – “boxes or books moved or lifted, instructions given, news relayed, and meals prepared by family, friends, neighbors, and minimally decent strangers” (Benkler 2006: 119) – constitute a significant aspect of the global economy, we tend to ignore them (*ibid.*)¹¹.

However, in the context of information technology it becomes easier to harness the forces of social production, pool them as a resource, or for the production of a resource. As information

11 It is worthy of note here that “excess capacity” is very similar to an element in the Aristotelian justification for private property rights that is commonly translated as magnanimity. The magnanimous person takes pleasure in sharing excess capacity with others. Aristotle noted that “there is the greatest pleasure in doing a kindness or service to friends or guests or companions, which can only be rendered when a man has private property”. On that view, the excess capacity that drives social production, is capacity that arises once basic requirements for survival have been provided for – by means of private property rights – and if the person in question is magnanimous. Indeed, “democracy itself is in many respects a socially produced resource relying on the leisure time of its citizens as an essential input” (Strahilevitz 2007: 1477).

technology becomes more readily and widely available, the potential for social production to be transformed from mundane politeness and courtesy into a productive force to be reckoned with, increases:

“Because of changes in the technology of the industrial base of the most advanced economies, social sharing and exchange is becoming a common modality of production at their very core—in the information, culture, education, computation, and communications sectors. Free software, distributed computing, ad hoc mesh wireless networks, and other forms of peer production offer clear examples of large-scale, measurably effective sharing practices” (ibid: 121).

The reason why falling prices of information technology facilitate an increase in social production is because such technologies can be used to pool excess capacities - a little bit from here, a little bit from there - and thus establish and maintain resources that rival those of firms and markets.

“For ... excess capacity to be harnessed and become effective, the information production process must effectively integrate widely dispersed contributions, from many individual human beings and machines. These contributions are diverse in their quality, quantity, and focus, in their timing and geographic location. The great success of the Internet generally, and peer-production processes in particular, has been the adoption of technical and organizational architectures that have allowed them to pool such diverse efforts effectively. The core characteristics

underlying the success of these enterprises are their modularity and their capacity to integrate many finegrained contributions” (Benkler 2006: 100).

Excess capacity, then, is the engine of social production; and it is a capacity that is in great part reliant on and emergent from tangible resources.

I now turn to the promise of wealth redistribution and the obstacles to its realisation. Giving directions to a fellow citizen is not very conducive to bridging the gap between the rich and the poor. However, the example of freely sharing excess capacity (of time and skills) by contributing to the creation, production and maintenance of professional level computer software - understood as an important means of production in an information society- appears much more promising with regard to a redistribution of wealth. The potential for a redistribution of wealth normatively underpins Benkler's advocacy of social production as a new mode of production.

“If the networked information economy is indeed a significant inflection point for modern societies along ... it is so because it upsets the dominance of proprietary, market-based production in the sphere of the production of knowledge, information, and culture. This upset is hardly uncontroversial. It will likely result in significant redistribution of wealth, and no less importantly, power, from previously dominant firms and business models to a mixture of individuals and social groups on the one hand, and on the other hand businesses that reshape their business models to take advantage of, and build tools and platforms for, the newly productive social relations” (Benkler 2006: 468).

Although the achievements and future success of social production, for Benkler, is related to the simultaneous advance and continuously decreasing prices of information technology, the rise and success of social production should not be understood as “deterministically preordained” (ibid.).

However, we should take note of the fact that Benkler’s account does rely on the falling prices of hardware. This is to say that he clearly recognises that cheap materials for access to cyberspace are needed on a very large scale in order for everyone in the world to be a radical blogger – and for the world government to be a real-time cyberspace debate between self-organised commoners.

“We have an opportunity to change the way we create and exchange information, knowledge, and culture. By doing so, we can make the twenty-first century one that offers individuals greater autonomy, political communities greater democracy, and societies greater opportunities for cultural self-reflection and human connection. We can remove some of the transactional barriers to material opportunity, and improve the state of human development everywhere. Perhaps these changes will be the foundation of a true transformation toward more liberal and egalitarian societies. Perhaps they will merely improve, in well-defined but smaller ways, human life along each of these dimensions. That alone is more than enough to justify an embrace of the networked information economy by anyone who values human welfare, development, and freedom” (ibid: 473).

These are great promises. But if we unpack the dynamics of hardware production in terms of natural resource use and the exploitation of labour, as well as the disposal of these always already obsolete, super-annuated electronic commodities that must give way for the latest, cheapest, fastest new gadget, then these promises ring hollow: without environmental conscience or solidarity with labourers. Benkler's account of the potentials of the intangible realm, however, certainly exhibits a clear reliance upon the tangible realm and its materiality.

Those problems apart, a major obstacle to realising the wealth distribution inherent in social production is the power of those whose interests it challenges. Needless to say, the emergence of commons-based peer production provokes reactions:

“In law, we see a continual tightening of the control that the owners of exclusive rights are given. Copyrights are longer, apply to more uses, and are interpreted as reaching into every corner of valuable use. Trademarks are stronger and more aggressive. Patents have expanded to new domains and are given greater leeway. All these changes are skewing the institutional ecology in favor of business models and production practices that are based on exclusive proprietary claims; they are lobbied for by firms that collect large rents if these laws are expanded, followed, and enforced” (ibid: 469-470).

The political tensions described here have been the subject of much debate over the last few decades (see Section 1.3). In the way that Benkler presents social production, particularly commons-based peer production, it is clear that these novel social relations pose a threat to those who seek rent in ideas, information and knowledge. While, vice versa, the regimes of so-

called intellectual property rights pose a threat to the continued success of commons-based peer production and any other form of social production on a larger scale. These are conflicts over the shape of the “institutional ecology”¹² of the networked information economy. Benkler, it seems, finds a middle-ground on which the commons need not fear destruction on the one hand, while private interest can continue to reap profits, on the other.

There is another, related conflict arising from these circumstances, which has to do with the technical layer of social production, namely the underlying, material network, i.e. the Internet with all its cables and switches and satellites. In the same way as the widespread availability of computers is required for hackers to be able to be productive, a *technostructural underpinning* is also required for individual labour inputs – i.e.

12 Benkler uses the institutional ecology metaphor to emphasise “the actual organization of human affairs and legal systems is not converging through a process of either Marxist determinism or its neoclassical economics mirror image, “the most efficient institutions win out in the end”” (Benkler 2006: 387); rather the laws and institutions that govern, directly or indirectly, the cultural environment are sites of conflict between parties with often oppositional interests. In each local and single-issue conflict certain paths will be chosen and it might be difficult to determine who is winning locally and who is leading globally: “[t]he term “institutional ecology” refers to this context-dependent, causally complex, feedback-ridden, path-dependent process” (ibid.), which “includes regulatory and policy elements that affect different industries, draw on various legal doctrines and traditions, and rely on diverse economic and political theories and practices. It includes social norms of sharing and consumption of things conceived of as quite different —bandwidth, computers, and entertainment materials” (ibid: 392). “Critically, the institutional ecology ... can be understood as a system of institutions that interacts and co-evolves with the other important behavior-affecting (regulating) systems, including technology, social practices, and markets”. (Frischmann 2007: 1131)

fragments of excess capacity - to become successfully aggregated into an economically significant resource. Hence,

“[w]e are seeing significant battles over the organization and legal capabilities of the physical components of the digitally networked environment. Will all broadband infrastructures be privately owned? If so, how wide a margin of control will owners have to prefer some messages over others?” (bid: 469).

Approaches to these conflicts will be critically discussed in the following two sections. It is obvious that those two battle fronts – with intellectual property law and network owners – are crucial for the future of commons-based peer production. That is to say that a realisation of the great potential that Benkler sees in the novel social and co-productive relations that are facilitated in “the networked information economy” will in great part depend on the outcome of those battles, and the framing of these issues is an integral part of the battle tactics, as we shall see.

In the next section I consider the philosophy and politics of what I call “information exceptionalism”, which is an approach to defending social production and the Internet commons from privatisation. It turns an a conception of property that is problematic and which I will problematise and seek to subvert.

1.3 Information exceptionalism: protecting the Internet commons?

“Notions of property, value, ownership, and the nature of wealth itself are changing more fundamentally than at any time since the Sumerians first poked cuneiform into wet clay and called it stored grain. Only a very few people are aware of the enormity of this shift, and fewer of them are lawyers or public officials. Those who do see these changes must prepare responses for the legal and social confusion that will erupt as efforts to protect new forms of property with old methods become more obviously futile, and, as a consequence, more adamant.” (Barlow in Groves 1997: 25-26)

1.3.1 Ideas should not be owned.

In this section I look at the politics of intellectual property. First in general terms and then from the perspective of cultural environmentalism or Free Culture.

As already suggested in the previous section the success of commons-based peer production and the growth potential for social production in general is subject to the outcome – or unfolding – of a battle with those corporate forces that have a business model based on intellectual property rights. It is in large part a battle in the public policy arena for which Benkler's analysis – which proceeds from the same economic framework – is well suited. His arguments for reform of what he calls the “institutional ecology”, based on the promises of social production, as we have seen, are very strong. However, the enemy is at least as strong. Barlow explains in colourful language and with reference to “armies”:

“[S]ince it is ... now possible to create useful tools that never take physical form, we have taken to patenting abstractions, sequences of virtual events, and mathematical formulae - the most unreal estate imaginable. In certain areas, this leaves rights of ownership in such an ambiguous condition that property again adheres to those who can muster the largest armies. The only difference is that this time the armies consist of lawyers ... What was previously considered a common human resource, distributed among the minds and libraries of the world, as well as the phenomena of nature herself, is now being fenced and deeded. It is as though a new class of enterprise had arisen that claimed to own the air.” (Barlow 1994).

In this field of tension we can speak of an intensification of intellectual property protection on a global scale (May 2010)¹³. The scope and level of protection in intellectual property law has dramatically increased over recent decades. Protectable subject

13 Intellectual property law must be divided into several distinct areas. Copyright law protects “original forms of expression” - ‘Tambourine Man’, ‘Star Wars’, ‘1984’. Patent law protects inventions - snowboards, microchips, genetically engineered rice. Trademark law protects words and symbols that identify goods and services - ‘Coca-Cola’, the Mercedes-Benz star. Trade-secret law protects information that a company has tried but failed to conceal from competitors - secret formulas for soft drinks, confidential marketing strategies. Plant breeders’ rights protect new plant varieties. Of these, copyrights, patents, and trademarks are arguably the most economically significant. There are other, more obscure rights that fall under the intellectual property category: e.g. the rights to layout designs of integrated circuits, or the “right of publicity” which protects celebrities’ presumed interests in their images and identities.

matter is being widened, protection terms are being expanded, new rights are being created, the ease with which protections are granted is growing, and intellectual property standards are being harmonized throughout the world (Fisher III 1999). While intellectual property rights have never been more economically and politically significant than they are in the current so-called ‘knowledge economy’, they have also never been more controversial (Dutfield 2003). Information and knowledge today are crucial market commodities, and are priced accordingly. In this way, the benefits of the ‘knowledge economy’ or ‘information society’ flow “to those who own the information and knowledge resources which have been rendered as intellectual property rather than those whose need for such information and/or knowledge might be greatest” (May 2000: 1).

James Boyle (1996), whose work I return to below, argues that there are structural tendencies in our patterns of thinking and discourse about intellectual property that lead to ‘over’ rather than ‘under-protection’ of such property. He thinks that there are two theories, or discourses of information – the “public goods/incentives theory” and the “anti-monopoly/free flow of information theory” – which conflict over the issue of intellectual property:

“The economic analysis of information is beset by internal contradiction and uncertainty; information is both a component of the perfect market and a good that must be produced within that market. Under the former characterisation, information is supposed to move towards perfection – a state in which it is costless, instantly available and so on. Under the latter characterisation, information must be commodified so as to give its producers an incentive to produce. But each property right handed

out to ensure the production of information is a transaction cost when seen from the perspective of market efficiency” (Boyle 1997: 95-96.).

The last decades have seen the expansion of copyright and patent legislation to cover software, the patenting of life-forms and human genes, and the extension of copyright term limits. With the advent of the Internet, and the digital possibilities it affords, private enterprise has, somewhat unsurprisingly, almost exclusively pressed for the commodification of information. These pressures are difficult to avert, expressing as they do some of the most powerful interests on the global politico-economical stage. Intellectual property rights are predominantly justified in terms of their ability to produce present and future public benefit – whichever way the latter is defined on any particular justificatory account.¹⁴

But it is important to remember that intellectual property rights are “*limited monopolies*” (Boyle 1997: 105; emphasis added), and it is their limitations that are at least as important for the generation of public benefit as is the grant of the right itself. In Boyle’s words: “since there is no ‘natural’ absolute intellectual property right, the doctrines which favor consumers and other users, such as fair use, are just as much a part of the basic right as the entitlement of the author to prevent certain kinds of copying” (ibid.: 105). The rhetoric and vision of the ‘original author’ or ‘lone inventor’ that pervades the current intellectual property discourses not only downplays the importance of fair use and thus encourages an absolutist rather than a functional idea of

14 Fisher (2001) identifies four main perspectives that currently dominate theoretical writing about intellectual property: Utilitarianism; Lockean Labour Theory; Hegelian Personality Theory; and the more recent, legal realist Social Planning Theory.

intellectual property, but also devalues the importance of the ‘raw materials’ (previous inventions and articulations) out of which new works are forged. In doing so, the prevailing intellectual property regime, with all its emphasis on innovation, undermines the situation in which the materials for innovation are readily available:

“The structure of our property rights discourse tends to undervalue the public domain, by failing to make actors and society as a whole internalize the losses caused by the extension and exercise of intellectual property rights. The fundamental aporia in economic analysis of information issues, the source-blindness of an ‘original author’ centered model of property rights, and the political blindness to the importance of the public domain as a whole ... all come together to make the public domain disappear, first in concept and then, increasingly, in reality” (ibid.: 111-112.).

Boyle calls for an analytically and rhetorically sophisticated political economy of intellectual property, for “the fundamental property regime of the information economy” not to be constructed behind our backs (ibid.: 116).

We return to Boyle's approach to the described problems below. First, let me briefly consider the nature of those problems as presented in economic terms. This concerns the construction of scarcity.

Information – knowledge, ideas – can usually be shared between people at little cost. In the most basic example, I can pick up a scrap of paper in the bin and write down my favourite recipe or poem and give it to you. In turn, you can equally easily copy

either of these and pass them on. Alternatively, we can circulate them by word of mouth. This, however, creates a problem on the liberal economic account. As the famous economist Kenneth Arrow, whose work on intellectual property has been very influential since the 1950s, writes:

“If information is not property, the incentives to create it will be lacking. Patents and copyrights are social innovations designed to create artificial scarcities where none exist naturally ... These scarcities are intended to create the needed incentives for acquiring information” (1996: 125).

We can thus identify the contradiction that Boyle took note of above in Arrow's economic statement, which causes increased tension in policy debates as the discourse about social production gains traction.

"The contradiction that lies at the heart of the political economy of intellectual property is between the low to non-existent marginal cost of reproduction of knowledge and its treatment as scarce property" (May 2000: 43)

However, as Benkler and Boyle argue, artificial scarcity is *not* necessary for economically significant production of informational goods to happen. If it were, Free Software, Wikipedia and the blogosphere would not exist.

To paraphrase Barlow, then, novel social relations with regard to things are being forced into old moulds that stifle their unfolding and thus pose an obstacle to freedom of information and speech and by extension to democracy as such. Property concepts

derived from the industrial revolution – that themselves are artificial – and which were created for very different purposes, have detrimental effects in an economy where the possibilities for the free flow of information, knowledge and ideas – due to sophisticated information technology – are enormous. As Barlow writes:

“Physical objects have a completely different natural economy than intellectual goods. It’s a tricky thing to try to own something that remains in your possession even after you give it to many others”. (Barlow in Doherty 2004).

Here echoed in general terms by Lessig:

“While some resources must be controlled, others can be provided much more freely. The difference is in the nature of the resource, and therefore in the nature of how the resource is supplied” (Lessig 2001: 94)

These are the foundations of the analyses of Barlow, Benkler, Boyle, Lessig and others who have followed their lead and joined the movement of “cultural environmentalism”, which I will present briefly below.

The idea of cultural environmentalism developed as a call for a social and political movement for the protection of the public domain. Boyle gave birth to the idea in his “Shamans, Software & Spleens: Law and the Construction of the Information Society” (1996), drawing upon lessons learned from the social and political movement(s) generally known as the environmental movement.

“Metaphors and analogies do not make things happen by themselves. In the vast majority of cases, the environmental analogy merely provided an easy label to something that was happening anyway. Nevertheless, I think there are productive semantic, theoretical, economic, constituency-building, and organizational insights to be had in thinking about a cultural and scientific environmentalism ” (Boyle 2007: 19)

It was a bold idea, but well founded. Boyle began in 1997 with a cautious and qualificatory remark with regards to his analogy, yet emphasizing that what issues from conflicts in the cultural environment might indeed have substantial impact on human lives:

“For some, the difference in seriousness of the two problems robs the analogy of its force. After all, environmental problems could actually destroy the biosphere and this is just, well, intellectual property. My response to this is partly that this is an analogy. I am comparing the form of the problems rather than their seriousness. Still, I have to say I believe that part of this reaction has to do with a failure to adjust to the importance that intellectual property has and is going to have in an information society. Again and again, one meets a belief that this is a technical issue with no serious human, political or distributional consequences.” (Boyle 1997: 115)

The environmental movement invented the “environment” as a semiotic category and gave a common cause to hunters, fishers,

birdwatchers and consumers who could then unite as activists to save “the environment”¹⁵ (Boyle 2003). By semiotic is meant merely the textbook definition of that term, namely a sign (which in this case is a word) in which a wider collective invests the same meaning; that meaning is whatever would bring together a bioregionalist in Lancashire with an indigenous community activist in the Amazon in a common discourse about (protecting) “the environment”. While the former might speak of unfair wage relations and environmental costs in connection with imported fruit, the latter might speak of disrespectful behaviour toward Mother Earth, but they can come together within the idea of “the environment” and share strategies and tactics to end the respective injustices that they perceive are occurring in what are no longer disparate areas of life and the planet, but which are globally shared (environmental) concerns.

From the Silent Spring via the Kyoto Protocol to the recent Climate Summit in Bali and the UN Climate Summit in Copenhagen 2009 “the (natural) environment” has become a household term and the focus of concerned citizens taking collective action, forming voluntary associations in civil society and beyond.

“[F]ollowing Rachel Carson’s 1962 exposé *Silent Spring* to the early 1970s’ movements that led to federal legislation like the Clean Air Act, the Clean Water Act, and the Endangered Species Act, thousands of non-experts have forced hidden technological decisions into the public eye. An interesting example of ongoing grassroots, citizen-

15 The “natural environment”, it is perhaps pertinent to note, is in itself a socio-cultural (semiotic) construction rather than something to be regarded as an antonym to nature or “the social”.

based science activism is the Volunteer Monitor and its hundreds of local groups carrying out water-quality monitoring with homemade devices, simple observations, and open record keeping (Carlsson 2008: 31).

Boyle wanted to see the same thing happen for the cultural environment, so that, say, poets, hackers, bloggers, musicians, scholars and journalists can unite under the collective banner “cultural environmentalism” to save the public domain and ensure that future generations have access to a free flowing culture of information, knowledge and ideas. Cultural environmentalism, we could say, is a movement for the facilitation of creative unfolding unfettered by exclusive ownership arrangements.

“Cultural environmentalism is an idea, an intellectual and practical movement, that is intended to be a solution to a set of political and theoretical problems—an imbalance in the way we make intellectual property policy, a legal regime that has adapted poorly to the transformation that technology has produced in the scope of law, and, perhaps most importantly, a set of mental models, economic nostrums, and property theories that each have a public domain-shaped hole at their center” (Boyle 2006).

The aim of cultural environmentalism can be summed in the title of Lessig's “Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity” (2004),

while the subtitle sums up the analyses of cultural environmentalism¹⁶.

Relatedly, it has been clearly acknowledged that cultural environmentalism and the Free Culture movement stand on the shoulders of the giant Free Software movement, which is a key reason for the pertinence of their debates to this essay. The most successful and the original example of Free Culture in cyberspace is Free Software:

“The inspiration for the title and for much of the argument of this book comes from the work of Richard Stallman and the Free Software Foundation. Indeed, as I reread Stallman’s own work, especially the essays in *Free Software, Free Society*, I realize that all of the theoretical insights I develop here are insights Stallman described decades ago. One could thus well argue that this work is “merely” derivative” (ibid: xv).

More than a decade has passed since Boyle's seminal work and a lot has happened in both theory and practice. The environmental analogy has been further developed and the idea of cultural environmentalism is by now widely used in scholarly circles. A special issue of 'Law and Contemporary Problems' was published in spring 2007 with Lawrence Lessig and James Boyle as editors to celebrate more than ten years of developing the ideas that Boyle originally framed within his notion of a cultural

16 I use “cultural environmentalism” and Free Culture interchangeably, but will tend to the latter hereinafter, due to its close connection to Free Software. While there are subtle differences between either of these terms and what they refer to, all three movements or factions do have shared views on property, as we shall see.

environment through which he inspired a new “environmental” movement for a free cultural realm¹⁷.

The work of Benkler has seen a move “beyond a fascination with the second enclosure movement and the assault on the public domain” (Boyle 2007: 21) to begin establishing an analytical framework for understanding social production. In other words the building of alternatives. Benkler has charted the territory of the (cultural) environment that circumscribes the possibilities for human creativity and he has revealed basic points of conflict within that institutional ecology. As Frischmann writes, “[h]e views the “new enclosure movement” in terms of attempts to shape and control systems of laws and institutions that structure our relationships with the cultural environment and affect behavior within the environment. Thus, while intellectual property laws remain an integral front in the battle, telecommunication law and regulation, domain name governance, trespass to chattels, and other laws and institutions are also subject to conflict” (ibid.). The cultural environmentalist movement is thus no longer merely providing analyses of how the cultural environment is being destroyed through enclosure, but has begun to provide both descriptive and analytical accounts of the alternative modes of co-production that are emerging in cyberspace, as we saw in the preceding section.

This was a brief overview of Free Culture politics with regard to intellectual property. We saw how they frame the debate in basic terms, which sets the intangible realm – ideas, knowledge, information – apart from the tangible realm. Due to the difference in what we might call metaphysical terms, Free Culture advocates argue for a treatment of informational goods

17 The special issue is the best introduction to cultural environmentalism (See Boyle and Lessig 2007).

that does not involve “property”, which is seen as an outdated, industrial mode of organisation that is unfit for information and ideas. In this account, the material foundations of cyberspace are obscured, but they come to the fore, only framed differently, in the relation between Free Culture and the state.

Social production, as Benkler constructs it, requires the state for regulatory intervention due to the threat that the owners of the material underpinning of cyberspace represent and for the purposes of education, infrastructure and so on (I go into detail in Section 1.4).

In Benkler's discussion of social production, which is “rooted in a theoretical skepticism about the state” (Benkler 2006: 21), “the state plays no role, or is perceived as playing a primarily negative role” (Benkler 2006: 16). However, Benkler does not dismiss the state entirely. On the contrary, as part of a “practical diagnosis of opportunities, barriers, and strategies for achieving improvements in human freedom and development given the actual conditions of technology, economy, and politics” (Benkler 2006: 21), the state is embraced as an appropriate institution for securing “funding of neutral broadband networks, ... funding of basic research, and possible strategic regulatory interventions to negate monopoly control over essential resources in the digital environment” (ibid.).

In order to safeguard these new and productive social forces of cyberspace from enclosure, cultural environmentalists appeal to the state. The freedom of Free Culture is hence dependent on the state despite Benkler's “state skepticism”. On the one hand, social production is well defined and unfolds with minimal reference to the state – of which many social producers are themselves sceptical – while on the other hand, it is crucially dependent on the state to intervene and regulate the institutional

ecology in such a way as to facilitate the growth of social production, as we shall see in Section 1.4.

Benkler does not object object “in principle to an effective, liberal state pursuing one of a range of liberal projects and commitments”, but rather suggests that “the state *could* play constructive roles, if it stopped listening to incumbents for long enough to realize this” (2006: 21; emphasis added).

If the state would listen to Free Culture advocates, rather than corporate agents, it could play constructive roles. Yet Benkler recognises that the state is not necessarily the best provider of freedom and autonomy: “there is more freedom to be found through opening up institutional spaces for voluntary individual and cooperative action than there is in intentional public action through the state” (ibid.). The most important role that the state *could* play with regard to social production is to ensure that its technostructural underpinning remains freely accessible, which is a crucial role with regard to the concept of “network neutrality” (see Section 1.4.2 below). Moreover, in the “networked information economy” envisioned by Benkler, the state appears to play a more active, engaged role – in a positive understanding of engagement – than it has done in the neoliberal era of globalisation from above. In other words, a relatively strengthened state. The relationship with the state is therefore rather ambiguous:

“I offer no particular reasons to resist many of the roles traditionally played by the liberal state. I offer no reason to think that, for example, education should stop being primarily a state-funded, public activity and a core responsibility of the liberal state, or that public health should not be so. I have every reason to think that the rise of nonmarket production

enhances, rather than decreases, the justifiability of state funding for basic science and research, as the spillover effects of publicly funded information production can now be much greater and more effectively disseminated and used to enhance the general welfare” (ibid: 22).

In the next section I will briefly outline the shared tactics of the Free Software and Free Culture movements that define their strategy to foster an institutional ecology of freedom and autonomy.

Our discussion will soon show that regulatory intervention by the state – *in the absence of a revolutionary reform of the property relations that govern the technostructural underpinning of social production* – is absolutely crucial for Free Culture in the struggle against privatising forces.

1.3.2 Property and the tangible/intangible divide: a policy of what?

In this section I examine the reasoning behind the particular framing of the intangible realm that characterise information exceptionalism.

Siva Vaidhyanathan, prominent cultural environmentalist and professor of Media Studies and Law at the University of Virginia, writes that “[i]t is essential to understand that copyright in the American tradition was not meant to be a “property right” as the public generally understands property” (2001: 11) and “[c]opyright should be about policy, not property” (ibid: 15) and “[c]opyright is not property as commonly understood. It is a specific state-granted monopoly issued for particular policy

reasons” (ibid: 253). Moreover “[c]opyright was a matter of policy, of a bargain among the state, its authors, and its citizens” (ibid: 23) and “Jefferson even explicitly dismissed a property model for copyright” (ibid.).

That copyright is a matter of policy, not property might sound strange to a lawyer or a philosopher trained to understand copyright as a particular instance of property relations with a temporal limit and who understands property as a matter of policy. Some things do not quite add up. Nevertheless, that copyright is a matter of policy, not property, is a point that the founder of the Free Software Foundation, Richard Stallman, together with other advocates of “Free Culture”, wants us to accept¹⁸.

Essentially, the Free Software and Free Culture movements reject the concept of property and instead choose to frame issues pertaining to ideas, information and knowledge - or the intangible realm - in terms of freedom, liberty, human rights, policy, intervention, and regulation. Anything but property, but preferably “policy”.

Two mediate questions arise from this position: (i) What is policy? (ii) Why should we choose to adopt one term instead of another? I will answer them in turn.

18 The presentation of the Free Software Foundation's position on copyright as policy, not property that follows is in great part an outcome of an extended email exchange with Richard Stallman. In order to understand FSF's view on these matters I commenced the exchange and sent, so far, 44 emails between May 12, 2007 and January 30, 2008. Stallman responded with 58 emails between May 13, 2007 and January 18, 2008. In the original thesis manuscript I sincerely thanked Richard Stallman in the acknowledgements for taking his time to engage in this exchange. I do so here again.

What is policy? Is there something in the word that clearly delimits it from property? What does policy actually mean and where does the term come from? It is term that is etymologically compounded by two roots. The Greek “polis” - πόλις – which means “city” or “state” and also “citizenship” or a “body of citizens”. In other words, a rather general term suggestive of “political society” and those “who make up that society”, either individually or collectively, or their status within that political society. The second root of policy is the Latin “politus”, which means “polished” in the sense of “refined”. In late Middle English the compounded “policy” ambiguously referred to “political sagacity” *and* “political cunning”, the former presumably the meaning it had for those in power, while the latter likely reflects the views of common people. Despite the ambiguity, or perhaps exactly because of this ambiguity, policy referred to “what those in power are doing, how they rule society”. The modern term policy, then, enters the English language conveying the meaning of “a constitution”, which is now rare or obscure, but in 18th century political science referred to “government, administration”; or was equated with “polity”, which in turn meant “civil order”, “administration of a state”, “civil government” or “a particular form of political organization” (OED 1955: 1536-1537)¹⁹. In other words, policy is a broad term that we may say refers to a variety of activities that a state performs as part of the governance of its people.

In the context of capitalist democracy, therefore, the conventions that institute its particular form of private property is a central

19 The term also means “a document containing an undertaking ... to pay a specified amount ... in the event of a specified contingency”, or a “promissory note”, both of which are suggestive of the contemporary usage in “insurance policy”.

part of the state's *policy*. It is a policy that gives rise to certain laws, such as “theft” codified into a statutory offence in the Theft Act 1968 in the UK, where Section 1 reads “A person is guilty of theft if he dishonestly appropriates property belonging to another with the intention of permanently depriving the other of it; and “thief” and “steal” shall be construed accordingly” (Theft Act 1968). Private property is part of the state's policy and the Theft Act is an enactment of that policy, which is necessary to secure the stability of possessions as declared in the policy.

If we return to the claim that “copyright is policy, not property” it becomes obvious that there is a conflation at play, which is deployed for tactical purposes. The choice of policy over property is presented as a matter of tactic, rather than analysis: tactically it is decided to focus on “policy”, despite an analytical awareness that property can take on many different forms. This tactic is chosen on the assumption that the public cannot understand the term “property” in the way that lawyers and philosophers are able to.

However, property *is* a form of policy – or it is a manifestation of policy. We may say, for instance, that “private property is a central ingredient in foreign aid policy in order to further entrepreneurship” or that “private property was central to Thatcher's reasoning for the policy to turn council housing tenants into house owners”. Or, expressed differently:

“If it is true—as it must be—that copyright is policy, then it is equally true that all property rights are policy” (Mossoff: 2005: 33).

The claim that copyright is a matter of policy, not property can also be unpacked differently. Instead of arguing whether property means this or property means that – in the context of what are

essentially *artifices of justice* at any rate – we can ask what debates around each of these respective issues entail. What kind of questions are asked in discussions about property relations and what kind of concepts are at play in discussions about copyright. Here it “is easy to see that every tangible property entitlement has arisen from a crucible of moral, political, and economic analyses, and thus implicates the same questions about utility, personal dignity, and freedom that now dominate the debates over digital copyright. The preeminent property cases that every law student studies in the first year of law school are exemplars of this basic truth” (ibid.). Nevertheless, investigating the claims of the “information exceptionalists” further will be instructive²⁰.

As part of the tactic to substitute policy for property in the context of understanding copyright, Free Culture advocates claim that copyright understood as property is a modern invention carried out by scheming corporations using the rhetoric of (natural) property to distort the public perception of the underlying and original policy of copyright (Stallman 2004)²¹.

20 I am slightly altering Mossoff's (2005) terminology, who calls the Free Culture advocates “Internet exceptionalists”.

21 This “fact” has a curious history in itself. Hughes (2006) calls it a result of the “scholarly house of mirrors” (ibid: 1001) and notes that it seems to first appear in Vaidhyanathan (2001: 11-12) in reference to Lemley (1997). There is no other origin of this “fact”, which has become common currency in the Free Software and Free Culture movements. As Hughes writes, it was cited twice by Lessig in footnotes stating “the term intellectual property is of relatively recent origin” (2004) and “a touch less guarded ... “the term is of recent origin”” (2001). Stallman uses the authority of “Professor Mark Lemley, now of the Stanford Law School” to state that “the widespread use of the term “intellectual property” is a fashion that followed the 1967 founding of ... (WIPO)” (Stallman 2004). It turns out that Lemley casually, in a footnote, mentions that the “modern use of the term “intellectual property” as a *common descriptor* of the field *probably* traces to the foundation of the World Intellectual Property Organization” (Lemley: 1997:

However, the

“...story supposes that a multilateral treaty would be written and an international agency established with a wholly new name that no one was familiar with. In fact, WIPO’s predecessor international agency was called the “United International Bureaus for the Protection of Intellectual Property.” It was commonly known by its French acronym, BIRPI. BIRPI was formed in 1893, as a combination of two small agencies that had been established to administer, respectively, the Berne and Paris Conventions. Thus, “intellectual property” was a conscious, nineteenth-century category created to subsume both “literary property” (Berne) and “industrial property” (Paris).” (Hughes 2006: 1005-1006)

Further good evidence for the tradition of understanding copyright and patents as property has been provided recently as a response to these seemingly misleading claims:

895; emphases added). This clearly shows that he is *not* speaking of copyright, but of the subsumption of *all* of the particular legal arrangements known as intellectual property rights under one common banner. On the other hand it shows the “viral power of a statement by a respected academic” (Hughes 2006: 1003). Moreover, the publication in which Lemley gave birth to this fast circulating “fact” was in fact a book review of James Boyle’s seminal work (1997), the work with which Boyle founded the cultural environmentalism movement (which has become synonymous with the Free Culture movement). Lemley’s review was relevantly called “Romantic Authorship and the Rhetoric of Property”.

“There can be little question today that intellectual property assets are forms of “property.” The Patent Act expressly declares that “patents shall have the attributes of personal property” and the Supreme Court acknowledges them as such. The Copyright Act states that “ownership of a copyright may be transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession.” (Menell 2007: 37)

Consider also a publication that pre-dates cultural environmentalism and Free Culture:

“English law has considered copyright a form of property. An 1842 decree asserts that "Copyright ... shall endure for the Natural Life of Such Author and shall be the Property of Such Author". In other decrees the terms "the owner of the copyright," "ownership of copyright" and "proprietary rights" are mentioned“ (Matuck 1993: 406; see also Mossof 2005, 2007).

