

Chapter 7: The Commons as an Alternative Policy Framework

In the preceding chapters, significant headway has been made in understanding the historical, political, and economic circumstances that have led to the kind of open access policy seen in the UK today. This chapter will go a step further and tackle a key question: if current open access policy is contingent on a multitude of environmental constraints, then is it possible to design alternative policies, and if so what could they look like? In particular, the focus here is on the idea of the *commons* and possibilities for commons-based open access policy. The political economist De Angelis has argued that ‘it is difficult today to conceive emancipation from capital [...] without at the same time organizing on the terrain of the commons, the non-commodified systems of social production. Commons are not just a “third way” beyond market and state failures; they are a vehicle for *claiming ownership* in the conditions needed for life and its reproduction’ (De Angelis 2012: 185). It is this ‘claiming ownership’ in the territory of scholarly communication through the act of commoning that could be a path towards a wholly different future for open access. By concentrating on the commons in this chapter, however, the intention is not to claim that this approach is the *only* possibility for an anti-neoliberal or non-market-based open access policy. Instead, the purpose is to show that it is possible to imagine alternatives, even within the confines of a policy environment still saturated with neoliberal ideology.

The commons is a method of organising resources that sits outside both market and state, and can potentially manage certain kinds of resources more effectively than either a market or a state. The commons has frequently arisen as a potential organising principle for scholarly works (see below); it features heavily in the rhetoric of open advocates, especially in discussions regarding the appropriate (or inappropriate) role of copyright and licensing for scholarly works. Following the critique in Chapter 6 of the neoliberal aspects of UK open access policy, this chapter explores the extent to which the commons can be a useful concept for advancing an anti-neoliberal open access policy. An explicitly anti-neoliberal policy must be *against* the defining traits of neoliberal ideology, such as considering competition to be a fundamental characteristic of human behaviour, and economic efficiency as a primary measure of value. So the commons can act as a theoretical framework¹ providing a means to construct an alternative open access policy beyond neoliberal trappings and focused instead on community stewardship and care.

For several decades the dominant political environment has been highly resistant to non-

1 As the analysis below will make clear, the commons is not *only* a theoretical framework – it is a living institutional form that has been used to organise human activity for many centuries.

market solutions such as the commons.² One of the architects of neoliberal ideology, Hayek, argued that sufficiently complex systems, such as modern economies, cannot be adequately organised through central planning. Hayek claimed that decentralisation is necessary to organise such complex systems³ and only *competition* can effectively manage decentralised systems (Hayek 2001 [1944]: 51). The second part of this claim is challenged in this chapter, by drawing on work ranging from Ostrom’s analysis of common-pool resources (Ostrom 2015 [1990]), through to contemporary network theory such as that of legal scholar Yochai Benkler, who has written extensively about organisation within decentralised networks and how *cooperation* can co-ordinate action more effectively than competition in at least some circumstances (Benkler 2002; 2006). Hayek claimed that the price system under competition is the only system that can accomplish this organisation (Hayek 2001 [1944]: 50–51) and much of his work – and thus subsequent neoliberal ideology – hinges on this assertion, so by exploring contemporary alternatives to Hayek’s claim it is possible to open up a broader range of policy options. A third alternative to either competition or central planning (authority-based decision making by states or other monopolistic organisations) is decentralised cooperation.⁴ In the argument against planning as a form of co-ordinating the variety of specialist interests found in a society, Hayek says: ‘The economist is the last to claim that he has the knowledge which the co-ordinator would need. His plea is for a method which effects such co-ordination without the need for an omniscient dictator’ (Hayek 2001 [1944]: 58). Perhaps the method Hayek was seeking, as a formal structure of co-ordination, may actually be found not in market competition but in commons-based peer production. Commons-based peer production, as a way of structuring and organising activity in a given domain (see below), could be an alternative organising principle to replace competition in order to achieve an open society.

Neoliberalism is based on a simplistic and fundamentally flawed notion of human behaviour, that we are all inherently both selfish and rational. This chapter is written from the perspective that humans are, in reality, social beings with a strong propensity to cooperate. As such, the commons offers a valuable framework for understanding the collective behaviour of those who contribute to the scholarly record. As Bollier argues,

the language of the commons [...] provides a coherent alternative model for bringing economic, social, and ethical concerns into greater alignment. [...] [The commons] fills

- 2 At the time of writing neoliberal hegemony as outlined in Chapter 4 does appear to be on the wane, with a growing movement for alternative political visions fighting back – from both the right (in the form of protectionist nationalisms) and left (through democratic socialism). However, for the purpose of this thesis, which concentrates on analysing open access policy at a specific time and place (the UK during approximately 2012-17), it is still reasonable to consider neoliberalism to be a primary structuring principle for determining which political futures are seen as possible.
- 3 The original draft Statement of Aims of the Mont Pelerin Society stated that ‘Only the decentralization of control through private property in the means of production can prevent those concentrations of power which threaten individual freedom’ (Hartwell 1995: 49).
- 4 This may be a key point of the thesis: if Hayek and Popper are wrong that free markets lead to openness, then perhaps *decentralised cooperation* (commons-based peer production) is the logical mode of coordinating action in complex open systems. Hayek may be right about the limitations of planning, but wrong about liberal markets (price mechanism) as the solution. [Also: note the network effect as consolidation of power.]

a theoretical void by explaining how significant value can be created and sustained outside of the market system. The commons paradigm does not look primarily to a system of property, contracts, and markets, but to social norms and rules, and to legal mechanisms that enable people to share ownership and control of resources. The matrix for evaluating the public good is not a narrow economic index like gross domestic product or a company's bottom line, but instead looks to a richer, more qualitative and humanistic set of criteria that are not easily measured, such as moral legitimacy, social consensus and equity, transparency in decision making, and ecological sustainability, among other concerns.

(Bollier 2011: 29)

In the first section of this chapter, the concept of the commons is analysed. This is followed by examining the application of commons theory to the realm of information/knowledge, and then particularly to scholarly knowledge, with the idea of a scholarly commons. Much as Chapter 3 considered openness as a complex phenomenon that eludes reductive definitions, this chapter works towards a certain level of clarity regarding what the commons is, while recognising that the concept is a complex one with a wide variety of [instantiations]. The final section returns to open access policy, and builds on the critique of existing open access policy given in the previous chapter by exploring avenues for policy interventions that could work towards a commons-based open access environment.

The purpose of this chapter is not to suggest a single answer to the challenges of freeing open access from neoliberal ideology, or to propose a grand vision of an ideal scholarly communication system. Instead, the aim is a more modest one – it is to show that there *are* possible alternatives; to examine one of these – the commons – in depth; and to think through some of the policy issues and design challenges that might be encountered in moving towards a more commons-based approach to scholarly communication.

The commons⁵

'The commons' is used as a shorthand for referring to resources that are used by many people in common and the rules that govern use of these resources. *Commons* and *common-pool resources* are not the same thing; common-pool resources only become a part of a commons when they are governed by certain kinds of rules (see below). The necessity of social relations for the existence of a commons has led to the phrase 'no commons without commoning' (Paysan 2012: 4).⁶ Research in this area initially⁷ focused on the management of natural resources such as grazing areas and fisheries; the application of these ideas for an 'information commons' is discussed further in the next section. Elinor Ostrom's *Governing the Commons* (2015 [1990]) is a defining text in commons scholarship that draws on a wide range of empirical case studies to theorise effective strategies for the governance of common-

5 [history of early commons/enclosures could go in a separate section, perhaps before this one]

6 [compare 'neoliberalising' with 'commoning'. Active structuring process, not static state.]

7 [meaning, political science research by Ostrom et al.]

pool resources (CPR), defined as ‘a natural or man-made resource system that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use’ (Ostrom 2015 [1990]: 30). Ostrom undertakes institutional analysis to examine these strategies, and argues that collective action by voluntary organisations acting outside of either the state or the market can be the most appropriate institutions for regulating the use of common-pool resources (Ostrom 2015 [1990]: 1, 14–21).

Classic arguments against the efficacy of existing strategies for managing CPR centre on the free rider problem. In this problem, when there is a non-excludable resource that many people can use, as in CPR, and there is nothing to stop them taking as much as they wish, then the rational action for people to take is to use the resource without contributing back (see Olson 1965). In other words, an individual can ‘free ride’ off the actions (or labour) of others. If free riding leads to a resource being over-exploited then it can cease to be sustainable and then either no-one is able to benefit from it or the benefit is greatly reduced. So the collective interests of a group of people may be undermined by the individual interests of the members of the group. The standard response of classical economists to free rider dilemmas is that either centralised state control or a free market are the only possible solutions – and as Chapter 4 has analysed extensively, this binary choice has been strongly emphasised by neoliberal thinkers who believe that free market solutions are the only acceptable choice for determining the governance of resources.

