Erling Berge, Norwegian University of Life Sciences

Abstract

Some observations on rights of common in old industrialized countries

The fate of commons in the old industrialized countries can be read as a story of their disappearance. There certainly are enough statements about their waning significance. The age of enclosure is over. In some countries commons get special purpose legislation. In others they are left to themselves. Does it make a difference? Fewer and fewer of the classical rights of common are exploited today, and no new types of rights of common have been added. Or have we found new ways of exploiting out-fields that traditionally were regarded as commons? Can we learn anything useful from history? It is also possible to look at the old industrialized countries and ask about resource governance of resources that due to their nature are best exploited jointly.

Then there are some reasons for not looking for lessons in history. One is that the organisations created today govern goods of very different characteristics. Very frequently it is designed to care for pure public goods or very large scale club goods. Another reason is that the organisation has to be created at a scale above the local community, often also at a scale above the state. But exactly how do new public good resources relate to older private good resources when both are found on land and both are managed as a commons?

The paper will review some theoretical problems involved in governing both old and new types of common goods with some examples from Norway, England, and Japan.

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On The Commons of Developed Industrialized Countries



Introduction

In 2008 Oslo got a new opera house (above). This summer visitors to the opera house were met with the following announcement: "Here comes the "Opera Commons".



It is also explained in English:
"Operallmenningen, the Opera
Common, ... will be a multi-functional
meeting place for cultural events,
recreational activities and people passing
through."



The announcement is interesting. The Norwegian word "allmenning" is usually translated as "commons" and will in most cases designate a very old form of joint ownership or ownership in common among a well-defined group of commoners. Their current legal reality is regulated in legislation from 1857, 1863 and 1920 with the last major revision from 1992¹.

The naming of this square² as the "Opera commons", located beside the Opera house and in front of the new library of Oslo, will, in the tradition of the main square of Bergen, called "Torgallmenningen", indicate that an urban commons in Norway is constructed as an urban area with very little "green stuff". It will appear as very different from the urban parks that are constructed as nature areas with grass, trees and flowers, sometimes with a classical garden design. In their green appearance urban parks are similar to national parks.

The tradition of English village greens and town greens are rooted in traditional commons that used to be available for people in villages and towns to graze their animals. For the most part they have evolved into urban parks but usually with few elements of garden design included. In Norway the traditional urban commons were called "takmark" and have today

¹ The acts are available in English translation in Berge, Mitsumata, and Shimada (2011).

² The "Operaallmenning" has got its name within the large scale urban development called the Fjord City with several other squares named as commons in the same fashion: Festningsallmenningen, Stasjonsallmenningen, and Loallmenningen. See REGULERINGSBESTEMMELSER FOR BJØRVIKA - BISPEVIKA – LOHAVN, Oslo kommune, Byrådsavdelingene, S-4099, 15.06.2004.

disappeared as such, but in some places the area remains as "Bymark", available for the citizens for recreational activities (Christiansen, Sandnes, and Sætre 2006).

One might reasonably have expected that this area in Oslo had been named "Operatorget" (the Opera Plaza or Opera Square). One interpretation of the choice of "allmenning" (commons), to designate a place that is available for citizens of Oslo and their visitors as a "meeting place for cultural events, recreational activities and people passing through", is that it may be part of an international trend idolizing "the commons". This one may observe both in academia and in some political circles.

The present paper will discuss the emergence of these new ideas of commons against a backdrop of the fate of traditional commons in complex urban and industrialized societies. Understanding the enclosure of old commons as well as the success of new types of commons can be approached by some core concepts from the theory of the commons: the cost of excluding consumers, and the dynamic impact of consumption.

"Reinventing the commons"?

The fate of commons in the old industrialized countries can be read as a story of their disappearance. There certainly are enough statements about their waning significance³. The age of enclosure is over. In countries where the disappearing has been most noted, the remaining commons get special purpose legislation. In others they are left to themselves. Does it make a difference? Fewer and fewer of the classical rights of common⁴ are exploited today, and no new types of rights of common have been added.