There is no evidence to suggest that intellectual property is a new term, on the contrary. To understand why Free Culture and Free Software advocates are rejecting the term, we need to understand their perception of the public imagination and the public's capacity to understand issues concerning property and social organisation. Lessig explains:

“If you're a lawyer, it's OK to think of intellectual property as property, because we're trained to use the word property in a careful way. We don't think of it as an absolute, perpetual right that can't be trumped by anybody. We understand property rights are constantly limited by public-use exceptions and needs, and in that context we understand intellectual property to be a very particular, peculiar kind of property -- the only property constitutionally required to be for limited terms. It's clearly established for a public purpose and is not a natural right ... The real problem is when people use it in the ordinary sense of the term property, which is "a thing that I have that nobody can take, forever, unless I give it to you." By thinking of it as property, we have no resistance to the idea of certain great companies controlling "their" intellectual property forever. But if we instead use terms like monopoly to describe the control that companies like Disney have over art objects like Mickey Mouse, it's harder to run naturally to the idea that you ought to have your monopoly right forever” (interview in Walker 2002).

Copyright, then, *is* property, for a lawyer and a philosopher, and property for a lawyer and a philosopher *is not* simply private property based on a natural right that requires no justification. For the “public” and in “ordinary” usages, on the other hand, property is a natural right according to Lessig: Stallman agrees:

“I, along with most people, consider property rights as natural rights, something people are simply entitled to. They don't need any specific justification; rather, exceptions need justification” (Stallman 2007: email)²².

Do most people really think that, I wonder? However, it is not a question that is really relevant here. Two principles prevent us from entering into such questioning. Firstly, this is an academic and scholarly exercise, to the best of my abilities, and secondly, we are certainly not in the business of misleading “the public” on the basis of the assumption that “the public” is unable to understand property properly. If anything, a very careful explanation to “the public” of what property means for lawyers and philosophers would be called for, rather than a misleading, non-factual deviation. Such a careful explanation will be provided in Chapter 2. Let us here disentangle the confusion, which will reveal a different effect of the “framing effect”.

Stallman uses the term “framing” to strengthen the Free Culture claim and justify the tactic to treat the public as too unwitting:

“Bringing the word "property" into contact with this issue in *_any_* fashion frames the issue in favor of whoever is the "owner" of the "property". Everyone can sympathize with "Keep off my property! I can use my property any way I like." And that is the basis that non-philosophers will use to respond to your statement ... In the "network neutrality" debate, that framing favors AT&T. In copyright issues, that framing favors the author or publisher.

22 Email written December 29, 2007. On file.

The issue here isn't the history of Western modern ideas of property rights. (Property rights existed before 1700.) It's about what people (other than philosophers) think today. I agree with you that, at the fundamental level, property rights are conventions set up by society, and that these conventions could be set up in various ways, and that we can present arguments in favor or against various proposals. None of these conventions is beyond the domain of questioning, and although I accept the idea of property rights as the default for physical objects, I can consider the question. I think you will find that a large part of the public won't go that far. Merely to call patents a "property right" will make it difficult for many people even to entertain opposition to them.

You're probably aware of the effect that the way of framing an issue has on people's thoughts. Perhaps philosophers have trained their minds to the point where they can overcome this effect -- but not most people. If we frame copyright issues in terms of "property", that is in practice a terrible handicap" (Stallman 2008: email)²³.

There is good reasoning and cogent argumentation behind the tactical choice to *not* frame the politics of Free Culture and Free Software in terms of property. However, I am wary of discussing legal and philosophical concepts in a way defined and determined in scope by popular opinion, especially in the context

²³ Emails written January 17, 2008, and January 18, 2008. On file. The concept of "network neutrality" will be explained in Section 1.4.2

of the free flow of information, ideas and knowledge - and a Free Culture in general. I lean toward sharing knowledge and skills with “the public”, rather than simply assuming their ignorance.

Indeed, I argue that framing Free Software in terms of property has great potential. Imagine what would happen if Free Software was understood as property and the public came to learn that copyright, as a form of property, could take very different and shared and collective forms and be temporally limited. The concept of property would be relativised, so to speak, and no longer take the particular form that appears to be tattooed onto everyone’s mind, namely the kind of private property that characterises capitalist democracy. For Ayn Rand, subverting the understanding of one intellectual property right means nothing other than the dissolution of “all other rights”:

“Patents are the heart and core of property rights, and once they are destroyed, the destruction of all other rights will follow automatically, as a brief postscript” (Rand 1966: 128).

Currently, property is understood in what Stallman and Lessig so cogently noted was an incorrect manner: a natural, absolute, perpetual right to do whatever you please. Free Software, however, is very differently configured and if understood as property would force upon that concept substantial reorientation. If indeed framed in terms of property, Free Software might constitute a threat to capitalist property, because it reveals that capitalist property is only one of many possible ways of configuring property. Viewed upside down, then, the tactical framing (i.e. *not* in terms of property) that is central to Free Software politics, serves to protect Free Software from public *misunderstanding*, just as much as it serves to protect private property from public *understanding*.

Understanding Free Software as property potentially provides a fresh view on property that is not alien to lawyers and philosophers and which would be enlightening to “the public” (whoever that may be). It opens a door to the politics of property, which, according to the Free Software and Free Culture movements, is suffused with misunderstandings. A lack of information, I claim, is a signal to open up the black box of property and let insights circulate freely; and *not* a signal to keep the black box of property closed. Yet, Stallman disagrees:

“Our goal is to establish relations about software which are not property relations. There are rules, yes; but these rules are not like property rights (unless you stretch that term so far it will snap)” (Stallman 2007: email)²⁴.

Snapping property is precisely what I am aiming at. The institution of property is a core element in political thought. Revisiting it, revising it, and understanding property in new contexts in the same way that you re-read a novel to grasp dimensions that you had previously failed to notice, is a recurrent political task. In times of change, when the technological, cultural and social circumstances change around us, we need to address the core rules and laws that typify society to ensure that they fit and are sensible in the new context. One such core rule or law is property and it is necessary to continuously redefine its boundaries. That is my claim, but that is also where my view diverges from Stallman’s:

²⁴ Email written May 15, 2007. On file.

“I think the "institution of property" is an overbroad idea, not useful for thinking about political issues ... If [redefining the boundaries of property] is your goal, it seems that we are fundamentally opposed” (Stallman 2008: email)²⁵.

Because of this divergence, the “policy approach” that defines Free Software and Free Culture is irreconcilable with an anti-capitalist position. That incommensurability is clearly reflected as Lessig states his position with regard to private property:

“I [do not] condemn “proprietary culture.” Proprietary culture has been with us from the start and for most of our history has served creativity and culture well. What I do condemn is extremism—the shift from the standard view to an extreme version of “proprietary culture” that could easily become embedded in the digital economy” (Lessig 2005: 63).

Given that Lessig primarily sees property as referring to the tangible realm only, the statement that proprietary culture serves us well must include reference to exclusive ownership of land, the means of production and distribution. In short, Lessig refers to the very heart of the capitalist economy, which social movements all over world have resisted for hundreds of years. Lessig thus defends the industrial machinery that has landed humanity in an unprecedented ecological crisis and a relatively profound and prolonged economical crisis. Private property rights are embraced uncritically – except for in cyberspace – in submission to the invisible hand with the violent fist. The

25 Emails written January 17, 2008, and January 18, 2008. On file.

uncritical view on existing property regimes is here confirmed by Benkler:

“This is not to say that property is in some sense inherently bad. Property, together with contract, is the core institutional component of markets, and a core institutional element of liberal societies. It is what enables sellers to extract prices from buyers, and buyers to know that when they pay, they will be secure in their ability to use what they bought. It underlies our capacity to plan actions that require use of resources that, without exclusivity, would be unavailable for us to use” (Benkler 2006: 23-24).

The market is a useful and integral element of a liberal society of the kind that Benkler is advocating, because it facilitates contractual relations between rational agents that enable them to plan actions and produce things. The market is good for humanity, *as long* as it behaves nicely in cyberspace. The point of Free Culture “is not to rethink real property but to explain the ways in which the economic theory of real property falls short when applied to the rather different world of intellectual property” (Lemley 2005: 1097). When it comes to the economic theory of “real property” as they call it, there is nothing to question, because we can “say with some confidence that a right of physical exclusion works as a legal matter because its benefits exceed its costs” (Lemley 2005: 1099):

“Real property rights do in fact serve two valuable goals. First, they prevent rivalrous uses by multiple claimants to a particular piece of property and therefore avoid the tragedy of the commons. Second, they allow their owners to invest in improving or developing the property” (ibid: 1098).

For the Free Software and Free Culture movements, we have seen, (mis)understanding property is a matter of tactic, not analysis. The overall strategy, it has been revealed, does not include a critical perspective on ownership in the tangible realm. The analysis of this chapter, on the other hand, will show that this tactical approach at the expense of a thoroughgoing, critical engagement leaves Free Software and Free Culture eternally vulnerable to enclosure. That is because exclusive ownership of the technostructural underpinning of cyberspace – the materiality of cyberspace, as it were – permits those owners to seek rent in and prioritise traffic on their network: exclusive, private ownership in the tangible realm permits an extraction of wealth from activities that unfold in the intangible realm. There is no such thing as a purely immaterial mode of production or circulation, not even dreaming or telepathy come close. Nothing in cyberspace exists without a material foundation, as we shall see in the next section. For that reason, Free Culture must appeal to the state to ensure that capitalists play ball in cyberspace and do not extract wealth in the manner to which they are accustomed.

By implication, then, Free Culture requires a strengthening of the state – and an *always strong* state – while the problems of private property rights in the tangible realm remain unquestioned. Consequently, the novelty of the social relations for which protection is sought are instead conceptualised in terms that rather permit for market forces to profit from them, than provide protection in a substantial sense. From an anti-capitalist perspective the celebrated co-productive relations are hence lost in the sense that they are not applied to that province of our knowledge and legal systems called property. It is, however, a desolate province in urgent need of cultivation. Understanding Free Software as property and commons-based peer production as a new mode of production that instantiates a non-capitalist

space in society on the basis of novel property configurations, I argue, will cultivate an understanding of property that is very instructive.

In the next section I consider the interpenetration of the tangible and intangible realm to further expose the problems of the “policy approach” of the “information exceptionalists”.

1.4 Material foundations: on cables and machinery, food and shelter.

“A child of five would understand this. Send someone to fetch a child of five” (Groucho Marx).

1.4.1 The interpenetration of tangible and intangible.

In this section I first present some facts and figures about the materiality and energy usage of cyberspatial activities and then briefly consider the validity of the capitalist claim that informational goods require investments to be made, insofar as the material realm is organised by means of exclusive, private property rights.

The very obvious problem of separating the intangible realm from the tangible realm is that the intangible realm necessarily relies upon the tangible realm. It is not possible to send emails or surf the web without hardware and networks. The environmental impact of the IT industry was perhaps first noticed by the Silicon Valley Toxics Coalition (SVTC n.d.), which was formed in 1982 after concerned citizens discovered leaks at manufacturing plants of IBM and Fairchild Electronics which were the suspected cause

of widespread birth defects and health issues in the Silicon Valley. That was of course only the beginning.

Gartner Research, in 2007, estimated that the “global information and communications technology (ICT) industry accounts for approximately 2 percent of global carbon dioxide (CO₂) emissions, a figure equivalent to aviation”. As the global ICT industry is the fastest growing carbon emitting industry, cyberspace is now a bigger cause of carbon emissions than the aviation industry. Arriving at this conclusion, Gartner’s research “included all commercial and governmental IT and telecommunications infrastructure worldwide, but *not* consumer electronics other than cell phones and PCs.” (Gartner 2007; emphasis added). Considering the scale of energy use required to power Internet services, such as search engines, will further put matters in perspective. The energy consumption of Internet searches estimated by Harvard physicist Wissner-Gross, whose *cyberwarming research* has been corroborated by John Buckley, managing director of carbonfootprint.com, a British environmental consultancy (Leake & Woods 2009), and ETC Group’s Jim Thomas (2009), is staggering when considered in context. Matilda, a wind turbine decommissioned in 2008, generated more renewable energy than any other source in history during its 15 years of activity, namely 61,4GWh (Leufstedt 2008). This energy output would power approximately 5.5 billion Internet searches or less than a month’s worth of current Internet search activity. Daily Internet searches constitute the equivalence of 2500 passengers taking a transatlantic flight (The Times 2006). All of these numbers are estimates, but they certainly indicate that cyberspace is not a clean environment. Moreover, they are based on Internet searches alone, and do not include the much more significant energy use associated with for instance watching multimedia content, once the search engine has taken you there.

Google has responded and strongly noted that these numbers are much too high and that:

“In terms of greenhouse gases, one Google search is equivalent to about 0.2 grams of CO₂. The current EU standard for tailpipe emissions calls for 140 grams of CO₂ per kilometer driven, but most cars don't reach that level yet. Thus, the average car driven for one kilometer (0.6 miles for those in the U.S.) produces as many greenhouse gases as a thousand Google searches” (Google 2009).

The way Google figures it, however, leaves out *external energy consumption* (i.e. accounts only for *added* Google in-house energy consumption) and does not even account for the running of the institution of Google as such, let alone the rest of the cyberspatial networks that make Google's business possible, thus speaking at cross purposes with Wissner-Gross and besides the point: the very point of *cyberwarming research* is to make visible the total energy consumption generated by cyberspatial activities from peer-to-peer and from consumer's home computer *through* provider networks *to* the central servers *and back* again. That is, all aspects of the energy required to inconvenience the electrons necessary for a given cyberspatial activity. Nevertheless, considering only the *minimal amount of energy* in the *optimal time* that a search query strains the Google machine, it is still equivalent, according to their own numbers and estimating a current, but fast growing 250.000 Google searches per day (Tanaka 2008), to almost 7.5 times around the world at the Equator - *per day* – in the kind of car that Google uses in their calculation. In a sense, it appears to me that Google is corroborating, rather than refuting the estimates presented above

by admitting these numbers; certainly it is clear that cyberspace is a very energy intensive reality.

Moreover, to take note of the full cycle of a commodity's life span, the SVTC speaks of a “Global E-Waste Crisis: Threatening Communities Around the Globe” in connection with disposal of electronics discarded by consumers in the EU and the U.S.. The disposal is causing severe environmental and health problems in especially Mexico, Nigeria, China, Pakistan, India and Singapore (SVTC 2009).

Founder of the electronetwork.org, Brian Thomas Carroll, reminds us what these numbers actually mean:

“The grand project that is Cyberspace is grounded in the mundane realities of what is required to sustain it. Today's multitudinous technological breakthroughs such as the Internet are still reliant upon ancient and recurring themes tying the diagnostic health of Electrical Civilization to its sources of energy, war, and economic stability .. Through architectural language, one can see the otherwise intangible Cyberspace materialized in the power, media, and technological systems of the Electrical Infrastructure. In so doing, pressing issues such as war, energy inefficiency, global warming, pollution, and economic instability can be structurally related to the seemingly separate experience online the Internet. Identifying this relationship can help to educate and organize citizens who want to address common yet otherwise ignored needs of the representative human public” (Carroll 2001).

There is an enormous industrial apparatus underpinning cyberspace. From mining of minerals used in conductors through satellites in space to those who labour in the very material processes of their production, maintenance, and disposal, cyberspace is anything but virtual. Understanding life in cyberspace as immaterial – a space of movement and no body – hides the very reality of environmental costs and exploitation of labour from view.

I now consider the fact that the intangible realm is indeed very material from the perspective of producers of informational goods.

No activity can unfold without material underpinning. Even knowledge creation is always bound to, and dependent upon the material realm: it requires at the very least a human body, including all the material inputs necessary for its reproduction (food, a shelter for repose, garments to protect from weather, medicines to heal when broken); moreover, most economically interesting knowledge creation nowadays requires also chairs and desks, offices, books, computers, electricity and other vital means of communication and information exchange – indeed intellectual quests presuppose a form of flesh-and-bone community.

Knowledge and information cannot be said to be entirely non-exclusive and non-rivalrous, since it has clear material foundations, and that is why the arguments *for* privatisation in the intangible realm are often so convincing. After all, knowledge creation requires certain material conditions to be in place and the provision of these is an expense, or requires an investment. Privatisation (of intangible products) bears promises of a return on (tangible) investments. Indeed, the capitalist claims, not only is enclosure *fair*, as a means of ensuring capital

returns to the investor, but enclosure might even be *necessary* in order to encourage knowledge creation, for it is thought that few would want to invest time, labour and other capital without a promise of a financial returns. As Kenneth Arrow, also quoted above, notes: “If information is not property, the incentives to create it will be lacking” (1996: 125).

Although the idea that no one would spend time, labour and capital without taking advantage of the (incentivising) promise of enclosure and privatisation of their product has been shown to *not* be true at all times and in all settings (otherwise you would not be reading this essay about Free Software, since it would not exist), some strong arguments in that favour have been made. D. A. Burge, for example, recounts the story of Alexander Fleming who upon discovering penicillin in 1929 refused to pursue patent protection in order for commercialisation and production to take place without anyone asserting monopolistic rights. Unfortunately, the result of this “fatal folly” was that for 14 years no commercial manufacturer was willing to invest the needed resources to purify the drug and develop the techniques necessary for commercial manufacture (Burge 1984: 27).

The interesting question here, however, is whether this really tells us something about human innovative processes, creativity, and motivations in general, or whether this is not rather simply a story about the mechanisms through which investment decisions are made in capitalist economies, after all, all societies constrain and enable human action in particular ways²⁶. What it precisely

26 Consider as counter-point the story of Jonas Salk and patents. Salk invented the first safe and sound polio vaccine in 1955 and when asked who held the patent he questioningly replied: “There is no patent. Could you patent the sun?” The rest is history. Salk moved to Torrey Pines Mesa by San Diego to set up a research shop. His reputation became great for two reasons, firstly,

tells us is that as long as the means of production and distribution (in the tangible realm) are owned exclusively, there are good arguments for why such exclusivity should be extended into the intangible realm. As the two realms are so clearly mutually interpenetrating there is a good case to be made for organising them along the same lines.

When Benkler states that asymmetrical or exclusive, private property “constrains action” (2006: 24) he is right. This is obvious. However, the constraints that I face in the tangible realm are primary to those that I face in the intangible realm. Buying a computer is a first step and, even then, downloading Free Software will only be possible once I have also bought access to the Internet from a corporate provider. Pace the information exceptionalists, the major obstacle to social production is private property in the *tangible* realm, because the threat of private property in the intangible realm is merely a consequence of the existing regime in the tangible realm. If the private property regime that governs the tangible realm was radically reformed, there would be little left to fight against in the intangible realm.

of course, he established a breakthrough in polio vaccine research - his is still considered the safest-and saved many lives, but secondly he did it in what is now called “the Salk way” by insiders of that industry. Salk’s research facilities are surrounded by what is generally considered to be the densest concentration of biological science companies and research institutes in the world. Many followed because the social mission of Salk resonated with them and because in an environment where information flows freely ideas and knowledge come cheap. “Salk attracted world-class scientists such as the late Francis Crick, co-discoverer of DNA’s function as carrier of the genetic code, and Leslie Orgel, a chemist who has made major discoveries about the evolution of early life” (Fikes 2005).

In the next section we shall see how the reality of ownership in the tangible realm continually pose a threat to the intangible realm. This will become evident by reviewing the debate about “network neutrality”.

1.4.2 Network neutrality and the advertising company called Google.

“Washing one’s hands of the conflict between the powerful and the powerless means to side with the powerful, not to be neutral” (Paulo Freire).

In this section I consider a current debate concerning “network neutrality” in the context of the discussions above and with particular reference to property. It will illustrate the interplay between the tangible and intangible realms and – by extension - how exclusive control over tangible resources facilitates an extraction of wealth from social relations that unfold in any intangible realm that is underpinned by those tangible resources. The illustration will further reveal the philosophical problems and political implications of information exceptionalism.

I take as point of departure the “network neutrality” debate, which is a very heated policy debate in the U.S. However, it is not the particularities of that context nor the debate as such that is important for our present purposes. It is the principles at play with respect to the physicality of the Internet and the activities of those who use it that I want to show and present in a more general manner, but with particular reference to property relations.

To understand the concept of network neutrality it is necessary to understand the basic architecture of Internet traffic. The Internet is a physical network that consists of *cables* – through which data traffic flows in packets – and *switches* that relay data packets. Data transmitted through the Internet, such as an email, is disassembled by the sender's computer into data packets consisting of 1500 characters each, which are then reassembled in the receiver's computer to form a whole email.

Think of a packet as an envelope with your own name – as a sender - and the receiver's name on it *and* some form of identification that ensures that each group of packets are reassembled correctly. When you have sent an email (consisting of more than 1500 characters, including headers and other meta data) it will leave your computer in several packets. These packets will arrive at switches that will pass them on without any concerns for where they are going, unless a given packet is meant for a destination that the switch in question recognises as being located on a different network, i.e. a local or sub-network. Otherwise the packet is simply passed on to the next switch via the route that offers the least resistance.

Because it all happens at the speed of light it does not matter much in human terms of time whether a packet passes by Tokyo on its way from London to New York. If the route via Tokyo is less congested, such as when people in Asia are asleep and thus not using the Internet, that route might just constitute the systemically optimal solution.

It is in this way that the Internet is non-central: it has no central command structure without which it cannot survive. If a part of the Internet is broken, packets just travel by another route. Each switch merely relays. The Internet, by analogy, is like an ant colony. There is little intelligence, in human terms, exhibited in each ant, but as a whole, on a collective level, they are very

intelligent²⁷. The Internet is the whole of the colony, while a single switch is an individual ant. This non-central E2E (end-to-end) architecture is the amazing thing about the Internet and in terms of development it means that anyone (with the financial means, subject to political will) can add some kilometres of cable to the existing structure and thus become part of the group of Internet owners. In terms of traffic it means that no one is discriminated against. All packets are equal before the Internet law of traffic. The openness of the Internet standards of transmission is at the core of the Internet's philosophy and is "one of the great technological breakthroughs of the twentieth century" (Naughton 1999: 20). The network is neutral, as it were.

It is this neutrality with respect to data transfer that together with the materiality of cyberspace underpin Free Culture, which is why strong arguments are made in favour of maintaining the Internet's informational neutrality. In the following I provide a very brief overview of the network neutrality question.

Network neutrality is another way of saying "common carriage", which is an ancient concept. It basically "guarantee[s] that no customer seeking service upon reasonable demand, willing and able to pay the established price, however set, would be denied lawful use of the service or would otherwise be discriminated against" (Noam in Crawford 2007: 51). In the context of the Internet, network neutrality as a policy of intervention is supposed to practically ensure "common carriage". In practice that would mean that no packet of data is prioritised by any switches or routers of the Internet and consequently the anti-

27 It is curious that the exact opposite can be said about humans, who, according to their own terms!, exhibit a lot of individual intelligence, but on a collective level, according to those same terms, appear infinitely inferior to ants.

capitalist mobilisation email can circulate as fast as the latest commodity flow by Walt Disney & Co.

The “opposite” (or absence) of network neutrality would be if network owners exercised their rights – as given by the private property rights regime - to exclude any activity from their network as well as demand varying fees for any activity that they *do* allow on their network. Some configurations of private property define the right to do just that. If I have an apple I am allowed to offer it to X for a tenner and to Y for a fiver. However, there is a tradition for competition policies to regulate such matters in the realm of commerce. For instance, the local shop is not allowed to charge me a fiver and you a tenner for the same commodity. The mail company does not demand to read the content of your letters and charge you more if it is a desperate letter to your estranged lover. The playing field is supposed to stay level. That is a competition aspect. On the other hand it is also assumed that for innovation to occur, the incentive of exclusion and rent seeking in your creations are needed. The promise of return (as opposed to creativity in general, curiosity or even boredom) is what drives innovation on economic terms. There is in other words a tension.

Private property is needed for innovation to occur, but the exercise of the rights of private property threatens competition. The network neutrality debate concerns finding a balance between innovation and competition. The standard function of private property structures innovation, while regulatory intervention ensures competition. Forth and back.

“The questions raised in discussions of open access and network neutrality are basic to both telecommunications and innovation policy. The promotion of network neutrality is no different than

the challenge of promoting fair evolutionary competition in any privately owned environment, whether a telephone network, operating system, or even a retail store. Government regulation in such contexts invariably tries to help ensure that the short-term interests of the owner do not prevent the best products or applications becoming available to end-users. The same interest animates the promotion of network neutrality: preserving a Darwinian competition among every conceivable use of the Internet so that ... only the best survive” (Wu 2003: 142).

A major concern in this debate is *vertical integration*. An example of a vertically integrated company is Virgin Media. They produce content, such as music, they own cables through which their media content can be transmitted and they provide internet connections. It is thus possible for an Internet user to stay entirely within a zone owned by Virgin. The same goes for AOL Time/Warner, which also controls a supply chain all the way from media production to delivery to consumers. The point of vertical integration is obvious: no one can pose obstacles to your business at any point in the processes from production through wholesale and transport to retail. It is a matter of control and it is a form of monopoly.

The obvious problem occurs when I have a connection to the Internet with a vertically integrated provider, but want to consume content produced by their competition, such as video from Youtube, which is part of Google. Such content could be slowed down or even blocked. A similar example is the case of a telephone company that owns Internet cables and blocks Internet telephony services, such as those offered by Skype, because they undermine their own business. Although threats have been posed

and technologies developed, the Internet has so far remained more or less neutral.

Those are the issues that have given rise to the network neutrality debate. I now look at a related problem, which illustrates the significance of network neutrality and tangible ownership.

The network neutrality debate has been unfolding since the late 1990s. In the same period the Google corporation emerged as a key player in cyberspace. Google has become one of the strongest supporters of neutrality on the Internet and - in part - to that end they have hired as Vice-President and Chief Internet Evangelist one of the fathers of the Internet, Vinton Cerf. Addressing the U.S. Senate Committee on Commerce, Science, and Transportation Hearing on “Network Neutrality”, Cerf stated on behalf of Google that:

“Even as we welcome the deregulation of our telecommunications system, we should preserve some limited elements of openness and non-discrimination that have long been part of our telecommunications law. Absent real physical layer competition, Google supports a tailored, minimally-intrusive, and enforceable network neutrality rule (Cerf 2006: 7).

In October 2009 the Federal Communications Commission (FCC) published a draft for comments which articulates what Cerf calls a “minimally-intrusive” and “enforceable network neutrality rule” and one of the most outspoken advocates of network neutrality, Lawrence Lessig, called the proposal “perfect” (Gustin 2009). Although many details remain to be decided upon, the network neutrality debate, we can say, has been won by its supporters. The FCC will intervene and regulate.

However, tension remains, in great part because of the particular business model of Google.

"The network builders are spending a fortune constructing and maintaining the networks that Google intends to ride on with nothing but cheap servers ...It is enjoying a free lunch that should, by any rational account, be the lunch of the facilities providers" (Mohammed 2006).

Let us investigate what Google's free lunch consists of. Google is an advertising company that uses a search engine – and by now many other information services - to attract customers. That is arguably their basic business model, because that is how they profit (BBC 2005). As a user of Google you receive information “for free”, but your activities within the Google domain generate revenue from advertisers for Google. That is, in short, because Google can facilitate the placement of targeted advertising on your screen based on your search history and habits. Google can do this because they have huge server farms all over the world of which little is known. It is estimated that Google has up to 450,000 servers in these farms (Chandler 2008: 299). In other words, Google can extract wealth from social production, because *they own tangible* resources through which the data transfers of millions of people can be indexed, organised and otherwise manipulated. These hardware resources interestingly run on Free Software. Google has thus become one of the world's most powerful corporations on the basis of a software platform that is an outcome of commons-based peer production. Volunteers have created the software that Google uses, and volunteers put this software to work, thus generating an income for Google.

The wealth extraction aspect of Google's model obviously lies in the fact that they own a lot of tangible material, i.e. the computers on which this Free Software runs. With possibly half a million computers Google is able to provide a lot of services to people and in turn sell advertising space and other services to companies that are interested in online behaviour. The sophistication of Google's search engine algorithms – of which little is known – obviously increases as people are using the search engine and as more and more behavioural data is collected – i.e. the more we use Google's “free services” - the more money Google makes. It is the users of the Internet that make Google function and it is essentially social production that fill their coffers.

The underlying reason for the functionality and success of this business model is that the network owners so far have been selling their network services like any other business. Very simplified it means that if you want to purchase 100 terabytes of data traffic you pay 100 times the price of one terabyte. This business logic suited everyone until Google began to extract wealth from social production, which is to say that they began to extract wealth from social and creative activities on the Internet in ways that no one had done before.

Google operates on the basis of a clever advertising structure and – allegedly – very sophisticated search engine algorithms. The secret of Google's success in economic terms is that they found a way to *internalise* the *positive externalities* inherent in activities in cyberspace. In a way, we are all commons-based peer producers for Google. Most people enjoy Google's business model, whether they know about it or not, because it includes the provision of many “free” services. These services can be considered remuneration for your “free labour” (see the next section). However, the network owners did not foresee that their

customers would be able to extract wealth from social production in this way. When the Internet business began, it was simply like selling carrots. Now things look different, because some traffic might be worth a lot more than other traffic. According to the CEO of AT&T:

“There seems to be a mentality [on the part of online companies such as Google] that they can put more and more through our pipes for free [sic] ... We’re the ones who built the network. You cannot make that sort of investment if you can’t make a return on the capital. They’re more than welcome to use our networks, but if they do, they’re going to have to pay. It’s not free” (AT&T CEO in Crawford 2007: 51).

The network owners have noticed that Google is internalising positive externalities and naturally want in on the action. That is business as usual and because they are in fact the owners – they have private property rights in those networks – they are entitled to seek rent under normal circumstances. It is those normal circumstances of private property rights and market competition that the policy of network neutrality is intended to regulate. It is therefore no wonder that Google is an outspoken network neutrality supporter.

The important aspect of the network neutrality debate for the purposes of this essay is that it illustrates how wealth extraction functions and how ownership of the tangible resources that make cyberspace possible facilitates that process of extraction.

In the last part of the section I will briefly look at how this kind of wealth extraction is becoming more and more widespread in cyberspace.

The Google business model is no longer unique. It has become a common way of doing business on the Internet. It is often celebrated under the label “Web 2.0”, which by many commentators is associated with “social networking”. The most famous so-called social networking framework is Facebook. However, Web 2.0 would more correctly be labelled “a business model to extract wealth from social production”. Social networking has been one of the main features of the Internet from before the World Wide Web made the Internet popular and, thus, long before wealth extraction businesses like Facebook came along and provided a commercial framework for social relations.

A Web 2.0 company, to explain briefly, will offer a service for “free”, which it will use as a honey pot to attract unwitting worker bees from whose social relations and behaviour some wealth can be extracted. The hype around Web 2.0 concerns just that. The use of the Internet as a medium of social relations and networking, however, is nothing new. The creator of the Hyper Text Transfer Protocol Tim Berners-Lee, who “isn't swayed by the hype machine” (Anderson 2006) says about Web 2.0:

“Web 1.0 was all about connecting people. It was an interactive space, and I think Web 2.0 is of course a piece of jargon, nobody even knows what it means. If Web 2.0 for you is blogs and wikis, then that is people to people. But that was what the Web was supposed to be all along ... the idea of the Web as interaction between people is really what the Web is. That was what it was designed to be as a collaborative space where people can interact” (Berners-Lee 2006)

What Berners-Lee is missing is that the novelty of Web 2.0 is not merely sophisticated tools for social networking, but rather that these social networking tools often consist of vast amounts of hardware (tangible means of production) that facilitates social networking, *while also* gathering or handling or manipulating data of various forms extracted from those social networking activities.

The architecture of the Internet is defined by its end-to-end (E2E) or peer-to-peer (P2P) principles, as we saw above, and the World Wide Web is deliberately an extension of this architecture. Social networking is the very purpose of the web, but that purpose was meant to be between peers, from end to end, passing through a neutral network and underpin an autonomous culture; indeed maintain the “independence of cyberspace”.

In the Web 2.0 economy, on the other hand, P2P autonomy has been replaced by large-scale tangible infrastructures through which data traffic moves and by means of which wealth can be extracted. “Social” networking is a highly commercial venture, indeed Web 2.0 is a new frontier of enclosure:

“If Web 2.0 means anything at all, its meaning lies in the rationale of venture capital. Web 2.0 represents the return of investment in internet startups. After the dotcom bust (the real end of Web 1.0) those wooing investment dollars needed a new rationale for investing in online ventures. ‘Build it and they will come’, the dominant attitude of the ’90s dotcom boom, along with the delusional ‘new economy’, was no longer attractive after so many online ventures failed. Building infrastructure and financing real capitalisation was no longer what

investors were looking for. Capturing value created by others, however, proved to be a more attractive proposition” (Kleiner and Wyrick 2007).

We have seen that the concept of private property is hidden from view in current debate about Free Culture and that its continued function as a means of wealth extraction most certainly obtains in cyberspace, even if the intangible part of that space is “kept free” from such *direct* constraints.

The material necessity for the intangible realm results in the possibility for those who own that material foundation to extract wealth that essentially arises from the activities of every day users, most of whom do not realise that in a way they are working for Google or Facebook when they use it.

Next I draw some conclusions on the basis of the above discussions from a critical perspective – with the role of property foregrounded. That leads us to Chapter 2, which will provide a detailed analysis of property.

1.5 **“Capitalist commonism”: capturing social production.**

“Weißt du, wie das wird?”

“Verwirrt ist das Geweb' - Es riß!”

“Es riß!”

“Zu End' ewiges Wissen! Der Welt melden Weise nichts mehr.”²⁸

In this final section of the chapter I draw conclusions on the implications of the position of Benkler - and Free Software and Free Culture advocacy in general - from a broad political economy perspective.

While there are subtle differences between their respective positions, they do exhibit more or less the same view on private property. They see *private* property – which they simply call property – as a stable mechanism for social organisation of the tangible realm, but advocate that this form of ownership be not

28 “Do you know what will come to pass? The Web is confused. It's torn, It's torn. Eternal knowledge is ended. The wise ones report nothing more to the world”. From the Prologue of Richard Wagner's Ring der Nibelungen. At the end of the prologue the three Norns are deliberating: Do you know what will come to pass? - as betrayals and lies, uncomprehending acts by would-be innovators have led to confusion, the world-wide web woven by the knowing makers of fate rips apart. It is the beginning of the end: Götterdämmerung, Ragnarök, the end of the Gods is nigh. The realm of ancient knowledge is confounded, the web of fate no longer holds. The breaking of the web of fate, from the perspective of our analysis, can be understood as a prophecy of what could happen to the World Wide Web if the material conditions of its existence are ignored and thus riven by disunity.

extended to the intangible realm. That is what I call *information exceptionalism*.