Ostrom attempts ‘to understand how individuals organise and govern themselves to obtain collective benefits in situations where the temptations to free-ride and to break commitments are substantial’ (Ostrom 2015 [1990]: 27). Her critique of the free rider problem is that it makes the fundamental mistake of assuming that formal criteria used in abstract economic models actually apply directly to real-world situations (Ostrom 2015 [1990]: 6–8). In particular, game-theoretical economic models such as the prisoner’s dilemma or Hardin’s ‘tragedy of the commons’ (1968) assume that people are fully rational, do not communicate with each other,⁸ and are unable to change the rules by which they are governed.⁹ By instead grounding their theory in a detailed understanding of empirical evidence regarding institutional governance models in a wide variety of existing situations, Ostrom is able to take a more nuanced and realistic view, and to outline other models for governing common-pool resources that sit outside of either state or market solutions (see also Mattei 2012).

The general model for commons governance is that individuals who wish to make use of a common-pool resource make a mutual agreement, in the form of a binding contract, to cooperate. Participants to the agreement create an organisation, commit to following its rules, and monitor compliance (Ostrom 2015 [1990]: 45). This strategy allows them to share the

8 See Janssen (2013) for more on how communication effects the way people behave in relation to common-pool resources.

9 [M.E.: ‘On counter logics against the prisoner’s dilemma scenarios of free riding, there’s something to be done with Derek Parfitt’s *Reasons and Persons*, which vigorously tests prisoner’s dilemma logic within various moral scenarios.’

benefits of using the resource, although they must also bear the costs of enforcement. Monitoring activities and the punishment of infringers may be undertaken by an external actor but tend to directly involve the participants themselves (Ostrom 2015 [1990]: 15–18, 59, 68–69). As Olson argued, ‘when a number of individuals have a common or collective interest – when they share a single purpose or objective – individual, unorganized action [either will] not be able to advance that common interest at all, or will not be able to advance that interest adequately’ (Olson 1965: 7). So in CPR situations, collective action – working together to achieve a shared goal (see Hess and Ostrom 2011: 10; Olson 1965) – is a way to enhance the outcome for all affected individuals. One of the key aspects of Ostrom’s work – and the reason for the lengthy discussion of it here – is that it was the first comprehensive analysis of successful organisational strategies in existing CPR situations. Many of these can be described as ‘self-organised’. To say that a community is ‘self-organising’ or ‘self-governing’ means that organisation and governance occur internally to that community. The community may still interact with, and rely on support from, external actors; but the rules that structure its behaviour are decided internally. Precise details of institutional arrangements will vary for each situation; there is no ‘one-size-fits-all’ solution because of the multiple physical, technological, and economic factors that structure the possible governance arrangements of a given CPR (Ostrom 2015 [1990]: 50).

Analysis of natural common-pool resources is a useful starting point for considering alternative collective action strategies that sit outside of either market or state solutions. However, information- or knowledge-based resources such as scholarly texts have a very different form. It is therefore necessary to now expand the analysis to encompass knowledge commons, and consider the attributes specific to knowledge resources that may determine effective governance strategies.

Knowledge commons

A commons of information or knowledge resources¹⁰ is subject to different economic principles than natural commons. Before going into the specifics of scholarly commons in the following section, this section will examine general features of knowledge commons. They can be considered as comprising three components: facilities, artifacts, and ideas (Hess and Ostrom 2003). Ideas and artifacts correspond to the legal distinction between an idea itself, which is intangible and not covered by copyright law, and an expression of an idea, which is the physical instantiation of an idea in a particular artifact [citation needed¹¹].¹² The third

10 The terms ‘information commons’ and ‘knowledge commons’ are used interchangeably throughout this chapter. The classic definitions of data, information, and knowledge present them in a hierarchical relationship, with data as discrete facts; information as structured, organised, and contextualised data; and knowledge as information that has been processed and understood through the application of human judgement (see for example Desouza and Paquette 2011: 36–37; Rowley and Hartley 2008: 5–6). Hess and Ostrom use the term knowledge to refer to ‘all types of understanding gained through experience or study, whether indigenous, scientific, scholarly, or otherwise nonacademic’, and including creative works (Hess and Ostrom 2011: 8).

11 [look for a book called something like ‘introduction to intellectual property law’]

12 The phrase ‘immaterial commons’ is sometimes used as a synonym for knowledge commons or digital

structural aspect of a commons, facilities, are the physical infrastructures that house artifacts (such as libraries and archives, whether they are digital or otherwise). So in a knowledge commons, knowledge is instantiated in containers which require a supporting infrastructure for long-term storage and access. All three of these components consist of both human and non-human elements (Hess and Ostrom 2011: 47) so it is not possible to consider a commons without the social dimension; as Hess and Ostrom argue, a commons is ‘a resource shared by a group of people that is subject to social dilemmas’ (Hess and Ostrom 2011: 3). A commons is not a *thing* so much as a governance regime (Madison, Frischmann, and Strandburg 2012: 370). Although the typology used by Hess and Ostrom – facilities, artifacts, and ideas – may be applied to both digital and analogue commons, the rest of the analysis in this chapter will focus solely on *digital* knowledge commons because that is the domain within which open access sits.

A fundamental difference in thinking about commons of information resources rather than natural resources is the issue of scarcity.¹³ The primary reason why natural resources require effective governance to ensure long-term sustainability is that they are scarce, and thus mismanagement can lead to degradation of the resource. The situation for information resources is very different because resource units are not subtractable, meaning that a resource does not deplete when it is used (Hess and Ostrom 2011: 5), but can be infinitely copied with zero or near-zero degradation (see also Benkler 2006: 36). In other words, digital networks help to overcome the problem of scarcity (Levine 2011: 250). The relevance of this point for scholarship is discussed in the next section. Subtraction of resource units, though, it not the only scarcity issue – the contribution of labour towards maintenance of a commons resource can sometimes be as important as resource allocation (Ostrom 2015 [1990]: 86). So for knowledge commons, this becomes a central governance issue – the collective action problem here is about fairly apportioning the labour that is necessary to construct, or maintain resource flow into, the commons. There is also the related issue of reducing as far as possible ‘free riders’ who do not contribute labour towards the construction of the commons. In an information commons, the issue of free riding applies to the *provision* of the resource rather than use.¹⁴ Equity, also, is about just contribution to the maintenance of a resource, rather than extraction from the resource (Hess and Ostrom 2011: 6).

In a digital knowledge commons, free riders do not pose the same risk in terms of resource sustainability that they sometimes do for a natural commons. This is due to two interrelated qualities of this kind of commons: their digital nature, and excludability. Private property is

commons (e.g. Kuhlen 2012), but this is slightly misleading because information always has a physical reality – it can only exist as encoded within a physical substrate (Floridi 2010: 60–72; Gleick 2011: 355–372).

13 [see Martin’s articles about this]

14 It has been widely argued by proponents of F/OSS that free riders are actually a good thing for their community (see Weber 2004: 153–155), and the same may be said of other digital knowledge commons: ‘Others outside that community who browse, search, read, download, or print out documents in the repository are *not* free riding. In fact, they enhance the quality of the resource by using it’ (Ostrom and Hess 2011: 58; see also Suber 2011: 180).

founded on excludability, so non-excludable resources – or resources that excluding access to would be prohibitively costly – pose a challenge to economic models of private ownership. Commons goods fit into this category (Ostrom and Ostrom 1977).¹⁵ Non-excludable resources do also exist in non-digital form, such as radio broadcasts or clean air, but digital resources are more likely to non-excludable due to the ease with which they can be copied. Since the excludability of goods is a contingent quality that is created in the use of goods, rather than an intrinsic quality (Helfrich 2012a: 65), a transition from analogue to digital cultural artifacts potentially alters what kind of economic goods they are. For instance, according to Hess and Ostrom, the intangible knowledge found in the reading of a book is a public good, whereas the tangible artifact of a printed book is a private good (Hess and Ostrom 2011: 9). But the change from print to digital books allows the possibility for the structure of a good to change from private to commons, because an openly-licensed digital text that is accessible to many people simultaneously is no longer easily excludable.¹⁶ This structural change of form is a process that Hess and Ostrom (2011: 10) identify as occurring repeatedly following the introduction of digital technologies, which:

can enable the capture of what were once free and open public goods. This has been the case with the development of most “global commons,” such as the deep seas, the atmosphere, the electromagnetic spectrum, and space, for example. This ability to capture the previously uncapturable creates a fundamental change in the nature of a resource, with the resource being converted from a nonrivalrous, nonexclusionary public good into a common-pool resource that needs to be managed, monitored, and protected, to ensure sustainability and preservation.