Yet there seems to be a growth in the commons imaginary. People see the utility of sharing resources in various ways and they pick up the label "commons" to explain what they are doing. Wagner (2012) writes about this growth. I observed the idolization of the commons at a meeting in Berlin in the fall of 2010. There were few traditional commons scholars. Listening to both public presentations and small group conversations gave pause for thought. The impression I took home was that for the majority of participants the commons represented a new ideology with some of the important desirable features of socialism, and few of the negative consequences associated with it. IASC's president was one of the keynote speakers and tried to introduce conceptual distinctions from the theory of the commons. But the academic approach seemed rather uninteresting for the conference participants. They and apparently many more share a belief in the need for, and desirability of, shared usage of commons resources.

In complex urban societies scholars have started to look at public infrastructure as a commons (Hess 2008), applying insight from the study of traditional commons. The importance of the road and railway infrastructure has been highlighted (Frischmann 2012; Jain and Moraglio 2014). The importance of sharing knowledge has created the open access movement "Creative Commons" making copyright agreements more in line with every scholar's wish to

³ Simpson (1986, 261-262) writes "The only parts of the country where common rights are still the backbone of the agricultural system are those mountainous areas where hill sheep-farming is practiced. Elsewhere common rights are rarely of great importance, nor is it normal today to grant new profits to be enjoyed in severalty."

⁴ Rights of common to pasture, to turbary, to estovers, to pannage, to piscary, and to a couple of profits à prendre such as to take minerals or parts of the soil and to take wild animals (Rodgers et al. 2011, 4-7)

be read and have access to what others have written (Hess and Ostrom 2007)⁵. In the same direction we find studies of "cultural commons" (Bertacchini et al. 2012). Property rights to, and management of the radio spectrum has been studied as a form of commons (Berge and Kranakis 2011), and so have microbial commons (Dedeurwaerdere 2010), protection of nature (Zachrisson 2009; Lawrence, Molteno, and Butterworth 2009), the atmosphere (Paavola 2008), the oceans (Holt 1992), and other global commons (Buck 1998).

However, the theoretical approach to "new commons" is different from the approach that names urban squares as commons, or organize sharing of academic works. The growth of "commons" as a kind of ideological explanation for promoting the sharing of resources deserves its own study alongside the study of the organisations that actually call themselves commons. In both cases a few insights from the commons theory might help avoiding some of the possible errors and improve on our understanding of the complicated link between believing and doing.

Theoretical background

"A commons is a resource shared by a group where the resource is vulnerable to enclosure, overuse and social dilemmas. Unlike a public good, it requires management and protection in order to sustain it" (Hess 2008, 37).

One point of departure for discussing commons is a resource shared by a group. What counts as a resource is defined by the knowledge and technology that is able to produce or provide something that people want, starting out with the something we identify as the resource. That which we want from the resource we shall call a good. Resources of a commons are also vulnerable to enclosure, overuse and social dilemmas. Hence a commons also comprise an institutional infrastructure including people committed to values furthering sustainable resource exploitation and in most cases also a group benefitting from the resource (the good). This group is usually charged with the duty to protect the reproduction of the good. Traditionally the bearers of the institution and the group of beneficiaries are the same. In resource systems larger than those a traditional community (rural or urban as the case may be) can exploit, we see that these two groups are separated. Does this make a difference?

One key concept in understanding this is the legal authority and technological feasibility of excluding any particular person that wants part of the good. The allocation of authority to exclude and the cost of exclusion determine the form of detailed rules needed to control harvesting of the good and ensure its reproduction.

The other aspect to understand is the characteristic of the good that is provided by the resource system. The traditional goods of traditional commons are of a kind where one person's enjoyment of the good makes it impossible for another person to enjoy the same unit of good. There is competition (or rivalry) in the appropriation of utility from the good. One may also say that the goods provided by the resource system are subtractable. But many types of goods do not display the characteristic of subtractability in appropriation of utility. Goods that one intends to safeguard in protected areas are usually non-subtractable.

⁵ There is today a kind of struggle between the open access movement and the traditional enclosing of the research results commons. Publishing houses are fighting to retain their profits from public investments in research.

Ostrom and Ostrom (1977)'s classification of goods according to these distinctions provides four types of resources.

Table 1 Typology of goods

71 53 5	appropriators are:	
resource is	excludable	non-excludable
subtractable	PRIVATE	COMMON POOL/
		POSITIONAL
non-subtractable	CLUB/	PUBLIC
	TOLL	

Source: Adapted from Ostrom and Ostrom (1977).