In the property-free intangible realm, instead, they promote commoning – or social production – as a means with which to reinvigorate democracy through the involvement of rational, but voluntary acts of citizens. These citizens act *not* because they are forced, *not* because they want to profit directly in terms of monetary rewards, but for reasons of collectivity. Sharing and cooperating, then, constitute a modality of agency that is to be reckoned with as much as the self-interest that supposedly drives the market. From a Free Culture perspective, it is good for the economy to nurture social production because it is a very productive force that can overcome the too high informational transaction costs that an economy with too many patents and copyrights entails. For Free Culture advocates, social production is a growth sector, a novel force of production arising from excess capacity that ought to be harnessed to economic, productive ends. I, on the other hand, believe social relations in cyberspace ought to be seen as cultural and creative relations, not merely *economically productive* relations, and rather be harnessed for the greater good of humanity.

Before drawing further conclusions, however, I want to briefly present a counter narrative, which will put information exceptionalism, Free Software and Free Culture politics into relief.

1.5.1 Hacklabs and social centres: embodied commons.

On the outskirts of the Free Software and Free Culture movements, certain networks, gatherings, online channels and independent media act as hubs for an evolving radical civil

society (Strangelove 2005; Lovink 2005), radiating out from squats and social centres. Seeking a path away from liberal values, the nation state and capitalist practices, and towards notions of anti-authoritarian autonomy, mutual aid and collective freedom, this underbelly of the movements presents views radically different from those of the leading Free Software and Free Culture voices. These differences become particularly obvious in the practices of hacklabs in social centres.

The social centre movement emerged in Italy and Spain in the 1970s. A social centre is a coming together of communists, socialists, anarchists, goths, ravers, punks, hackers, artists, performers and various category-defying individuals, who reclaim spaces and excess capacity in the tangible realm. In Italy they have established a tradition for seizing “vast, abandoned factories, forts, boarded-up schools and churches and transformed them into cinemas, concert halls, bars, squats and art galleries. Far from being scabies-infested scum pits with gutter punks spray-painting the names of their favorite bands on the walls, Italy’s social centers are among the country’s most vital cultural institutions” (Bregman n.d.).

In the 1990s, inspired in part by the Free Software movement and working with the new wave of social movements that became known as “the global movement of movements (for globalisation from below)” many social centres began to create *hacklabs*: spaces where knowledge and skills are shared, technological literacy is instructed and played with.

New systems and relations are literally created and rebooted. Ideas circulate freely and communities and networks are built as social centres - with the added value of thousands of Free Software programmes - emerge all across Euro-America and

beyond²⁹. The London Hacklabs Collective presents themselves as:

“...a group of people interested in using technology to bring about social change. We establish, develop and run Hacklabs - political spaces used for independent media, the promotion of free software and other emancipatory technologies. Hacklabs are places to share skills, to learn and to teach (London Hacklabs Collective n.d.)

The physicality of a hacklab in a social centre is partially a realisation of the fact that Free Software is not enough for a knowledge revolution, but that space with a roof and walls, electricity, machines, cables and connections are crucial for agency in cyberspace. A coming together of bodies in tangible space, a pooling of powers in a real commons, is the nature of a hacklab that sets it apart from a virtual commons, which brings together ideas, not bodies.

These hacklabs are perfect *embodiments* of what I am centrally arguing for in this essay, namely that it is unhelpful to place emphasis on the tangible/intangible divide in the way that some economists do. The actions of those “concerned citizens”, building hacklabs, mixing squatted architecture and vision, hardware and software to create free spaces manifest a strong critique of virtual commons. The hacklab defies the distinction

29 The emergence of hacklabs also inspired a series of gatherings which I co-organised and which was funded by the Institute for Advanced Studies at Lancaster University. See <http://knowledgelab.org.uk> Generally we should here take note that contemporary anti-capitalist movements are practically engaged in prefigurative politics: realising the envisaged world without letting the ends justify any means.

between the tangible and intangible realm; indeed, the hacklab is deliberately organised across these two realms. It is an urban technological commons, but it is a commons. Additionally there are many rural commons, eco-villages, being recreated across the world, where people come together to grow vegetables and chop wood, in attempts to find the exit of capitalism. The re-creation of the commons of the land, as their destruction were the entrance into capitalism, might be the way out.

A commons is given meaning by its instantiation and realisation. At once the specific commons as well as *the idea* of a commons are given meaning through creation. As an idea a commons has symbolic value and this value is realised in the moment of creation and occupation of time and space. It is from the occupation of time and space that a commons derives its power as an alternative to abstract market based relations between legal persons understood as rational agents. The hacklab is a real commons of people, while a virtual commons connects ideas. They are two sides of the same coin, which should not be separated. Commons consisting only in ideas, bits and bytes need commons with bodies and collective spaces - and vice versa.

I now return to conclude upon my critique of the economic framing of social relations in cyberspace.

1.5.2 Framed for the market.

We have seen how Benkler's work contributes to an expansion of the economic framework that enables it to better capture the dynamics of social production. These social relations he defines as outside the market and property, which he otherwise considers very important institutions:

“The rules of property are circumscribed and intended to elicit a particular datum—willingness and ability to pay for exclusive control over a resource. They constrain what one person or another can do with regard to a resource; that is, use it in some ways but not others, reveal or hide information with regard to it, and so forth. These constraints are necessary so that people must transact with each other through markets, rather than through force or social networks, but they do so at the expense of constraining action outside of the market to the extent that it depends on access to these resources” (Benkler 2006: 24).

Social production for Benkler, then, is the kind of social relations that are currently not captured within “the market”, as that institution is traditionally understood. Moreover, social production should not be subjected to the private property and contract mechanisms that define the market, because these mechanisms are considered unfit for the intangible realm of information. Instead the economic framework – the language of marketeers, essentially – must be enlarged to be able to systematically capture the dynamics of social production, while, and this is the crux of the matter, *private property and all the wealth concentrated on that basis remains unquestioned*. In other words, the power amassed through the private property regime in the tangible realm is left untouched, but *as an organisational mode* is rejected from the realm of ideas; because the operation of existing powers in the tangible realm needs a free flowing virtual commons in order to continually have access to ideas, knowledge and information. The organisational mode of the tangible realm, however, remains. That is to say that Benkler is developing a framework with which to capture social production

without destroying it. It is the construction of “capitalist commonism”, to use an oxymoron, that we see in the work of Benkler.

Capitalist commonism recognises that existing economic powers cannot sustain themselves without a minimal degree of commonalty in the intangible realm. In order for the operation of the industrial apparatus to sustain itself it must refrain from enclosing in a traditional sense the intangible realm, because it needs this realm of ideas to feed its increasingly information dependent, but heavy, physical machinery of electronic commodity production.

The dynamics of social production, however, are captured through incorporation in the economic framework. That permits those institutions that organise themselves with such means – corporations, states and many NGOs and PGOs (Pseudo-Governmental Organisations) – to scientifically grasp those dynamics and thus extract the surplus value that arises from the excess capacity embodied in relations between citizens.

The excess capacity, as we saw, is capacity in excess of basic requirements, such as housing, food, time and skills. Housing and food are tangible matters, while skills are transmitted most often through tangible means in physical spaces, most of which is organised by means of private property and thus – largely – remain in the hands of the few. Excess capacity, then, by a small stretch of the imagination, can be understood as positive externalities that cannot be internalised on the basis of the usual mechanisms of enclosure, because these mechanisms would destroy the commons once and for all. By analogy, such enclosure is like overfishing: if you land all the fish they cannot reproduce themselves and you have nothing to fish for any more. The virtual commons *must be defended*, but ways to reap its

positive externalities – the economic potential inherent in the pooling and extraction of its productive forces – are required for capital interest, confined to the tangible realm, to be able to carry on its expansionary movement. The information commons, therefore, becomes a capitalist commons and it is Benkler's great achievement that he has begun to establish a framework from within which tangible powers can extract wealth from the intangible realm without destroying that realm. From a capitalist perspective this is genius, because it resembles a sustainable fishing policy: we can keep fishing, but the fish will remain available. From an anti-capitalist perspective it is a domestication of the virtual commons and consequently a separation of the virtual commons from the real commons, conceptualised in terms that relies upon state power and in turn justifies state power.

It is similar concerns that have led to Tiziana Terranova (2000) to argue that in the phenomena that Benkler calls “social production” we rather see an emergence of “free labor” that offer new ways for capital to consolidate itself through extracting wealth from social relations hitherto external to direct market relations. Not only is it free labour, we may venture, but *resistance-free* labour. In her later work she sees Benkler's conceptualisation of social production as offering “liberal and neoliberal economics a refinement of its logic that does not significantly break with its overall political rationality” (Terranova 2009: 251-252). That reflects the argument I am making here. In Benkler's presentation she finds that “[n]on-market production, in fact, is based in social cooperation, but it becomes economically effective, that is it achieves the status of an economic phenomenon” (2009: 252), because, as Benkler says “it increases the overall productivity in the sectors where it is effective ... and presents new sources of competition to incumbents that produce information goods for which there are now socially produced substitutes’ (Benkler 2006: 122). In the

networked information economy “[s]ocial life and economic life would thus find a point of convergence where the former would no longer find its expression exclusively within the reproductive sphere of civil society but would become directly productive in the economic domain” (Terranova 2009: 251). It is this economic perspective that domesticates social production - ties it to capital - and funnels the wealth created through these non-market relations back into capital. I am arguing in this essay for a social analysis of property relations for exactly the reason that Terranova criticises Benkler's account:

“Although nothing in principle prevents social production from outperforming competitive markets as a more efficient economic form, it still seems destined to remain subaltern to the logic of the neoliberal market as a whole ... In a way it seems as if, once passed through the ‘reflective prism’ of political economy, social production loses all potential to actually produce and sustain radically different forms of life – which would neither coexist nor compete with neoliberal governmentality, but which could question its very logic” (ibid: 252).

Being able to question the “very logic” of neoliberal economics, I argue, involves an analysis of property from a social movement perspective. Paradoxically, then, I develop a view on property that is inspired by the phenomenon of Free Software. It is paradoxical because the Free Software Foundation, the self-organised civil society institution and social movement that defines Free Software, does not see the concept of property as relevant for Free Software. They vehemently reject the idea. In that sense I am standing outside the movement, insofar as we understand the movement as the voice of its leaders. But why should we?

Although I argue against their rejection of property, the *main* purpose is not to advise the Free Software Foundation on matters of policy strategy and tactics, but to provide the wider global network of social movements working to (re-)create commons with a map and matrix of property that can be used to advance their causes and to grasp just how multi-faceted a concept property is. Understanding Free Software as property is a very useful starting point for transcending existing conceptions of property, because when understood as property, Free Software opens the door for radically different configurations of property. Importantly, Free Software is an example of a community articulating their own relational modalities and thus defining how they self-organise to make space for a realisation of their “needs, desires, aspirations, affects and relations” (De Angelis 2005a). While it is certainly an important victory for community based, self-legislation, it is perhaps even more importantly a crack in property where the light gets in: if we inscribe the relational modalities of Free Software upon the concept of property, then the concept is forever changed. In other words, its “framing effect” would be entirely different and informed debate become possible.

Above I used the term paradox to avoid any association with self-contradiction. It might be read as if I am contradicting myself, declaring allegiance with social movements, then turning around to conceptualise the dynamics of a social movement in terms that they reject. However, the contradiction is on their part.

The libertarian values that the Free Software and Free Culture movements exhibit are not liberties that were won in the struggle for virtual commons and the right to share digital information and cooperate on software projects. The freedoms upon which

the Free Software commons rests – the liberties that make it possible for such a movement to act and organise – are liberties won by struggling women and men, who with their bodies fought for land and freedom. The *habeas corpus* in which virtual commoners find themselves is an outcome of a struggle that has been unfolding for almost a millennia. Arguably, the leadership of the Free Software and Free Culture movements are separating themselves from the real commons. The commons of the land and the commons of the means of production and distribution are the fundamental commons without which virtual commons are merely lambs for the profit slaughter.

The view on property that is shared by the Free Software and Free Culture movements obviously invite a critique that clearly goes beyond virtual culture itself, serving as a perfect point of departure for a critique and reassessment, long needed, of property in general. Critiques and reforms are certainly needed, lest the promissory notes of Free Culture are to wither in the twilight of enclosure.

In the introduction we defined our revolutionary question to “How?”. We then asked “With what?”. By identifying the “hidden” powers of property as our answer, we must now ask “How does property work?”; or “What are the properties of property?”.

Chapter 2
Properties of Property:
A Jurisprudential Analysis



J. Martin Pedersen

2 Properties of Property: A Jurisprudential Analysis

“It is not wrong to say that the nature and intent of a society reveal themselves in the legal and customary concepts of property held by the various members and classes of that society. These property concepts do not change without an incipient or fundamental change in the nature of the society itself. The history of property relations in a given society is thus, in a way, the history of the society itself .” (Schurmann 1956: 507)

“No doubt the eighteenth century preferred rational treaties expounding the *theory* of property to historical essays describing the *theories* of property. But ... we ... know that the institution of property has had its history and that that history has not yet come to an end ... We begin with the knowledge that there must be as many theories of property as there have been systems of property rights. Consequently we abandon the search for the true theory of property and study the theories of the past ages. Only thus can we learn how to construct a theory suitable to our own circumstances” (Schlatter 1951: 10).

2.1 Introduction: sovereigns, commoners and the state we are in.

In this chapter I provide the reader with a framework that enables an analytical understanding of property. I argue that property is normative protocols structuring social relations with regard to

things (that is, property relations). Given that there are, in practice, no social relations that do not involve things of some kind as their setting or as their props, property is of fundamental importance to the way in which societies, and other social groups, are organised. Property protocols refer to customs, norms, and conventions guiding people's behaviour. These protocols (often understood as patterns of duties, rights, powers, privileges and so on) define certain freedoms or limitations with regard to who may do what with any given thing or resource.

2.1.1 Private property and commoning under one umbrella.

The most well-known and widespread configuration of property is private property, which, of course, characterises capitalist democracy. Private property is a particular property protocol that is generally understood as giving rise to social relations with regards to things that are paradigmatically different from the social relations with regard to things that I have referred to as commoning, following Linebaugh and De Angelis.

While it is uncontroversial to define property as social relations with regard to things, philosophical or legal accounts of property do not normally account for commoning *as* property. The commons is seen as the paradigmatic non-property case. Yet both commoning and private property concern the same subject matter: how we relate to each other with regard to things and with regard to the rest of the world. Who has access to what resource, what are those with access allowed to use the resource for, who takes responsibility for the resource, what happens to the wealth that can be generated from the resources, who can sell, buy or otherwise transfer the privilege of access to a resource and its wealth effects, who makes the decisions about

these things, how are the decision-making processes organised in cases where more than one individual holds the decision-making authority and, finally, with reference to what values are these decisions legitimised?

Once we uncover the elements which both share, these two different kinds of property can be brought together under one analytical umbrella. The purpose is to reveal the way in which each of them functions and the different kinds of social relations that they give rise to. In this way the applicability of either of the two in a given context – for instance a particular resource or class of objects – can be assessed on the same terms. A normative evaluation can start from there.

Because property in general has come to be understood as synonymous with private property, the way in which analysts are able to think about property has been greatly limited. By opening up the analytical framework of property to include *at once* commoning *and* private property, both will be seen in a new light. Moreover, given the anti-capitalist starting point of the essay, understanding commoning in the same terms as property can better facilitate a transfer of land, its resources, and the means of production and distribution, from being organised with private property rights to become organised through modes of commoning.

It should here be noted that I am in no way arguing that private property should be done away with, rather I am hoping to reveal its anatomy, so that we may assess its usefulness for different purposes and in different domains. While the idea is to better be able to *limit its range*, my account of property should not be understood as a normative exercise. While I point to certain normative implications throughout my discussion, it is not my primary objective to provide a thorough moral analysis of

property. Many of these have been provided by others more skilled in such matters. Rather, I will address the way in which property is understood to function in liberal jurisprudence. Specifically, I will draw upon James Harris's work, whose analytical approach and framework describes with most accuracy the way in which the institution of property in capitalist democracy functions legally as well as economically. His account is consistent with, and indeed clarifies, many preceding accounts of property in liberal jurisprudence on the one hand, and on the other, economic policy which implements and regulates property.

2.1.2 The little king of private property.

Property, it is generally argued, distributes decision-making authority regarding the use of resources. Private property, as we shall see, distributes this authority to individuals and quasi-individuals such as firms and associations, granting them open-ended powers and privileges with regard to the use of certain resources, and legitimising what Harris calls their *self-seekingness* in this regard.

Public policy discourse has become saturated with economic reasoning³⁰, and it is taken for granted that the primary, if not the only purpose of property is the satisfaction of individual preferences through the market. The sole function of property rights has seemingly become the “guiding [of] incentives to achieve a greater internalization of externalities” (Demsetz 1967: 347). That is, property rights are thought to maximise aggregate

30 The law-and-economics movement has been traced back to Ronald Coase's influential 1961 article 'The Problem of Social Cost' (Posner 1983).

social wealth by encouraging people to calculate the costs and benefits of owning things. Underlying the economic approach to property rights is that “the costs and benefits of a person’s activity should rebound on him (as far as possible), and only on him (as far as possible)” (Reeve 1986: 25).

What on an economistic account is the main purpose of property – satisfaction of preferences – is for Harris the logical presupposition on which all property institutions are built. The institution of property presupposes the notion of open-ended powers and privileges which people have over things, and which authorise the pursuit of ends that are entirely justified simply by virtue of being *theirs*. It is not that Harris agrees that self-seekingness, the pursuit of self-interest, is the only motivational factor for agency, nor that it is necessarily the primary one in social or psychological terms. What Harris *does* say is that the operation of property within the law *proceeds* from the conception of property as open-ended power, and the view of the individual as sovereign. In actually existing property systems, of course, Harris recognises, these open-ended powers are always also limited: their range is not absolute. Nonetheless, it is the vision of the individual sovereign, the little king, that is at the heart of the dominant conception of private property as instituted in capitalist democracy.

What I call “economistic” refers to the science of economics that has been “detached” from further moral, political and social discussion (Sayer 1999). For what *does* concern moral, political and social questions, the economistic approach to policy *assumes* the moral and political priority of the individual over the community; the subjectivities of values (values as preferences); and the market as the primary mechanism for mediating individual preferences within society.

Sharing, on this view, leads to tragedy.

2.1.3 The distribution of care and the tragedy of the commons.

The Tragedy of the Commons (Hardin 1968) is a story that has been much debated since its publication, but the terrain that it covers is not new. It can be traced back to the distribution of care, a philosophical concept first introduced by Aristotle. The distribution of care concerns who takes care of what and how with regard to goods and resources. For Aristotle, care would be most adequately administered if distributed to individuals, not managed in commons. He took note of "how immeasurably greater" the pleasure is, "when a man feels a thing to be his own" (Aristotle, *Politics*, Book 2, Part 5). Accordingly, he did not have great sympathy for commons:

"What is common to the greatest number gets the least amount of care. Men pay most attention to what is their own; they care less for what is common; or at any rate they care for it only to the extent to which each is individually concerned. Even when there is no other cause for inattention, men are more prone to neglect their duty when they think that another is attending to it" (Aristotle, *Politics*, Book 2, Part 3).

The story of the tragedy of the commons runs along similar lines. It was communicated through the imagined organisation of a fictitious pasture: if a group of herders owns a pasture in common, to which access is "open and free", there is no reason for each of the herders *not* to expand their herd. And if there is no

reason *not to* expand, they *will do so* - at least so the story goes - soon leaving them all with too little grass and space for their respective herds. The result is that the pasture becomes overused, and hence all the herders suffer: a tragic breakdown and collapse of natural resources. Moreover, if the pasture is shared between all, it opens the possibility of individual herders free-riding on the work of others. Of course such concerns also apply to the intangible realm, since complex computer programmes, encyclopaedias, journals and large-scale scientific quests in general, require a successful distribution of care, just like pastures.

If, however, the pasture is split up into exclusive parcels, the herders will each manage their respective parcel in a sustainable manner according to their own self-interest. According to the logic of the market, then, whoever cannot handle their parcel profitably will be bought out by one of the others, who has been handling his own parcel so successfully that he has accumulated an excess of wealth with which he can buy out his competitor (and subsequently - quite possibly - employ him on the basis of wage relations to do the exact same kind of work, but for less return and without the joy associated with ownership, as stated in the Aristotelian premise).

Looking at the story of the tragic commons from a different perspective, however, we may say that the herders would be better off sharing a pasture in common, since the rain, the wind and the sun do not obey human property laws. Hence the rain may fall, the wind may blow, and the sun may shine unevenly and consequently there would be a need to be able to move the herds around in a manner more flexible than what is afforded by

splitting the pasture up into exclusively owned parcels³¹. In other words, overuse is just one of many possible outcomes to be taken into account in the organisation of a common pasture. Moreover, the Aristotelian premise that distribution of care is better achieved when people have a sense of ownership hardly helps to make the case for a system that concentrates ownership in the hands of the few and renders the many employees – or unemployed.

Hardin's tragic story is not the only one of its kind and certainly nothing new³². Hardin complemented Mancur Olson's "The Logic of Collective Action" (1965) which reiterates the Hobbesian proposition that individuals are self-interested and will not, unless there is an external, coercive mechanism, produce common goods or achieve collective ends. Olson's and Hardin's justifications for a market economy and a central authority with powers of coercion are both structured according to what is known in game theory as an *n*-person prisoners' dilemma (Dawes 1973), and have long been refuted through many empirical examples (see next section) and on purely logical grounds (especially Taylor 1976, 1982, 1987; Ostrom in Baden and Noonan (eds.) 1998). The assumptions of the tragedy of the commons, however, run deep. The phenomenon of Free Software, for example, has been called "the impossible public

31 The obvious reply from the privatiser to this is that such re-distribution of rain and sun can be solved by private contracts, but the question for the community of herders practising their customs in common would still remain: why split up the pasture in the first place?

32 Ostrom notes: "In 1833, William Forster Lloyd sketched a theory of the commons that predicted improvident use for property owned in common. More than a decade before Hardin's article, H. Scott Gordon clearly expounded a similar logic in another classic, "The Economic Theory of a Common-Property Resource: The Fishery"' (Ostrom in Baden and Noonan (eds.) 1998: 96.)

good” (Smith and Kollock 1999). Cooperation and commoning are still assumed to be unlikely beyond the market and the reach of a coercive authority. And care is still thought of as best distributed by enthroning little monarchs with each their private property realms, despite plenty of evidence that, while care *might* coincide with self-interest or other private purposes, it very well *might not*.

2.1.4 Commons in the world.

Elinor Ostrom, beginning with her doctoral field work in the mid 1960s (but see particularly Ostrom 1990, 2000) has unpacked the Tragedy of the Commons empirically, and thereby challenged the conventional wisdom that common property is poorly managed and should be either regulated by central authorities or privatised³³. By investigating real-life commons, such as fish stocks, pastures, woods, lakes, and groundwater basins, which people have sometimes for over centuries managed and cared for in common, Ostrom has shown that:

“...there is no reason to think that the only forms of resource governance must come from individual ownership on the one hand, or from central governmental management on the other ... communities clearly refute the idea that the commons is necessarily "tragic"” (Rose 2003: 106).

33 For her trail-blazing work to reinstate the validity of the commons as a strategy for managing natural resources, Ostrom was awarded the 2009 Nobel Prize in Economic Sciences (The Royal Swedish Academy of Sciences 2009).

Instead of corroborating the idea that human beings are naturally self-interested and therefore must be coerced to cooperate, Ostrom points to future areas of research to better understand how resources can be shared. Drawing on her research findings, she confirms that free-riding is a problem, she admits that some people do indeed seem to not naturally cooperate, but that, also, many people happily cooperate on a voluntary basis.

The real tragedy of the commons, then, is their enclosure, that is the destruction of commons by privatising forces. After all, “[t]he commons did not collapse, they were “stolen,” as common sentiment at that time expressed it” (Siefkes 2009).

Crucially, contrary to Hardin's fiction, the sharing of a pasture in real life happens *in community*. Open-access commons, of Hardin's tragic kind, are governed by only one rule: anything goes.³⁴ Anyone with access to the resource can take from and do with it what they will. Most existing commons, however, are highly *structured commons* with a set of principles, rules, norms and, in general, specific ways of living together in order *not to* face a tragedy. These community-defined rules and principles have developed over time through cooperation and in the case of natural resources, observations of the land. Communities structure commons and commons structure communities. As De Angelis notes:

34 Hardin later admitted his original conflation of open-access commons with structured ones in personal communication with John A. Baden (Baden and Noonan (eds.) 1998: xvii). However, I am here not addressing Hardin's personal intellectual development, but the continued force of his fiction in the context of public policy.

“By assuming that commons are a free-for-all space from which competing and atomised ‘economic men’ take as much as they can, Hardin has engineered a justification for privatisation of the commons space rooted in an alleged natural necessity. Hardin forgets that there are no commons without community within which the modalities of access to common resources are negotiated. Incidentally, this also implies that there is no enclosure of commons without at the same time the destruction and fragmentation of communities” (2004: 58).

Rebuilding commons, it is implied on that view, is to rebuild communities and vice versa: the rebuilding of communities is the rebuilding of commons. In Chapter 1 we discussed the problem of virtual commons detached from real commons becoming – if we follow the money – capitalist commons. When detached from real commons, the virtual commons has no body and no connection to the land and therefore, crucially, no proper connection to social movements for whom access to and control over land as a means of subsistence and production are the most pressing concerns – and for whom a virtual commons is meaningless without having land to put their feet on.

Consider the Landless Workers' Movement (MST) in Brazil, which counts more than a million people who collectively are challenging extreme inequalities: nearly half the land is owned by just over 1% of the population (McNally 2006: 285). The MST have clear objectives aiming at a radical social transformation:

“We have three fences to cut down ... the fence of the big estate, the fence of ignorance and the fence of capital ... Our struggle is not only to win the land ... We are building a new way of life” (quoted in *ibid.*)

Opposing the state and private interest is not a peaceful affair. At least 1,684 assassinations of landless workers took place between 1964 and 1991 and MST activists are “regularly murdered by soldiers and military police” (*ibid.*). However, despite the nation state and private property *working against them*, stifling their cooperation, the MST has carried out more than 1200 land occupations, expropriated more than 50,000 square kilometres of land and established settlements for more than 100,000 families (*ibid.*). According to their slogan “Occupy, Resist, Produce”, the MST does not advocate individual ownership of land and the means of production, but supports cooperatives for agricultural production and factories, which handle meat storage, milk packaging and coffee roasting. McNally writes:

“Once land is occupied, an MST encampment is set up and organized democratically. Decisions are made collectively with a general assembly constituting the highest decision-making body ... It has established 1,200 schools and operates thirty radio stations. Finding that mainstream teachers are not adequate to the task of building a culture of liberation, the MST has developed its own teacher training programs” (*ibid.*).

If Free Software is an “impossible public good”, which only really exists because it rides on the surplus of capitalism and because it unfolds in the intangible realm where reproduction

costs are minimal and the rivalrousness of goods absent, then the achievements of the MST are approximating a miracle. Making sense of such social movements in philosophical, legal and social terms can obviously not commence from a starting point that entails the assumption that their achievements are impossible. In order to facilitate the work of these social movements and to begin creating a jurisprudential framework that can be used for an articulation of their property relations – with a view to self-legislation – we obviously need a different starting point.

2.1.5 Learning from property.

My starting point is not merely that sustained cooperation, commons and community building are possible, but that they are essential. I maintain that commons continue to be under threat of enclosure. Privatisation of land, its resources and the means of production and distribution is relentless and noxious to people, their relations and the environment. The use and abuse of these resources inevitably implicate everyone, and hence decision-making powers over them should not lie exclusively with individuals or, possibly worse, quasi-individuals whose pursuit of self-interest is authorised without further justification.

But private property is also enabling. It licenses creativity and open-ended agency, potentially free from the interference of other individuals, the state or another overarching political authority. Private property goes hand in hand with the creation of a legal individual whose rights are inviolable. It sanctions life and liberty for an individual whose agency and creativity are, potentially, open-ended. It makes a person's body and her creations her own. It defines the individual's realm, in which she can build her castle or tear it down – at least theoretically, for

those who are in a position to exercise their private property rights. The question then arises, however, how big can the castle be?

I believe that there are lessons to be learned in the examination of the particular configurations of private property: understanding private property and the way it functions is indispensable to any attempt to constrain its reach, transform, or indeed, dismantle it. As we shall see in Chapter 3, the Free Software commons is in fact dependent on a particular version of private property – namely copyright – which it subverts to its own ends by using its power of decision-making to instantiate a commons that ensures reciprocity in perpetuity. As a property model, Free Software is grafted onto copyright, using the power of its enforcement mechanisms to ensure certain freedoms for all. We will understand Free Software better, when we understand it as property. And we will understand property better, when we understand it as including commons.

My discussion in this chapter will begin with a disentanglement of property *in general* and property *in particular*. I will then explain in more detail the notion of property relations as relations between people with regard to things, and property protocols as those normative codes that structure these relations. This will give us the basic structure for developing a framework within which social relations with regard to things can be understood – be they structured through law and private property rules, through the emergent customs of commoning practices, or any other property system. I begin with three variables only: the *relating subject*; the *related-to object*; and the *relational modality*, which is defined through property protocols. I examine the relational modality of private property relations in some detail, and show that it consists of several elements, which enable its functions. Changing these elements, or *reconfiguring the*

specifications of private property even in only small ways, can lead to surprising transformations of the kind of community that this relational modality gives rise to. Next, I discuss the ways in which *common property* forms are usually classified and distinguished from *private property*, which shows that the differences between different property forms are all differences in the configuration of, essentially, the same elements. Indeed, I conclude that property protocols, whichever way they may be expressed, all provide answers to the question of who makes (or can make) decisions over the actions of people with regard to things, and by reference to what these decisions are legitimised. I then argue that it is through the articulation of property protocols that a commons self-constitutes.

I hope to show that a property framework can be a useful toolbox for the commoner, as well as that by inscribing commoning onto the framework, new tools and perspectives for property analyses become available more generally.

2.2 Property in general, property in particular.

“The distinguishing feature of Communism is not the abolition of property *generally*, but the abolition of bourgeois property” (The Communist Manifesto; emphasis added).

The way in which the term property is often used and hence understood is as an object or a collection of objects under someone’s exclusive control: “your property” is the stuff that you own, and what you own you have very special rights over. “Get off my property” shouts the landlord at stray ramblers, his

aggression warranted by his special, legally protected relation to the fenced-in ground on which he stands.

2.2.1 Absolute dominion.

Underlying this sort of understanding is the conception of ownership as absolute dominion, most unequivocally expressed by Blackstone in the eighteenth century: “that sole and despotic dominion which one man claims and exercises over the external things of the world in total exclusion of the right of any other individual in the universe” (1962: 2)³⁵.

The dominion conception of ownership has its roots in the classical Roman concept of *dominium ex jure Quiritium* which is often described as conferring absolute rights over the object of ownership to the owner. The best-known Roman law definition describes dominium as “the right to use and abuse [consume/use up] one's own within the limits of the law” – *jus utendi et abutendi re sua quatenus iuris ratio patitur*. However, there is disagreement about whether this citation is correctly attributed to Roman law regarding property³⁶, as well as about the extent to which *dominium* in practice amounted to complete sovereignty over something, given that laws in ancient Rome regarding the resolution of conflicts over property were very complex.³⁷

35 However, Frederick Whelan (1980) has shown that Blackstone's *Commentaries* are replete with examples of the limitations on absolute ownership.

36 See Shael Herman's ‘The Uses and Abuses of Roman Texts’ (1981) for a revealing discussion regarding the supposed definition of *dominium*, tracing its most likely origin to Grotius, founder of the school of modern natural law, and a Justinian article on mandate – not property.

Moreover, even during Blackstone's era "no legal system afforded protection to an unchecked dominion of a resource by an owner" (Christman 1994: 18). In fact, it is questionable whether the notion of "sole despotic dominion" by someone over some things without any kind of state intrusion or other limitations was ever instantiated to any significant degree in any system of law (Christman 1994).

No matter, however, where exactly its roots are and how exactly it is realised in practice, the conception of property as absolute power of disposal is a forceful one that has made it into one of the most important modern liberal documents of history, the French Declaration of Rights of Man:

"The right of property is that which belongs to every citizen to enjoy and to dispose of his goods at his will."³⁸

The dominion conception, while rhetorically very powerful, invoking, as it does, deep-seated feelings regarding individuality, independence and power in the face of a world full of threats to a

37 See Henry Maine (1861); Christman (1996); Duncan-Jones (1990). Lawson (1958) denies that absolute ownership was ever instantiated in any legal system. See also Dias (1976).

38 Herman (1981: 676) clarifies the link between property, the contract-making individual and the state which we broached above: "A freedom with unspecified content, [property in the Declaration of Rights] conformed with a post-feudal image of men as free, willing parties to a social contract, bargaining their way up and down an economic ladder. The interdependent ideas of contractual freedom and private ownership were logically anterior to the state, itself a pact of so many free wills. "The government (was) instituted to guarantee men the enjoyment of their natural and imprescriptible rights," proclaimed the Declaration of Rights of 24 June 1793. Among these rights were liberty, equality, security and private property."

mortal human body and the things it needs or wants, is nonetheless a very narrow perspective which betrays the multitude of property relations which have structured and continue to structure social relations.

However, James Harris has forcefully argued that the notion of *dominium* (which he calls “full-blooded ownership”) underlies all property institutions, in fact that it is *presupposed* by any property institution, as well as by any rules that set out to limit the realm of dominion. For Harris, even the different versions of common property (which we will encounter later) are all merely aberrations of the logically prior idea of *dominium*. Harris would nonetheless agree that in a lot of literature and ordinary parlance, property – a general term – is equated with private property – a particular configuration of property. We have seen this conflation at play the discussion of Free Software and Free Culture in Chapter 1. Such type-token conflation is arguably not very surprising given the hegemonic character of private property in contemporary economic systems. Most accounts and legal articulations of private property, however, do not actually institute it as the kind of absolute sovereignty that *dominium* posits. For example, property-limitation rules, according to Harris, characterise all existing property systems (Harris 1996: 33), and hence constrain the absoluteness of dominion. Dominion, in reality, is not absolute, it is conditional.