So the economic form of a resource can change, but if it is to become a commons, the necessary social structures of commons governance are required. If these are not put into place, then the digitisation of knowledge resources could in fact have the opposite effect – what Boyle calls a ‘second enclosure movement’ (Boyle 2003; see also Kranich 2011: 85–93). This is a reference to the ‘first’ enclosure movement, that of enclosing common lands – ‘the process of fencing off common land and turning it into private property’ (Boyle 2003: 33–34)¹⁷ – in Britain during the late eighteenth and early nineteenth centuries.¹⁸ This withdrawal of communal rights to land use, or privatisation, is echoed in the contemporary privatisation of knowledge resources whereby intellectual property law is used as a tool for enclosure. This knowledge enclosure occurs across many domains, including (over)patenting of genetic material such as plant crops, [etc. etc.], that leads to what Heller has termed the ‘tragedy of

15 [check reference]

16 The fact that huge numbers of people can potentially use the same resource at the same time with no degradation [though mention problems like bit rot] means that, unlike for natural commons, in a digital knowledge commons it is not always necessary for there to be prescribed limits to the size of the resource or the quantity of resource extraction.

17 [discuss early commons earlier in the chapter]

18 For the longer history of this enclosure movement throughout the early modern period see Yelling (1977). And as Wily has argued, land enclosure is still ongoing, with vast areas of common lands in some parts of the global South being sold to private developers (Wily 2011).

the anticommons' whereby the full potential of resources is not realised because legal restrictions result in their underuse (Heller 1998). Much as enclosure of land dispossessed people of the social value that could arise from the land's use, enclosure of knowledge commons prevents people from obtaining the full benefit

The analyses of openness and closure given earlier in this thesis, with regards to both open movements and neoliberal political theory, can shed light on this digital enclosure of knowledge commons: privatisation and commodification of knowledge is linked to the neoliberal ideology analysed in Chapter 4, and to describe it as a form of 'closure' also recalls the political perspective on openness that was examined in Chapter 3.

[digital information can also be enclosed and commodified (Hess and Ostrom 2011: 3).]¹⁹
 [Bollier argues that in many cases, 'the fruit of the commons cannot or should not be converted into money. That's because the common wealth is often an irreducible, inalienable social wealth. Typically, a commons must retain its organic integrity for it to remain productive; it cannot be broken into fungible pieces and bought and sold' (Bollier 2004: 5-6).]

Benkler (2002, 2006) has been among the most thoughtful advocates for examining the social and political potential of digital technologies. Although Benkler takes care not to succumb to utopian visions of what an idealised internet should be, his optimism about the ability of the 'networked information economy' to enable a wholesale shift towards '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' (Benkler 2006: 3) already seems slightly archaic given the ongoing corporate control of the internet, the ability of elites to manipulate what information is seen online, ubiquitous surveillance, and the global turn to authoritarianism (Cadwalladr 2017, 2017a, 2017b).²⁰ However, there is still value in the insights about what he terms *commons-based peer production*: a 'new modality of organizing production: 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' (Benkler 2006: 60).²¹ As with most people writing about knowledge commons, Benkler uses the term 'commons' in a less strict sense than Ostrom, and regards open access resources²² as a type of commons – 'open commons' – rather than a separate category of resource (Benkler 2006: 61). However, Benkler's interest in the commons revolves around some of the central issues discussed in this thesis – power, control, and freedom:

the core characteristic of property as the institutional foundation of markets is that the allocation of power to decide how a resource will be used is systematically and

19 [also read Coleman 2012: 196–200].

20 [add more citations]

21 Benkler is not alone in believing that digital networks hold a special role in supporting commons – for instance, Bollier has argued that 'open networks are a natural hosting infrastructure for commons' (Bollier 2011a).

22 In this case referring to 'open access' in the economic sense of inexcludable resources, rather than open access to research.

drastically asymmetric. That asymmetry permits the existence of “an owner” who can decide what to do, and with whom. We know that transactions must be made—rent, purchase, and so forth—if we want the resource to be put to some other use. The salient characteristic of commons, as opposed to property, is that no single person has exclusive control over the use and disposition of any particular resource in the commons. Instead, resources governed by commons may be used or disposed of by anyone among some (more or less well-defined) number of persons, under rules that may range from “anything goes” to quite crisply articulated formal rules that are effectively enforced. [...] The characteristic of commons is that the constraints, if any, are symmetric among all users, and cannot be unilaterally controlled by any single individual. The term “commons-based” is intended to underscore that what is characteristic of the cooperative enterprises I describe in this chapter is that they are not built around the asymmetric exclusion typical of property. Rather, the inputs and outputs of the process are shared, freely or conditionally, in an institutional form that leaves them equally available for all to use as they choose at their individual discretion. This latter characteristic—that commons leave individuals free to make their own choices with regard to resources managed as a commons—is at the foundation of the freedom they make possible. [...] It is the freedom to interact with resources and projects without seeking anyone’s permission that marks commons-based production generally, and it is also that freedom that underlies the particular efficiencies of peer production

(Benkler 2006: 61–62)

In this view, commons are primarily about freedom for individuals. Such an argument does not align with the understanding of commons seen elsewhere in the literature, and may reflect the libertarian ideas about freedom that are so prevalent in the F/OSS communities that influenced Benkler’s thinking. As seen in the discussion in Chapter 3, issues around power and control within decentralised networks are by no means straightforward, and decentralised technical architectures do not necessarily result in a concomitant degree of freedom of all users of those networks. However, Benkler’s work is still a valuable contribution to theorising the knowledge commons, not least because of his argument that for knowledge resources existing in a digital network, it may be more effective to co-ordinate activity through cooperation than competition (Benkler 2006: 6–7, 35–36, 107–121). Ostrom has previously shown how intra-group cooperation is an effective way to govern commons, and Benkler has provided a theoretical grounding – based on extensive empirical examples – for why networked knowledge resources can be particularly suited to cooperative organisation. Benkler may have overreached in the extent to which he believed the form of organisation based around peer production was likely to form a core part of modern economies,²³ but his

23 Ironically, he also under-reached, by failing to engage with feminist and gender theory which have long argued for understanding the importance of nonmarket labour activity outside of the workplace – particularly performed by women – in playing a vital role in the functioning of society. In common with most of the early theorists of the web, Benkler’s omission of how extant power inequalities based on race, gender, class, (dis)ability, sexuality, and so on interact with the possibilities of digital technologies perhaps explains why

ideas still have value for the consideration of some *particular* areas of society.²⁴ Software creation is clearly one such area, and the parallels between F/OSS and scholarly communication indicate that academic publishing could be another. These parallels have been discussed in Chapter 3 so the following paragraph is just a brief reminder, to set the scene for the more in-depth analysis of scholarly commons later in the chapter.

The description of an information commons outlined so far in this chapter applies very closely to free and open source software (F/OSS). As Chapter 3 has shown, F/OSS is defined by both a new approach to software licensing and also distributed collaboration processes (see also Schweik 2011: 279–281). So the *content* of F/OSS and the *process* of content generation are indivisible when considering the structure of F/OSS as both a resource and a community. F/OSS is a common-pool resource: it is used by many people in common; it has coordination mechanisms and governance structures in place, with rules regarding contribution processes and conflict resolution; and as with other knowledge commons, the collection action or free rider dilemma is on the supply side, for maintenance of the resource, rather than on the demand side regarding extraction or exploitation of the resource. Whether *open access research* can be seen as a commons is difficult to ascertain, in part to the ambiguity as to what exactly counts as open access. *Free access* to research, such as through repositories without open licenses (see Moore 2017), is not enough to make it a commons (despite such repositories sometimes having the word ‘commons’ in their name). And for open access to be seen as a commons in the same way as F/OSS is, it requires distributed collaboration to have as prominent a place as open licensing. Perhaps the general process of asynchronous collaboration (adding to the scholarly record over time through publications) can count as this. [There is generally a difference between scientific and humanities-based collaboration.]²⁵ [peer production as a kind of disintermediated process without professional gatekeepers]

In terms of changes to the ‘institutional ecology’ that Benkler, writing in 2006 (see pp.22–23), was predicting could happen once networked digital technologies were fully embedded in the economy, the most ‘disruptive’ change has arguably not been through the adoption of

they were able to reach such optimistic predictions.