Private and public goods are well known. Private goods are excludable and have rivalry in consumption. These are the ordinary consumer goods which one can buy in a market. Public goods are non-excludable and have non-rivalry in consumption. The nature of the pure public good is such that if the good is produced at all, it will be available to all whether they pay for it or not. If NATO is able to protect one country, all countries will be protected. This is so because there is no way of, either theoretically or practically, excluding any person or province from the protection. The realization that this was the case for an important class of goods, and the concomitant free rider problem in collective action (Olson 1965), led to important theoretical developments for public policy (Cornes and Sandler 1986; Sandler 1992).

This definition of public goods means that there are just three ways a public good can appear. A public good (or bad) may

- 1) appear by itself as natural phenomena (e.g. a beautiful sunset or a violent storm), or it may
- 2) appear as a byproduct (unintended consequence or externality) from other social processes (e.g. solidarity or anomie), or it may
- 3) appear because everyone (or at least enough people) contributes voluntarily or by force (taxation) to its production.

This definition of pure public goods also implies that they are not welfare goods. They are delivered to the citizen at their full price, collected by the general tax.

Those goods which are neither pure public goods, nor pure private goods, used to be called impure public goods. Goods which are excludable and at least partly non-rival in consumption have been called club goods (Cornes and Sandler 1986) or toll goods (Ostrom and Ostrom 1977; Ostrom 2005). Partly non-rival means that the initial situation is one of non-rivalry. It can be called a club good because of the nature of the exclusion mechanism. The exclusion mechanism is like a boundary. You can partake of the club goods once you are within the boundary. Once you are inside the boundary the good has the character of a pure public good. As long as the number of members in the club is below "the carrying capacity" of the club, the club good is available to all. But as the number of members increase, crowding will lead either to deteriorating quality of the good or competition for access to the good. It is worth emphasizing the necessity for members to enter and use the club. Unlike pure public goods, club goods have a voluntary element in so far as it requires an intentional act by the consumer to appropriate the good.

Goods with rivalry in benefits, and where the consumer is at least partly non-excludable, are not, like club goods, explicitly labelled by Cornes and Sandler (1986) but might perhaps have called them "impure private goods". They were labelled common pool goods by (Ostrom and Ostrom 1977). Hirsch (1976)'s discussion of the non-excludable aspects of status goods and location in urban societies suggest "positional goods" as one type of common pool goods. Partial non-excludability means that the situation usually is considered to be one of excludability, but may under certain circumstances approach one of non-excludability. Non-excludability may, however, be more pervasive also for some aspects of private goods than one commonly is led to believe. At the outset the positional good, in a technical sense, is a pure private good. But during its consumption something happens to make it something else or something more. ⁶ It becomes a symbol in the status competition (see (Veblen [1899] 1976; Fallers [1954] 1966; Bourdieu [1979] 1984; [1989] 1996). ⁷

It should be emphasized that the four types of goods are analytical categories. Most real world goods are joint products where aspects of more than one type of good may be found. If carrying capacity is the key concept of clubs, queues or waiting times are the key to positional goods (and bads). Both may be discussed as forms of crowding effects. Once crowding occurs there is rivalry in consumption and some kind of regulation is needed to protect the good. But the negative utility from crowding propagates differently for the two types. This means that the rules of management have to be different. There are also important differences between common pool resources and positional goods. Over-exploitation of common pool resources leads to scarcity of the good for all requiring an exclusion mechanism before the resource is destroyed. The rivalry in appropriation of positional goods creates queues as a rationing mechanism. Complications arise as we realize that the same material aspect of the world may hold values of all types.

Natural resources can usefully be divided into:

- The specific material resources embedded in the ground, attached to the ground, or flowing over the ground and
- Eco-system services such as water control, disaster mitigation, local climate control, biodiversity, etc.

Traditional commons have exclusively been concerned with the goods that could be obtained from exploiting specific material resources. The modern concern with eco-system services have led to the creation of organisations and regulations of designated protected areas that arguably can be called commons. The goods that the protected areas are protecting are eco-system services and biodiversity aspects of nature. These goods are pure public goods or club goods. National level institutions are managing these goods for the benefit of the national population. As such it may be seen as a (national) commons. But within the protected areas

⁷ Granovetter and Soong (1986) investigate consumer interactions in the consumption of private goods and identify a "forward bandwagon effect" if someone buys a product because others already have it, and a "reverse bandwagon effect" if someone stops buying because too many people have bought it. These are precisely the processes Hirsch (1976) associated with the positional economy of urban land ownership. In their extreme form, where consumption of the good only or primarily serves to promote status, we find the processes represented in the potlatch ceremony of some primitive peoples as well as the phenomena in modern society Veblen ([1899] 1976) describes as "conspicuous waste" and "conspicuous consumption".