That is to say, not only do we need to distinguish between *property in general* and *property in particular*, we also need to distinguish between the different kinds of configurations of property that might be grouped under the term *private*. Absolute dominion might be one such configuration and its justification, if there should be any, is probably limited to a rather narrow class of objects which we might term, following Margaret Radin (1982), *personal* possessions.

2.2.2 The variation of property.

There is an ancient contrast between “private” and “common” property. Plato conceived of his ideal republic as based on common property arrangements, while Aristotle, as we have seen, promoted forms of private property as a better way of organising social relations. Since their time, many arguments for and against private and common forms of property have been developed, hailed and ridiculed.

Clearly one of the major issues in political theory has been to identify and discuss the rival merits of private property on the one hand, and common (or public or state or collective property) on the other³⁹. This is hardly surprising, given that, whatever form they may take, property institutions are fundamental to social life. The kinds of conceptions and rules that exist regarding property in any given society will structure the kinds of interactions people will have, the kinds of economic practices they will engage in, the kinds of production that will exist, the kinds of policy priorities that will be set, and the distribution of resources that will take place – in brief, property relations constitute communities. Or, in the words of Edwin Hettinger: “Property institutions fundamentally shape a society” (Hettinger 1989: 31).

39 Some of the more important works in recent decades are C.B. Macpherson’s “Theory of Possessive Individualism: From Hobbes to Locke” (1962), which provoked many responses, including a renewed engagement with seventeenth century philosophers’ views on property; and Robert Nozick’s “Anarchy, State and Utopia” (1974), which assumes the primacy of individual property rights and which led to critical explorations of the justification of private property, including general analyses of justificatory arguments for and against private property (e.g. Becker 1977).

Andrew Reeve has argued that thinking about property blurs the boundaries between the idea of an economic system, a legal system and a political system, by providing some of the most fundamental connections between them all (1986: 7). Property connects the economic, legal, and political in its coding of relations between people with regard to things. Humans dwell in a very material world, no matter how suffused it may be with symbolisms, know-how, value and meaning. As human beings, we participate in and share this world in which the animate and inanimate, the human and non-human intermingle and interpenetrate. But how we share and how we participate can take a multitude of forms. Property is a central part of shaping these *hows*.

Despite being “ubiquitous and complex, socially important and controversial”, property is also “notoriously elusive” (Harris 1996: 6). Writings in political philosophy dealing with property do not always refer to the same thing. As Waldron writes: “My suspicion is that talk of 'a right to property' means something different in each case” (1988: 15).

Sometimes, property is envisioned as a simple relation between a person and a thing, and explored in terms of the justifications that exist for someone to have absolute dominion over a thing of the external world. Sometimes it is envisioned as “a social cake capable of being sliced up in different ways” (Harris 1996: 6), and investigated in terms of the justifications for the unequal distribution of the cake. Lawyers conceive of property differently than moral or political philosophers who again work with different conceptions than economists. There is, it seems, not one single correct meaning of the term “property”.

One thing is for sure, however, property is more than either private or common. Neither “private property” nor “common

property” have had stable meanings throughout different eras and areas. Nor has one conception ever prevailed exclusively. Property “...is not immutable ... but ... like all material and intellectual phenomena, incessantly evolves and passes through a series of forms which differ, but are derived, from one another” (Lafargue 1975: 3).

Apart from the countless normative works that have been written over the centuries and which expound in detail the advantages and disadvantages of any particular manifestation of property, there exist also a series of studies which explore the different historic manifestations of property as an institution in legal and political thought and practice (e.g. Schlatter 1951; Lafargue 1975; Alexander 1997). But to acknowledge the historical variation in conceptions of property also:

“...throws up the problems of identifying the significant variation in institutions and ideas, and relating the two, on the one hand; and of providing a general account of the features of property of which these variants are examples on the other” (Reeve 1986: 45).

In that sense, a general characterisation of property depends on how to identify different conceptions of property, and how many of them to recognise.

A *general* account of property, for Reeve, should encompass all the *particular instantiations* of property as its variants. It should indicate what might vary amongst the different conceptions of property, and thereby also what exactly a justification of property needs to address. However,

“All attempts in the history of theorizing about property to provide a univocal explication of the concept of ownership, applicable within all societies and to all resources, have failed” (Harris 1996: 5; see also Honoré 1987).

It is a curious fact that the perhaps most central concept that is shared across the disciplinary boundaries of philosophy, law and political economy remains an unsolved puzzle. This is probably a testimony to its ubiquity: it is simply too wide a concept to pin down. As such, the fact that no univocal explication exists is not a call for a solution either. It is certainly not my ambition to here provide such an explication.

I do, however, want to present a framework from within which property analyses of a wide range can be applied in a variety of settings. The settings that I am particularly concerned with are those of social movements, the lived realities of struggles for redistribution of land, its resources, and the means of production and distribution. The application I imagine is the self-articulation of needs, desires, aspirations, affects and relational modalities with regards to things, in the form of property protocols. In other words, the process of self-articulation, that is, the collective determination of property protocols which structure social relations with regard to things is also a process through which a community autonomously constitutes itself. From an anti-capitalist perspective the most attractive power of property, it seems to me, is the power that some systems of property relations lend people to self-legislate and thus inscribe a community's values and priorities upon the land and into the surrounding things.

2.3 Property as social relations.

To begin with, then, we need to overcome the idea that property is a simple person-thing relation that implies an absolute (or even conditional) entitlement:

“We often think of property as some version of entitlement to things: I have a right to this thing or that. In a more sophisticated version of property, of course, we see property as a way of defining our relationships with other people. On such versions, my right to this thing or that isn't about controlling the "thing" so much as it is about my relationship with you, and with everybody else in the world”
(Rose 1993: 27-28)

2.3.1 Hohfeld's matrix.

The more nuanced perspective can in great part be attributed to “a pivotal article” (ibid: 42, note 10) by Wesley Newcomb Hohfeld in which he outlined ‘Some Fundamental Legal Conceptions as Applied in Judicial Reasoning’ (1913). However, because the work of Hohfeld stands as a milestone in the liberal and legal positivist traditions, not much - if any - “politically radical” work has been built on his conceptions; indeed there is a general reluctance amongst anti-capitalists to engage with liberal jurisprudence, including structural analyses of property. This can be taken to reflect the conflation shared across the political spectrum and in the public imagination that property *in general* is seen as equal to the very *particular* social relations that exclusive, private property rights give rise to. Or, *private property rights, particular to capitalism*, are understood as *property in general*. Writing on property often does not unpack a given instance of property properly, but for instance merely states

that “property is theft”. That is in itself a false reference, since Proudhon arguably was among the first to seriously analyse and unpack the idea of private property, which he did *not* simply write off as theft (Waldron 1988)⁴⁰.

Hohfeld’s important contribution to jurisprudence was a way of systematising components of legal reasoning. His analysis applies to property as one of the sub-systems of law. Hohfeld “expounded the lowest common denominators of the law by reference to two squares of correlations and opposition” (Harris 1996: 120-121):

Right	Privilege	Power	Immunity
Duty	No-right	Liability	Disability

Illustration 1: Hohfeld's matrix.

In this matrix there is *correlation* (vertically) between *right* and *duty*, between *privilege* and *no-right*, between *power* and *liability* and between *immunity* and *disability*; while there is an *opposition* (diagonally) between *right* and *no-right*, between *duty* and *privilege*, between *power* and *disability*, and between *liability* and *immunity*. The top half of the squares refers to the entitlements that characterise jural relations, the bottom half to its

40 It is beyond the scope of this essay to discuss Proudhon's analytical work further, but Waldron (1988: 323-330) provides a good starting point for an understanding of Proudhon's analysis, which, to put it in very simple terms, for example takes note of the fact that: *If a justification of private property is based on the idea that it is good and essential for a human being to have and to hold private property rights, then all human beings should have and hold such private property rights, unless a society wittingly wants to create inequalities.*

correlated position.⁴¹ On Hohfeld's account of jural relations, each such relation consists of four basic components: (i) the person or group of persons holding an entitlement (X); (ii) the person or group of persons occupying the position correlative to the entitlement (Y); (iii) the form of the relation (i.e. whether it is, say, a right-duty relation or a power-liability relation); (iv) and the content thereof (the specification of the right-duty relation).

A Hohfeldian explication of proprietary entitlements would hence specify the content of such entitlements. That is, it would specify what Y must do or cannot do, and what X may do or can do. With regard to proprietary entitlements, any suitable specification would necessarily refer to the object or resource with regard to which X and Y have to behave in a certain way⁴². In that sense, the relation of primary importance is the relation *between people* (X and Y, you and me), even though this relation will *concern things*. We can begin to understand property relations as social relations between people – all people – with regard to any given thing.

The matrix permits us to understand the simple dominion conception – the vision of one individual having absolute, legitimate control over a thing – as implicating everyone else.

41 Hohfeld was convinced that “if all more complex legal conceptions were reduced to combinations of these various bi-party relations, legal reasoning would be clarified, fallacious conceptualization would be avoided, and genuine normative choices made apparent” (Harris 1996: 121).

42 Misreadings of Hohfeld have led to the disaggregation thesis (most prominently developed by Grey 1980), in which property as a concept is rendered (legally) useless. Property “disintegrates” and leaves only rights-duty relations between persons, the “owner” becomes invisible as emphasis is placed on different people having different rights with regard to the same resource (cf. the “bundle of rights” conception), thereby obscuring further the projection of the king into the sovereign individual.

Our starting point thus becomes the web of relations between people, and the interrelated nature of their actions which always involve objects, things, resources as either settings or props. Hohfeld's work added that multi-lateral dimension to liberal jurisprudence and thus raised awareness of the complexity of the social relations that are involved in any given instance of property relations⁴³.

2.3.2 Social relations as starting point.

In a related context, yet with a different analytical approach, Sol Picciotto takes note of the importance of the starting point in analyses of property: “Property should be thought of *in the first instance* as social” (2003).

In formulating what can be understood as a general understanding of property relations, Irving Hallowell, following the versatile Huntington Cairns (1935) and Hohfeld, emphasises the *triadic* character of the institution of property. In a classic anthropological theory essay from 1955 Hallowell writes: “A

43 Hohfeld's matrix has served as an inspiration for the influential understanding of property in terms of a “bundle of rights” (Maine 1917; see also Becker 1977; Munzer 1990). Penner (1997) provides a critique of the “bundle of rights” conception), which simply refers to the aggregation of different rights and duties that make up an instance of property relations. That is, the bundle of rights idea highlights the different components that make up property such as the right to use, dispose of, inherit. Different rights of the bundle might at different times be allocated to different persons (or other legal entities). The rights of the bundle can be separated and reassembled depending on circumstances, as we shall see in some detail in Section 2.5. The bundle of rights understanding is derived directly from Hohfeld's matrix, as it refers to the correlations that can be composed from within Hohfeld's matrix or any modification thereof.

owns B against C', where C represents all other individuals" (Hallowell 1974: 239). The dominion conception of property, by contrast, is *dyadic*. A dyadic conception of property would propound that A owns B, without C even entering into the equation. The difference is one of starting point, where the dyadic conception fails to see that the notion of an entitlement logically implicates those whom it is an entitlement *against*.

The triadic understanding as a starting point in analyses of property relations permits a more thorough understanding of property relations in *general*. It also facilitates and enhances an analysis of any given *particular* set of property relations within a specific economic system or culture, such as capitalist democracy.

"If we wish to understand property as an institution in any society our primary concern must be an analysis of the pattern of rights, duties, privileges, powers, etc., which control the behavior of individuals or groups in relation to one another and to the custody, possession, use, enjoyment, disposal, etc., of various classes of objects. In such an undertaking we have to reckon with an exceedingly complex network of structural relations and a wide range of variables, the specific pattern or constellation of which constitutes the structure of property as a social institution in any particular case." (Hallowell 1974: 239)

Here we have the definition of property with which I would like to start. Property relations, on this view, are social relations. These social relations make up and are shaped by a "pattern of rights, duties, privileges, powers, etc., which control the behavior of individuals or groups in relation to one another and to the

custody, possession, use, enjoyment, disposal, etc., of various classes of objects”. The etceteras of the definition might worry the analytic philosopher, but they open up the general concept of property to a wide variety of particular configurations. This open definition should not prove to be controversial. It is reflected in Jeremy Waldron's work where he defines property as “the concept of a system of rules governing access to and control of material resources” (Waldron 1988: 31). It is taken for granted in the elaborate frameworks that Andrew Reeve (1986), and John Christman (1994) present, as well as in discussions of intellectual property rights, such as Hettinger's “Justifying Intellectual Property Rights” (1989). All start from a perspective of property as social relations between people with regard to things – patterned by legal or customary protocols that guide behaviour.

As already mentioned, Harris's authoritative treatment of property, however, argues that property protocols have distinctive features without which they might still be protocols guiding people's behaviour with regard to things, but they would not be *property* protocols. It will be instructive to familiarise ourselves with Harris's terminology and account at this point.

2.3.3 Property and non-property.

Property, according to Harris, has the dual function of governing the use of things and of allocating “social wealth”, which for Harris refers to the total of those things and resources which are scarce, that is, over which there might be substantial conflict regarding their use. That is, property functions as both a mechanism for distributing *use-privileges* (and their concomitant wealth effects, about which more later), as well as *control-powers* (decision-making authority). If rights of property only

conferred on the holder the right to use a resource as she liked but never the right to allow another to use it, then the dual nature of the function of typical property institutions would be split (Harris 1996: 28). For Harris, in property, use privileges come with control over uses made by others.

All property institutions (actual articulations of complex sets of property protocols into property systems or regimes), for Harris, are characterised by the twin notions of *trespassory rules* on the one hand, and the *ownership spectrum* on the other (Harris 1996: 31-32). The *ownership spectrum* is made up of a set of *ownership interests*, which are best understood as the kinds of specifications needed to make sense of the Hohfeldian jural relation. An ownership interest will specify a particular use-privilege or control-power. Different ownership interests may obtain for different people for the same resource. All ownership interests (i) specify a juridical relation between an owner and a resource, (ii) are open-ended, in that they do not specify exactly the kind of uses that a resource may be put to, they merely express open-ended privileges and powers, and (iii) they authorise the pursuit of one's self-interest on part of the individual or group owner. It is the *open-endedness* and *authorised self-seekingness* of ownership interests which are crucial to Harris's account.

Trespassory rules are social norms that oblige every member of a society – apart from the individual or group of individuals that are taken to have the kind of open-ended, self-seeking relationship to a thing that ownership is – not to make use of the thing in question without the latter's consent. The ownership spectrum refers to those open-ended relationships that the trespassory rules presuppose and protect.

“Where trespassory protection runs out, the owner cannot dictate uses. Within the compass of that protection, his use-privileges and control-powers are inferred, not from the content of the trespassory rules, but from the prevailing conception of the ownership interest itself” (Harris 1996: 32).

Without the prevailing (and, so Harris, *prima facie*) conception of *ownership interests as open-ended and as authorising self-seekingness*, no talk of property would make sense. The limitations and constraints that are imposed on owners (such as expropriation rules, planning and environmental regulations) presuppose this idea of dominion. Normative discussions of property which seek to replace private property regimes with common property regimes also all presuppose this notion of dominion as the ultimate referent in regard to which they make their case for its dissolution in practice.

“Ownership interests, however labeled in law, are among the organizing ideas through which social wealth is filtered. Social wealth confronts citizens as lumps over which open-ended privileges and powers obtain, not as packages of specified rights” (Harris 1996: 138).

It is the open-endedness of privileges and powers that is crucial to the concept of ownership, argues Harris. As the owner of an apple, I do not only have the right to eat my apple raw, and to eat it cooked, and to sell it and to give it away, that is, I am not the holder of a package of specified rights⁴⁴. Rather, I have a

44 As we shall see later, in a lot of liberal jurisprudence, ownership is often explained by reference to the idea of a “bundle of rights” which obtain to the owner (or is spread over several people).

privilege to use it in whichever way I want: I can eat it by myself, cut it up and share it, let it rot in the fruit basket, bury it in the garden, pickle it in formaldehyde, or or or. This is what open-endedness refers to. Open-endedness is limited to uses that do not contradict any other kind of law. For example, I cannot justify intentionally causing your asphyxiation by lodging my apple very deep in your throat, simply by reference to the fact that it is *my* apple (i.e. over which I have open-ended use-privileges). Criminal law still applies. But since it would apply whether or not the apple was mine, indeed whether it was an apple or a fist that asphyxiated you, Harris calls such prohibitions *property-independent*. While it is possible to imagine societies that are structured *without* such open-ended powers of persons over things, Harris holds that no actually existing societies are structured that way.

For Harris, the institution of property presupposes the notion of open-ended powers and privileges which a person can have over things, and which authorise the pursuit of ends that are entirely justified simply by virtue of being *the person's own ends*. These ends might be worthwhile, healthy, cooperative, or even altruistic, but they might well not be. The characteristic of the idea of property is that it legitimises (within the confines of the rest of the law) *whatever* choices an owner makes. The owner is cast in the image of the monarch who is the source of legitimacy rather than its object. Within the little king's realm, the king is right *whatever*. Of course, as already discussed, Harris is not committed to the view that the pursuit of self-interest, is the only or primary motivation for human action. He does show, however, that the conception of property as open-ended power is fundamental to its legal operation, and that the vision of the individual sovereign is at the heart of the property system of capitalist democracy.

The notion of open-ended use-privileges *to* and control-powers *over* things which authorise self-seekingness might be a prevailing notion, systemically instituted. It might also be a notion that is presupposed in all existing discussions of property relations, but this does obviously not mean that it is only by manifesting this notion that social relations with regard to things can be structured. Harris of course does not deny this. In fact, he expounds in detail the social structures of imaginary societies that show that social life can be organised entirely without reference to this fundamental notion of ownership (which I will continue calling the dominion conception). However, he calls such societies “property-less”, exactly because they *do not* conceive of relations between people with regard to things in terms of (primarily) dominion (Harris 1996: 15-23).

But this break between property and non-property is exactly the kind of break which I want to overcome. Why is that necessary? Would I not be stretching the concept of property too far and too thin? What usefulness would remain in the term? Property, most contemporary commentators would agree, is social relations between people with regard to things, which are given their particular content through particular normative protocols. By providing a framework within which all such relations can be (roughly) understood, we are also providing a framework that facilitates a comparison. Private property, then, can clearly be seen as one particular configuration of property relations in an ocean of possibilities. In fact, it will be seen as a set of several different such configurations, rather than a monolithic idea itself. This will help to free our imagination with regard to the possible. Moreover, by being able to account for commoning through such a widened understanding of property, we enable a more detailed comparison of commoning on the one hand, and the various forms of private property on the other. If we think of commoning as the normatively guided practice of particular kinds of social

relations with regard to things, we can develop a property framework which accounts for different possibilities of commons.

2.4 A framework for property as social relations.

Let me hence begin to present a framework based on the definitions of property as social relations which we encountered above. It should be understood primarily as a heuristic device (rather than an exposed ontology) for the purpose of bringing into relief certain features of relations between people with regard to things which I would like to discuss.

2.4.1 The variables of social relations with regard to things.

What this framework reveals is that property, as patterns of conventions structuring social relations with regard to things, always refers to (i) a social group amongst whom the relations hold and are performed (the *relating subject*), (ii) some resource, object or set of objects with regard to which the relations hold and are performed (the *related-to object*), and (iii) the way in which the relations are shaped, that is constrained and/or enabled, through normative protocols (the *relational modality*).

These variables will find different extensions in different contexts. For example, the *relating subject* might be the population of a nation state, it might be a tribal community, a corporation, a social movement, or the whole of humanity. Property associates pluralities of people, and so an analysis of property requires us to inquire into some such plurality. In important ways, the relating subject is co-emergent with the

relational modality. That is, communities are continuously reproduced through people's interaction with each other and the things that surround them on the terms given by their conception(s) of property. The normative protocols that shape these interactions, conversely, emerge and are transformed in the continuous reproduction of community. It might be important to clarify here that the "relating subject", as I construe it, is the A+C of the often used schema "A owns B against C". It is not merely A. This defines a starting point for an analysis of property that is social, rather than one focused on the "owner" (the individual or group holder of use-privileges and control-powers).

The *related-to object*, as already stated, might be a resource, an object or a set of objects, or a heterogeneous pool comprising various resources and objects. These might be big or small, tangible or intangible, significant or trivial, but they will always have some meaning and value to people. The stuff of the material world is suffused with meaning and value: as human beings, we do not only name things, we also order them in categories and in relation to one another, conferring meaning on them through that ordering/relating process. But, of course, we do not name and order things out of the blue, or from some sort of "view from nowhere" (Nagel 1989). Things play roles in the human lifeworlds they furnish, and gain their meanings accordingly. Meanings mostly develop over long periods of time, and in association with occurrences, cosmologies, actions, and all the other things that make up human social realities. It is because people dwell and participate in the material world, always already relating to all its constituents, that meaning emerges. It emerges from lived, human-non-human interaction, rather than being super-imposed by the human onto the non-human from some kind of external position (Ingold 2000). The particular meaning and value that something has for people thus depends on, and in fact arises from, the particular ways in which people

interact with it (over time). While objects are most often concrete, measurable entities, resources need not be. A forest might seem like a relatively bounded thing in most of Europe, but in the Amazon basin “the forest” is an all-pervasive, amorphous meta-resource providing all that is needed for food, home-building, fuel, ornamentation and medicine. It is in constant transformation, growth and decay, and even if we could measure its totality in some way, it might have significantly changed soon thereafter. Similarly, Free Software can be seen as a pool of software code, made up of individual code fragments, but also of projects that combine, transform, rework, comment on and discard these fragments. The pool is growing and changing constantly, and might one day dry up. The related-to object of our framework maps onto most other characterisations of property systems, as the B of the “A owns B against C” relation.

The *relational modality* is what characterises the associations between the entities that make up the relating subject (between the individuals and sub-groups of individuals of an overarching community, i.e. A+C) with regard to the related-to object. To say that property is relations between people with regard to things does of course not tell us anything very specific about these relations. Property in general says very little about property in particular (which is possibly an additional reason for why it is so easy to conflate the two: specifying property in one way or the other at least commits us to a particular understanding of the relations that actually pertain or ought to pertain between people with regard to things – rather than just positing that such relations exist). “A owns B against C” does not tell us anything about what “owns against” actually means, apart from that it somehow associates A and C with regard to B. It is the specificities of that association that an analysis of property must address.

Above we spoke of the primacy of interaction between humans, and between humans and non-humans. Co-existence is the starting point for all of us. If we proceed from this point of view of the interaction between humans and things, it should become obvious that the *relational modality* of our property framework is primarily an active one. We *do* things with people and the stuff that surrounds us. But what we *do* is usually dependent on what we *can do*, and what we can do is partly subject to norms and conventions, customs and laws, freedoms and prohibitions. It is these normative protocols that guide social interactions with regard to things that *relational modality* refers to. This brings in the “controlling behaviour” aspect of the definition we adopted above. Property relations, we said, are a “pattern of rights, duties, privileges, powers, etc., which control the behavior of individuals or groups in relation to one another and to the custody, possession, use, enjoyment, disposal, etc., of various classes of objects”. It is the *particularity* of these action-guiding protocols that an inquiry into the relational modality of a particular form of property would set out to describe. It would be an inquiry into what “owns against” of the “A owns B against C” expression actually involves in practice. Harris’s open-ended ownership interests are specifications of relational modality on our account.

The kind of social analysis of property for which I am arguing hence begins with an inquiry into the particularities of the *relating subject*, the *related-to object*, and the *relational modality* of the property relations under examination. For purposes of this essay, this means that if we want to understand the property relations that characterise the Free Software movement, for example, then we begin by asking the questions posed above.

2.4.2 Articulated and unarticulated normative protocols.

The Free Software movement is a translocal community of, primarily, software developers and software users, who are associated by their common creation, maintenance, reproduction, distribution and use of (free) software, in a shared vision of software development. The pattern of rights and duties that guide their activities is clearly articulated in the movement's defining legal document, the GPL software license. We will examine the GPL in Section 3.5. In the case of Free Software, the pattern is articulated in legal detail, while in other contexts it may not be articulated at all. This is an important point for understanding the social analysis of property that I envision: the rights and duties may be embedded in shared customary practices or other forms of unwritten rules, without being legally articulated or otherwise made explicit. Hackers' customs were implicitly embedded in hackers' practices in this way before they were articulated in the GPL. "Rights and duties" hence have to be understood in a loose sense as referring to the kinds of freedoms and responsibilities people in social settings take one another to have. Hallowell clarifies:

"From a comparative point of view ... property, conceived as a social institution, does not necessarily imply legal relations in the narrow sense as part of its structure. But it may be discovered upon analysis that the social *function* performed by law in securing property interests in our culture may, in another society, be performed by a non-legal institution. Such variables are of great importance to our understanding of the structure and functioning of property as a *human* institution." (Hallowell 1974: 238)

Social structuration that might be upheld by the letter of the law in one society, might be upheld by a different social institution in another. Such different social institutions might be customary: habits, rituals, ceremonies, manners or, to put it simply, unwritten law. Indeed, customs are often precursors for legal articulation⁴⁵. On my account Richard Stallman successfully articulated hacker customs into property relations in order to defend the software commons, even though he does not recognise his achievement on those terms.

Approaching the practices of Free Software from our framework will allow us to identify the particular features that distinguish “Free Software as property” (Chapter 3) from other configurations of property relations. Doing so will reveal aspects of both Free Software and private property that otherwise pass unnoticed. The former is an example of how the latter can be radically transformed through subversive use of the decision-making authority that private property entails. This will only become fully clear in Section 3.5.

To propose a common framework within which all the different varieties of relations between people with regard to things can be located allows us to contrast and evaluate them with more ease. It is not to flatten out important distinctions in the variety of human social experience and organisation, but it is to highlight that in

45 There is no scope to deal properly with the concept of custom in relation to positive law here. I had previously drafted a chapter on customary law, particularly drawing upon the work of Platt (1894), Smith (1903) and Allen (1927) as well as Rose (1993): “It is at least certain that in many societies of which we have evidence, before any clearly articulated system of law-making and law-dispensing has developed, the conduct of men in society is governed by customary rules...they are 'legal'...inasmuch as they are binding and obligatory rules of conduct (not merely of faith or conviction), and that the breach of them is the breach of a positive duty” (Allen 1927: 64)

terms of social relations with regard to things, certain variables (subject, object, modality) generally apply, and their particular extensions in different contexts speak of the variety of ways in which human co-habitation, of a hamlet, a mountain, a metropolis, cyberspace, planet Earth, including all their respective non-human constituents, can be realised.

By starting from such a general view on property, we “snap” the conventional and constricted understanding of property as private property, and open it up to the multitude of modalities of agency that characterise social relations with regard to things. Moreover, this framework allows us to articulate property relations from community practices. Such articulation, or making explicit, fosters reflexivity in communities, and is particularly helpful for those who struggle against privatisation. It can be a means by which to constitute and strengthen spaces which operate on logics different from, and maybe even subversive of the logics of capitalism. It is, in my view, somewhat ironic that this way of articulating practised social relations with regard to things into explicit property relations has been so well performed by Richard Stallmann and the Free Software Foundation, who refuse to see property in this way, let alone consider Free Software on such terms at all. But to look at matters in this way is, I believe, to better recognise their achievements and the wider potentialities involved.

Our framing of property as particular configurations of social relations, which at its most general level associates a relating subject with regard to a related-to object in a relational modality, pushes us to inquire into the details of these variables in order to understand and evaluate any one property system. The behaviour of individuals or groups in relation to one another and with regard to various classes of objects is guided by particular laws, norms, customs, or values, which vary from one socio-cultural

context to another, and often within any one such context. Property systems might be multiple and overlapping, maybe even conflicting within any particular setting. A social analysis of property would have to be attentive to such multiplicity.

But leaving such complexity aside for the moment, in order to illustrate the particular way in which the relational modality of private property is predominantly configured, we shall examine now the (legal) specifications that determine the actual rights and duties of a private property owner with regard to others in capitalist democracies.

2.5 Specification of property: the configurations of relational modality.

I have already said that Harris's open-ended, self-seekingness-authorising ownership interests should, on our model, be understood as specifying the *relational modality of basic private property*.

A diagram (on the following page) will aid the understanding of the discussion that is to follow.

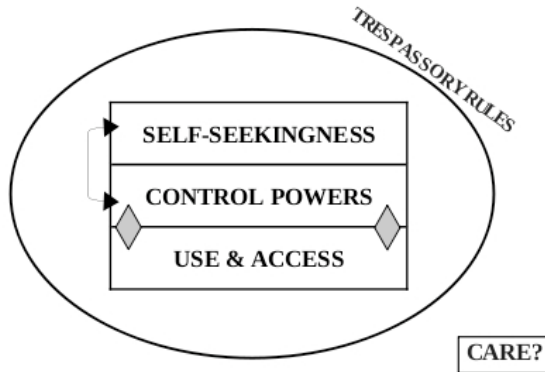


Illustration 2: Basic configuration of private property.

2.5.1 The basics of private property.

Use of or access to a resource is a fundamental element of social relations with regard to things. We said that most of the time, our interactions with things are about *doing* things. I might eat the apple, or cut it up and share it, or bury it, or let it rot in the fruit basket, but a precondition of whatever I do with it, is my *access* to it. *Use-privileges are about accessing and using resources* – in specific as well as open-ended ways.

The function of property, according to Harris (and Waldron and others), is to distribute decision-making authority over the use of things (*control power*) along with access to these things (*use-privileges*). While control-power might lie with one person (e.g. the landlady), and use-privileges with another (e.g. the tenant), in the paradigmatic case of private property, these are *collocated* in

the sense that it is the landlady who can make the decision to grant the use-privileges that are part of her ownership interests to the tenant. The two grey arrows of Illustration 2 are meant to illustrate this collocation of what is sometimes also called “beneficial use” (use-privileges) and “title” (control-power). Control power, on Harris’s account (which I accept as expounding the paradigmatic case of private property), is *self-referential in terms of its legitimation*. The landlady’s decisions with regard to, say, whom she is going to let her house to, are legitimate simply because she is the landlady. She can justify all her decisions simply by stating that they were hers. The institution of private property authorises her to exploit all her control powers and use privileges according to her rational self-interest – or whim. The thin black arrow to the left indicates the referral. Self-seekingness is not only authorised, it authorises her decisions. It is in this way that the individual is enthroned as sovereign in her own realm.

Trespassory rules, the social norms and legal protection that keep people from accessing or using what is under someone else’s control power without their consent, circumscribe the realm within which the individual is sovereign. This realm can be understood as a real territory, especially in the context of land ownership: trespassory rules legally fortify the fence. But more importantly, this realm is a commixture of a thing and its open-ended uses: trespassory rules do not only keep you from sitting on my chair without my consent, they also keep you from interfering with my painting it fluorescent green. Within this “realm”, the owner is free to dictate uses (unless she has contracted some of them away as the landlady has to the tenant). Trespassory protection legally secures this power. We shall see in Section 3.5 that it is copyright that circumscribes the realm within which Free Software can flourish.

Interestingly, as already broached, on the economic account it is simply assumed that once a sovereign is in place, *care* is taken of the realm, because the individual is an agent that optimises the use of resources and generates the most wealth. But as Proudhon so usefully reminds us, the Aristotelian premise does not necessarily hold:

“The Roman law defined property as the right to use and abuse one's own within the limits of the law -- *jus utendi et abutendi re sua, quatenus juris ratio patitur*. A justification of the word abuse has been attempted, on the ground that it signifies, not senseless and immoral abuse, but only absolute domain. Vain distinction! ... The proprietor may, if he chooses, allow his crops to rot under foot; sow his field with salt; milk his cows on the sand; change his vineyard into a desert, and use his vegetable-garden as a park: do these things constitute abuse, or not? In the matter of property, use and abuse are necessarily indistinguishable.”⁴⁶
(1840: 42)

An effective distribution of care – so that the things of the world may not only be used, but used in intergenerational perpetuity, for example – is not achieved simply through paradigmatic private property arrangements. Unless decision-making authority is legitimated by reference to something else than mere self-seekingness, care cannot adequately be accounted for on this model. In fact, we may say that the distribution of care has been entirely overridden by the distribution of self-seeking decision-

46 *Abuti* in Latin means both 'to misuse' and 'to use up, to consume', which might temper Proudhon's exclamations somewhat. His point is still relevant to our discussion, however.

making authority in the institution of private property. By mapping the elements out in our heuristic diagram, we learn that it is not necessarily the exclusivity of the decision-making authority (the landlady can make the decision exclusively, and she can make the decision to exclude you) that is the normatively most problematic issue with dominion. Another, possibly deeper-seated issue concerns the value by reference to which such decisions are made.

It is a particular vision of the interrelations of autonomy, agency, identity, authority that underlies the conception that the legitimacy of a decision derives from who made it rather than by reference to what it is justified. It is the instantiation of private property itself that creates the automatic link between justification and self-seekingness: we have projected the monarch into the individual. The individual (like the monarch before her) becomes the source of all legitimacy: within the confines of my realm, what I want and choose is right. The institution of private property confers the power to make might into right. In Harris's terms, it allows for desire to become authorised choice (Harris 1996: 102). But to place the source of legitimacy into the individual will is the expression of a particular value. It is the valuing of individual choice that needs to make reference only to itself. It is the valuing of a subjectivisation of values (cf. Sayer 1999) over and above coming together in a mutual shaping of values.