- 24 [Bauwens says ‘*Commons-based peer production* can also be defined as the common creation of value using peer governance to manage this process and peer property to protect common value from private appropriation’ Bauwens 2012: 375). Commons-based peer production cannot refer only to work outside of the wage-labour system, when it is interdependent with the capitalist economic system it is embedded in. (‘Peer governance creates many issues around the distribution of power, and creates a new form of (class?) “struggle” between peer producing communities and commoners on the one hand, and entrepreneurial and large corporate entities on the other’ (Bauwens 2012: 377).) Academia may provide a better structure for commons-based peer production than F/OSS because, in theory, academic researchers are employed by institutions that pay their salary so that they are free to give away the products of their labour. F/OSS frequently relies on for-profit corporations to subsidise work directly by paying employees to work on F/OSS or by providing a ‘day job’ for volunteer labourers. However, problems are raised when we consider *who* gets to become a salaried academic, and the privileged social position of most researchers.] [DRM and W3C]
- 25 [Wikipedia as common-pool resource that defined its own rules. The rhetoric of Wikipedia, as with the open movement more broadly, is that ‘anyone can participate’. Of course, this is not strictly true – real constraints exist in the form of cultural, language, and economic barriers to participation.] [more on Creative Commons?]

commons-based peer production but rather the emergence of platform capitalism. [define (Srnicsek 2017)] Political and economic power generated through participatory web services is concentrated in the handful of corporations that own the platforms those services run on, not in the users themselves. This concentration can be exploited as part of other ongoing power struggles, especially due to the reliance on advertising for so much of these platforms' revenues. Most notably, public opinion regarding key votes in Britain and the US in 2016 was apparently manipulated by Russian authorities through the purchase of targeted advertising on social media.²⁶ Platforms that are used to coordinate physical resources, such as Uber and Deliveroo, position themselves as technology companies but their behaviour is more akin to hyper-capitalist firms [Platform cooperativism (Scholz 2014; Scholz and Schneider 2017). 'Platform socialism' (Reynolds 2017).]

Bollier and Helfrich position the commons as a political strategy aligned with social movements that are working for progressive causes in ways that move beyond 'governance systems that do not allow [people] meaningful voice and responsibility' (Bollier and Helfrich 2012: xi).²⁷ The advocacy of commons governance as a 'third alternative' beyond the market and state plays a strong role in understanding the commons as political, though it is worth noting the glaring lack of anarchist thought in analyses of the commons. While there is not space in this thesis to do full justice to the rich history of anarchism and syndicalism, it is important to note that there is an extensive array of anarchist modes of organisation in both theory and practice, and these alternative models of cooperation has long provided an alternative to organisational thinking rooted solely in a state/market binary. The lack of engagement with anarchism by those writing on many of the interrelated topics of this thesis – the commons, the organisation of scholarly communication, open movements in general – may be attributed to a reluctance by people working in these areas to explicitly position themselves on the political left. [...] Bollier and Helfrich (2012: xii) argue that despite the commons paradigm operating with a different logic to state control, the support of the state is vital for facilitating the commons through supportive law and policy – a role that the state currently performs with regards to the market (see Chapter 4). If this is correct, then direct engagement with traditional democratic political process is necessary for commoners.

The following section further considers the relationship between open access and the scholarly commons, so it is necessary to make clear the distinction between open access and commons resources. When speaking of natural resources, the terms 'open-access' resources and 'common-property' resources refer to very different situations. An open-access natural resource is inexcludable, so there are no governance mechanisms in place to regulate the use of the resource and anyone may access it. Resources that are governed as a commons, on the other hand, are used only by a self-governed community with defined membership rights (see

26 [citation needed - Guardian]

27 Bollier and Helfrich tend towards somewhat overblown rhetoric as to the potential political impact of the commons, seeing the idea as a new grand narrative with far greater reach than the relatively limited role that Ostrom and colleagues saw for natural commons.

Ostrom 2015[1990]: 222, note 23). So when considering open access to research as a commons, the term open access – in the sense outlined in the introduction and Chapter 3 – does have a similar meaning as it does in the policy literature on natural or environmental commons, because the focus is on a lack of restrictions on use.²⁸ Unlike a natural commons, a knowledge commons – as discussed above – does not *necessarily* have restrictions on who may use the resource, although sometimes they do. Access to a natural commons may be closed off to most people, except those within a pre-defined community, whereas knowledge commons *may* be closed off or may be accessible to ‘all’²⁹ depending on the governance rules in place for that particular commons. Therefore to speak of open access (to research) as a commons is consistent with the terminology used by political scientists.

Scholarly commons

This section explores the idea of scholarly commons, used here to mean a specific kind of knowledge commons in the sense derived from Ostrom and Hess’ work (2011, 2011a), which in turn is an adaptation of the concept of a commons used in the social and environmental policy literature (see Ostrom 2015 [1990]). The aim in this section is to conceptualise scholarly commons in a way that is consistent with the theoretical understanding of the term ‘commons’ across disciplines. It is notable that many authors who write about scholarly commons do not have a rigorous definition of the term, and use it in a rather loose sense.³⁰ Also relevant to this point is a definition of ‘scholarly’. (See Chapter 1 for a discussion of what ‘counts’ as scholarship, though a fairly limited content-focused definition is used there.) The *process* of doing scholarship is of central importance and perhaps it is not possible to disentangle it from the end product; in other words, scholarship requires an ‘appropriate social engagement with one’s material and one’s colleagues’ (Hyland 2000: 11). The combination of both *resources* and the *actions of the community* that creates and maintains a resource is at the heart of understanding what a commons is. So a content-focused definition of scholarship is not sufficient for conceptualising a scholarly commons.

Although research libraries hosting print publications have been described as an example of a commons (Kranich 2011: 85), the focus here is on digital research publications.³¹ Existing open access initiatives – journals and repositories – have also been seen as commons (Bollier 2011: 37; Suber 2011: 179). Bollier expands on this view to include ‘the behaviour of scientific communities as they generate and disseminate their research’ as part of a scholarly commons (Bollier 2011: 27). In this section, the commons is explored as a means of creating a scholarly communication environment which expands access to knowledge and works with principles of openness, but avoids the neoliberal trappings of existing open access policy. As

28 A lack of restrictions in terms of *who* is allowed to access the resource; there may be other restrictions put in place through licensing arrangements.

29 With the usual caveats about barriers to access due to lack of money, connectivity, language ability, etc.

30 For example, Morrison (2015), ...

31 See Lougee (2011) for an exploration of possible future roles for libraries in the transition towards a digital commons.

such, commons thinking is a way to take open access beyond the ‘openness’ of open licenses, and to bring considerations of participation, membership, and community to the forefront of a commons-based conception of open access.

‘Understanding information as a commons draws attention to the need for *collective action*, *self-governance*, and *evolving rules* that are required for the successful management and sustainability of all shared resources’ (Hess and Ostrom 2004: 2).

To understand what models of community governance might be possible for open scholarship requires interrogating what the scholarly ‘community’ is. Communities are defined by who is included or excluded as a member; they have edges, boundaries, however porous these may be. Open scholarship aims to expand or relax the boundaries to increase levels of inclusiveness. But there may be a limit to the extent this increase can occur; perhaps scholarship must remain a ‘club’ (Potts et al. 2017) because a community needs to have some sense of shared values, norms, and practices in order for it to make sense to regard it as a community. In Ostrom’s analysis of common-pool resource governance, successful communities all retained a consistent population size over time (Ostrom 2015 [1990]: 88). The scholarly community, if it is defined as the number of active researchers or academics, has been continually increasing for some time (see Chapter [2]) and one of the stated aims of the open scholarship movement is to increase participation even further.³² However, the issue of community boundaries is particularly important for determining who has rights to use a resource, and this is not relevant for an open information commons. But even so, the issue remains of whether boundaries must be set with regards to who contributes to the maintenance of the commons.³³ [‘provision rules requiring labor, material, and/or money’ (Ostrom 2015 [1990]: 90).] [delineate] [scarcity. Paywalls create artificial scarcity by extracting payment for accessing a resource that, without a paywall, would be abundant.] [Digital abundance of content does not necessarily reduce the scarcity of labour needed to produce said content (Eve 2017).]³⁴ [Some commons activists, such as Bollier (2010), have spoken as academia as a ‘gift economy’ without properly engaging with the wage-labour relations that, in a capitalist society, are a prerequisite for the production of these ‘gifts’. Because of this omission, ‘an acknowledgement of the underpinning material basis for the production of the commons is avoided’ (Neary and Winn 2012: 409), resulting in an incomplete understanding of the economic relations required for commons production; ‘While Open Education attempts to liberate intellectual work from the constraints of intellectual property law, it does little to liberate the intellectual worker from the constraints of the academic labour process and the reality of private property’ (Neary and Winn 2012: 409).]

32 [citation needed]

33 [Need to say something about scholarly *disciplines* as a ‘unit’ of community, as well as HEIs (see Becher and Trowler 2001). Disciplinary allegiances can be stronger than institutional ones, and cultural change can occur at different paces.]

34 [the digitalness of new commons is as important to their structure as the fact that they are knowledge-based.] [commodity fetishism]

Potts et al. (2017) have argued that scholarly texts are neither public goods or commons good, but rather are club goods. In reference to Ostrom and Ostrom's (1977) classification of type of goods (see Figure 7.1 [add]), ...

[see Waters 2011: 159, in Hess and Ostrom] 'clubs' have tight boundaries, which appears antithetical to the openness desired by many advocates...

