

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