2.5.2 Capitalist private property.

Capitalist private property has to be characterised in slight distinction from "basic private property". It has been argued decisively (Christman 1996; Holderness 2003; Berle and Means

1932) that it is especially *two* conditions that are central to the particular configuration of private property in capitalist democracy. For the influential jurist-cum-economist Richard Posner, the function of property rights is to “create incentives to use resources efficiently” (1977: 10), and exclusive property rights are a necessary but not sufficient condition for the efficient use of resources. Wealth is thought to be maximised when resources are used most efficiently. Wealth maximisation, however, “requires a mechanism by which the [owner] can be induced to transfer rights in the property to someone who can work it more productively; a transferable property right is such a mechanism” (Posner 1977: 29). Private property rights-based relations within capitalist democracy are hence specified by the *collocation* of (i) *exclusionary rights*, that is, control powers or decision rights and (ii) *exchange rights*, that is, rights to alienability on the market and wealth effects. This collocation is at the core of the privatising forces of the capitalist economy: in the so-called free market, agents (i) enjoy exclusive decision making power over goods and resources (or capital) and (ii) the rights to any income that the fruits of their resources may bear and generate through exchange in the market place.

“This collocation of decision rights and wealth effects provides both the incentive and the feasibility for value-enhancing transfers. Berle and Means ... appropriately call collocation the “atom of property” and view it as “the very foundation on which the economic order of the past three centuries has rested” (Holderness 2003: 77).

This (second)⁴⁷ collocation will have to be added to our diagram (see Illustration 3 on the following page).

We might conceive of the right and privilege to wealth effects as part and parcel of use privileges. But it adds a particular quality to private property, making it characteristic *of the particular form of private property that structures capitalism*.

It is this particular configuration of relational modality that converts things into commodities, and makes the capitalist market feasible.⁴⁸

47 The first collocation we observed of decision-making authority or control power and use privileges or access has, to my knowledge, never been identified as being of much significance. Given that, as we shall see below, splitting either of these collocations changes social dynamic significantly, I have decided to highlight the collocated nature of both of them.

48 Interestingly, corporations are usually characterised by a separation of the use-control and wealth-allocation functions of property (or the “separation of control and ownership” in Berle and Means terms (1947: 93)). Shareholders, for example, have the right to a share of the wealth effects, yet cannot usually expect a right to make use of corporate assets. However, because a corporation counts as a juridical person, of which shareholders and chief executive officers are just parts, we can still sensibly speak of a collocation here.

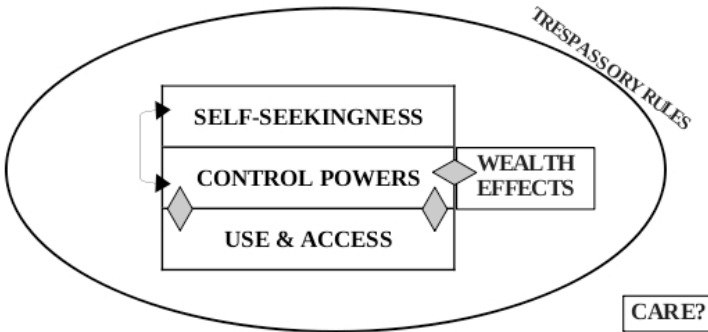


Illustration 3: Capitalist configuration of private property.

2.5.3 Splitting the atom of capitalist property.

If the collocation of control powers and wealth privileges is the “atom of property”, what happens, we may wonder, if we split it?

A simple illustration with regard to the real estate market may be illustrative. If we decoupled control powers and wealth privileges with regard to land and housing, i.e. if we removed the exchange rights from the property arrangement that governs real estate, then the speculative aspect of the markets in land and housing would, if not completely disappear, at least be severely undermined⁴⁹. Although the land and housing market would be profoundly changed with far reaching implications of wealth distribution, you remain a private home owner with the right to

49 For this to work in practice, other organisational forms for the circulation of housing would of course be necessary in order to ensure the mobility of people. However, this merely serves as a heuristic example here.

exclude others, but *not* the right to sell it. You and I could be house owners and enjoy a substantial part of the privileges that come with being house owners, but we could not sell our houses to one another or to others. With regard to land, people could exclusively own pieces of land for growing crops, but they could not engage in speculative trade of land. Moreover, we could imagine that, if we only reconfigured the property arrangements with regard to the use of land, but not of the fruits of the land, the right to sell those crops could still obtain. Removing the right to exchange, one of the powers of the owner under a capitalist private property regime, would hence make the real estate market – as we know it – disappear. The kind of speculation that makes some people very rich through controlling land and through letting, but which keeps others confined to renting in poverty and without direct access to land, would not exist. At the very least, it would be transformed to such a degree that it would be unrecognisable. In other words, the implications of private property with regard to land and housing would be entirely different if only one of its conditions was changed or removed.⁵⁰

Another way of reconfiguring the private property relations that define capitalist democracy would be to alter the conditions of (for example) the right to exchange, rather than removing it completely. If exchange rights were not decoupled from exclusion rights, but rather *redefined*, such as through the prescription of wider community involvement in the transfer, (legal) agency of owners in the market of land and housing would necessarily unfold completely differently, literally on

50 An argument for the ownership of one's organs could also unfold along these lines, because it would not be prone to criticisms based on the claim that it encourages a trade in organs. A poor person would through exclusive ownership, but without exchange rights, not be encouraged by the law of property to trade in her organs.

different terms or conditions. Speculation would be possible, but it could be specified that those implicated by speculative transfer would have to be consulted in the process of transfer. Transfers – and thus speculation – would be significantly slowed down, and could then be assessed through community participation on a case by case basis. Exchange would thus become much more transparent. The same principle could be applied to currency speculation and such activities as computer algorithm and network based currency speculation consisting of many transfers per day would effectively become impossible. There is an initiative called the Tobin Tax, which proposes a simple tax on currency trading that is designed with a view to limit speculation in currencies. In structure the Tobin Tax is similar to the alteration of exchange rights, but does not constitute a removal of the fundamental right that is currently facilitating financial speculation in currencies across borders. The Tobin Tax does not imply that “speculation” will definitively disappear. It “merely” implies that those who have the desire to speculate in and exploit the potentials for wealth in taking exclusive control of currency with a view to speculative trade, will be subjected to taxation that either: (a) might lower the incentives for doing so, or (b) will generate an income for the state that can be redistributed, for example through the provision of universal health care or perhaps a basic income for all human beings or instead used for the purchase of repressive technologies. This example is for illustrative purposes only. The ambiguity associated with what the state can and will do with such revenues – including the problem of the state as such from an anti-capitalist perspective – should be obvious. Moreover, the Tobin Tax as an additional and limiting element of exchange rights is an indirect and rather weak version of the addition of “community involvement in transfers” that I was suggesting above. It does not carry as much weight as direct community participation might do in the changing of socio-economic organisation, but it is structurally very similar

and, nevertheless, arguably a reconfiguration of property worth considering⁵¹. However, such discussion crucially should involve open debate about the use of those revenues. Such state income could in theory be used for the upkeep of squats, social centres and permaculture villages, rather than for the consolidation of the state.

2.5.4 Personal property.

This point about property (re-)configuration can be expanded by focusing on the related-to object. Many of the classical justifications of some form of private property (based primarily on decision or exclusion rights) were arguably never intended to apply to all classes of objects. Arguments for an inalienable right to private property at their most laudable refer to a relatively small amount of things, those that constitute a person's identity (Hegel), those that a person has directly mixed their labour with (Locke), and those that are necessary for an at least minimally dignified life, free from hunger and fear. Such a right would not include the right to unlimited accumulation, and would not obtain with regard to the means of production and natural resources. There is a wide variety of arguments, reasons and narratives inherent in the writings of the philosophers who originally justified private property as an important theoretical aspect of the transition into capitalism that are relevant for delimiting personal property. Many different aspects could be singled out, indeed an entire thesis could be written about just that. I am here not

51 During the current financial crisis the Tobin Tax has unsurprisingly gained currency, as it were, in mainstream debate. See for instance "The time is ripe for a Tobin tax" by Larry Elliot (2009). However, see De Angelis (1999/2000) for a critical examination of the shortcomings of the Tobin Tax in the real world of speculation.

arguing for what kind of objects ought to be the object of such personal, private property relations, but merely raising the point that there might exist some that ought to be.

The arguments of Hegel, Locke and others suggest that a certain kind of exclusive decision-making power over and responsibility for some things is of great value to individuals. People get bound up with things in constitutive ways that are not always fetishistic in an unhealthy sense. If we remember that we said a relation can be constituted by interaction, that is it can be performed as well as symbolically posited, we should be able to see that there are relations between an individual and an object that are intimate because of the significance (to the individual) of the action that involves both of them. The cuddling of a teddy bear comes to mind, or the daily use of a toothbrush or saucepan, or the occasional, cathartic weeping over an old photograph. Hence a certain kind of exclusive personal control (possibly never absolute) over a few things in the world – enough to sustain a realm of autonomy and freedom – is needed in any community. Regarding land, its resources, and the means of production and distribution, however, I maintain that access to and use of them is so crucial for basic subsistence, while the way in which it is accessed and used have such significant social and environmental implications that affect, ultimately, the whole of humanity (and all other living beings), that the configuration of these property relations ought to be approached differently than the configuration of personal property. These, however, are normative side points for now.

The atom of the private property relations that define capitalist democracy has been identified as the collocation of exclusionary and exchange rights and it follows from this that one of the most profound reconfigurations of capitalist property relations consists in splitting that atom, or radically altering the composition of that

atom. One way in which that can be done is by adding limitations to the scope of those exchange rights. I will show in Chapter 3 how Free Software is a reconfiguration of property relations where the two elements whose collocation makes up copyright – exclusion and exchange – are both redefined in such a way, and their social implications thereby changed so fundamentally, that they are hardly recognisable (which might explain why it is that some authors fail to understand Free Software as an instance of property relations at all).

Having seen that the kind of community that property relations give rise to can be altered in potentially radical ways merely by small changes to the normative codes that guide collective behaviour with regard to things, we can begin to imagine property configurations of many different kinds with regard to different things and for different purposes.

2.6 Property and commons.

Because of the way in which we have construed our relating subject (as the overarching community of our analysis), we can see that the relational modality within capitalist democracy is, as a starting point, primarily one of asymmetry and exclusion, and hence also fragmentation. However, the asymmetry is, in some not insignificant way, shared. Rose (1993) suggests that private property can be understood as the “common property” of a community which has agreed upon, embraced and considered the implementation of private property theirs (or, we might want to add, upon which private property was imposed). De Angelis relatedly argues that: “No social relation among people can do without some types of commons that act as a centre of their interaction. Not even in capitalist production” (De Angelis

2005b: 68). In capitalist democracy, the normative protocols that are private property rights are part of such a centre. A+C are united, as well as separated, through the common values that underlie the institution of private property. Whether or not, however, private property continuously causes fragmentation is not the primary question for a general understanding of property. The more important point that I want to make here is that not only do communities make property relations, but property relations make communities. And, as repeatedly noted, it is the *particular specifications* of property that actually give structure to a community.

Above I have introduced the reader to the basic configuration of private property, and its capitalist variant. In this section, I will examine the structure of property configurations that are usually contrasted with private property and variably referred to as common, public, communal, communitarian, or collective property, or some such. While we have seen that there can be even within one particular school of thought a lot of disagreement over the particular kind of thing that private property is, its central idea is usually that decision-making authority over particular resources is allocated to *individuals*. That is, individuals are given rights to make decisions about what is being done with a resource and who can do so – and they are given these rights as against everybody else. Private property being a right, the owners' decisions with regard to the object of their ownership will be backed up by public force. Common property is sometimes used to refer to *joint ownership* – where a determinate number, but more than one person hold private property rights in something together. This form of property is probably best thought of as a particular configuration of private property and is obviously central to capitalism, in the form of firms, corporations and (indeed) charities.

2.6.1 The importance of access.

Benkler contrasts “property” (really, *private* property) with *commons*, which he divides into four different types according to two parameters. The first parameter concerns the collectivity which has access to the commons: is it a defined group, or an indeterminate “everyone”? Open commons are open to all, whereas limited-access commons are open only to a defined group of people. In that sense the latter are, according to Benkler, better thought of as “limited common property regimes rather than commons, because they behave as property vis-a-vis the entire world except members of the group who together hold them in common” (2006: 61). The second parameter concerns the regulation of access. All limited common property regimes that have been studied, so Benkler, are governed by some set of rules regarding their use, but of course we could at least imagine *some* that were not regulated in that way. Open-access commons are those that can be accessed unconditionally by all. Other commons might be governed by rules, but even so, these constraints, if present at all, “are symmetric among all users, and cannot be unilaterally controlled by any single individual” (2006: 61-62).

	Regulated	Unregulated
Open to all	Regulated commons	Open-access commons
Open to a defined group	Limited common property regimes	?

Illustration 4: Benkler’s commons.

On this conception, *access* is central. Classifications turn on the question of *who* has access (all or only some) and *what kind* of

access they have (“anything goes”, free for all, or conditional access, specified by rules). This is of course in many ways in line with the conventional view that property is about access to and use of things. The distribution of control power, that is, decision-making authority, however, is slightly submerged on this perspective as the questions of regulation and openness take its place.

I have to add here a few observations. Firstly, one wonders why regulation is supposed to be a defining parameter: if entirely open-access commons exist primarily as a justificatory “tragic” fiction for private property (see Section 2.1), and all known “limited property regime commons” are regulated; that is, if all *realistic* commons are governed by some kind of rule, why is regulation a parameter at all? Secondly, we might be able to imagine “open” commons that are governed by rules that *do not* apply symmetrically among all users, which can however neither be controlled *unilaterally*. What about a lake to whom everyone has symmetric access in terms of swimming, but only women can remove water for their gardens from? Assuming that this rule has not been unilaterally imposed, but evolved over time or through a collective decision-making process, would we be looking at a limited property regime in terms of “water-removal” and at a commons in terms of “swimming”?

Moreover, one is easily led to muse whether, on Benkler’s characterisation, there is anything else than air (his example) that could ever be a truly open commons. Of course access to certain things can be *potentially* open to all, such as Central Park in Manhattan, if only everyone could get a visa, and across the sea. A “virtual” internet commons, similarly, might be *potentially* open to all, but actually to very many it is not. The question this raises is why *potential* openness is supposed to be a usefully defining parameter.

However, “openness” (always potential), if inquired into a little more, might tell us something that is somewhat hidden by the terminology. The question of whether a commons is (potentially) open or not makes a difference in a situation of conflict: trespassory rules would circumscribe a “limited common property commons”, whereas they would not circumscribe an open commons. In a court of law, “openness-to-all” would make a difference if someone had been denied access to a common resource. That is, potential openness seems to matter in terms of *allegations of trespass* and *conflict resolution*. This is the conventional view: openness means nobody can trespass, after all, the commons is open to all. However, if all realistic open commons are regulated in some way, then we might wonder whether trespassory rules would not in some significant way still circumscribe even the open commons. After all, even if the group which has access to the commons is indeterminate (potentially open to anyone) rather than clearly defined (only open to a group of people that could potentially be listed), access would only be allowed under certain conditions. That is, access would be (potentially) open to anyone *who abides by the conditions of access* (for example, access to a lake is open for swimming, but not for using the water in irrigation). While we might not be able to draw up a positive list of persons who have access as against everybody else (“Sarah, John and Paul, and all their offspring”, i.e. the defined group), we can clearly state the characteristics of someone who can have access as against someone who cannot (“she who abides by the rules”). Trespassory rules would hence still circumscribe the commons, yet trespass would not be based on *identity* (in the birth certificate kind of sense), but on *action* (how do people behave).

“Openness”, we might say, is meant to capture this difference: are people excluded from access for reasons of identity or for

reasons of action?⁵² We can note here that identity and action are key organising principles of social relations with regard to things that are rarely made explicit. They will resurface in our discussion below. Again, however, the question of control power looms large: *who* is making the decisions with regard to who has access and under which conditions? I will now turn to Jeremy Waldron's account of common property, in which it becomes clear that the value by reference to which these decisions are legitimised plays an important role in the institution of property.

2.6.2 The importance of “whose interest”.

Waldron (1988) contrasts private property with common property on the one hand, and collective property on the other. On his account, *common property* is understood as referring to resources, access to which is *open to all and any* member of that society or community. Rules with regard to such access might exist, but they exist only in order to enable equal access and enjoyment, or care and maintenance of the resource. A public park would fall under this rubric. It might be forbidden to cut down trees or dig large holes or build pyramids in the park, but these rules merely exist to ensure that its main purpose as a place of recreation is upheld *for all*.

What is called common property by Waldron is elsewhere sometimes called public (or state) property, as it often refers to resources that are administered by the government of a nation state for the benefit “the public”. The public is of course an elusive unit, referring usually to an indeterminate group of

52 I will leave the question of the ontology of identity and action, and the potential collapse of their distinction for someone else's work.

people, even if connected to a specific nation state. Public property usually implies that use-privileges are available equally for this indeterminate group of people, who, however, do not have any control powers. The public authority administering the park would usually have such control powers, which is why it could sell the grounds to a developer (unless additional legislation prohibits it). Public property is predominantly characterised by a separation of “beneficial use” (use-privileges) from “title” (control-power), and the title holder is supposed to control and dispose of the property *in the “public interest”*.

On Waldron’s account, *collective property* refers to resources, decisions over access to which are made collectively, based on a determination of *the “social interest”* – for example through “leisurely debate among the elders of a tribe [or] the forming and implementing of a Soviet-style ‘Five-Year Plan’” (2004). This implies that members of a society would not necessarily all have equal access to the collective resource. It might be that it was decided to be in the best interest of “all” that, say, only the elderly, or an intellectual elite have access to a fresh water reserve.

Waldron’s classification of property systems turns firstly on the question of *who has the authority* to make decisions over access to resources (individuals and quasi-individuals such as incorporated groups, or some wider collective such as a nation or a tribal community). Secondly, it turns on the question of “*in whose interest*” these decisions are made. Very crudely, private property allows for decisions to be made purely in pursuit of self-interest, common property ensures that everyone’s (individual) interest is equally addressed, whereas collective property provides access to resources according to the overarching social interest, or common good.

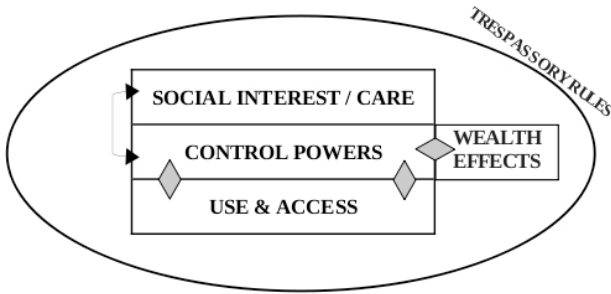


Illustration 5: Basic configuration of public property

It seems to me, however, that Waldron’s distinction collapses too easily. The objective of keeping access to a resource open to all embodies ultimately just as much a determination of “the social interest” as a decision with regard to a collective resource would – which is why the administering authority is understood as accountable to the public with regard to, say, the park. We have also already discussed the way in which a system that is predominantly based on private property arrangements embodies a particular idea of the common interest (a particular common value), namely one of the primacy of individual autonomy – often reduced to market agency. Despite these reservations regarding the distinction between “social interest” and “interest of all”, we can glean from Waldron’s account that (i) distribution of decision-making authority, on the one hand, and (ii) the norms and values according to which decisions are made, on the other, remain key organising principles of social relations with regard to things.

On Waldron's account, common (and collective) property are characterised by their control power having to refer to something else than merely itself in order to be legitimate (see Illustration 5). The monarch's self-referentiality in terms of legitimacy has been abolished, while the element of care is often retained in public property arrangements as part of its justificatory basis. Trespassory rules, of course, continue to stake out and protect the scope of decision-making authority (made legitimate by its consideration of the social interest).

2.6.3 Common property and the legitimacy of self-seekingness.

For Harris, property institutions, as we have already seen, are characterised by ownership interests – open-ended powers and privileges with regard to a thing, which authorise self-seekingness, hence bridging the gap between desire and authorised choice – and trespassory rules which protect these interests. Ownership interests which do not authorise self-seekingness, but rather imply that particular uses can only be justified by reference to something else than self-interest (e.g. the public good) are called *quasi-ownership interests*. Non-property, hence, refers to resources with regard to which *no* ownership interests or quasi-ownership interests, and concomitantly *no* trespassory rules obtain⁵³. An open-access commons is the paradigmatic example of non-property on this account⁵⁴. Harris refers to such non-property as “common property” (always in

53 Harris also excludes from property institutions resources access to which is protected by trespassory rules, but without any reference to ownership interests. Since these “protected non-property holdings” are (according to Harris) “rare” (1996: 111), and we might want to add “hard to imagine at all”, I will not worry too much about them here.

quotation marks) to mirror the terminology of other writers. Apart from “common property” (which, for Harris, really is no property at all) there are other forms of property that are nonetheless distinguished from the ownership interests plus trespassory rules model characterising individual private property. These are (i) joint (or group or corporate) property, (ii) public (or state) property, and (iii) communitarian property.

As already mentioned, joint property is best thought of as a version of private property. It is characterised by the *absence of trespassory* rules regarding the resource *between* the owners, even though there might be “internal regulations allocating use-privileges and control-powers between members of a group, as will often be the case with associations like clubs or trade unions” (Harris 1996: 101). Corporations are usually characterised by a separation of the use-control and wealth-allocation functions of property (or the “separation of control and ownership” in Berle and Means terms (1947: 93)). Shareholders, for example, have the right to a share of the wealth effects, yet cannot usually expect a right to make use of corporate assets. Whatever the internal organisation actually looks like however, Harris writes that “those who exercise control are free ... to justify their actions on the grounds that they are in the self-seeking interests of their members or shareholders. In the case of these [joint] variants, as in that of individual private property, ownership interests serve as irreducible organizing ideas between desire and authorized choice” (Harris 1996: 102).

54 He admits that certain uses of the resource might be banned to all, but this would have to be by property-independent prohibitions, such as through taboos. Any rule that may govern the particular resource in question would have to be free from proprietary presuppositions, that is it cannot assume any ownership interest whatsoever: “[i]f property is ‘common’, no man may say you nay because the thing is his” (Harris 1996: 109).

Public (or state) property, according to Harris and mirroring Waldron's account, is characterised by *quasi-ownership interests*. Those agencies vested with certain use-privileges and control-powers are not at liberty to exploit these for their own benefit, that is, *they lack authorised self-seekingness*. Instead, the exploitation of their powers can only be justified by reference to the particular public purpose for which the agency has been vested with these powers in the first place. For example, by reference to the public interest in terms of the park (as is reflected in Illustration 5). Public property is hence, for Harris, a quasi-property, an aberrant form of dominion.

Harris contrasts communitarian property with public property and joint forms of private property: "a spontaneously evolved category of property holding which has been of the greatest historical significance, but which, for better or for worse, has been largely eclipsed in modern society" (Harris 1996: 103). "Communitarian property" in his sense, refers to a wide range of land-holding arrangements, the particular specifications of which depend on social, economic and spiritual variables, and are only conceptually united by their negative contrast with private property. He explains:

“‘[C]ommunitarian property’ refers to a situation in which a community of persons has the following relationship to a resource, usually land. They have the benefit of trespassory rules excluding outsiders from the resource – in that sense it is their private property. However whatever powers of internal division or transmission they possess are referable, not to the wider institution which contains the trespassory rules that confer protection against

outsiders, but to internal regulations arising from their mutual sense of community” (Harris 1996: 103).

While communitarian property is accorded trespassory protection, “it carries no connotation of open-ended self-regarding exploitation” (Harris 1996: 104). In that sense, it resembles public property. However, particular uses that are made of the resource do not have to be justified by reference to any particular purpose that is external to the community. The community does not have to defer to any exogenous regulations with regard to the internal distribution of use-privileges and control-powers. In that sense, it resembles private property. A crucial difference between joint private property and communitarian property, on Harris’s account, is that the former is an institution *of* and *in* existing legal systems, while the latter is not – even though legal systems might *recognise* communitarian property (for example in the form of indigenous title to land) as some kind of special, though probably defeasible interest⁵⁵.

55 Harris refers to a decision of the High Court of Australia in *Mabo v. State of Queensland* (No. 2) 1992, 175 CLR 1, which ruled that “the ‘radical title’ to land acquired by the Crown on settlement was burdened with the ‘native title’ of any aboriginal ... group ... for so long as its descendants remained in occupation and until native title was effectively extinguished by legislation or exercise of executive power, or surrendered to the Crown. So long as it persisted, the community’s native title was subject to appropriate legal protection against all the world. All questions as to the rights of individual members of the community over their land were to be determined, as questions of fact, by reference to the particular evolving traditions of the group. It was not requisite to show that, internally, the members viewed their relationship to the land as an ‘ownership’ interest, in any way comparable to the range of ownership interests known to modern legal systems” (Harris 1996: 103).

Harris's classifications are very useful in understanding the way in which most contemporary legal systems *actually* function with regard to questions of property. However, as noted previously, while the open-ended powers authorising self-seekingness which obtain over "lumps" of social wealth (Harris 1996: 138) *indeed* characterise the landscape of capitalist nation states, there is of course no reason for them to *have to* do so. And this is so *whether or not* private property is logically prior to any conception of "common property", as Harris incessantly argues.

For our purposes, his conception of communitarian property warrants special attention. It is characterised by a clear sense of communal autonomy from the greater totality of which it is nonetheless a part. Let me repeat his words again here:

"[W]hatever powers of internal division or transmission they possess are referable, not to the wider institution which contains the trespassory rules that confer protection against outsiders, but to internal regulations arising from their mutual sense of community" (Harris 1996: 103).

Moreover, it is characterised by diversity in its manifestations, and an independence (another autonomy) of the *only* institution of property that Harris recognises as proper property:

"The social, ethical, and spiritual bonds which unite a spontaneously-evolved community to the resource it collectively claims for its own are infinitely variable. In the absence of private property institutions, that variable relationship has its normative force independently of any conception of property whatever" (Harris 1996: 117).

I proposed a framework that seeks to understand property as structuring the social relations with regard to things that give rise to a community, and that illuminates the constitution of a *relating-subject* through its particular interactions with regard to a *related-to object*. Given this framework, we can understand communitarian property as *the autonomous constitution of a commons based on the articulation of common values in the form of property protocols*.

2.6.4 Commoning as autonomous property configuration.

Let me conclude (for now) that the conventional accounts we encountered so far can be summarised as all explaining and classifying different forms of property according to particular configurations of (i) the distribution of decision-making authority (regarding what use can be made of something and by whom, including wealth effects, and the trespassory rules that stabilise this distribution); and (ii) that by reference to which these decisions are made legitimate (whim or self-seekingness, “public” or “social” interest, spontaneously evolved community values).

We might summarise this further as (i) *who decides about what?* and (ii) *how?* And we might map these concerns onto our original diagram. Self-seekingness or social interest are encompassed by the question of *how* decisions are justified. And justifications always happen, even if tacitly, in common. If most people respect the boundaries that private property draws, and if those that do not are being publicly penalised, then the idea of self-referential decision-making authority is, at least to a certain degree, a *common value*. Control power is encompassed by the question of *who can make decisions* about what can be done with

something. Are individuals or groups of individuals assigned sovereignty over different things? *Who* has to be involved in the decision-making process for it to be legitimate? Do I need to ask someone before I hurl the plate I eat from against the wall? Do I need to ask someone before I cut down trees to build a parking lot? Access and use are encompassed by the question of *what can be done* with the resource in question. We have discussed above that, as human beings, we do not only do things, we do things *with things*. The decision-making power that characterises property is hence about enabling and constraining *action*. And as action also always involves an agent, this power is also obviously about people.

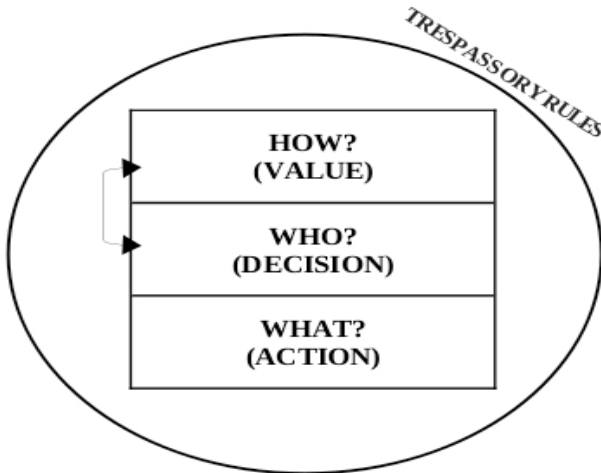


Illustration 6: Elementary questions of property.

Autonomy, in the sense of Harris's communitarian property holders, I maintain, is the background upon which answers to these primary questions are configured, and which provides the background values by reference to which these configurations gain their meaning (and legitimacy). And this is not only so for the kind of communities that hold communitarian property in Harris's terms, but for any kind of social totality (what we have been calling the *relating-subject* or A+C). Autonomy is not primarily *freedom-from* something or other, but the *freedom-to* collectively self-constitute. Those who can collectively self-constitute form autonomous communities. Commoning is such collective self-constitution, commoning is creating autonomy. It is in the process of self-constitution that a certain kind of force of law is unleashed which binds the collective together. What binds us together is our common values, emerging, as they do, from common action, co-habitation, communication, sociality. And it is from the collectivity that answers to how, who and what emerge, are contested, entrenched and overthrown.

Does this mean, then, that capitalist democracies are autonomous commons? In some ways, it is instructive to see all social totalities as commoning. I have noted a few times already that there are important ways in which capitalist societies do indeed also constitute commons, with shared values and common (if fragmenting) practices and relationships.

However, there is a distinction that I would like to make lest I stretch the concept of commons too far for it to be useful for my anti-capitalist purposes. The distinction is based on Linebaugh's thesis of the difference between individual rights and rights of commoning. And also reflects Harris's insight that "social, ethical, and spiritual bonds ... unite a spontaneously-evolved community to the resource it collectively claims for its own" (1996: 117).

In the introduction we introduced a distinction between individual rights, invested in individuals, and rights of commoning that was reflected in the principle differences between, on the one hand, The American Declaration of Independence, and the Magna Carta and the Charter of Forest (the Great Charters) on the other.

The former revolves around the individual's right to private property, while the latter take as a starting point “a world of use values” (Linebaugh 2008: 42-43) and are “independent ... of the state and the temporality of the law and state” (ibid: 45). Rights of commoning, for Linebaugh, reflect “a natural attitude” - it is not the self-referential, individual will that decides on action in isolation from the environment and the community in which it is embedded.

The configuration of control powers (who makes the decisions) and use privileges (what actions are enabled or constrained) emerges through a collective labour process, and is not sanctioned nor enforced by the state, but lived and negotiated in common (Linebaugh 2008: 45).

Conversely, The American Declaration of Independence articulates the right to private property, projecting the monarch into the individual, thereby instantiating and valuing self-referential legitimacy (of course not always a bad thing), and justifying the state insofar as it upholds these individual rights.

The commoner's body is autonomous from the state, her privileges and powers, rights and duties are laid upon the land and emerge and are reproduced through social interaction.

This nature of the rights of commoning distinguishes them radically from liberal logics of private property, which proceed

from assumptions about a sovereign individual whose autonomy can be interpreted, in an ironical reversal, as a fiction that serves to legitimate the state. The common value associated with capitalist private property lies in a moment of *creation of separation*, and the common value is thus expressed by all remaining sovereigns in their individual realms. The message of this value is that no further common values are necessary: the sum of market agency will deliver the common good. That it is sufficient for achieving commonalty, then, is the core value encoded in capitalist property.

Commoning, on the other hand, is the collective performing of actions involving the use of things. It is collective not insofar as it is *always performed together*, but insofar as it is guided by norms and values that are *common*. It is not about everybody working on the field, or on a software project *at the same time* (even though it sometimes will be). Rather it is about building relationships to one another through *the attention to* a common field or a software project, that is, through the attention to a common resource which enables and sustains both collective and individual projects. It is in the *shared attention* that is paid to a resource that the commoners' relationships are formed. And the forming of relationships is also the forming of values – the learning of a *common language*. In this sense, commoning is recursive: it both *makes* and *is made by* shared values.

Care, we might say, lies at the heart of the decisions that need to be made with regard to a commons. In commoning, it is less about *who has the power to make decisions*, and more about *which decisions are actually made*. Decisions are legitimised by the shared values they embody (if they do) rather than *by whom*

they were made⁵⁶. The primacy of *identity* (in the birth certificate kind of sense) is eclipsed by the primacy of *action* in the question of who makes authorised decisions and who has authorised access. The elements of property (use-privileges, control power, that which legitimises control power, trespassory rules) are still the same, but their different configurations give rise to qualitatively different social relations with regard to things.

2.7 Concluding Remarks.

As a technical code for the commodity form, private property has proven very powerful. As such, it has colonised our understanding of social relations with regard to things. Indeed, we have become objects ourselves, as captured in Marx's concept of alienated labour or the management concept of "human resources". However, as argued in the Introduction, freeing ourselves from the commodity form does not mean freeing ourselves from "the thing". As a matter of fact, it seems entirely unlikely that we would at all be able to free ourselves from the commodity form, deeply ingrained in our psyche as it is, without a foregrounding of the role of things in social relations. Such foregrounding of the thing in order to escape the commodity form would be expressive of self-articulated needs and desires and be sensitive to its social and environmental setting.

56 This is not to say that power and identity are absent in the commons. In the context of the Linux kernel, which is a central Free Software project, it has been noted that the organisational mode is meritocracy (Moody 2001). This means that it often matters after all *by whom* decisions are made. However, this *power to decide* is closely associated with how well a person embodies the *central values* of the commons in her *actions*.

Understanding property primarily as social relations opens up to a possible critique of property that goes far beyond the usual arguments regarding the justifiable reach of private property, or the exact conditions that make up property rights. By taking a social relations view, the way in which property protocols shape entire communities moves into the foreground. The focus on entire communities brings questions of the *ends* of social organisation, which the hegemony of the economic view suppressed, back into discussion. Correspondingly, the possibility of constituting commons through an articulation of property relations into property protocols becomes more visible. Such articulation can be based on actually practised relations or on normative judgements about which kinds of practices would help constitute the kind of commons people would like to create.

I set out to provide a minimalist framework for a *social analysis of property* that could facilitate *processes of self-articulation of relational modalities* through which commons can *autonomously constitute* themselves. The framework can moreover be used for re-articulations of the private property rights through which exclusive control of the land, its resources, and the means of production and distribution is sanctioned. My purpose has been to deconstruct and destabilise property, reveal its anatomy and operationalise it to open ends. Property provides answers to the question of who makes (or can make) decisions over the actions of people with regard to things, and by reference to what these decisions are legitimised. But can the commons, even if it finds its own answers to these questions, constitute itself under capitalist democracy?