The collective action problem pertaining to natural common-pool resources is one of regulating the actions of those who use an already-existing resource, to ensure its continued viability. The collective action problem faced with regards to the scholarly commons, on the other hand, is that of how to act in order to create a commons in the first place, as well as subsequently maintaining it. Fundamentally, the collective action problem for a knowledge commons is about determining the contribution of labour by all stakeholders that is necessary to construct and/or maintain the commons. So in terms of funding, a scholarly commons requires a pivot from the current situation, in which most of the funding actors pay for commodity goods for their own private use (i.e. institutional journal subscriptions), to a situation in which the infrastructure of the commons is collectively funded by those same actors. The numerous challenges in designing and implementing such a transition, from designing effective incentives to determining sanctions for non-compliance, have so far prevented any large-scale 'flip' to an open access model as envisioned by the OA2020 project (see EU2016 2016; [also cite *Pay It Forward* and maybe Lewis 2017]).³⁵ A successful commons requires self-governance [by actors who want a commons],³⁶ which in turn requires the existence of institutions that allow the commons to occur and enable its success. This is why the fact that higher education institutions have been reconstituted as *neoliberal* institutions (see Chapter 5) is so important when considering the viability of a scholarly commons – without the support of the institutions that nurture and fund scholarly research, collective action becomes seemingly impossible.

Effective governance structures are critical for long-enduring commons (Ostrom 2015 [1990]). [What are the governance issues specific to scholarly communication?]

The costs and benefits of changing institutional rules can be considerable; the situational variables affecting cost-benefit analyses may be numerous and intersect in complex ways, and those making the judgements about whether to keep or change the rules may not have complete information on which to base their decisions (Ostrom 2015 [1990]: 195–205, 210).

[This is a problem when considering how to break out of path dependence.]

As Hess and Ostrom argue, 'any type of commons must involve the rules, decisions, and behaviours people make in groups in relation to their shared resource' (Hess and Ostrom 2011: 10). For a scholarly commons, this includes understanding the incentives that lay behind publication decisions and their root in hiring and promotion mechanisms.

Different stakeholders have diverse interests, which makes designing institutions more complex (Hess and Ostrom 2011: 44). [authors against publishers, cite Fyfe] Similarly,

³⁵ The OA2020 model is constructed along market lines and does not see itself as a commons-based approach.

³⁶ [M.E.: 'if it requires self-governance, it also requires actors who want to self-govern within a commons'. A spontaneous move to an open scholarly commons won't happen if no-one cares enough.]

considering resources at different scales results in a change of variables...

[for commons policy, more interaction is required between different levels of decision-making i.e. not just HEFCE top-down decision, but ‘co-designing’ with faculty.]

[OA Beyond APCs Conference Report listed requirements for an APC-free publishing agenda:

- present a solution that is free for readers and for authors — in this case APC-free;
- work in the local context and create partnerships that incorporate a variety of global situations, including those marginalized by historical, political, and economic power structures;
- acknowledge and suggest paths for addressing perceived barriers and challenges to the proposed scenario;
- present an agenda for action;
- envision a 5- to 10-year transition that includes universities as a major stakeholder in a knowledge production and sharing environment that will benefit all readers and authors;
- be scalable — something that interacts with the local but could be scaled up to the global

(Smith 2017)]³⁷

[As Bhaskar claims, publishing is always economic, but not necessarily profit-oriented (Bhaskar 2013: 138, 141).]

[cooperativism – not sure how it fits in to the chapter]

There is a difference between governing a commons and governing as a cooperative. People may cooperate in the use of a CPR, but in order to individually benefit. In a cooperative, everyone shares in the benefits (equally?). So a commons may be governed by a cooperative, or by a community of individuals. [be clearer] [cooperatives can be for-profit market institutions.]

Cooperation is a core part of the logic of the commons, as opposed to *competition* in the logic of markets (Helfrich 2012: 36). So cooperatives, as institutions with cooperation as the founding principle, are uniquely suited to governing commons. For this reason it is important to consider the potential opportunities of cooperative higher education and the role that cooperatives could play in governing a scholarly commons.

[cooperative HE – Neary and Winn (2012), Members of the Social Science Centre Lincoln (2017).]

Although, cooperatives do not necessarily transcend capitalism: ‘even though the cooperative form departs from the traditional rules of capital, it still remains essentially private in nature, which leads to frequent capitalist drifts when the cooperative is successful [...] While realising the construction of commons is a co-activity between a number of stakeholders managing a resource, cooperative ownership remains private in nature’ (Borrits 2016).

37 [See also Smith (2015).]

[People sometimes talk about the commons as though it is something which stays intact and should not be exploited for profit.³⁸ This is a misunderstanding of what a commons is. The point of a digital information commons is that it can be used by anyone,³⁹ and you cannot limit who uses it or the extent to which they use it. So if a commons exists in a capitalist society, it can be used for commercial gain. [If you want a commons but do not want this to happen, then really you want it to exist in a non-capitalist society.] A commons explicitly allows capitalist exploitation (see Bollier 2011: 38).] Counter: ‘to talk about the commons is to say that citizens (or user communities) are the primary stakeholders, over and above investors, and that these community interests are not necessarily for sale’ (Bollier 2011: 30). Publishers frequently assert their right to be included in decision-making as stakeholders [citation needed]; this does not have to be the case, but even if it is accepted, that does not mean that publishers are *equal* stakeholders with equal ownership claims over scholarly resources. Different stakeholders – or different communities with an interest in a particular commons – may have different relationships with that commons and the rules that govern it may therefore treat those communities differently.

‘Cultural commons are also nested within and interact with more complex systems of natural and socially constructed environments’ (Madison, Frischmann, and Strandburg 2010).

[The motivating factors leading researchers to conduct their work and write books and articles have little to do with direct monetary compensation.]

As Ostrom has shown (Ostrom 2015 [1990]: 89), each common-pool resource must have specific operational rules. The question for a policy analyst interested in a scholarly commons is, what might the operational rules be? And are there policy levers that might be used to bring them about?⁴⁰ Since successful CPR governance requires *self-governance*, if external policy is a driver for change it must involve community input from the start and allow some of the institution-building to be developed from within the community – not least because some information about the effects of institutional change are only available to community members (Ostrom 2015 [1990]: 195).

[what are the features of successful knowledge commons?]

The most thorough investigation into the notion of scholarly commons thus far is the work of the FORCE11 Scholarly Commons Working Group (Bosman et al. 2017; Champieux et al. 2016; FORCE11 Scholarly Commons Working Group 2017; Kramer et al. 2016).⁴¹ FORCE11 is a community initiative that grew out of the ‘Beyond the PDF’ conference and the FORC

38 [See tweets from the LIANZA conference (Library and Information Association of New Zealand Aotearoa), 26 September 2017, on the hashtag #open17.]

39 [though not necessarily for any purpose, depends on the license e.g. CC BY-SA over CC BY-NC – is it no longer a commons if CC BY-NC?]

40 [Ostrom’s design principles (p.90) are not all relevant to information commons. Check for more recent references (e.g. Ostrom and Hess); they may not exist. Remember that it is the general principles that determine success, not specific rules which vary from situation to situation. See also Madison, Frischmann, and Strandburg 2010, <https://www.force11.org/scholarly-commons/principles>, and Bosman et al. 2017. (which tries to be all-encompassing, contrary to the localised approach I’m in favour of.)

41 The official websites of the group can be found at FORCE11 ([n.d.]a) and FORCE11 ([n.d.]b).

(Future of Research Communications) Workshop in Dagstuhl, Germany – both held in 2011 – which aims ‘to bring about a change in modern scholarly communications through the effective use of information technology’ (FORCE11 [n.d.]).⁴² Discussions at the Force15 conference led to the formation of the Scholarly Commons Working Group (SCWG) which first held a workshop in Madrid in February 2016, with invited stakeholders ‘from across the ecosystem of scholarly production and consumption’ who were asked to imagine an ideal scholarly communication system free of ‘the restraints of the current system’:

the initiative is designed to both define and promote a set of high level principles and practical guidelines for a 21st century scholarly communications ecosystem—the Scholarly Commons [...] we are working to define the best practices, interfaces, and standards that should govern the multidirectional flow of scholarly objects through all phases of the research process

(Champieux et al. 2016)

One obvious problem with the approach taken by the SCWG in the beginning was that most participants were from privileged institutions in the global North. Steps have subsequently been taken to remedy this (Bosman et al. 2017: 9–10), though see Hudson (2017) on the limitations of ‘diversity and inclusion’ as a social justice strategy and Hathcock (2016) on the failures of the SCWG to truly de-centre an insular global North perspective. The principles that were drafted during the Madrid workshop⁴³ therefore reflected a limited range of perspectives. For instance, Principle 2 of the *Principles of the Scholarly Commons* states that ‘Research and knowledge should be freely available to all who wish to use or reuse it’, which means that ‘the commons is open by default’ (FORCE11 Scholarly Commons Working Group 2017). As discussed in the following section, this principle is in conflict with the right of a community to self-determine how its knowledge is used. For the SCWG to say that ‘everyone agreed that the Commons was for everyone’ (Kramer et al. 2016: 23) shows that some voices are missing from the conversation. Overall, however, the principles are reasonably consistent with the notion of commons as understood in this thesis; equitable, open, sustainable, and research and culture driven:

We view the Commons as a set of practices governing the production, flow, and dissemination of scholarship and research to facilitate access by all who need or want this information, in both human and machine readable forms, so it can be put to use for the good of society.