⁶ The relative attractiveness of various locations is translated into prices which then clears the queues for the various locations. Those willing and able to pay the most get the most attractive locations. Those with the least ability to pay get the least attractive locations. A housing lot has a position in the overall positional economy. No one can opt out of this. Similarly the latest fashion in for example clothing (or cars or ideas or...) divides the total population into those adopting early and those adopting late - or never.

there are also traditional goods that may or may not be exploited by traditional commoners. One may picture the goods of the new commons as an overlay upon the old goods that used to be exploited within the same areas.

The regulations protecting the public goods (biodiversity) and club goods (eco-system services) provided by the protected area may seem reasonable in relation to the exploitation done by the traditional commoners. But for the traditional commoners it is experienced as just one more friction in the economic system. Over time it will add to the many other forces that contributing to the slow disappearance of traditional commons.

Resources and institutions governing their exploitation have to be discussed jointly simply because the "nature of the good" found in the resource (is it a pure public good, a club good, a common pool good or a pure private good – or a mixture?) must be understood in order to design the institutional set-up if the resource governance in one way or another shall produce results where governance makes a difference. New environmental commons are created to govern goods that are non-subtractable and non-excludable. This means that the problems of free-riding in provision and consumption that lie at the core of common pool resource governance do not exist. The problems of governance of public and club goods emerge from their existence as top-level aspects of existing goods and materialize as a need for negotiating an agreement with stakeholders with established rights in the old style goods whether these rights originate as rights of common or otherwise.

In governance of the new commons one important part of the institutional setup is the possibility for handling conflicts between the appropriators of the new goods and those exploiting the old goods (Armitage 2007). This is where co-management might have a mission (Carlsson and Berkes 2005). Just blocking off the exploitation of traditional goods to create or maintain new ones is to create conflicts. Adaptive management to maintain the public good in the face of environmental change is a different task from maintaining a working relation across the divide between appropriators of the new and the old goods. Adaptive co-management is a very interesting approach (Armitage et al. 2008; Bown, Gray, and Stead 2013; Sandström and Roya 2009; Berkes 2009).

Some observations on rights of common in Norway

In Norway the commons of old comprise sea and mountains as well as forests and ordinary waste lands. Market forces reaching into the forest commons (15th to 17th centuries) and new technology enabling fishermen to catch much more fish than before (late 20th century) have both triggered processes that might be interpreted as tragedies of the commons. The right to harvest forest and the right to fish have in the aftermath tended to be individualized, or enclosed if you will. But any causal link between overharvesting and the enclosure is at least complex and contingent.

In a judgement of the Supreme Court of Norway from 23 October 2013 (HR-2013-02200-P) an administrative regulation from 2005 awarding a company fishing quotas without time limit was accepted as valid and could not in a new regulation from 2007 be given a time limit without violating the constitutional prohibition on making rules apply retroactive. One may see this as a sign that the enclosure of the fishing rights in Norwegian waters has come a long way since 1989 when the cod fisheries collapsed leading in 1990 to the introduction of fishing quotas tied to particular fishing vessels. Enclosure, Norwegian style, is a slow long term process rather than an abrupt shift in the system of rights. Berge and Haugset (2013) provide

details on one case where rights of common have disappeared from those commons that in the 1863 legislation were defined as "private commons".

Eythórsson (2008) provides interesting details from the enclosure of fisheries. He writes about the coastal fishers of Finnmark and their struggle to keep the fjord fishery as a commons for the local fishers. They failed in this, and for many reasons. The ethnic identity of the local fishers as Saami, the lack of understanding of the fjord ecosystems among marine biologists, and the strong position of the of the Norwegian Fishermen's Association in the design and implementation of regulations, as well as the invasion of harp seals and the red king crab can all be seen to contribute to the deep crisis of the 1990s⁸. Both in the ministry and in the Norwegian Fishermen's Association there were strong opposition to proposals for delegation of regulatory authority to local bodies. But the introduction of the valuable red king crab and the very profitable fishery on this species has made it possible to approach a kind of local fishermen's commons. One may speculate that the lack of established interest groups around this fishery as well as the push from the Saami Parliament whose powers were growing during this period may be part of the explanation for this. There is no doubt that the general trend in the sea is towards enclosure. This goes on despite the fact that the Norwegian state is formal owner of the sea surface, the sea bottom and the fish resources.