Commons always generate their own property protocols. Commoning is acting together in a world full of things, and full of life which is dependent on things. Values which guide this action will always be present, and will inform the practice of the

commons. To articulate these values into property protocols is a form of reflexive self-constitution. The important question is now how to articulate them within the setting of capitalist democracy.

Free Software, I argue, is an example of how a (very capitalist) private property protocol (namely, copyright) was cleverly reconfigured to instantiate and protect the commoning practices of hackers. As we will see in more detail in the next chapter, the Free Software commons relies on the decision-making power it has been granted through copyright, using it to provide freedoms for all in perpetuity.

It is not my intention to suggest that adopting the Free Software model is possible in exactly the same way *outside* the realm of copyright. Research on the legal particularities of different property rights would be necessary, and might vary between jurisdictions⁵⁷. However, articulating the property protocols of Free Software will *inscribe upon the theoretical province of property the relational modalities of Free Software*, thereby *enriching* this province.

Moreover, by articulating their property protocols, many other commons could also contribute to an even more fine-grained understanding of the possibilities of property. Every time a commons inscribes itself upon property the conceptual framework is enlarged, as new tools and perspectives for property analyses become available. The picture is enriched through new ideas for *relational modalities*, ways of constituting

57 The work of the P2P Foundation – led by Michel Bauwens – is doing pioneering work with regard to the translation of Free Software and related cyberspace principles into other domains. See <http://p2pfoundation.net/>.

the *relating subject*, classifying the *related-to object* and whatever else can be imagined.

As long as the *end* of the commons – the continued mutual articulation of the many yeses - is also the *means* of the commons, autonomy based on action and relationships has eclipsed the commodity form as a guiding principle of building social relations. The commons conceived in this way is a realisation of the politics of the meaning of life, and suggestive of social organisation beyond the nation state. The commons is a lived resistance: if there is any exit at all from capital, it lies in the subversion of property frameworks through the inscription of the relational modalities of the multitude of commons upon it.

Let us finally investigate the Free Software commons in detail to investigate its technical foundation, history of resistance, community building practices, and, of course, property relations.

Chapter 3

Free Software as Property



J. Martin Pedersen

3 Free Software as Property

“All property relations in the past have continually been subject to historical change consequent upon the change in historical conditions” (The Communist Manifesto).

“The Tao abides in non-action, Yet nothing is left undone” (Lao Tzu).

3.1 **Introduction.**

This final chapter is about Free Software. It will provide a detailed analysis of what Free Software is and how it came to be a global social movement. There is a clear and deeply embedded normative element to the Free Software movement in that it posits *community* as a desirable alternative to *private control* over software and information and knowledge in general. In that sense, the Free Software movement reverses the process *from* commoning *to* privatisation: commoning substitutes for privatisation on normative grounds. This normative element is articulated in the GNU General Public License, which is a legal document, more precisely a software license, that defines the Free Software community. The reversal of this process – *from* privatisation and *to* commons – is in part a struggle over software values and the dignity of hackers, suggesting that we may understand the Free Software struggle as part of the beginning of history (cf. De Angelis 2007)⁵⁸.

58 As opposed to the neoliberal idea of the “end of history”.

As argued in Chapter 1, the work of the Free Software and Culture movements' leading voices can all too easily be seen as liberal apologias and as re-enforcing capitalism by providing “free labour” (Terranova 2000) and “offer liberal and neoliberal economics a refinement of its logic that does not significantly break with its overall political rationality” (Terranova 2009). The difference between resulting in a strengthening of capital or resulting in the emergence of a new mode of production, so I have argued in this essay, turns on a (mis-)conception of property. In response I will now present Free Software as a model for property.

Free Software, we may say, is an instance of *neo-commoning* that shares tendencies with the traditional commons and the neo-commons movement of the pirates, who hacked the transatlantic network of commerce, causing “a crisis in the lucrative Atlantic trade” (Rediker 2004: 9) during the Golden Age of Piracy, as noted in the Introduction, through a self-organised defence against - and alternative to - privatisation. Although Free Software most certainly is a phenomenon of “our” culture, it nevertheless constitutes novel forms of co-productive relations that challenge existing conceptions of property. Indeed, the very configuration of social relations with regard to software, or more specifically computer code, that inheres in Free Software has deliberately been shaped in an “other” way.

“We could not establish a community of freedom in the land of proprietary software where each program had its lord. We had to build a new land in cyberspace--the free software GNU operating system, which we started writing in 1984” (Stallman 2001a).

What sets Free Software apart from the culture within which it is unfolding, in addition to the property relations novelty that I am presenting here, is that it is built in “the new land” of cyberspace. In this frontier land of opportunities – in the “liquid architecture” of cyberspace - it was, and to some extent still is, possible to do things in ways that differ significantly from conventional societal forms. Cyberspace is a permissive space, although it is increasingly enclosed, corporatised and regulated (as we saw in Chapter 1). It has permitted the Free Software movement to maintain its novel nature and grow into a successful global project, which sustains its particular social relations, based on the values of sharing and cooperating, with regard to the creation of and care for software.

While the leading voices of the movement itself do not want to understand Free Software as an instance of property, or a configuration of property relations, it is most certainly, according to the definition of property presented in this essay, an instance – a very novel and interesting instance at that – of a particular configuration of social relations with regard to things. The “things” are software and as software pervades almost every aspect of the world in which we live, embedded in all kinds of devices - car engines and brakes, flight control systems, ambulances, voting machines and of course your personal computer and the Internet, which connects people world wide - it is a very important set of social relations.

As already stated, understanding Free Software as an instance of property might not – from a strategical or tactical point of view – be useful for the Free Software Foundation and the movement it facilitates. It might well be that the future development of the Free Software movement's cause is better served by not addressing issues of property at all, so as not to contradict the basic interests of those corporations who profit substantially from

existing property relations in the tangible realm, particularly sections of the IT industry, whose collaboration the Free Software movement is in part dependent upon. In that sense I am admittedly exploiting the phenomenon of Free Software as a case study and a springboard to present not only a critique of private property, but also present an alternative approach to property configurations. However, I do think that the Free Software Foundation and their political and intellectual fellow travellers in the “Free Culture” movement are aiming too low. After all, their movements have emerged in resistance to privatisation – and they often make reference to enclosure of land and use anti-privatisation rhetoric and arguments as well. As such I think they are at best misguided and at worst misleading their followers in the struggle against privatisation, both generally and particularly with regard to the struggle – and its viability - for Free Software and “Free Culture” in the long term. Indeed, as argued in Chapter 1, without a substantive critique of ownership in the tangible realm, the position of the Free Software and Free Culture movements remains a liberal apologia, thus harbouring an internal contradiction where privatisation is opposed yet supported in its most basic form, namely with regard to the tangible means of production. Instead of rejecting property in the intangible realm and thus implicitly supporting private property in the tangible realm, the rhetorical power of property can be made to work *against* privatisation. In other words, the power of the “framing effect” (see Section 1.3.2) can be subverted. That is one of the aims of this essay.

It is with these concerns in mind that in this chapter I will further develop the case for Free Software as a novel and potentially revolutionary instance of property.

Given that there potentially are “as many theories of property as there have been systems of property rights...” and “...that the

institution of property has had its history and that that history has not yet come to an end” (Schlatter 1951: 10), because “the meaning of property is not constant...” and the “...actual institution, and the way people see it, and hence the meaning they give to the word, all change over time” (Macpherson 1978: 1), Free Software, as a case study in property relations, is interesting. It is interesting because it forces us to see property relations in a new perspective, from the perspective of the particular social relations that characterise Free Software, and because it shows that social relations and care for and development of goods and resources can be successfully organised collectively and autonomously. In turn, the insights derived from such a conceptualisation can be used to strengthen critiques of property relations in the context of the tangible means of production and land, especially because the process of understanding Free Software as property recursively becomes a process of understanding property in a new way. It is not because Free Software *needs* property as such, rather property needs Free Software. However, a weakened private property regime is a weakened threat of enclosure: that is the central point that the Free Software movement is missing when they reject property as a useful means of social organisation.

Finally, it is also very relevant to note that “property concepts do not change without an incipient or fundamental change in the nature of the society itself” (Schurmann 1956: 507). If, then, we consider the widely accepted idea that things are changing fundamentally, that we are living on a trajectory toward a globalised village, or in a networked information society and a knowledge based economy; and if we keep in mind that profound societal changes in the past went hand in hand with the advent of new configurations of property relations, such as in the transition into capitalism, then Free Software understood as property has implications far beyond software.

However, before turning to these matters it will be necessary to introduce the “nature of code”, because it is crucial to understand just how software works in order to fully grasp the significance of the Free Software principles and why the movement has emerged and grown to be so successful. That will be the task in the following section.

Upon explaining the nature of code in Section 3.2, I will present, in Section 3.3, the history and background of the Free Software movement and make a few notes on its growing economic and cultural significance⁵⁹. In Section 3.4 I briefly present the concept of a “recursive public”, before turning, in Section 3.5, to the software license at the centre of it all, namely the GNU General Public License. The GPL, as it is commonly known, will be explained in detail and with reference to copyright law and its inherent and central element of *reciprocity in perpetuity*. I will also offer an insight based on architectural metaphors in a political context (Pullan 2004), where the GPL is understood not merely as a software license, but also as a constitution of the Free Software community, which is a growing voluntary association of hackers, software developers, policy makers, politicians, activists, lobbyists that act within global civil society in the interest and for the promotion of Free Software and Free Culture in general.

Section 3.6 addresses the ways in which the Free Software movement as a recursive public has organised its own defences against violations of their self-legislative boundaries.

59 Unfortunately the political economy of Free Software is largely beyond the scope of this essay. In a previous draft of the PhD thesis, the political economy constituted half the work, but I developed a focus on property relations instead, because it was absent from the literature.

Let us now take a look at the nature of code.

3.2 The nature of code.

In order to understand the social, ethical, political and cultural significance of *Free Software* it is necessary to understand the technical foundations of *software in general*. That is what I call the nature of code and it involves also understanding how hardware - without which software is meaningless, useless and indeed impossible – works.

Computer hardware only understands binary code. Binary code consist of zeros and ones, referring to whether a switch is OFF (zero) or whether it is ON (one), because at the most basic level a computer is “only” a collection of switches that still largely operate on the principles defined by John von Neuman (1945) in “First Draft of a Report on the EDVAC”. Essentially, the Central Processing Unit (CPU) found in computers – and many other gadgets nowadays – is simply zillions of switches squeezed into an incredibly small space.

Binary notation is not very easy for human beings to handle and that is why programming languages are crucial for the development of software, just as human (natural) languages are crucial for a conversation. Were we to communicate by way of, say, Morse coding with our eye lids our communicative capacity would be greatly limited, although, of course, should we lose the power of speech such communication would be very useful. In the same way, some very special software is sometimes written directly in binary code for specific purposes on a “low level” by specialised experts. This is the exception that proves the rule.

At the lowest level, then, computer code is binary, which is also called “object code”, but for most programming purposes, in practice, it is not possible to write in binary form. A *programming language* partly solves this problem by allowing for a semantic abstraction away from this lowest, binary or object code level. Computer programming languages include algorithms and types, variables, and values ordered in so-called libraries (or collections), mainly derived from mathematics and rather far from the level of object code. The following table illustrates in simple terms the principle difference between these levels:

<i>Binary</i>	<i>Hexadecimal</i>	<i>Assembly language</i>	<i>Instruction description</i>
01111011	7B	MOV, A, E	Move contents of register A to register E

Illustration 7: Code and abstraction.

It is much easier for a human mind to write “MOV”, “A” and “E” when wanting to move the contents of register A to register E, and it is much easier to remember that function in those terms than it is to remember that the binary string “01111011” instructs the computer to do so⁶⁰.

60 It should for good measure be noted that this illustration and its explanation do not actually include a high-level programming language example, but merely illustrates the principle of abstraction and the relations and usefulness for the human mind of using such abstraction. Assembly language, as a matter of fact, corresponds “one-to-one” (or directly) to the binary notation level, whereas in higher level languages a few words can compile to many more binary (object code) instructions. As such this illustrates the concept of abstraction towards natural language, but not the

Using a programming language only partly solves the problem of the difference between source and object code for the obvious reason that the source code still needs to be translated into object code.

Conceptually speaking there are generally two main forms of translating code into its binary destination. The semantically higher level of a given piece of code can be translated either by means of *interpretation*, which means that another programme sits as a translator between the programme and the hardware while the programme is running, that is when a user is *executing* it. The interpretation approach makes for a slow running programme, but might be a preferred option for testing and experimenting with code during development.

A faster option is *compilation*, which is done by a *compiler*. It is faster in terms of running the programme, once compiled, but it takes considerable time to translate or compile a programme. A compiler is itself a programme or set of programmes, which translates a given *source code* into *object code*, according to the specified environment. Once source code has been *compiled* into binary object code it cannot be translated back into its source code origins. Generally, software (whether Free or non-free) is distributed in binary form, because it is only in that form that it can be run (executed, as it were) on a computer. Thus, most commonly, when you download a computer programme, such as the Firefox web browser, it is in a binary form.

What distinguishes Free Software from non-free software is that the source code of Free Software programmes, although

complexity that programming languages actually entail. I provide an example of high-level programming language below.

distributed in binary, compiled form, is always made available for the public. Exactly how this works will become clear throughout the rest of the chapter.

Let us take a look at an example of a source code segment.

The excerpt (on the following page) is an example of code from the Linux kernel, which is a famous Free Software project. The text between the demarcations `/*` and `*/` are comments. The demarcations, tell the compiler to ignore whatever comments are written between them during its process of translating source code into object code (or binary form). The comments are needed for humans to better understand what the code does; what the intention of the programmer was; when and why s/he wrote it; and what ever else s/he might want to share. In this case it also includes contact information:

```
/* Tell the user who may be running in X and not see the console that we
have panic'ed. This is to distinguish panics from "real" lockups. Could in
theory send the panic message as morse, but that is left as an exercise for the
reader. And now it's done! LED and speaker morse code by Andrew
Rodland <arodland@noln.com>, with improvements based on suggestions
from linux@horizon.com and a host of others.*/

void panic_blink(char *buf)
{
static unsigned long next_jiffie = 0;
static char * bufpos = 0;
static unsigned char morse = 0;
static char state = 1;

if (!blink_setting)
return;

if (!buf)
buf="Panic lost?";

if (bufpos && time_after (next_jiffie, jiffies)) { return; /* Waiting for
something. */
```

Illustration 8: C source code

In this example, written in the high-level programming language C, we learn that someone has contributed to the kernel code by equipping it with a morsing mechanism so that the kernel can send messages to the user during extreme "panics" through LED's and the system speaker. If the kernel panics the user is likely to experience what is generally called a crash: your computer freezes, the input devices, such as mouse and keyboard, no longer function and you might have to reboot via the reset button, potentially causing data loss or perhaps even hardware damage.

Comments are important because code can sometimes be difficult to understand even for proficient programmers. In other words, ‘ideas’ in software are contained both in the actual code *and* in the complementary comments in which the code is wrapped; together they form what we refer to as source code. Commenting is an elementary aspect of creating software; and comments are absolutely essential for the modification of code in a complex system, which might need to be adapted to local purposes or expanded to work with novel or with more devices than initially imagined (or available).

The source code hence refers to both the composition of algorithms and types, variables, and values *and* to the commentary that the people creating and maintaining the source code write as the code base of a programme evolves. During compilation the comments are ignored and are thus not part of the object code. They are lost. Although it is theoretically possible to reverse engineer and replicate the *functions* of a programme, by snooping on the data flows going in and out of the programme, it is not possible to establish exactly how these functions were implemented, by means of exactly what algorithms and so on. Certainly the comments are lost entirely and it is also possible to write and compile code in such a manner that it is even more difficult to reverse engineer.

Access to the code, then, is necessary to understand any given software programme fully, to customise it for local, specific needs and to repair it.

Therefore, the functionality of complex systems (from a single desktop computer to networked systems controlling nuclear power stations, airports, trains and ambulances) can only be analysed in depth if there is access to the source code of the software that makes it run.

If this obvious need of access to source code in order to analyse it is disregarded for whatever reason then we can speak of a process of knowingly designing insecurity and creating a *black box technology*. Software without access to the source code is a product where a public peer-review is impossible and the resulting software is *non-free* software⁶¹. It is, in part, for these very reasons that the Free Software license, the GPL, stipulates that all source code must be available to the public for scrutiny.

As software increasingly pervades all aspects of technology and social life the question concerning access to the source code – or not – is of increasing and alarming importance. The ubiquitous presence and ever increasing importance of computers for all kinds of social relations call for such public scrutiny options and the accountability that Free Software makes possible and advocates. Given the intimate relation between a computer and human users further stresses the extreme importance of access to the source code in order to facilitate public scrutiny and, in the widest sense, to facilitate a democratisation of technology. If the future of the networked information society is shaped by technologies of which only a few corporate programmers, subject to non-disclosure agreements, know the actual internal functioning, the future of technology is a future of unnecessary uncertainties, whereas if the networked information society's underlying technology is based on Free Software and Free Software derived principles of openness and freedom, then uncertainties are kept at a minimum. That is why a social movement for software freedom and reform of those intellectual property laws that regulate software and other production of

61 Some quotes will be used in which non-free software is mistakenly labelled *non-proprietary* software.

cultural artefacts has emerged and continues to grow and act in the lobbies of public policy making institutions.

Let us take a look at this movement.

3.3 A brief history of Free Software and its imaginary, scientific and cultural origins.

I want to first take note of the way in which computer science – and software as such – is embedded in the scientific commons. Software is not possible without the common scientific knowledge upon which it rests. I will also suggest that the idea of creating programmable devices has been part of the collective imagination across eras and civilisations.

Moreover, as science and technology, as well as social science, increasingly utilises software for modelling and calculating matters, software becomes a crucial element in the advance of science, technology and social science. In the same way as public roads are needed for market relations, so is software needed for many activities associated with public goods. In Section 3.3.2 the specific history of the Free Software movement is briefly presented.

3.3.1 Embedded in the scientific commons.

Computer science has a peculiar history, because it cannot be separated from the (other) scientific traditions upon which it rests. Computer science is at once connected to ancient history, yet stands as a symbol of an advanced, high technology society. In order to programme a computer – that is to write computer

code in a programming language, as already suggested above – it is necessary to draw upon various of the principle branches of mathematics for the purpose of logical reasoning and quantitative calculation, as well as generating graphical representations of what is being calculated. For instance, drawing a circle, or part of one, on a computer screen involves knowledge and principles that, as far as is known today, began to be established by Sumerian mathematicians (3000 - 2300 BCE) and were perfected by Pythagoras and his followers approximately 500 BCE. The equation with which to calculate the circumference of a circle ($C=2\pi r$) and its derivations are thus central to generating the graphical representations that make your computer usable for such things as browsing the Internet or, indeed, writing a thesis.

Computer science brings together a lot of established scientific knowledge from different eras, cultures and traditions and, recursively, as a tool for the advancement of most sciences, whether natural or social, it feeds back into those scientific systems (of thought). Most social scientific quantitative research involves the use of computers and the design of human-computer interfaces draws upon the social sciences and humanities. Notable in this context is the pioneering work of Lucy Suchman at Xerox's Palo Alto Research Center (1979-2000), collected in "Plans and Situated Actions: The Problem of Human-machine Communication" (1987) and Vernon Pratt's "Thinking Machines: Evolution of Artificial Intelligence" (1987).

The history of programmable machines is surprisingly old. During the Islamic Golden Age, al-Jazari (1136 - 1206)⁶², a polymath, published a "Book of Knowledge of Ingenious

62 Full name: Abū al-'Iz Ibn Ismā'īl ibn al-Razāz al-Jazarī

Mechanical Devices”, with which modern application of science to mechanics began to take form:

"We see for the first time in al-Jazari's work several concepts important for both design and construction: the lamination of timber to minimize warping, the static balancing of wheels, the use of wooden templates (a kind of pattern), the use of paper models to establish designs, the calibration of orifices, the grinding of the seats and plugs of valves together with emery powder to obtain a watertight fit, and the casting of metals in closed mold boxes with sand" (Hill 1991: 64).

It was not only basic mechanical applications, however, that al-Jazari championed. Noel Sharkey at University of Sheffield has replicated one of al-Jazari's remarkable devices, speculating that this might have been a programmable automaton, pre-dating Leonardo's automaton, hitherto considered the first programmable machine. One of the many amazing automata that al-Jazari devised was “a boat with four automatic musicians that floated on a lake to entertain guests at royal drinking parties. It had two drummers, a harpist and a flautist”. The heart of Sharkey's replica “is a rotating cylindrical beam with pegs (cams) protruding from it. These just bump into little levers that operate the percussion. The point of the model is to demonstrate that the drummer can be made to play different rhythms and different drum patterns if the pegs are moved around. In other words it is a programmable drum machine” (University of Sheffield n.d.).

Particularly noteworthy, apart from the fact that the programming of machines is nothing very new, is that the idea and the imagination of programmable machines and automata go even further back in history, stretching into ancient myths. The Greek

god Hephaestus, the “divine blacksmith, the artisan-god, the demi-urge who has created admirable works and taught men the mechanical arts”, from whom Prometheus stole the (technology of) fire – and who created Pandora as humankind's punishment for that theft - also devised programmable automata to assist in his workshop. The box of evils and hope had been opened. Most famously Hephaestus constructed and programmed Talos, the giant “man” of bronze, a robot that is, “whose duty it was to guard the Cretan tree and prevent its being approached” (Aldington and Ames 1972: 126). It is curious to note that Hephaestus was born as a cripple and thus did not possess the full level of mobility that the other gods and the humans did. Was that why he “naturally” became the god of creating things for overcoming “human” limitations and replicating human capacity, bringing at once evils and hope? At any rate, al-Jazari, we may say, stood on the shoulders of Talos the giant when he created his programmable automata and in turn figures like James Watt (1736 – 1819) and Charles Babbage (1791 - 1871), the conceptualiser of what can definitively be considered a programmable computer, and Ada Lovelace (1815 - 1852), the first “programmer” (of Babbage's non-existent machine), stood on the shoulders of al-Jazari.

It is equally instructive to consider the work of Frances Yates. In *The Art of Memory* (1966) and *Theatre of the World* (1969) Yates traced the conceptual history of techniques and arts of memory in the workings of the architectural, poetic, rhetorical, theatrical and occult imaginations across cultures and time. She thus provided an analytical narrative of (dis)continuities ranging from the associative memory structuration of the Greek poet Simonides, through the neo-platonic memory theatre of hermetic philosopher Giulio Camillo and medieval cathedrals, to the occult magic of Giordano Bruno, heralding the modern concept of “scientific method”:

“It is a curious and significant fact that the art of memory is known and discussed in the seventeenth century not only by ... [those] ... still following the Renaissance tradition, but also by the thinkers who are turning in the new directions, by Francis Bacon, by Descartes, by Leibniz. For in this century the art of memory underwent yet another of its transformations, turning from a method of memorizing the encyclopaedia of knowledge, of reflecting the world in memory, to an aid for investigating the encyclopaedia and the world with the object of discovering new knowledge. It is fascinating to watch how, in the trends of the new century, the art of memory survives as a factor in the growth of scientific method” (Yates 1966: 355).

The history of the art of memory is a history of the concepts without which it would not be possible to imagine the kind of digital computers that we know today. Yates, in an astute aside, notes that this history of storage, retrieval and manipulation of information for the purpose of organising forms of and access to knowledge might provide useful insights for the development of the digital computer. Indeed. This is not only the case for the internal workings of the digital computer, where data is stored with reference to its storage location – similar to the associative memory of Simonides – but also the conceptual order of the graphical user interface, which for most practical purposes is the way that most people know, recognise and use a digital computer. The graphical user interface, like the art of memory, uses icons in specific loci to refer to specific information and knowledge stored elsewhere (beyond the visible field of the computer user). This point was picked up on by Nicholas Negroponte (1995) and

later Peter Matussek (1999) in the context of the “invention” of the graphical user interface of contemporary computers:

“This new interface put to new use an old insight of the Roman rhetoric manuals – namely, that the highest degree of mnemonic efficiency is exhibited by techniques involving topographical arrangements of mental images (*loci et imagines*). That the use of image-based technology might have involved an actual historical reprise in the computer age was explicitly reflected already by the Architecture Machine Group who developed the Spatial Data Management System during the seventies.” (*ibid.*)

Software makes computers work. It controls the CPU and makes communication possible between the various hardware entities that make up a computer, but it also structures the graphical user interface. As the term suggests an inter-face is a two way system: accessing the underlying, lower level command structures and machine instructions through pointing and clicking (and writing) in the two-dimensional graphical interface *and* very importantly, receiving the return of the requested computations shaped in that very fashion. The interface thus structures both access to and computed returns from the digital magic realm that only specialist low level programmers could otherwise understand. How we create this interface, the principles, known and unknown, that are at play to quite some extent define the boundaries of the novel epistemological terrain of cyberspace. By extension, without access to the source code, the minds of people in a “networked information society” are shaped by black-box technologies: if there is no access to the source code, we cannot know exactly how we are interfacing with our

computers, with cyberspace and with other people through digital media⁶³.

“Any time you engage with information, the reality that you extract from that information is shaped by the tools that deliver it. Microsoft's information presentation is such a monoculture that it edits out a lot of other realities. So you have a new kind of monopoly that affects the way people think in ways that are invisible to them. It's a very dangerous form of monopoly, especially now that they are talking about the "trusted computing" model, where it will be very difficult for you to save and then pass on documents on systems without identifying yourself ... That system is supposed to be designed to help control digital rights management. By its nature it will be great for political rights management, because it's an enormously penetrative surveillance tool, and it makes it hard to do anything anonymously involving a computer. Here is a monopoly in essence, the Wintel monopoly -- Windows/Intel -- which has enormous global power and which no government is willing to stand up to, at least effectively, so far” (Barlow in Doherty 2004).

63 Beyond the scope of this essay, these aspects of software and software freedom might be related to Article 19 of the Universal Declaration of Human Rights (and related declared rights of the freedom of thought and communication): “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.”

The problem of software as a black-box is not limited to the graphical interface, of course, but even more so pertains to the core of any given programme. The file sharing programme called Kazaa, whose developers were later to create Skype, was a Trojan Horse that once installed on your computer tracks your computer use and Internet surfing habits for the purpose of targeted advertising and collection of such data in general. The code segments included in a programme for such purposes are called Spyware or Malware. When uninstalled, Kazaa leaves the Malware behind and a third-party programme called “KazaaBegone” (Merijn n.d.) is required to purge your computer of unwanted, snooping code. Skype also has functions that turn your computer into a “super node” on the Skype network without your knowledge, unless you have informed yourself and found out how that can be avoided. Bev Harris, founder of Blackboxvoting.org and author of “Black Box Voting: Ballot Tampering in the 21st Century”, has done a lot of work to expose the problems of software that cannot be scrutinised in public. In particular, she has drawn attention to Diebold Election Systems, a company with strong ties to powerful political factions. Journalistic investigations have revealed what becomes possible if democracy is processed through black box technology:

“Following the 2003 California election, an audit of the company revealed that Diebold Election Systems voting machines installed uncertified software in all 17 counties using its equipment” (Fittrakis 2004).

The inscrutability of the software system of these machines made voters in the U.S dependent on “third-party” monitoring bodies:

“Like Ohio, the State of Maryland was disturbed by the potential for massive electronic voter fraud. The voters of that state were reassured when the state hired SAIC to monitor Diebold’s system. SAIC’s former CEO is Admiral Bill Owens. Owens served as a military aide to both Vice President Dick Cheney and former Defense Secretary Frank Carlucci, who now works with George H.W. Bush at the controversial Carlyle Group. Robert Gates, former CIA Director and close friend of the Bush family, also served on the SAIC Board” (ibid.).

This vicious cycle of technological fraud and control would be severely minimised, or even eliminated, if the voting machines – should they be necessary at all – were run on Free Software that could be assessed by the public. In more general terms:

“Exclusive access to the how of storytelling lets a storyteller monopolise the what ... [A] television program or commercial holds us in its spell as much through the magic of broadcasting technology as its script. Whoever has power to get inside that magic box has the power to write the story we end up believing” (Rushkoff 2004: 21).

Computer science through its application as information technology today is central to the workings of many scientific disciplines, social organisation and leisurely pleasures. On that basis there is a good ethical and social case to be made for Free Software based implementations, rather than black-box technologies. Keeping the knowledge and science behind one of contemporary times most central technologies as business secrets seems to me to be a dangerous route for knowledge and

development. Especially taking into consideration that there are good claims and arguments that Free Software develops faster and is more versatile than its counter-intuitive counterpart, non-free software. Moreover, with importance far beyond software, Free Software is a paradigmatic case of getting “inside that magic box” and thus begin revealing the technological foundations of the global village.

3.3.2 A brief history of the Free Software movement's resistance to privatisation.

The history of digital computing in recent decades has been well documented (Ceruzzi 2003 is a good starting point) and the history of Free Software and hackers has been the topic of historical investigation from the early days (e.g. Levy 1984).

The software commons, as we may call the hackers' community, enjoyed a glorious, but relatively brief initial period of success.

“When I started working at the MIT Artificial Intelligence Lab in 1971, I became part of a software-sharing community that had existed for many years. Sharing of software was not limited to our particular community; it is as old as computers, just as sharing of recipes is as old as cooking. But we did it more than most ... We did not call our software “free software”, because that term did not yet exist; but that is what it was. Whenever people from another university or a company wanted to port and use a program, we gladly let them. If you saw someone using an unfamiliar and interesting program, you could always ask to see the source

code, so that you could read it, change it, or cannibalize parts of it to make a new program” (Stallman 1998).

However, in 1976 William Henry Gates the Third publicly began his project to enclose software and being a corporate lawyer's son with a keen sense of business and the capacity to speak in public policy lobbies, Bill Gates as he is commonly known, was to become very successful at that. His “Open Letter to Hobbyists”, dated February 3 that year, addressed the community of computer hobbyists who were copying and sharing software in order to be able to use their computers for fun and for a wide variety of projects. By calling this practice of sharing theft and those practising it thieves, combined with lobbying for extensions of so-called Intellectual Property Rights law to include software, Gates divided and conquered the emerging culture of computer use so successfully that on that basis he was to become the richest man in the world (Mames and Andrews 1994). In the early 1980s one hacker felt that privatisation was so severely threatening the hacker community of sharing and cooperating that action had to be taken. This man was Richard M. Stallman, who later became the founder of the Free Software Foundation (and thereby of the Free Software movement). Stallman is the author of the GNU Manifesto (1985) and the GNU General Public License (1989) and he here describes a moment of significance in the process of enclosure of hacker culture:

“The situation changed drastically in the early 1980s ... The AI lab hacker community ... collapsed ... In 1981, the spin-off company Symbolics had hired away nearly all of the hackers from the AI lab, and the depopulated community was unable to maintain itself ... The modern computers of the era, such as

the VAX or the 68020, had their own operating systems, but none of them were free software: you had to sign a nondisclosure agreement even to get an executable copy. This meant that the first step in using a computer was to promise not to help your neighbor. A cooperating community was forbidden. The rule made by the owners of proprietary software was, “If you share with your neighbor, you are a pirate. If you want any changes, beg us to make them.”” (Stallman 1998).

The social values of sharing and cooperating had – without articulation – governed the software commons of the hackers. Stallman was very perceptive of exactly that; and the experience of the loss of the community that was sharing those values was what drove him to recreate a community where these values could thrive. This time they were to be (legally) articulated in order to clearly define that community and its boundaries. Like the Magna Carta and the Charter of the Forests articulated already existing and, by the commoners, practised values once they came under threat, so did the GNU General Public License (GPL) articulate the already existing and practised values of the hacker community. It is in precisely this sense that I suggestively call the Free Software movement a community of neo-commoners, because it opposes the powers of privatisation and enclosure.

“The basic idea of the free software movement is that nobody should have such power over anyone else. Users deserve freedom, so software should be free. Thus, proprietary software is something worse than an inconvenience. Proprietary software is a social problem, and our aim is to put an end to it. Free software is sometimes more powerful and

reliable, but what concerns us most is that it is a more ethical way to distribute software” (Stallman in Biancuzzi 2009).

Stallman's project was to create a free operating system, written from scratch, and protected in such a way that it could never be enclosed. This “new land in cyberspace--the free software GNU operating system” (Stallman 2001a) was the beginning of a remarkable history. The idea was to create a UNIX-like system. With the same architecture and based on the same principles, but without code that was exclusively owned. In 1987 Stallman released the first version of the GNU C compiler. C is a programming language and the GNU C compiler, obviously, can compile C source code into binary code. A compiler is necessary to create all the other programmes that make up a complete operating system and as such the GNU C Compiler was a milestone in the process towards an entirely free operating system. The GNU C Compiler has since been greatly extended and is now known as the GNU Compiler Collection, thus maintaining the same acronym: gcc.

Until the 1990s, however, the GNU operating system still lacked a so-called kernel, which is the core of an operating system, which acts as a mediator between programmes (or applications) and the hardware level of the computer. The Free Software Foundation's attempt to write a kernel for GNU, called GNU Hurd, has been wrought with difficulties and has never materialised in a form that has been widely used. Things changed for GNU in spring 1991 when Linus Torvalds, a keen Finnish student interested in computers, began writing a kernel that he called Linux. Soon thousands of people joined him in developing the Linux kernel – and as his code was released under the GPL, a whole community rapidly grew around it. Torvalds here describes the initial conditions:

“I had taken a course in UNIX and C, the fall semester before. The first time I actually touched UNIX was fall 1990, when I had a UNIX course at Helsinki University. Actually, it was the first UNIX course they ever had at Helsinki University, because it used to be a VAX and VMS place. They had just gotten a UNIX machine for trying out that newfangled thing, and it turned out to be a huge success. Within a few years, they had switched over everything to UNIX. But that first machine was used for this small course in UNIX and C, and I immediately felt that this was what I wanted to have. It made sense. Then when I bought a PC, I wanted UNIX on it, and the rest is kind of history” (Torvalds in Richardson 1999).