(Champieux et al. 2016)

The description of a scholarly commons in a later document aligns extremely closely with the work of Ostrom: ‘a set of principles and rules for the community of researchers and other stakeholders to ascribe to, the practices based on those principles, and the common pool of

42 For more on the reasoning behind FORCE11, see the original Force11 Manifesto (FORCE11 2011) that was written following the first conference.

43 See FORCE11 Scholarly Commons Working Group (2017) for an updated version of these principles.

resources around which the principles and practices revolve’ (Bosman et al. 2017: 1, 4). There are, however, at least two vital differences – the erasure of plurality, and the lack of self-governance. For the SCWG, the discussion is about *the* scholarly commons – it envisages a single global pool of scholarly knowledge. They use the term ‘scholarly commons’ to refer to the scholarly communication ecosystem as a whole (Kramer et al. 2016: 27).⁴⁴ The design question regarding whether scholarly commons should be regarded as singular or plural is discussed in the following section. It is notable however, the SCWG are not trying to be prescriptive as to how the principles are implemented: ‘In our view, the principles do not describe what the Scholarly Commons should look like or how it should be organized. They do define the minimal conditions that practices and participants in the Scholarly Commons should meet. [...] The actual implementation of the Scholarly Commons (whether that is by use of existing systems and platforms, or the creation of one or more new platforms, including decisions on how to govern these) is beyond the scope of the principles themselves. The principles are aimed to provide guidance on the conditions that should be met in the use, development and governance of systems or platforms’ (Martone 2016). Still, the overall impetus behind the SCWG activities appears to have a shade of neocolonialism about it (Hathcock 2016); the aim is to actively shape the way scholarly communication is developed, and given the membership of the steering group and the source of the funding for the project (The Leona M. and Harry B. Helmsley Charitable Trust), it is questionable whether any other outcome can be achieved. One of Ostrom’s primary insights into successful commons is that they require *self-governance* – the active participation of the local community in decisions concerning governance: ‘successful commons governance requires an active community and rules that continue to evolve [...] commons are more robust when users have some autonomy to make and enforce their own rules’ (Hess and Ostrom 2004: 8). The charitable analysis of the SCWG’s aims is that, much like Ostrom, they are trying to identify attributes of successful commons, in order to guide decision-makers in constructing effective commons-based initiatives. However, the notion that the SCWG can derive such universal principles for commons governance from the blue-sky thinking of a relatively small group of insiders, rather than the painstaking analysis of actually-existing commons such as Ostrom and her colleagues pieced together over a significant period of time, is a stretch of the imagination.

⁴⁵[This section has identified some characteristics of a proposed scholarly commons, drawn from both a critical understanding of the research publication process, and from prior work that advocates for such a commons. It has contrasted these characteristics with the existing situation of open access. Further analysis would be required to see to what extent the sketch given here can fit into analytical frameworks from the wider policy literature. Here, an indication can be provided by describing possible policy decisions that could steer open access work towards a more commons-like situation (given the constraints of the current political context) – in other words, to posit some variables that may be altered in order to

44 To the extent to which they recognise the heterogeneous nature of the scholarly communication ecosystem (e.g. Bosman et al. 2017: 16), it is only as a transitional stage towards a ‘maximal’ commons that fits their principles.

45 [I wrote this paragraph a while ago and it needs replacing]

affect change.] [This is particularly tricky when considering *national* open access policy with a view to creating a global commons; one more reason why considering a plurality of more local scholarly commons is a more achievable goal.] [Assume devolving is good (subsidiarity). Scholarly communication as *a collection of knowledge commons*.]

Towards an ecology of scholarly commons

The final section of this chapter will attempt to bring together the insights gained about scholarly commons, particularly concerning the potentially local and plural nature of commons, with an analysis of open access policy. By doing so, a way forward towards a more progressive commons-based open access policy can be glimpsed. First, the rationale for a plurality of scholarly commons – imagining an ecosystem rather than a monolithic entity – will be discussed. Secondly, a postcolonial critique of scholarly communication provides further support for an approach to open access that encourages diverse publishing practices, shifting emphasis away from the traditional models that have served to reinforce the epistemological hegemony of the global North. Finally, the chapter will conclude by considering the implications of all this for open access policy.

Commons are social institutions so they cannot spontaneously come into being; they are always constructed by people. Although long-enduring commons tend to evolve and change over time, the luxury of the theoretical observer is the ability to consider commons construction as a design process. As such, a key design question for those considering scholarship as a commons is whether to aim for a *single* scholarly commons, coterminous with the scholarly record i.e. containing all scholarship; or the construction of a collection or network of individual scholarly commons, bounded in particular ways, for example by type of resource such as books or data, or by scholarly discipline. There is great structural variation between both disciplines and resource types, which would lead to different rules for the provision and governance of those areas when considered as a commons. Due to this variation, a networked ecology of commons may be more appropriate than an approach that sees scholarship or scholarly resources as an undifferentiated mass (in which individual authorship is dissolved).⁴⁶ This approach would help maintain specificity of different knowledges, an important point that will be returned to below.⁴⁷ In light of the analysis of neoliberalism in Chapter 4, which highlighted its role as a globalising force that denies legitimacy to local and indigenous cultural and economic practices that do not fit into its framework,⁴⁸ a programme of resistance to neoliberalism should counter this by explicitly acknowledging and advocating for these knowledges to be afforded a place.

Moving away from the notion of a single scholarly commons conveniently sidesteps the issue

46 A commons does not necessarily challenge the notion of individual authorship, although it does open possibilities for doing so.

47 [megajournal as opposite of localism?]

48 [Careful here; Chapter 4 also speaks about the ability of neoliberal ideas to adapt to local conditions, and the risk of viewing it as a ‘totalising’ force.]

of what counts as scholarship, and whether it possible to define what the ‘scholarly record’ is. [accepting that it does not and cannot contain *all* human knowledge,⁴⁹ [Ostrom and Hess (2011a: xi) argue that such a limitation is ‘parochial’, and ‘ivory tower’ scholarly work should not be segmented off from other knowledge domains. However, it does offer a way past the critiques given above regarding the potentially colonising nature of too broad a definition. To define a scholarly commons in this way is not to preclude the possibility of other information commons. Even if there are no real clear boundaries, some level of delimitation (if porous and fluid) can be useful and may be necessary.]

If knowledge is considered as a shared resource (Hess and Ostrom 2011: 3), then *which* knowledge and *for whom*.

[Working towards an open ecosystem of heterogeneous publication practices could serve disciplines well, along with facilitating a decolonisation process. Is the necessary decolonisation work for those in the global North to step aside and provide space for others to experiment?]

Any shift in the way open access occurs – or, indeed, any aspect of scholarly communication – must take into account the incentives that different stakeholders would need in order to change their behaviour. In particular, the prestige economy within which academic researchers operate (see Chapter 2) determines which behaviours are seen as possible. Since publication practices are deeply entangled with this prestige economy (see Fyfe et al. 2017), moving towards a commons-based open access policy requires careful understanding of the ways in which authors currently approach publication and the risks they may perceive in alterations to their practices.

Given the diverse perspectives – from different stakeholder groups (e.g. authors, publishers, funders etc.) and different disciplinary communities – on what scholarly communication is for and how best to organise it, working at a local level has a distinct advantage when it comes to collective action. It is extremely unlikely that all interested parties will come to agree on a single way forward, so collective action at a system level appears untenable. But if a smaller community is able to come to an agreement regarding how they think *their* community should be organised, this could be more likely to lead to transformative action. The risk of fragmentation if different communities choose different paths may even be embraced as a good thing, and any negative effects could perhaps be alleviated through community coordination. The Radical Open Access Collective is an example of a grassroots attempt at this kind of coordination. By forming a horizontal alliance of scholar-led presses, they foreground the necessity for contestation, multiplicity, and experimentation in academic publication practices, while also providing community support (Radical Open Access Collective 2017).

[could localness help reduce the content-centric view of scholarly communication, to focus more on communities of people?]

49 Wikipedia’s slogan ‘the sum of all human knowledge’ is a good example of the kind of thing that should be avoided.

[match institutional organisation to the scale of a resource]

[‘production and consumption occurs in local and global arenas’ (Hess and Ostrom 2004: i).]