Fish farming may be seen as part of this enclosure process. The state as owner of the sea areas leases these to fish farms and collects fees for this, resulting in a de facto privatization of former "open access" areas. At the same time the owners of the permission to run fish farm (concession) has changed from local entrepreneurs to large scale national companies.

On land the enclosure process has a longer history and proceeds at a slower pace. But interestingly enough, apparently the privatization of established rights of common may continue despite judgements to the contrary of the Supreme Court and established facts of long-time use (Berge and Haugset 2013).

The individualization of ownership we see in fishery, fish farming, and in the exploitation of traditional rights of common on land have a counterpoint in the large scale landscape and nature protection processes designed to exclude unwanted human activity within the protected areas. Today this means excluding local people as well as large scale commercial operators. The intended beneficiaries are the current and future population of Norway, based on a general idea about enhancing their welfare. The goods protected are public goods and sometimes club goods. Everybody profits equally from the reproduction of these goods. Hence funding of the necessary effort can be done by the general tax fund of the Norwegian state. The common pool goods that local commoners traditionally have exploited have been managed by the commoners in a sustainable way for a long time. This can go on, but new ways of exploiting these resources and newly discovered resources worry the national nature protection bureaucracy. New ways will have to be approved by the bureaucracy. Seen from the local population's perspective they feel excluded from new ways of exploiting the commons. In 2004 the Norwegian Parliament resolved to make it easier for local entrepreneurs to exploit the protected areas. As of 2013 this seems to have come to nothing (Fedreheim 2013). Protected areas are available for commercial exploitation only in theory.

The open access policy for salt water fisheries resulted in declining resources for local coastal fishermen in Finnmark. Efforts to create a preferential position for the local fjord fishers in

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⁸ For a summary in English see Broderstad and Eythórsson (2014).

access to local fish resources came to nothing for a long time despite pressure from both below (the Saami organisations) and above (the political leaders of the Ministry of Fisheries⁹). One might guess that the fisheries bureaucracies found it contrary to their ideas about justice and customary procedures.

The ability of bureaucracies to resist clear political decisions in the exploitation of protected areas and in the management of fisheries is a fact of life in complex modern polities. Sometimes it is an advantage for all, but as we see here, sometimes it will be to the detriment of what we think of as traditional commoners.

Can we learn anything useful from history? There are some reasons for not looking for lessons in history. One is that the organisations created today govern goods of very different characteristics than those of traditional commons. Very frequently new organisations are designed to care for pure public goods or very large scale club goods. The processes that sustain their reproduction are very different from the traditional common pool goods. Another reason is that the organisation has to be created at a scale above the local community, often also at a scale above the state. But exactly how do new public goods resources relate to older private goods or common pool goods resources when both are found on land and both are called commons?

Trends in the development of the commons

For traditional commons the trend in Norway is for declining exploitation by individual commoners while the exploitation by organised businesses, usually owned and organised by the commoners or by the state, is steady or increasing. Sometimes this process implies transfer of control from local entities to larger scale public bodies or public companies.

In England and Wales as well as in Japan it appears to be the same. Rodgers et al. (2011) explore environmental governance on common land. While the commons as an important element in the rural economy has been declining, they find it far from extinct. They also record the same tension as seen in Norway between the public interests in protected landscapes and the private interests in customary exploitation. But arguably the private interests have a stronger legal position than in Norway. The public regulations have to be more sensitive to local conditions.

In Japan Murota and Takeshita (2013) by and large find that exploitation of traditional commons (iriai) is declining and rights are in some cases privatized. But the processes are different from those observed in Norway and England. The formal powers regulating the exploitation are local governments interfering in the commons through the system of property wards that was the outcome of struggles over a local government reform from 1889. The property wards provided funding for public infrastructure. But de facto it was the individual land users who found ways of joint exploitation to everybody's advantage (continuing the iriai system). This caused customs to be a strong source for legal adjudication as conflicts arose. The duality of property ward and iriai was a working polycentric system with a dual power structure. But urbanization and industrialisation has caused a process of scaling up of local governments creating new regulatory bodies for the property wards with less knowledge of the customary ways of the iriai. Mergers of municipalities have proven a threat to the functioning and legitimacy of the property wards. At the same time declining use of the

⁹ Since 1. January 2014 "The Ministry of Trade, Industry and Fisheries".