The history has been tremendously successful. The combination of the incomplete GNU operating system, especially the GNU C Compiler, and the Linux kernel, compiled by the GNU C Compiler, became the GNU/Linux operating system, which is now widely used in a wide variety of so-called distributions and by millions of people and many large companies around the world.

A distribution is an operating system: a collection of thousands of libraries and applications put together by companies for profit or by voluntary associations for the greater good. There are hundreds of GNU/Linux distributions available for free download on the Internet⁶⁴. In 1995 the Apache (“a patchy”) web server, named after the many patches contributed by a

64 The best overview is provided by <http://distrowatch.com/>

geographically widely dispersed community, was released under a GPL inspired and compatible license, called the Apache License. The Apache web server has been the most popular web server since 1996 and is currently, November 2009, run on 55.32% of the world's web servers. It is followed by Microsoft server products, which maintain 18.98% of the market share of active web servers (Netcraft 2009a).

Then came a wide variety of freely available web oriented scripting and programming languages that extended functionality of existing web building tools and made it possible to build very complex sites. Fused in the way that a distribution is, entire Content Management Systems (CMS) began to emerge, for instance Drupal, released under the GPL in 2001. In November 2009, the White House moved its website to a Drupal CMS as part of its promotion and support of Free Software (Netcraft 2009b). With these Free Software tools it has been possible for years now to build an entire web server and complex web sites based entirely on Free Software. Likewise, it is possible to surf the web, write texts, create and modify images, and a thousand other things on a computer run entirely on Free Software. Commerce built on Free Software is by now a multi-billion dollar industry, led by IBM. Many companies are developing Free Software around which they have created a portfolio of services, such as support, as a business model.

It is the principled stance of the Free Software Foundation that has made this possible, because the Free Software “ecology” has grown due to the protection measures articulated in the GNU General Public License. The GPL defines a defence against enclosure, as we shall see below.

However, as is common in social movements, it came to political differences over these principles of defence. Some key players in

the Free Software movement did not want to be *neo-commoners* with social and political aims, but merely wanted to derive an engineering methodology from the principles of Free Software. On these grounds the Free Software movement in the late 1990s split in two.

Within the movement a faction had emerged that did not consider the social and political aims of Free Software as important, indeed they considered the principled stance of the Free Software Foundation as a hindrance to marketing Free Software to the IT industry. What they wanted to promote was merely the concept of open access to source code, thus limiting their focus to the engineering methodology of Free Software. It gave rise to the establishment of the Open Source Initiative (OSI), which “respect the four freedoms [that define Free Software, as we shall see below] but they don't defend the four freedoms” (Stallman 2007). While the Free Software movement is based on a socio-political principle articulated in the GPL, the OSI only promotes a method of development. In great part the OSI “business people” based their initiative on a rejection of the term “free”, which they considered harmful for the acceptance in the business world of Free Software. This limitation is also recognised by the Free Software Foundation, but they insist on the term, because of the way in which it invokes the notion of right and refers to rights discourses. A “free man” or “free woman” lives in a “free society”, and a “free society” has “free software”.

“The term “free software” is prone to misinterpretation: an unintended meaning, “software you can get for zero price,” fits the term just as well as the intended meaning, “software which gives the user certain freedoms.” We address this problem by publishing the definition of free software, and by saying “Think of ‘free speech,’ not ‘free beer.’” This

is not a perfect solution; it cannot completely eliminate the problem. An unambiguous and correct term would be better, if it didn't present other problems ... Every proposed replacement for “free software” has some kind of semantic problem—and this includes “open source software” (Stallman 2007).

The visions of freedom were always integral to the Free Software movement:

“I designed the GNU GPL to uphold and defend the freedoms that define free software--to use the words of 1776, it establishes them as inalienable rights for programs released under the GPL. It ensures that you have the freedom to study, change, and redistribute the program, by saying that nobody is authorized to take these freedoms away from you by redistributing the program under a restrictive license” (Stallman 2001a).

Stallman had explicitly been using rights language and libertarian philosophy in the (U.S.) American way as a means to protect the fragments of the hacker community, a voluntary association of individuals exercising their freedoms of speech and assembly, which by the early 1980s began to feel the effect of primitive accumulation or market expansion. The customs of the hacker community were under threat by privatisation and in this way the Free Software movement is a social movement that share history with other social movements to secure civil liberties to protect existing customary, communal practices. The GPL “enshrine[s] a sort of customary law or act as a declaration of customs within hackerdom” as socio-legal scholar Maureen O'Sullivan puts it,

and the “...preamble of the GNU GPL, in particular, employs a style of language richly reminiscent of the often countered “We the People...” sections from the constitutions of many nations” (2005).

Bruce Perens is one of the co-founders of the Open Source Initiative, together with Eric Raymond. Perens is a key Free Software programmer and is the author of the Debian Social Contract and Debian Free Software Guidelines⁶⁵ upon which the Open Source Definition is based, and which he co-wrote. Not long after articulating it, Perens realised that the enhanced marketability and commercial palatability gained by discarding the term Free - and thus the reference to and socio-political struggle for principled (software) freedom – came at the cost of the protection of the values upon which the Free Software Foundation stood strong. In 1999, “around a year” after the split created by the Open Source Initiative, Perens posted an often quoted email with the title “It’s Time to Talk About Free Software Again”, in which he stated that:

“Open Source has de-emphasized the importance of the freedoms involved in Free Software. It’s time for us to fix that. We must make it clear to the world that those freedoms are still important, and that software such as Linux would not be around without them ... Sadly, as I’ve tended toward promotion of Free Software rather than Open Source, Eric Raymond seems to be losing his free software focus. The Open Source certification mark has already been abused in ways I find unconscionable and that

⁶⁵ Two important Free Software manifestos, which helped define the movement by declaring certain principles, terms and aims.

I will not abide. I fear that the Open Source Initiative is drifting away from the Free Software values with which we originally created it” (1999).

However, the phenomenon of Free Software is now best known to people by the name of Open Source, which hides the social and political aspects of freedom from view. We can of course never know how far the Free Software movement would have reached into the public imagination without the marketing trick of the Open Source business people.

Linus Torvalds whose project has benefited very well from the principles of Free Software - “[m]aking Linux GPL'd was definitely the best thing I ever did” (Torvalds n.d.) - as a paradox stands as the opposing voice to Stallman's ideological voice. Torvalds is “absolutely uninterested in politics” (Torvalds in Richardson 1999). OSI co-founder Eric Raymond is even more explicit:

“[I]n the battle we are fighting now, ideology is just a handicap. We need to be making arguments based on economics and development processes and expected return” (Raymond 1998).

Promoting an engineering standard on the basis of economic *short-term* incentives stands in strong contrast to the *long-term* social goals of Free Software. Time and again Stallman, in essays, interviews and talks, raises awareness of this crucial distinction. In his essay “The GNU GPL and the American Way” he states:

“The Open Source Movement, which was launched in 1998, aims to develop powerful, reliable software and improved technology, by inviting the public to collaborate in software development. Many developers in that movement use the GNU GPL, and they are welcome to use it. But the ideas and logic of the GPL cannot be found in the Open Source Movement. They stem from the deeper goals and values of the Free Software Movement. The Free Software Movement was founded in 1984, but its inspiration comes from the ideals of 1776: freedom, community, and voluntary cooperation. This is what leads to free enterprise, to free speech, and to free software” (Stallman 2001a).

Reflecting expressly the view on Free Software that I am outlining here, Stallman, in “Why Open Source misses the point of Free Software”, writes:

“Nearly all open source software is free software. The two terms describe almost the same category of software, but they stand for views based on fundamentally different values. Open source is a development methodology; free software is a social movement. For the free software movement, free software is an ethical imperative, because only free software respects the users' freedom. By contrast, the philosophy of open source considers issues in terms of how to make software “better”—in a practical sense only. It says that non-free software is an inferior solution to the practical problem at hand. For the free software movement, however, non-free

software is a social problem, and the solution is to stop using it and move to free software” (Stallman 2007)

Students of social movements will be familiar with this kind of split. In “conventional” social movements this split is often, colloquially, explained in superficial terms as the difference between “revolution” and “reform”. In a “Strategy for Labour”, Andre Gorz (1964), made a distinction between (a) *reformist reforms* that strengthen the underlying logic, institutions and legitimacy of prevailing power relations, and (b) *non-reformist reforms* that undermine the logic, institutions and legitimacy of power, thus opening possibilities of deeper change. Gorz’s distinction helps explain the difference between Free Software and Open Source: the former is a social and political movement that seeks to “undermine the logic, institutions and legitimacy of power” by advocating fundamental reform of mainly copyright and patent law. The latter is a trademark for a network of programmers, who prefer and consider superior software which provides access to the source code without addressing the “underlying logic, institutions and legitimacy of prevailing power relations”. If the Free Software commons is disembodied, as I argue, then Open Source is no commons at all.

Despite these differences in policy – one faction being somewhat stripped of social and political values – the two sides continue to work with a shared aim: the advance of software with access to the source code. Open Source is a concept that has been adopted by large sectors of the IT industry and beyond the world of software, while Free Software principles and politics continue to influence a wide variety of activities, equally not limited to software.

However, it is not a synergistic relationship only. Deviation from the original principles has given rise to a proliferation of licenses that are making it difficult for developers and businesses to decide on a particular license. When licenses are not entirely compatible with one another it does not strengthen the original Free Software based software commons, but establishes *several* software commons. Perens has long since realised that he made mistakes, not only when promoting Open Source over Free Software, but particularly in the context of the proliferation of licenses contingent upon splits in the movement:

“[T]he fact that there are 73 licenses is a problem. Many of those licenses are incompatible with each other. To understand the legal implications of mixing software under two of those licenses together in the same program, you'd have to learn 5256 different combinations! ... And the worst thing about this is, it's my fault! Well, partially. When I wrote the rules for Open Source licensing in 1997, as a policy document of the Debian project, not many people took what we then called “Free Software” seriously, and it was unthinkable that 73 different licenses that complied with my Open Source Definition would ever be written” (Perens 2009)

The complexity that Perens here points to and the subtle – or not – differences between the respective licenses are beyond the scope of this essay; indeed, undertaking such a task as to map out these differences would require an essay of its own. We must maintain a focus on Free Software in broader philosophical terms, rather than a specialised, detailed analysis of licenses. However, it is necessary to be aware of these differences in

general terms. This figure shows in a simple way the complexity arising from different categories of software (FSF 1996):

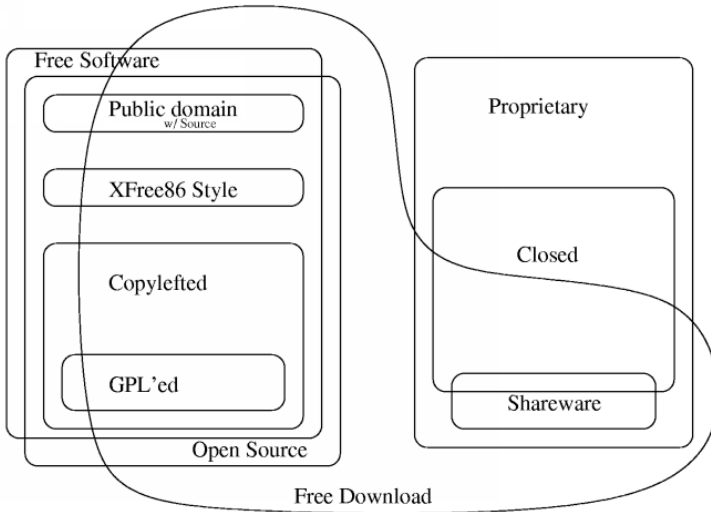


Illustration 9: Software categories

Apart from providing an overview of the complexity of categories of software, this figure also shows us, as Stallman noted above, that software released under the GPL falls within the category “Open Source”. Because the most widely used license is the GPL and because one of the most famous Open Source projects, namely the Linux kernel, is released under the GPL, the political division between Free Software and Open Source is even more complex than suggested above by Stallman and the relation between these factions reveals a peculiar aspect. While the Open Source movement tends to depoliticise Free Software, the most commonly used Open Source license is the GPL, which remains unaltered and thus, essentially, in a stealthy manner, we may say, still advances the cause of the Free

Software movement. In a sense, the de-politicisation – insofar as an Open Source project, which most do, choose the GPL as a license - remains superficial. That is because the principles are enshrined in the license and the associated code will always be accessible for Free Software commoners. An Open Source project released under the GPL remains a vehicle of Free Software principles and the code that it contains enters the structured, Free Software commons, but these underlying principles of freedom are hidden from view when the majority of users - and the public in general - only recognises the given piece of software as “open” and not “free”.

This historical outline with a view to certain underlying social and political principles does little justice to the rich history of a fast growing movement, but it should provide the reader with sufficient knowledge required to understand the specificities of the Free Software phenomenon and the software license that articulate the movement's social values, particularly in the context of copyright and property relations, to which I turn in Section 3.5. Before a presentation and analysis of the GPL, however, I want to further contextualise Free Software in socio-political and cultural terms. I do so by way of the concept of a “recursive public”.

3.4 The Free Software movement as a recursive public.

Christopher Kelty (2008) has conceptualised the phenomenon of Free Software and the cultural significance of Free Software in terms of his concept of a “recursive public”. The choice of the term recursive is obvious in the context of software, because the concept of recursion is a basic and very central aspect of computer programming. In other sciences it is also, relatedly,

known as a “feedback loop”, which in simple terms means that the output of a process becomes an input into that same (on-going) process. Recursion separates simple programmable devices from what we know as digital computers. It is a term and concept that is central to the imaginary of hackers and formed the basis for the naming of the GNU operating system: GNU is a recursive acronym that means “GNU's Not Unix”. In this case it is a humorous wordplay typical of the hacker community, but Kelty takes it to a serious social scientific level in his conception of the Free Software community as a “recursive public”. Likewise, I used the concept of recursion, in the Introduction and Chapter 1, to argue that the tangible/intangible divide as a fundamentally distinguishing factor in the configuration of property relations is misleading, because there is a recursive relation between goods and resources in these respective realms.

One of the first steps that Kelty makes in his narrative is to clarify the relation between Free Software and the Internet, which is also recursive, as already suggested above:

“The Internet is a unique platform - an environment or an infrastructure - for Free Software. But the Internet looks the way it does because of Free Software. Free Software and the Internet are related like figure and ground or like system and environment; neither are stable or unchanging in and of themselves, and there are a number of practical, technical, and historical places where the two are essentially indistinguishable” (Kelty 2008: 4).

The visions of freedom of information, speech and circulation of knowledge that are intrinsic to the Free Software movement were also clearly in the mind of Tim Berners-Lee when he developed

the Hyper Text Transfer Protocol, which is the technical aspect of the World Wide Web and which, together with email, have come to define the Internet. Berners-Lee imagined that the World Wide Web could connect all computers in the world and so provide access to all information in digital existence. Providing the tools for access and providing free and open access to the scrutiny of such tools was central to his vision (Berners-Lee 1999) – and reflected the utopian visions of technology that have been central to social movements in cyberspace for decades (Turner 2006).

Although the Free Software Foundation existed before the World Wide Web, it only grew slowly, in part because the programmes that they distributed were on recorded magnetic tapes that were sent with conventional mail companies; and it is with the circulation of the programmes, and the sharing of code, that the values of the community are perpetuated and thus that the community grows. However, these programmes and the vision of sharing and cooperating behind them, helped give shape to the Internet, which in turn provided a framework for distributing Free Software more smoothly and infinitely faster. Offering code on a website for download allows anyone, anywhere – who has Internet access and the hard- and software required to do so - the possibility to download the programme in question.

One dimension of the recursive nature of the Free Software public can thus already be found in this relation. One of the outputs of the Free Software movement in the early days were the programmes that came to define what we know as the Internet, and the Internet, in turn, became an important input in the development of the Free Software movement. This is an important relation that shows how openness and freedom perpetuate themselves. They come around if they go around, so to speak. It also shows how crucial Free Software - in practice (through provision of software tools) and in theory (through

defining and perpetuating visions of freedom and openness) – was and continues to be for the Internet and the World Wide Web. In that respect the Free Software movement has been actively creating the environment in which the movement thrives and because it thrives it continually recreates and strengthens the environment in which it exists. The output of the Free Software movement becomes an input to the system – cyberspace - upon which it is dependent. This is the *technical* aspect of Free Software's recursive relation to its environment.

Free Software also has a recursive relation that is *socio-political*. As a public the movement is recursive because it creates the foundations for its own success, similar to how it continues to create the technical foundations in which it thrives. Kelty writes:

“A recursive public is a public that is vitally concerned with the material and practical maintenance and modification of the technical, legal, practical, and conceptual means of its own existence as a public; it is a collective independent of other forms of constituted power and is capable of speaking to existing forms of power through the production of actually existing alternatives” (2008: 3).

“Recursive publics are publics concerned with the ability to build, control, modify, and maintain the infrastructure that allows them to come into being in the first place and which, in turn, constitutes their everyday practical commitments and the identities of the participants as creative and autonomous individuals” (ibid: 7).

Two of the most important legal challenges for the Free Software movement, with respect to the “institutional ecology” within which that movement exists and has to survive, are copyright and patent law (Benkler 2006; Frischmann 2007). I will, for brevity's sake, leave aside the question of patent law, although the Free Software movement in a variety of ways also contest existing patent laws⁶⁶, and only consider copyright law.

It is copyright law that has permitted the articulation of the GPL, to which we turn below, and copyright law reform is one of the main foci of the political lobby work of the Free Software movement. They work to “modify” copyright law, but they also seek to “maintain” it, because copyright law constitutes the legal foundation upon which they rest as a movement. That Free Software is based upon copyright law, yet seeks to reform copyright law in accordance with the subversive way in which the Free Software license, the GPL, is anchored in copyright law, is an important aspect that is often misunderstood.

A recent political initiative can help illustrate how the Free Software movement approaches the issue of copyright reform. The Swedish Pirate Party, which is a political platform “to legalise [non-commercial] internet file-sharing” and other cyberspace customs and which gained 7.1% of the Swedish votes and thus “won one of Sweden's 18 seats in the European parliament” (Schofield 2009), has proposed a copyright reform that would harm the cause of Free Software. It is somewhat ironic that a party, which it would not be possible to imagine the

66 The Free Software Foundation works to exclude the realm of computer software from patent law entirely. See for instance “Patent Reform Is Not Enough” available online at <http://www.gnu.org/philosophy/patent-reform-is-not-enough.html> and the “End Software Patents” campaign at <http://endsoftpatents.org/>.

emergence of without the prior existence of the Free Software movement, should propose reforms that would severely harm – quite possibly entirely undermine – the work of the Free Software movement. The harm consists of a radically shorter copyright term, namely five years, after which a copyright covered work would enter the public domain. As we shall see, the GPL rests upon copyright law to protect against enclosure and therefore that protection would be rendered useless after five years, because source code in the public domain can be enclosed in future software that is not Free Software. Because non-free software does not reveal its source code – only the binary programme is copyrighted – the source code of non-free software would never enter the public domain anyway. What could legally be shared non-commercially within copyright law reformed according to the Pirate Party's proposal would only be the binary programmes. However, this completely overlooks the nature of non-free software, which is not only protected by copyright, but also by EULAs (End User License Agreements). The use of EULAs would most likely exempt non-free software altogether from any reforms to copyright law in any case. Furthermore, as Stallman writes, non-free software could include a time bomb that simply renders it unusable after five years, meaning that nothing useful would enter the public domain:

“Thus, the Pirate Party's proposal would give proprietary software developers the use of GPL-covered source code after 5 years, but it would not give free software developers the use of proprietary source code, not after 5 years or even 50 years. The Free World would get the bad, but not the good. The difference between source code and object code and the practice of using EULAs would give proprietary

software an effective exception from the general rule of 5-year copyright — one that free software does not share” (Stallman 2009).

It is for these reasons that the Free Software movement is vitally concerned with the “practical maintenance and modification” of copyright. Without copyright there can be no Free Software as we know it. It is beyond the scope of this essay to investigate further the details of copyright reform from the perspective of the Free Software movement. However, this example shows that the nature of Free Software is such that conventional approaches to copyright law reform, such as reducing the term (before a protected work enters the public domain, from which it can be enclosed through inclusion into non-free future works), simply no longer makes sense in the context of Free Software.

The Free Software movement's work to reform copyright and the creation of Free Software as such are better understood as a contribution to the democratisation of technology to which a reform of copyright law is integral and necessary, but by no means sufficient. Within the philosophy of technology Andrew Feenberg has written on the democratisation of technology. He states the need for this in a manner very relevant for the case of Free Software:

“Technology is power in modern societies, a greater power in many domains than the political system itself. The masters of technical systems, corporate and military leaders, physicians and engineers, have far more control over the patterns of urban growth, the design of dwellings and transportation systems, the selection of innovations, our experience as

employees, patients, and consumers, than all the electoral institutions of our society put together” (1999: 131).

With such a powerful position in the everyday lives of people and the way in which software is integral to most technology, either in development, application or general use, we may understand the work of the Free Software movement, conforming a recursive public, as a contribution to the democratisation of technology. Feenberg takes note of how technology is both a tool for domination and a tool for liberation, and that its value is determined both by the prevailing mindset in which it is implemented, what Feenberg calls its “code”, and the ways in which technologies are put to use.

“[T]he computer is neither good nor evil, but both. By this I mean not merely that computers can be used for either domination or democratization but that they can evolve into very different technologies under the influence of different strategies of development” (Feenberg 2002: 91).

The ambiguity or ambivalence of technology Feenberg presents like this:

“1. Conservation of hierarchy: social hierarchy can generally be preserved and reproduced as new technology is introduced. This principle explains the extraordinary continuity of power in advanced capitalist societies over the last several generations. This continuity was made possible by technocratic strategies of modernization, despite enormous technical changes.

2. Subversive rationalization: new technology can also be used to undermine the existing social hierarchy or to force it to meet needs it has ignored. This principle explains the technical initiatives that sometimes accompany the strategies of structural reform pursued by union, environmental, and other social movements” (Feenberg 1998).

The work of the Free Software movement, we may therefore say, is an example of “subversive rationalization” both with regard to the technical dimension and with regard to socio-political dimensions. The Free Software movement exhibits a recursive relation with regard to not only the technical foundations – cyberspace and software - but also with regard to the institutional ecology. In the context of the legal aspect of the institutional ecology, Free Software, as we shall see in Section 3.5 below, is dependent on copyright law, while at once working actively in political lobbies to reform that very copyright law (as well as lobbying to exempt software from patent law). The recursive Free Software public, then, instantiates a process of “subversive rationalization” of software technology and thus contributes to a democratisation of technology led by civil society.

Kelty has conceptualised the recursive phenomena of Free Software and cultural derivatives in the wider Free Culture movement in such a way that other social movements can learn from the example. If some hackers with long beards can subvert copyright law and transform the powerful software industry and thereby set a precedent for a significant transformation of

societal relations, perhaps other movements can do so, too⁶⁷. Certainly for social scientists the concept of recursive publics can be applied to other domains. Imagine, say, a definition of organic food articulated by the permaculture movement⁶⁸, a driving test articulated by the Bicycology movement⁶⁹, or, indeed, property relations articulated by anti-capitalist movements. The example of the Free Software movement – for the rest of global civil society - stands as empirical evidence that it is possible to organise your own social relations and articulate your own property relations, that is to autonomously establish a community through voluntary associations through a subversion of the decision making authority that defines copyright as an instance of private property.

67 There are many movements that are successfully contesting the value measures of capital and changing their social relations with regard to things in their struggles against market mechanisms, see for example “We Are Everywhere” by the Notes from Nowhere Collective (2003). However, the Free Software movement remains the only movement that has articulated its values and social relations into legal language in such a manner that it has been accepted in courts of law and thus is directly subversive of the existing letter of the law .

68 The Permaculture Association writes: “The word 'permaculture' comes from 'permanent agriculture' and 'permanent culture' - it is about living lightly on the planet, and making sure that we can sustain human activities for many generations to come, in harmony with nature. Permanence is not about everything staying the same. Its about stability, about deepening soils and cleaner water, thriving communities in self-reliant regions, biodiverse agriculture and social justice, peace and abundance”. Available at <http://www.permaculture.org.uk/knowledge-base/basics>

69 “Bicycology is a cyclists' collective that offers a range of activities to promote cycling and make links with wider issues of environmental and social responsibility. We use our passion for cycling to pursue our vision of a just and sustainable world through a combination of education, entertainment and creative direct action”. Available at <http://www.bicycology.org.uk/>

These organisational lessons provided by the example of Free Software have been the subject of a paper by cyberspace visionary Douglas Rushkoff, originally written for the London think tank Demos:

“The emergence of the internet as a self-organising community, its subsequent co-option by business interests, the resulting collapse of the dot.com pyramid and the more recent self-conscious revival of interactive media's most participatory forums, serve as a case study in the politics of renaissance. The battle for control over new and little understood communication technologies has rendered transparent many of the agendas implicit in our political and cultural narratives. Meanwhile, the technologies themselves empower individuals to take part in the creation of new narratives. Thus, in an era when crass perversions of populism, and exaggerated calls for national security, threaten the very premises of representational democracy and free discourse, interactive technologies offer us a ray of hope for a renewed spirit of genuine civic engagement” (2004: 16).

These are great promises. However, as we covered in Chapter 1, the philosophical problems inherent in “information exceptionalism” and their consequences for Free Software and Free Culture politics result in a very important recursive relation being absent, namely with the tangible realm. The Free Software movement is “vitaly concerned” with copyright reform and abolition of software patents, but *they are not* vitaly concerned with substantial reforms of property relations in the tangible realm, on the contrary. The material foundations of cyberspace – and thus the realm in which software development takes place –

is certainly part of the infrastructure that allows Free Software to come into being in the first place. Without a critical approach to ownership in the tangible realm the Free Software movement will remain vulnerable to enclosure led by those capital interests.

The most important commons is the commons of the land and the tangible means of production and distribution. That is the shared material reality of humanity from which all other possibilities arise, whether tangible or intangible. The information commons is a luxury, the icing on the cake. It is costly and it is precious and has excelled in perpetuating the seemingly ubiquitous propensity of human beings to engage in sharing and cooperation when constraints are lifted. The liquid architecture of cyberspace has facilitated these emergent processes very well. But the proliferation of sharing and cooperating, which attracts so much attention - from rent seekers and anti-capitalists alike - is not confined to cyberspace, *nor* to the intangible realm.

The difference between tangible and intangible is not what determines whether people share and cooperate. As we have seen there is a long, rich history of commoning. Commoning is a shared skill of humanity and not a skill that suddenly, morphogenetically appeared on a global scale when the doors to cyberspace were opened. Rather, cyberspace provided people with a space that was not yet enclosed. There were few fences in cyberspace, so sharing and cooperating was possible. It was possible because the constraints of private property - present in almost all other dimensions of life - were absent. Now they are invading cyberspace, seeking rent and expansion of capital interest. It is laudable to form a movement to strike back and protect cyberspace, but a more reflexive approach would not stop at the gates of the tangible realm. The threats of capital will not go away as long as capital exists in its particular form. It will return, it will continue to seek new ways of enclosure, which

suggests that it is necessary to address this problem of capital at the most fundamental level, namely with regards to ownership.

Addressing merely the symptoms of avarice and capital expansion in the intangible realm condemns Free Culture to an eternal and defensive battle and separates Free Software and Free Culture from the global movement of movements struggling to take back the land and the means of production. Without acknowledging and acting upon its recursive relationship to the tangible realm, Free Software remains a virtual commons that is detached from the struggles for real commons. Having witnessed the phenomenal emergence of commoning in cyberspace – when the constraints of private property were lifted – we can only imagine what transformations the tangible realm would undergo if constraints were lifted there. As I said above, the opposition here is not *tangible versus intangible*, but private property versus forms of property that facilitate collective creativity and self-organisation.

Nevertheless, the achievements of the Free Software movement are remarkable. It is in the GPL that these achievements are manifest and in the following section this software license and copyright reforming declaration of hacker values will be explained in detail.

3.5 The GNU General Public License: copyright subversion and constitution.

Contemporary literature addressing copyright law in the context of software is replete with gaps, misunderstandings and misleading statements with regard to Free Software and the GPL.

It will be instructive to briefly present a few of those misunderstandings here.

3.5.1 Misunderstanding the GPL.

A frequent misunderstanding of Free Software is that it is placed in the public domain. We can find this replicated in the third edition of an Oxford University Press textbook on Intellectual Property Law:

“[The Free Software movement] is dedicated to the idea that code should be made publicly available rather than protected by copyright law. For example the Free Software Movement develops code and places it in the public domain. It can be used by anyone, with the proviso that they agree to the terms of the General Public License, which dictates that any improvement made to the software will be similarly placed in the public domain” (Davis 2008: 75-76).

As we shall see in more detail later in this chapter, this is not only misleading but false. The only correct statement in the quote is that “[i]t can be used by anyone, *with the proviso that they agree to the terms* of the General Public License”. Firstly, Free Software is protected by copyright law, that is its very foundation. Hence, secondly, Free Software is not at all placed in the public domain. This is the genius of Free Software. Instead it is protected from enclosure through a subversion of copyright and that subversion is articulated in the GNU General Public License (the GPL). The GPL is best understood as a set of sub-clauses to copyright, hence it rests upon copyright law.

Turning to Pearson Longman's "Intellectual Property", Seventh Edition, we find a long, densely case referenced chapter on copyright (Bainbridge 2009: 239-296), yet not one mention of Free Software. The chapter begins:

“Copyright law has a history of development that can partly be explained by reference to technological change ... The Copyright, Designs and Patents Act 1988 was an attempt to keep abreast of developments in technology coupled with an intention to enact legislation that would take future change in stride. Of particular concern was the protection of computer programs and of other works stored or transmitted in digital form” (ibid: 239).

If we look to another set of leading voices in the field, Bently & Sherman's Intellectual Property Law textbook, we find no mention of the phenomenon of the GPL in the second edition (2004) at all, but in the current edition (2008) space has been made for a mentioning. On page 266 a section is devoted to the work of the Free Software Foundation, adding little to the debate. It has to be noted that one of the greatest technological changes in this context in contemporary times, namely the advent of the Internet, which is built in great part with Free Software and recursively has made the further success of the Free Software movement possible, is hardly taken into account by the legal, academic establishment.

In the following section, I present the GPL and its legal, and above all property implications in more detail.

3.5.2 The GPL: just a software license?

The GNU General Public License (“the GPL”) is a software license, which, as is also the case of non-free software licenses, determines the conditions of distribution of a piece of software. The GPL was first published in 1989. The GPLv2 was published in 1991 and the process towards GPLv3 began officially with a global gathering at MIT in January 2006, which has been recorded, documented and discussed extensively, as has the gatherings that followed: the Second International Conference on GPLv3, which was combined with the 7^o Fórum Internacional Software Livre, took place April 19-22 in Porto Alegre, RS, Brazil; the third happened in Barcelona, June 22-23; the fourth took place in Bangalore, India, August 23-2; and the fifth took place in Akihabara Tokyo, Japan, November 21-22, 2006. Each of the conferences were organised by the local Free Software groups and coordinated with the civil society of developers and users. The process was coordinated by four committees, each composed of “18 to 22 members who were chosen from vendor, developer, hacker and open source communities” with a privilege of the original author, Richard Stallman, who “would make the final decisions on hot-button issues like digital rights management (DRM). However, even with Stallman as the ultimate decider in what stays and goes from the license he created in 1989, committee members were optimistic that the right issues are being addressed” (Loftus 2006).

The GPLv3 was finally published in June 2007, with a preamble and 18 sections of legalese in more than 5000 words; it is deliberately written for and within global civil society, rather than for any specific national jurisdiction (an aspect to which I return briefly below) and the GPLv3 is now the recommended software license by the Free Software Foundation. But how - exactly - does it work?

Software, like a book, a painting or a poem, is by default copyrighted and the exclusive right to define distribution terms belongs to the creator (unless s/he, like many academics, have signed away their so-called “intellectual property” as part of signing their employment contract). A software license is an expression of the creator's specific conditions with respect to distribution of the copyrighted software.

Copyright specifies the control powers and use privileges, conferring on the author - and the author only - an exclusive set of rights to: (i) reproduce or copy the copyrighted work; (ii) prepare derivative works (modify the work); (iii) distribute copies of the copyrighted work to the public by sale or other transfer of ownership, rental, lease or lending; (iv) perform or display the copyrighted work publicly. It is this articulation of copyright that the Free Software movement aims to radically reform and alter. As we shall see they have managed to do so with quite some success.

The Free Software movement's creations, that is the software they write and release, rest upon the provisions of copyright law, because the GPL specifies what the copyright holder permits others to do with a Free Software programme. The GPL is legally speaking a set of sub-clauses to copyright. These sub-clauses are articulated in such a way that they – at once – build on copyright *and also* subvert the function of copyright. The Free Software Foundation calls these sub-clauses “distribution terms” and they specify certain freedoms that are provided to users, but also specify certain conditions that the users are required to observe and follow in order to enjoy the privileges of freedom. In writing the GPL the Free Software community has constituted itself as the relating-subject (A+C), classified (free) software as its

related-to object (B) and specified their *relational modalities* and thus established a (software) commons.

3.5.3 Copyleft freedoms: reciprocity in perpetuity.

The general concept that is at play in the GPL's articulation of sub-clauses to copyright, or distribution terms in extension of copyright, has been labelled Copyleft. The articulation of the GPL has spawned a variety of other Copyleft licenses, notably those of the Creative Commons⁷⁰, and as such the GPL is a particular instance of Copyleft, which defines and articulates the “four freedoms” of Free Software:

“To copyleft a program, we first state that it is copyrighted; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code or any program derived from it but only if the distribution terms are unchanged. Thus, the code and the freedoms become legally inseparable” (FSF 2001).

The four freedoms of Free Software are thus:

- ◆ The freedom to run the program, for any purpose (freedom 0)
- ◆ The freedom to study how the program works, and change it to make it do what you wish (freedom 1). Access to the source code is a precondition for this.

⁷⁰ The Creative Commons was explained briefly in Chapter 1.