The SCWG (see Bosman et al. 2017) write as if a scholarly commons will only exist as a single global entity. Contrary to this, [I argue] for a plurality of local scholarly commons, which share common features but are not necessarily able to be submerged into a whole. The scholarly commons does not require grant-funded leadership from a small selective group who define the terms on the behalf of the community. Rather, it can be nurtured through local, collaborative, participatory means. Levine distinguishes between a *libertarian commons*, which ‘anyone has a right to use’, and an *associational commons*, which is owned and controlled by a defined group (Levine 2011: 250–251). From this perspective, membership is key, and for natural commons this facet is always present – self-governance by a membership community is, by definition, what makes a resource a commons rather than an open-access resource. For knowledge commons, which *can* take the form of open-access resources, membership is not strictly necessary for a resource to exist but it may well be one of the key criteria for a *successful* commons.

It is vital to recognise that the implementation, monitoring, and enforcement of policies have real costs and the burden of labour should be distributed and rewarded in a fair way. If more work is created, then sufficient provision of financial or human resources must be made to ensure a fair distribution.

For any governance alterations to be regarded as legitimate rather than an imposition, communities must be consulted about changes that will affect their practices. Given the heterogeneous nature of academic communities of practice,⁵⁰ any centralised open access policy that applies to all disciplines (such as the current HEFCE policy) will come into conflict with the norms of some communities. Locality is important. [Confederate structure, built from the ground up, of community-specific policy choices.] In the UK, the formation of UKRI exhibits a centralising tendency – but perhaps each research council should have a different policy. A problem with this is that the funder policy landscape is already somewhat complex, and a united RCUK policy has the advantage of simplifying open access requirements in researchers’ eyes. Further fragmenting policy requirements into the different councils could cause even more confusion, especially among those researchers working cross-council and in an interdisciplinary way (something that is encouraged). But these risks may be worth it, if decentralised decision-making can be encouraged. More friction may be a good thing, if it leads to greater critical engagement with publication practices. Collective action requires voluntary commitment from each participant (Meinzen-Dick, Di Gregorio, and McCarthy 2004). If a commons-based system is to ‘reject the idea of hierarchy in favor of a participatory and collaborative model, one that prevents the concentration of power and puts community interests at the center’ (Mattei 2012: 43), then an immediate flip to full open access by any means necessary begins to look like a conservative position compared to the

50 [How is community/discipline defined? Have I done this in]

critical and experimental approaches that can only be fostered at a more local level and at a slower pace (see also Radical Open Access Collective (2017).) [decentralisation] [governance from below]

So far, this section has made the case for a plurality of scholarly commons based on a theoretical understanding of commons derived from the work of Ostrom and colleagues, and also from a thorough understanding of academic practices. Now the attention will switch to what is perhaps a more important reason for advancing the ‘plural’ option – to acknowledge different ways of knowing, including to ‘recognize the persistence of Indigenous epistemologies’ (Dhamoon 2015; see also Sousa Santos 2008).⁵¹ This is vital for those involved with open access to understand – as the long-time open access advocate Leslie Chan says, it is important to remember that ‘knowledge is being produced *everywhere* and that there are unique traditions of knowing from around the world’ (Okune, Hillyer, and Chan 2017). For this reason, it is necessary to critique the ‘totalising’ nature of some advocates’ conceptions of the information commons. It is not appropriate to think about a single, undifferentiated commons of which all knowledge is a part.⁵² There are numerous different communities, in different places at different times, that have different epistemologies. As Bijker argues, “‘knowledge commons’ is the common sharing of a variety of knowledges. This interpretation builds on the recognition that a plurality of knowledge systems exists’ (Bijker 2011: 1). If we accept that knowledge is ‘socially rooted’, then ‘since there is a plurality of contexts, knowledge must be plural too’ (Bijker 2011: 2; see also Collins 2010). It would be unethical to assume that all of these various kinds of knowledge may be absorbed into a single commons – especially one conceptualised and designed by theorists from the global North. This is not to say that the idea of a scholarly commons should be abandoned, but rather, considerable care should be taken with regards to its construction and the setting of boundaries. It is important to remember that the idea of a commons was based on *particular* natural common-pool resources, utilised by defined communities in a particular place and time. If the same approach is applied to information commons, then the starting point of conceptualisation must be at an appropriate level of granularity. (See also Levine (2011: 263–265) on local commons.)

One way to consider appropriate ways of treating indigenous knowledge is made clear in the use of biological and genetic resources. Critics in the global South have highlighted the exploitative nature of the use of these resources, with researchers and corporations from the global North treating them as part of our shared collective heritage and so using them for free, but then aggressively patenting the results of their scientific work that transforms the resources into commodity goods (see Mudiwa 2002). There is a debate as to ‘whether the right way to protect their [indigenous peoples and local communities] interests is to

51 [I definitely need to expand on this and draw on critiques of the hegemonic nature of academic knowledges originating in the global North]

52 Some advocates of the scholarly commons such as Lewis (2017) think only in terms of making the current forms of Western scholarship more widely available, and think that the *kind* of scholarly commons that should be built is a settled issue.

implement a system of intellectual property rights or whether we need entirely different institutional arrangements and sets of norms' (Oksanen 1998: 2):

Many people think that it is morally unfair to regard indigenous cultural achievements -- or the biological wealth in the third world countries in general -- as belonging to the common heritage of humankind. This is so because then they would be vulnerable to the greater economic and political power of the rest of humankind: multinational corporations and western universities seek functional genetic substances which they could modify and for which they could apply for a patent.

(Oksanen 1998: 4)

One way to protect against this exploitation would be to bring traditional ecological knowledge into the realm of intellectual property rights, rather than treating it as part of a global commons. However, Macmillan has argued that for the rights of indigenous peoples, 'the idea of turning cultural heritage into intellectual property may not be optimal. One result of such a process is that the cultural property has to be corralled into the shape of Western intellectual property law [...] the end result is that occidental intellectual property law comes to constitute indigenous (and other non-Western) cultural heritage' (Macmillan 2017: 5). Rather than conforming to the time-limited – and transferable – monopoly rights of patents and copyright, or leaving things to the ungoverned space of the public domain, alternative arrangements could take the form of managing resources as a local commons – with usage rights being determined by the local community, so that indigenous knowledge is governed as a 'community-owned cultural property' (Macmillan 2017: 7). Macmillan draws on the stewardship model of property developed by Carpenter, Katyal, and Riley (2009), 'which specifically aims to vindicate the cultural property claims of indigenous peoples, seeks to find a liberatory use of the property paradigm that transcends its current narrow legal focus on private rights' (Macmillan 2017: 8). Indigenous knowledge is often intergenerational and shared among community members through oral and practical means rather than written; 'indigenous knowledge is typically embedded in the cumulative experience and teachings of indigenous peoples rather than in a library' (Battiste 2002; see also Mundy and Compton 1991). Stewardship – a duty of care towards knowledge resources over long periods of time – is an integral component of this way of sharing knowledge. Although the legal architecture required for community rights⁵³ to stewardship of intangible resources does not exist in a well-established form, there *is* long-standing tradition of commons governance practices for natural commons, which, as this chapter has made clear, can to some degree apply to knowledge commons. So in combination with open licenses (even though these mean conforming to Western notions of intellectual property⁵⁴), these commons governance

53 The distinction between community rights and private rights is key – private rights are held by persons, including corporate forms that are legally imbued with personhood. A community is not defined in law in such a distinct way. Mudiwa (2002: xvii–xviii) has even proposed that communities form jointly-owned companies to 'own' traditional knowledge as a way to engage with the international intellectual property regime.

54 For protection from exploitation, relatively restrictive licenses such as CC BY-NC-ND may be more appropriate than CC BY.

practices may go a significant way towards fulfilling the stewardship role.

With regards to research and scholarship, there is a power imbalance between the richest nations of the global North, who undertake the majority of the world's research and development and produce the vast majority of research publications,⁵⁵ and those in the global South who need access to this research and also need to be recognised as producers of knowledge themselves (Chan and Costa 2004: 3).⁵⁶ As discussed in the introduction, one of the starting points of this thesis was to explore the extent to which open access contributes to social justice by addressing this power imbalance. And as argued in Chapter 6, the approach to open access pursued through the UK's open access policies risks entrenching this power imbalance rather than countering it, because of the financial burdens of the APC funding model. While this is an unintended consequence of the UK's policies, even some of the initiatives with explicit aims to support researchers in the global South also fail to do justice to the needs of Southern research communities. For instance, the attempt to close the North-South knowledge gap by schemes such as HINARI and AGORA (developed by the World Health Organisation and the United Nations Food and Agriculture Organization respectively) may reduce 'the sense of professional isolation felt by many researchers in developing countries' (Chan and Costa 2004: 6) but only addresses the gap in access to research outputs,⁵⁷ and not in terms of participation in knowledge production. Researchers in the global South are forced to compete for publication in 'international' journals with prestige in the global North, and even to cite Northern research above more relevant local research in order to have their work taken seriously.⁵⁸ So for open access policies and practices to genuinely dismantle or subvert the dominant epistemologies of Northern academia, they must go beyond only increasing access to Northern publications:

While North-to-South flow of research is valuable to the South in terms of up-to-date scientific development, South-to-South flow of knowledge is equally important. [...] Unless efforts are made to include locally published journals into the international database, researchers in both the developed and the developing worlds will not get a true global picture of the phenomenon they study and researchers in the South will continue to be dependent on a North-biased approach to solving problems.