¹⁰ See contributions in Murota and Takeshita (2013) and Rodgers et al. (2011).

commons from fewer villagers, failed government forest policies, and increasing attention to environmental protection created new conditions for the commoners requiring new responses. The various strategies for adapting were not all successful and many commons have disappeared. Much has transformed into municipal property. In some cases local groups of volunteers have intervened to maintain aspects of the traditional commons that lack of use threatened to destroy, transforming the old style commons into some kind of recreational club (Shimada).

Takatsu in Murota and Takeshita (2013, 303-331) tells about a development in the shopping district centred around Kurokabe Corporation in Nagahama City that arguably can be analysed as the emergence of a new commons¹¹. The revitalization of the city centre required customers (the resource). How do you attract customers? To attract customers the commoners (the shop keepers of the district) went after what I have become used to call "signature products". Signature products are the antithesis to mass products. Signature products are one of a kind bearing the marks of its maker, the signature of its maker.

	Material	Immaterial
Signature	Artisanal products	Art performance
Mass-produced	Factory products	Internet entertainment

A shopping district may be seen as "an ecology" of active shops, dead shops, and shops growing up. Customers come to harvest from the ecology.

The shop keepers can also be seen as a club. They create local public goods that all can enjoy if they are members, including a pool of customers. Some of the local goods are in nature positive externalities, some are negative. And sometimes one may find free-riding members of such clubs. This perspective does not explicitly include customers. But part of the positive externalities is the increase in customers that comes from the joint attractiveness that competing shops generate. This may also be called network externalities.

Analyzing the transformation of a shopping district in the perspective of commons provides interesting perspectives on urban regeneration. If the end result in fact is an active and sustainable commons cannot be determined a priory, and is probably weakly related to what they prefer to call themselves.

The trend towards using the "commons" as a designation for that which one believes should be for common benefit within the community has not sparked many studies. Without more studies it will be difficult to guess about developments or implications either in general or for the established commons.

Concluding

The reduction of or disappearance of the medieval commons should not be lamented per se. But by forgetting about the old commons we forgot about the reasons for developing this amazing legal technology in the first place. The many enclosures simplified the landscape and disentangled the interdependence of interests and resources. But the simple landscape of dominium plenum did not last. Even before the turning point around 1850 large groups of people with stakes in the landscape appeared on the political scene and demanded their share of the values there. The enclosures had not managed to disentangle forever the multiplicity of

¹¹ This is reminds me of Foster (2011, 104)'s discussion of Business Improvement Districts ("BIDs").

partly interdependent users and partly interdependent resources. By the 1920s a new course in land use regulations pointed to the contemporary system of tenure.

Since the 1920se the drivers of change have been the advent of new concerns rooted in the interests of urban populations for access to nature and the protection of biodiversity, and the public health concerns about pollution and environmental degradation. The commons have reappeared but with new names. Today they are the lands of the National Trust, and the National Parks. They are seen in the parks in the cities and the green belts around them. They are admired as world heritage sites.

Property rights have to be renegotiated continuously as society and culture change. In doing so the level of specification of rights tends to grow. The greater specification allows problems to be solved. The solutions to old problems fade into the taken for granted and new problems take centre stage. The dominium plenum solution to internalising the externalities could not accommodate the more complex world of modern democracies.

Owning and exploiting resources in common or jointly is an old problem. Only recently have scholars realized that the problems of free-riding in provision and consumption, well known from the study of traditional commons, return in new guises in modern industrial societies. Technology (radio waves, internet) and knowledge (biodiversity, ecosystem services) produce goods that require collective action in agreeing on common rules for efficient provision, sustainable exploitation, and just distribution. The new goods do not replace the old ones provided by nature (forest, pasture, wildlife), but appear as layered on top or beside the old goods. This reality creates a more complex problem of governance.

If we can see no continuity between the old well working commons and the new commons appearing in complex urban societies, the commons as a social and legal reality will have to be reinvented by trial and error. Fortunately the scholarly study of the new and old commons promise better approaches.

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