- ◆ The freedom to redistribute copies so you can help your neighbor (freedom 2).
- ◆ The freedom to improve the program, and release your improvements (and modified versions in general) to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this (FSF 2009)

The code and the freedoms become inseparable through the ingenious element of *reciprocity in perpetuity* that is inherent in the GPL. Its opponents call this relational modality a “viral clause” in order to provoke associations with computer vira and illness in general⁷¹. For the software privatisers, GPL'ed code is a contamination, because it brings with it – as the code and the freedoms are inseparable – the freedom to share and cooperate *and* protects this freedom against enclosure.

The *relational modality* that instantiates *reciprocity in perpetuity* is a clever articulation of sub-clauses to copyright that on the one hand binds the code and the freedoms, while on the other, as a consequence of this binding, ensures reciprocity between developers and users within the community. In logical terms it is stipulated in the GPL that if a GPL'ed code segment X is included in programme Y, then Y, if it is released to the public, must also be released under the GPL. In that way you are obliged to extend and forward to others the four freedoms awarded to

71 Not unlike the subversion of the “framing effect” with regard to property that I have presented in this essay as a response to Stallman's warning that “most people” are unable to understand property beyond an absolute, natural rights-based conception, David Bollier has given a positive meaning to the term “viral” in his “Viral Spiral: How the Commoners Built a Digital Republic of Their Own” (2008). This attempt reflects my own view: rather more information, than less, rather investigate, than obscure.

you by the copyright holder through the distribution terms defined in the GPL, in case you elaborate on a given segment of Free Software and redistribute it. If you just modify and keep your modified software to yourself you are not obliged to do anything and can simply enjoy the four freedoms in private. In the GPL Version 3 the relational modality that ensures reciprocity in perpetuity is articulated as follows⁷²:

“The GPL - Section 5: Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date. [*In order that fellow commoners know that code has been changed and when.*]
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to “keep intact all notices”. [*The conditions or additional terms referred to here are irrelevant for our analysis.*]

⁷² The entire text of the GPL is available online @ <http://www.gnu.org/licenses/gpl.html>.

- c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it. [*This is the reciprocal specification: “the entire work” is the original code, plus your contribution, which then enters the Free Software commons. A can never be separated from C and the relational modality (reciprocity in perpetuity) attaches to, or follows B as it circulates. i.e. the commons grows.*]
- d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so. [*This is irrelevant for our analysis.*]

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an “aggregate” if the

compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate". [*This clarifies that a compiled – i.e. binary - Free Software programme (or application) can be used with other programmes without subjecting these other programmes to the conditions of the GPL, thus defining the limit of the reciprocal element. The exact details are not strictly relevant for this analysis, but concerns the freedom to combine Free Software in binary form with programmes that are not Free Software. GNU/Linux distributions, such as Ubuntu, do just that.*]

Reciprocity in perpetuity should be clearly distinguished from the reciprocal give and take that characterises a market economy, in which individuals enter into contractual relations that are characterised by *direct reciprocity*. Reciprocity in perpetuity is likely to be a feature of most commons: the commons is always there, for you to access and use and take from; however, it demands care and attention in turn. A commons can be destroyed by enclosure, but also by neglect or over-use. In the moment that a commoner does not perform the duty of care that has been distributed to her, the reciprocal link is broken: it might exclude her from the commons or contribute to its collapse. This is most obvious if we think of commons of the land and the ecological balance that sustains them. The GPL ensures that everyone is able to access the Free Software commons, and also that everyone will act in ways that ensure its continuity (and in fact, growth) into the future. Reciprocity in perpetuity refers to an attitude of responsibility and responsiveness that is necessary in

order for the commons to remain perpetually *there* (see also Section 2.1.3 on the distribution of care).

3.5.4 Copyleft loves copyright.

The GPL, anchored firmly in copyright law⁷³, yet subverting copyright, ensures *me* that if *you* use a bit of my code and add to it, then the bit that you added will be available to me on the same conditions. In that way our common creations are bound to and by the same freedoms in perpetuity. Free Software hackers are (neo-)commoners:

“Proprietary software developers use copyright to take away the users' freedom; we use copyright to guarantee their freedom. That's why we reverse the name, changing “copyright” into “copyleft ... It doesn't mean abandoning the copyright; in fact, doing so would make copyleft impossible. The word “left” in “copyleft” is not a reference to the verb “to leave” — only to the direction which is the inverse of “right”” (FSF 2009).

73 Not only is copyleft dependent on copyright protection, but the GPL, that is *its specific wording*, is protected by copyright. The GPL itself is therefore not copylefted, but remains under conventional copyright. In this way the GPL *also* interfaces with and makes use of existing copyright law. Stallman explains why: “We don't want people to circulate modified texts that purport misleadingly to be the GNU General Public License. Copyright does not restrict the writing of license text. Thus, if you want to write a license with wording similar to the GNU GPL but not exactly the same, you can do so. But you can't copy our preamble without our permission, so you can't make it appear to have come from us” (Stallman in Biancuzzi 2009).

Because the GPL is “merely” a set of sub-clauses in extension of existing copyright law, which is awarded automatically upon a creation's release to the public, in the moment that you do not adhere to the terms and conditions under which the GPL puts you, the GPL is rendered invalid. It follows that you can no longer claim the four freedoms of Free Software, since they are only yours to enjoy as long as you reciprocate them. Therefore, when breaching the GPL the software in question is no longer covered by the GPL's additional distributions terms, but reverts to being covered under conventional copyright law. That, of course, means that you are not allowed *at all* to copy or redistribute the code in question. Breaching the GPL by enclosing code is thus a *de facto* breach of copyright. I look at court cases setting legal precedents for such breaching in Section 3.6.

In other words, the GPL is a “hack of genius” (Meretz 2004: 31) that utilises existing law from within the system otherwise threatening Free Software development, namely copyright law, and subverts it through a reconfiguration that ensures reciprocity in a community instead of exclusion on behalf of an individual (see also Oksanen and Välimäki 2006). Copyleft, then, is not only a word play, but a whole new way of imagining copyright. It is on this basis that the Free Software movement is working to reform copyright law. They do not by any means want to eliminate copyright law, since without copyright the GPL loses its trespassory protection and hence means of defence. This has already been tested in a court of law (see Section 3.6 below).

That copyleft is dependent on copyright is often misunderstood, not only in influential textbooks on copyright law as we saw above, but also among anti-capitalists. The attentive reader will by now be aware that this reliance of a commons on the

institution of private property is by no means contradictory. On the contrary, in capitalist democracy, it is in fact inevitable.

The communitarian form of property that Harris describes, and which we adopted as a model of an autonomous commons within capitalism, represents the Free Software commons well. Its trespassory protection, given by copyright yet expressed as copyleft, circumscribes a realm of *collective-freedom-to* share and cooperate. This relational modality is articulated in the form of the GPL (a property protocol), which provides use privileges, and indeed a certain amount of control power to anyone whose actions do not undermine the conditions of reciprocity stipulated within it. The control power of the copyright holder is used to surrender the exclusivity of that control power, making it available to everyone who agrees to surrender theirs in turn under the same conditions. Use privileges are opened up to anyone in that way. The capitalist characteristic of property, the exclusive right to wealth effects is, as a side-effect of the surrender of control power, made non-exclusive: everyone can potentially sell products and services based on GPL'ed software code, as long as the code continues to circulate freely.

Understood in this way, the configuration of property relations in the Free Software commons can be illustrated in this manner (see next page):

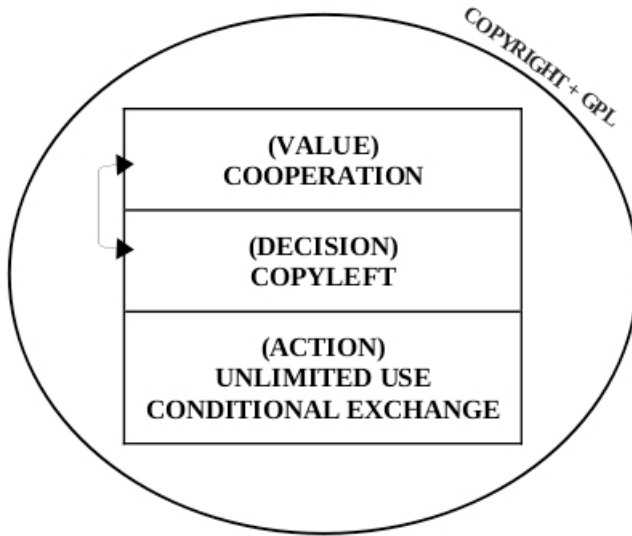


Illustration 10: The GPL as property configuration.

Both the original decision to (conditionally) surrender control power through copylefting one's creation, as well as any other decision made with regard to software code released under the GPL are legitimised by reference to common values of the hacker community, such as the fostering of sharing and cooperation. The GPL is an articulated protocol of such common values, and affords the author and everyone else use and exchange privileges.

Copyleft uses copyright as its enforcement mechanism in a world dominated by private property relations and authorised self-seekingness on behalf of corporations – that is, authorised profiteering in the interest of shareholders. In a world of

continuous enclosure, that is increasing individual and quasi-individual control powers over land (and everything else), subversion of enclosure might be the only way to stop its progress short of reverting to increased state regulation. To subvert enclosure is to subvert individual and quasi-individual control powers, by using the authority so invested to surrender some control power (conditionally) and open up use privileges to others. This is what copyleft does. It is also, in essence, what social centres and hacklabs do: some social centres are squatted, others are rented, and again others privately owned. In all three versions some degree of control is conferred respectively upon (i) the quasi-individual collective of squatters, (ii) tenants or (iii) landlords. In the squat, control power is *de facto* rather than *de iure* based on the physical possession and occupation of the building or plot of land. The rented social centre means that the use-privileges and some control power has been contracted out from the owners to the tenants. In the case of a social centre being privately owned by the social centre collective (often in form of a cooperative), control power lies even more straightforwardly with the centre. In all cases, however, this control is used to open up use-privileges to the wider community, as well as surrendering some decision-making power over how the space is used and by whom (though usually not the power to alienate the title on the market, i.e. the power to sell the centre).

Within capitalist democracy, most commons will have to rely on some sort of enforcement mechanism that can protect the commons from enclosure. Private property rights come with such state sanctioned powers of enforcements attached and, in principle, instances other than copyright can be “hacked” in a similar way.

The relation between the GPL and copyright law is one of dependence. But this dependence has less to do with the

fundamental need for private property in social organisation, or with the logical priority of private property. Rather, it has to do with the relentless nature of capitalist privatisation which creates the need for strong trespassory protection of a commons in the first place.

If hackers bought a piece of land and fostered a forest garden, they could constitute themselves by articulating their decided upon relational modalities with regard to their forest garden commons. As discussed in Chapter 2, coming together to buy a piece of land in legal terms is simply an instance of group private property – like a corporation – but what constitutes a commons is not only a matter of its precise legal foundations. A commons is an idea and it is an experimental process of commoning: working together, sharing and cooperating. As an act of creation the commons is on a trajectory away from the state and its modalities – by which door it exits is not necessarily a crucial matter. It is a collective expression and fulfilment of needs and desires. A commons self-articulates in and through commoning and its emergent property relations and protocols. One way it can defend itself is through the co-option of capitalist trespassory protection for its own ends.

Structurally speaking – with regard to social organisation – the “only” difference between private property and the configuration of property inherent in the GPL is the shifted focus from individual exclusion and self-seekingness to a sharing and cooperating community. Both are relations between people with regard to things, structured by normative protocols.

If we recall the process described in the Introduction *from* the Magna Carta and the Charter of Forests *to* the American Declaration of Independence, which was a process from *rights articulated for collective and communal benefit* to *rights*

articulated for individual privilege, we see here the exact reverse: copyright is articulated for the privilege of individuals to exclude others, whereas the GPL subverts that individual privilege and transforms it into an articulation that ensures collective benefits in a community of reciprocity. Private property - in the sense of it conferring decision rights, sanctioned by the state - can therefore be really useful for *commonism*. The Free Software commons is a function of private property. Standing on that foundation, it is a rather safe commons. However, it is not necessarily on the legal basis of private property that the Free Software commons is *constituted*. It is constituted as a commons by the voluntary association of hackers. They act according to their common constitutional liberties, as it were.

3.5.5 Constituting a commons.

In addition to being a clever legal document, moreover, the GPL is also a *constitution* of the Free Software movement (or community). It defines the boundaries of the software commons and binds together the commoners in the practices of commoning. It communicates a global vision for the community of software freedom, and articulates its relational modality. Furthermore, the GPL is an expression of the idea that freedom as *collective-freedom-to* needs to be written into the normative protocols that guide behaviour in capitalist democracy, and indeed, that it *can be* written into protocols. Inscribing *collective-freedom-to* in that manner requires certain conditions to be observed by all, in order for this freedom to remain collective into the future. But as such, these conditions are voluntary and reciprocal: you only have to abide by the rules if you want to use the resources of the commons, and you can

expect reciprocity in doing so. The commons is protected both through the practices of commoning and reciprocity in perpetuity, but of course also by the trespassory rules that copyright enacts. However, with Free Software, trespassory protection does not *exclude* people. Rather, it asks them to act in a particular kind of way. The Free Software commons is “open” to people not according to their *identities* (in the birth certificate kind of sense) but according to their *actions*.

Wendy Pullan (2004) in her architectural studies of the Israeli wall built to contain the Palestinian people makes an analytical distinction between thick and thin walls. Thick walls “structure differences and transitions, thereby embodying and fostering a certain richness of meaning”. Thick walls are constitutional of identity, yet permeable. Pullan uses the example of the Roman *poemerium*, the symbolic furrow later echoed in the city walls, “which deviated as necessary and were added to and changed over time to represent the practical structures of daily life” (ibid.) to communicate what a thick wall is. A thick wall is a facilitator, a mediator and point of reference, whereas thin walls, such as the Israeli one, are “constructed expressly to separate and divide”.

Pullan’s perspective is helpful to understand the GPL in metaphorical terms. We can understand the GPL as a thick wall around the Free Software community, protecting it, but not excluding the rest of the world unconditionally: the wall that the GPL instantiates is best understood as an invitation to join an intentional and autonomous community, whose goal is “to give people liberty, and to encourage cooperation, to permit people to cooperate” in the understanding that one should “never force anyone to cooperate with any other person, but make sure that everybody’s allowed to cooperate, everyone has the freedom to do so, if he or she wishes” (Stallman 2001b).

The GPL is based on distribution rather than exclusion (Weber 2004) in that it de-emphasises the regulation of an individual owner/creator who can exclude others - and for how long - from access to and use of software code. Rather the GPL instead emphasises how, and under which conditions software code can be shared and distributed in a common fashion. In doing so, the GPL unites people: it builds communities. The Free Software movement – “vitaly concerned with what allows them to come into being in the first place” – has in many senses set new standards for autonomous constitution. This again underpins the notion of the Free Software community as a recursive public: it thrives in global civil society and strengthens global civil society by showing by example how global voluntary associations can organise and protect themselves.

Because it is a global network of communities composed of members residing in respective jurisdictions, each subject to different specificities of local copyright law, the GPL is also an experiment in global(ised) law making beyond the nation state through voluntary associations⁷⁴. A property law made within global civil society by a social movement. The global dimension is reflected in the recently completed process to update the GPL

74 In an aside it should be noted that *lex mercatoria* exhibits similar traits. Legal sociologist Guenther Teubner argues that “*Lex mercatoria*, the transnational law of economic transactions, is the most successful example of global law without a state ... [but] it is not only the economy, but various sectors of world society that are developing a global law of their own. And they do so ... in relative insulation from the state, official international politics and international public law ... Technical standardization and professional self-regulation have tended towards worldwide coordination with minimal intervention of official international politics. The discourse on Human Rights has become globalized and is pressing for its own law, not only from a source other than the states but against the states themselves. Especially in the case of human rights it would be “unbearable if the law were left to the arbitrariness of regional politics” (Teubner 1997: 3-4).

to Version 3, which includes efforts of “denationalization”, in order to position the GPL within global civil society, in an “attempt to cut the language of the license loose from any particular system's copyright law” (Moglen 2006), so as not to confine it to any specific nation state's legal system and its terminology.

Free Software is created for both individual use and the common good. It contributes to society by creating commonalty: the Free Software community is a voluntary association of individuals whose creative agency make up a software commons. The GPL facilitates a codification of unwritten rules, norms, and customs derived from, on the one hand, the social and political concern that free access to source code be crucial for society, and on the other, the practical realisation that good software is produced by sharing and experimenting with each other's code freely and openly as a community. Realising that the most central element of software is the need to share, circulate and distribute it, for the sake of software evolution itself and for the sake of the common good of the people, the GPL articulates freedoms that focus on sharing and cooperating and secures the continued possibility to do so.

For many years the GPL remained untested in court and as such the legal validity of the self-organised and autonomously declared software freedoms remained unknown. The Free Software movement never wished to test it, but kept to a private policing and enforcement of the GPL when breaches became known (see below). When the time came for the GPL to enter a court of law the movement was a global community with well-established and widely recognised customs, and many awaited the first decisions with great anticipation.

3.6 Defending the GPL: a recursive public self-organises.

The way in which the Free Software movement has responded to violations of the GPL is a testimony to its self-organisational capacity. It provides an example of what Rushkoff finds so promising in “Open Source” as a model for democracy, because the Free Software movement's engagement with the law and its self-legislative capacity:

“...marks a profound shift in our relationship to law and governance. We move from simply following the law, to understanding the law, to actually feeling capable of writing the law: adhering to the map, to understanding the map, to drawing our own. At the very least, we are aware that the choices made on our behalf have the ability to shape our future reality and that these choices are not ordained but implemented by people just like us” (2004: 58).

Not long after the GPL was first used in 1989, enforcement activities commenced as informal community efforts often in public Usenet discussions. The next ten years the Free Software Foundation was the only established organisation defending the GPL and “their enforcement was generally a private process; the FSF contacted violators confidentially and helped them to comply with the license”. It was not until the early 2000's that things changed. “By that time, Linux-based systems had become very common, particularly in embedded devices such as wireless routers” - in a realm where non-free software is generally prohibitively expensive to implement and customise - and a new dimension of enforcement began: “public ridicule of violators in the press and on Internet fora supplemented ongoing private enforcement and increased pressure on businesses to comply”. The GPL Compliance Lab was established by the FSF in 2003,

as more and more cases became known, with a view to building “community coalitions to encourage copyright holders to together settle amicably with violators” (SFLC 2008).

In 2004, a German Free Software programmer called Harald Welte commenced a more organised enforcement approach with a project called GPL-violations.org. In late 2003 he had discovered that “a bunch of companies” were using code from a GPL'ed project - on which he was working - in a manner that breached the GPL. He became active in the legal realm and in the same way as it is said that Free Software often begins with an itch, a need to solve a personal, specific right here and right now problem, Welte set up the web site GPL-violations.org with an accompanying mailing list for sharing reports, analyses and advice on alleged, potential and definitive breaches of the GPL. They have been busy ever since - in the “About” section on their web site it reads:

“By June 2006, the project has hit the magic “100 cases finished” mark, at an exciting equal “100% legal success” mark. Every GPL infringement that we started to enforce was resolved in a legal success, either in-court or out of court” (GPL-Violations.org 2009).

The GPL-violations.org project has expanded accordingly, there are several busy mailing lists, in addition to the site, where people consult each other – that is, discuss as software commoners if a particular act is a violation or not. To frame it in terms of property, the relating-subject (A+C) is developing its own enforcement mechanisms and through discussions about enforcement they refine their own understanding of the relational modalities of their community and reflect upon what is permitted in the commons and what is not. For instance, discussing the

grey areas of the GPL in a fast developing field of embedded devices is a perennial task.

When the GPL was finally fully tested in a court of law, in September 2006 in Frankfurt am Main, the judgement read that because a device incorporating GPL'ed code was brought to market without proper GPL compliance, the:

“Defendant is ordered to pay to Plaintiff 2,871.44 EUR, plus interest on this amount of 5 percentage points above the base interest rate since February 25, 2006; regarding the amount of 141.34 EUR, payment shall be made in exchange for the transfer of ownership of the data storage unit “[...] Wireless G Network Media Storage DSM-G6000” which is owned by Plaintiff.”(GPL-Violations.org 2006).

Another crucial element of the ruling in the German court asserts that the GPL is a valid software license, a proper instance of copyright, and that in effect it is a contractual relation, accepted by the defendant and therefore the plaintiff's demands are ruled in favour of:

“The GPL applies to the legal relationship between the authors and Defendant. The three software programs are undisputedly licensed only under the terms of the GPL. In the case of free software it is to be assumed that the copyright holder by putting the program under the GPL makes an offer to a determinable or definite circle of people and that this offer is accepted by users [of the software] through an act that requires consent under copyright law; in this respect, it can be assumed that the copyright holder enters into this legal relationship

without receiving an actual declaration of acceptance [from the users] (Section 151 of the German Civil Code (BGB)).” (ibid.)

The ruling went against the argument of the defence which was loosely based on and attempted to mobilise anti-trust laws. The German court is clear and the logical aspect of the verdict reflects the analysis of the preceding section, which stated that if breaching the GPL, the code in question reverts to be protected under conventional copyright:

“It need not be decided whether, as Defendant argues, the provisions of the GPL violate Article 81 EC and Section 1 of the German Antitrust Act (GWB), in particular the prohibition against price fixing and of predetermining the conditions of secondary contracts in the first contract. This would, according to Section 139 of the German Civil Code (BGB), result in the invalidity of the entire license agreement with the consequence that Defendant would not have a right of use in the software at all, so that Plaintiff could file a copyright infringement claim for that reason.” (ibid.)

If you invalidate the GPL you are left with the foundation upon which it rests: copyright, and copyright is per default an exclusive right of the creator; thus contesting the validity of the GPL is practically useless, since an invalidation of the GPL at any rate will render the copyleft holder an exclusive copyright owner. Those who do not comply are left with but one choice, apart from paying up and withdrawing the device, and that is to play along. The rulings of this kind have had profound effects and there is now a proliferation of what is called “third-party

firmware” projects for wireless network devices, adding features and capabilities beyond what was originally intended by the manufacturers⁷⁵. The history of the GPL in court and the mechanisms of enforcement is so far a successful one.

During 2006 a range of even firmer defence mechanisms emerged. The Free Software Foundation Europe set down a Freedom Task Force, which provides licensing services to individuals, projects and businesses which use Free Software, working with GPL-violations.org and complementary to the Software Freedom Law Center (SFLC), which provides “legal representation and other law-related services to protect Free Open Source Software” (SFLC n.d.).

A significant conflict that was recently concluded began when the *Association pour la formation professionnelle des adultes* (AFPA), a French educational organisation, ordered and purchased some software, which turned out to be in breach of the GPL:

“The events of the case go back to early 2000, when Edu4 was hired to provide new computer equipment in AFPA's classrooms. Shortly thereafter, AFPA discovered that VNC was distributed with this equipment. Despite repeated requests, with mediation from the Free Software Foundation France, Edu4 refused to provide AFPA with the source code to this version of VNC. Furthermore, FSF France later discovered that Edu4 had removed

75 One of these projects has become a general purpose GNU/Linux distribution for embedded devices and the Free Software commons were not only defended by the court, but expanded it into the realm of routers, switches and embedded devices of all kinds. See <http://openwrt.org/>

copyright and license notices in the software. All of these activities violate the terms of the GNU GPL. AFPA filed suit in 2002 to protect its rights and obtain the source code” (FSF France 2009).

When the case was finally concluded in the Paris Court of Appeals on September 22, 2009, with no further appeals possible, the GPL was once again upheld on the basis of copyright law. However, in this ruling a new aspect to the defence of Free Software was established. It was not a developer, whose code and freedoms had been violated, but an end-user who filed suit and won:

“[W]hat makes this ruling unique is the fact that the suit was filed by a user of the software, instead of a copyright holder. It's a commonly held belief that only the copyright holder of a work can enforce the license's terms - but that's not true in France. People who received software under the GNU GPL can also request compliance, since the license grants them rights from the authors” (ibid.).

This illustrates that users are as much part of the software commons as the developers, in legal terms, since they too are granted the rights articulated in the GPL and can act on them and have their claims validated in a court of law. Moreover, since no further appeals are possible, this sets a legal precedent: in future legal proceedings in France, the GPL, on the basis of its clever relation to copyright law, ought to be automatically upheld with reference to this case. Given that intellectual property laws, through particularly TRIPs and WIPO (see Chapter 1), are increasingly global in nature and sought to be harmonised across national borders, a precedent in a leading industrial nation like

France might also carry a certain weight in other jurisdictions. Certainly the argument can be recycled in different national contexts by software commoners.

We can conclude that on the basis of the hacker customs and cyberspace values that self-organised voluntary associations are emerging to protect the four freedoms of software. The defence and enforcement of the GPL helps build a sustainable community which is capable of interfacing with the external judiciary to successfully translate the visions from within in relation to the old ways without.

The Statute of Anne, from which there is straight line to the modern concept of copyright, reflected the revolution of the printing press. The GPL and Copyleft reflect the revolutionary way in which information can be shared in cyberspace. It is an expression of needs and desires in a new technological environment:

“Once copying is a useful and practical activity for ordinary people, they are no longer so willing to give up the freedom to do it. They want to keep this freedom and exercise it instead of trading it away. The copyright bargain that we have is no longer a good deal for the public, and it is time to revise it—time for the law to recognize the public benefit that comes from making and sharing copies” (Stallman 1996).

Ten years later Stallman's brain child prevailed in court.

Conclusion:
Property and the Politics of Commoning



J. Martin Pedersen

4 Conclusion: Property and the Politics of Commoning

4.1 Brief recapitulation.

In the introduction the problematic of organisation together with the conceptual role of property in social organisation were identified as starting points for the essay. A map of the essay was followed by a selective review of the social history of the perennial nature of creative resistance to capitalism. The review led to an understanding of the conception of rights that underpins commoning. As collective rights, as collective powers-to, commoning is a counter point to exclusive, private property rights. The essay unfolded from there.

Chapter 1 asked questions concerning organisation and property in relation to the politics of Free Culture and Free Software. The libertarian values and liberal, economic conceptualisations that define Free Culture and Free Software, we saw, turn on a problematic distinction between the tangible and intangible realm, which results in a series of problems, specifically with regard to property.

Chapter 2 began to develop the tools needed for answering the questions raised in Chapter 1. A conceptual framework of property that allowed for an analysis of private property and commoning on equal terms was developed. The framework revealed various ways of reconfiguring property relations and thus facilitate self-articulation.

Chapter 3 brought the essay together by, starting from an anti-capitalist position, applying the tools and concepts developed in Chapter 2 as a response to the conflicts identified and questions raised in Chapter 1.

4.2 Property and other laws of cyberspace.

In order to conclude, I draw upon a famous analogy between law in society and code in cyberspace. Lessig (1999) observed that the protocols that facilitate the flow of bits and bytes through the Internet, in a sense, are laws of cyberspace. On that view they are technical codes that give structure to the distribution of, exchange of and communications about things between people. Lessig is right to point to this analogy between code and law in cyberspace, and a more precise analogy would be between *data* exchange protocols and *property* protocols. The Internet is a commons, an end-to-end architecture, that everyone – property arrangements in the tangible realm permitting – can share. Within it, people can create their own relational modalities with regard to things by collaborating on code and in the virtual spaces that code makes possible. The cyberspace commoners are articulating their own protocols of exchange and it is in defence of this freedom of self-articulation that commoners resist the enclosure of the Internet. Capital invasion of cyberspace through private interests is rebelled against precisely because it undermines the commons and facilitates the building of empires that are off-limits to commoners.

Two valuable lessons can be learned in cyberspace with regard to protocols of exchange: Firstly, the actual patterns of relations – when analysed in property terms - open up new understandings of property relations. In order to make sense of these patterns it is necessary to reflect critically on conceptions of property. This shows that property is highly modular and itself open-ended. Once the practices of commoning have been mapped onto the province of property new frontiers of social organisation open up that can nonetheless be articulated in terms of property relations. Secondly, the act of commoning is continuously replicated. The Internet instantiates a commons – a space without fences – and

Free Software emerges. Text editors to write more code, servers to host sites, tools to collaborate and free media in general show the power of commoning. It can unfold because it takes place in a space that is not yet enclosed. A space that has been created for common interest and not private gain. It is however a virtual commons. It has strong symbolic value and it gives meaning to a lot of people, but it has no body – or rather, it depends on arrangements in the tangible realm in a way that leaves it continually vulnerable to developments and initiatives in that realm.

Cyberspace is disembodied not only in the sense of being technologically mediated, or virtual, but also because it is continuously represented as if it were not highly dependent on the material realm for machines and minerals and energy. Understanding the dynamics of cyberspace in terms of property – the language of social relations with regard to things – is a good starting point for exploring the concept of property. It is a recursive process that generates a new understanding of property, which in turn might facilitate the emergence of further permutated relational modalities. If the world were a commons and property an open-ended toolbox for the self-articulation of value practices, then commons would probably blossom. Property seen through the lens of spontaneously emerging social relations – whether in cyberspace or landless movements in Brazil – opens the black box of property and reveals building blocks that can be recombined in very many ways. With an enriched understanding of property, private property might – in line with the anti-capitalist hopes that have animated this essay – be limited to (something like) personal possessions. Rights of commoning can then be substituted for private property in land, its resources, and the means of production and distribution.

4.3 Self-articulation.

The relational modality that centrally defines the Free Software commons is reciprocity in perpetuity, which preserves equal access for all. The resource and the community are growing as they creatively, skilfully manage and develop in common and in a community that is autonomously constituted. We may say that the Free Software model of property points in a new direction for individuals, not back to a golden age, but forward, towards community forms. This movement maintains what has been gained in the name of the rights-holding individual. That is to say that the process of eradicating the commons that defined the period *from* the Great Charters *to* the American Declaration of Independence is reversed in the articulation of the GPL. The individual returns to the commons, but with an acquired and distinct individuality that is legally circumscribed. The hacker is a *neo-commoner* from whom we can learn. Rushkoff puts it thus:

“The very survival of democracy as a functional reality may be dependent upon our acceptance, as individuals, of adult roles in conceiving and stewarding the shape and direction of society. And we may get our best rehearsal for these roles online” (2004: 16).

As Rushkoff states, a system such as democracy requires care. As role models for saving democracy (from itself?) he identifies the commoners of cyberspace. This suggests that with a sense of belonging - when a space is shared and common - people both *do* and *can* make a difference. On that view, the distribution of care is better obtained when a resource, a realm, is shared. Indeed, cyberspace commoners are resisting measures that threaten and undercut their decision-making authority. What they seek is essentially a basic element of ownership, of property. They do

not want to exercise exclusion, because they realise that a shared realm can only be owned by everyone and not someone particular who has a right to exclude others.

I have suggested that it is the distribution of care – both of stewardship and active contributions – that is at issue here. For Aristotle it is a crucial element of property, but it has wrongly been inferred that the optimal distribution of care always obtains through exclusive, private property. There is no doubt that great pleasure – and sometimes appropriate care and responsibility – is associated with calling some thing your own, but where lies the limit? I have not argued for any such limits in this essay, because the exact extent of private property is not our primary question. Commoners of the land and commoners of cyberspace continue to show that care is distributed successfully when a thing is owned in common. A sense of belonging (to a commons) is arguably essential for this distribution of care, for “how immeasurably greater” is the pleasure to care for something to which you belong and which belongs to you.

The Free Software commons, furthermore, shows that when given space to unfold without constraints, organisation emerges spontaneously through relations of sharing and cooperation in a common vision. The lessons that we can learn from an understanding of Free Software conceptualised in terms of property, therefore, go far beyond the nature of software and to the core of social organisation. Arguably, these lessons suggest possibilities for social organisation beyond the nation state, thus transcending capitalist democracy.

4.4 The politics of commoning.

These possibilities, however, are subject to the conditions of politics and the material realm. As I argued in Chapter 1, the current politics of the Free Software, Free Culture and cultural environmentalism movements - turning upon misleading conceptions of property relations derived from the economic distinction between the tangible and the intangible realm - remains a liberal apologia. In order to realise the potential for revolutionary social change inherent in the Free Software model of property, therefore, it is necessary to consider it in conjunction with the anti-capitalist visions and politics that explicitly confront exclusive, private property rights based control over land, its resources, and the means of production and distribution in all realms. It has been my aim to provide a framework of property from which such a political project can commence.

Although I have not been able to argue it here, I believe the most fundamental commons is the commons of the land. The sharing of values, opinions, information and know-how is also fundamental, but it cannot feed you. Only the land and its resources can do that. The idea of a commons is given meaning through the instantiation of a commons, but a virtual commons without a political alignment with the commons of the land, is a disembodied commons which does not recognise its origins and the blood, sweat and tears with which it was essentially built and continues to be maintained materially. At best the virtual commons sits on the fence, at worst it will be blind to its own downfall. Left to liberal thinking - as exposed in this essay - the virtual commons is in danger of enclosure.

As commoners of the land know all too well, capital is relentless. Virtual commoners believe that as long as private interests do not operate on the basis of private property in the intangible realm,

then they pose no threat to the virtual commons. This is, I have argued, a naïve position: virtual commons are threatened in the first instance not by capital's expansion into the intangible realm, but by its very existence in the tangible realm. With fewer and fewer tangible resources left in the world to exploit, the intangible realm constitutes a new and much needed frontier for capital. With or without the direct use of private property, private interest will continue to seek profit. Wishing that your opponent did not exist – or leaving him to operate unseen behind the lines between tangible and intangible that you have drawn, but which he has never recognised – does not make him go away. The solution for the virtual commoners is to join the commoners of the land and begin to decode property, reconfigure it and take back control of the land and the means of production. I leave you with a hopeful assumption: If rights of commoning organised these real matters and if private property gave each commoner his and her basic freedoms to dwell, grow, build, exchange and be mobile there would be little, if any at all, threat to the virtual commons. In the end, there is only really one commons and that is the commoning body of the world.

This essay has also stressed that neither mere hopes nor virtually organised voices of protest are sufficient for such changes. It will be necessary to build alternative institutions that reflect this political vision, such as the embryonic examples of social centres and hacklabs, working collectively and reflecting on the way in which power tends to centralise in decision making processes and organisation in general. There can be no other return of the commoner, than the return of the commoner to the land.

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