(Chan and Costa 2004: 9)

There are some scholarly communication initiatives originating from within the global South which have achieved success in facilitating South-to-South knowledge transfer, notably the

55 Although, as mentioned in Chapter 1, some nations (in particular China) are quickly gaining ground in terms of the amount of research conducted there.

56 The page numbers in references to this article refer to the preprint available from the E-LIS subject repository at <http://eprints.rclis.org/5666/>.

57 Much could also be written about the limitations and negative consequences of the philanthropic (or 'philanthrocapitalist') model of development (see McGoey 2015); as Chan and Costa (2004: 11) write, 'instead of promoting sustainable development in science through local capacity building differential fee programs [such as implemented by HINARI and AGORA] promote dependency on foreign aid and charitable subsidies'.

58 [citation needed]

SciELO (Scientific Electronic Library Online) and RedALyc (Red de Revistas Científicas de América Latina y El Caribe, España y Portugal) projects in Latin America. [expand on their rationale and success – cite Alperin]

The success of SciELO and RedALyc show that institutions with commons-like facets can advance a progressive scholarly communication agenda without first needing to assimilate into the dominant scholarly communication system.

An understanding of open practices in a historical colonial context is necessary. As such, it is worth quoting at length from an article about the work of the Open and Collaborative Science in Development Network (OCSDNet), a group of twelve researcher-practitioner teams from the Global South:

In conducting our research, our team considered how our research was situated and informed by the colonial pasts and legacies of colonial science in South Africa. In particular, we took into account how concepts of science such as “open science” and nature as “freely accessible” have historically been used to exploit countries such as South Africa and their indigenous peoples. We understood open science norms of disclosure and sharing as historically contingent, recognizing how practices of colonial science shaped and were shaped by such norms. Dutch and British colonial scientists traveling to South Africa beginning in the seventeenth century were influenced by and contributed to an emerging shift in the practice of science that encouraged scientists to publically share and disseminate their new knowledge, rather than keep it secret. Meant to support the growth of technological innovation, this epistemological transformation from secrecy to disclosure contributed both to the rise of modern science and European colonial power. Scientific commitments to openness and sharing were misused to justify the exploitation of Indigenous San and Khoi peoples’ lands, bodies, and knowledge(s). European colonial scientists treated the lands, animals, and plants they found as in the public domain, thus available for taking and transporting to Western Europe. In encountering and learning from Indigenous San and Khoi peoples about the natural world of South African lands, colonial scientists regarded San and Khoi knowledge as freely shared information that could be scientifically validated, disclosed, and published to support the production of knowledge about nature and the development of technological innovations. Through these practices of colonial science, colonial scientists reinforced regimes of expertise and hierarchies of knowledge production that positioned Indigenous peoples as suppliers of raw material, rather than producers of knowledge. In considering these colonial pasts, we could begin to understand how their legacies continue to shape practices of science today, including our own research.

(Traynor and Foster 2017)

‘When we ask *who is being left out of the Open Science agenda?* we are interrogating power, inequality and the barriers that prevent actors from having an influence over decisions that

affect them' (Albornoz 2017).

Although this thesis is not conducting a full analysis of scholarly communication using the Institutional Analysis and Development Framework developed by Ostrom and colleagues,⁵⁹ it is valuable to take inspiration from that approach by discussing examples of actually-existing scholarly communication initiatives with commons-based aspects to them. To counter the blue-skies thinking of the Scholarly Commons Working Group, this grounding in actuality begins to reveal the variety of commons-based perspectives that are possible, and also shows that it is not necessary to form high-level principles before taking action.⁶⁰

[Humanities Commons,⁶¹ OLH, [repositories?], etc.]

ArXiv can be considered as a common-pool resource (Meyer & Kling 2000).

[UK Scholarly Communications License as a example of a good approach – implementation must be done at an institutional level, with buy-in from the institutional community, but when many HEIs do it then there is a bigger collective benefit.]

Recalibrate the financial flows (Lawson, Gray, and Mauri 2016) towards commonly-owned infrastructure...

[Look at successful commons-based scholarship initiatives from the global South to learn from them.]⁶²

[library publishing – prominent example of community-owned infrastructure.]⁶³

Neylon (2018).

The role of central authorities in commons governance is only to provide conditions within which communities can govern themselves. This is in stark contrast to the approach to open access policy so far taken by policymakers, which has largely consisted of top-down mandates that few individual researchers had a say in creating. Moore has argued that open access is not 'suitable as a policy object, because boundary objects⁶⁴ lose their use-value when 'enclosed' at a general level, but should instead be treated as a community-led, grassroots endeavour' (Moore 2017). While the main thrust of this argument is consistent with the approach considered in this chapter, [I disagree] with the implication that open access should be removed entirely from the policy arena. Instead, the policy focus should shift to a dual

59 To provide an empirical grounding for research into the scholarly commons in this way would be an extremely valuable research project (building on the work of Hess and Ostrom 2004) but would require a whole additional thesis.

60 This is not to say that the SCWG has no value, only that there are other ways of working that can produce progress as well.

61 [it grew out of MLA Commons, a closed membership community]

62 [more needed on open access strategies from other parts of the world, Latin America. Have mentioned SciELO and RedALyc above]

63 [benefits for African and Latin American institutions - <http://dx.doi.org/10.3998/3336451.0020.202> & <http://dx.doi.org/10.3998/3336451.0020.203>]

64 'Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make the recognizable, a means of translation' (Star and Griesemer 1989).

track of supporting and funding infrastructure, and enabling local communities. For policymakers to withdraw from any engagement with open access would risk removing a key lever for connecting communities together in a strategic way and increase the chance of fragmentation. Although fragmentation may in some ways be considered a good thing if a diversity of approaches is to be encouraged, coordination is still necessary if the full potential of open scholarship is to be reached. Ideally, coordination would be achieved without the need for intervention from central authorities, but given the slow and inconsistent adoption of open access so far, a light-touch approach to policymaking could be beneficial in facilitating ...

Chapter 6 argued that neoliberalism has so infused the policy-making process in the UK that, unless significant high-level political change occurs, all open access policies that are enacted through official channels will end up supporting neoliberal ends. This chapter has explored the idea of scholarly commons as an anti-neoliberal alternative. If it is correct to say that policy-making has been captured by neoliberal interests, the way forward for anti-neoliberal ideas is therefore not through official policies of the government and its agencies. Resistance to neoliberalism, across many areas of society, has been richest outside of mainstream (parliamentary) politics (Ball 2014). So to progress a commons-based approach to scholarly communication, attention should focus instead on a plurality of localised grassroots initiatives rooted in particular communities. This does not mean that high-level perspectives should be ignored; there is still significant value to be found in working to connect these communities, with social and technical infrastructure, and it may be possible for high-level principles of the commons to emerge. But the analysis of the commons presented in this chapter places hope for a progressive future in the hands of communities themselves, not in government-approved policy.⁶⁵

Conclusion

In this chapter the commons has been considered as an alternative framework for understanding open access. While the commons is not a magic bullet solution to solve all of scholarly communication's current problems, and will not by itself usher in a utopic era of openness and equity, the idea of a scholarly commons can function as a framework to guide open access policy towards progressive ends. A framework is 'an analytical scaffolding that contains a universal set of intellectual building blocks' (Ostrom and Hess: 2011: 42); it is more a series of guiding principles than a rigid set of rules. As Ostrom says, 'From a framework, one does not derive a precise prediction. From a framework, one derives the questions that need to be asked to clarify the structure of a situation and the incentives facing individuals' (Ostrom 2015 [1990]: 192). So to argue for a scholarly commons is not to propose a grand theory within which open access functions. Rather, it is to shape the direction of travel for open access policy and to alter the incentives in favour of collective governance and collaborative ...

65 [How specific to the UK is this conclusion? I don't think it is wise to give up on influencing policy entirely, and political systems in other countries may vary and require different approaches.]

The commons is anti-neoliberal not only because it is an organisational form outside of the market, but because it prioritises *people* and the collective decisions they make. As Chapter 4 made clear, neoliberalism is about freedom for capital, not freedom for people. Neoliberalism is a political project to shape all social relations so they conform to the logic of capital. So to work with socio-economic forms that emphasis cooperative ownership and governance is a form of resistance to neoliberal ideology.⁶⁶ A scholarly commons – or an ecology of multiple scholarly commons – can act as a bulwark against market enclosure.

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66 [‘A commons in its true form is a non-capitalist system in which a resource is controlled in perpetuity by a community for the shared and equal benefit of its members’ (Monbiot 2017 <https://www.theguardian.com/commentisfree/2017/oct/11/labour-global-economy-planet>).]

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