Commons

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Abstract

The concept of the commons is increasing in traction across multiple disciplines as researchers explore ways we might live 'in common' with other people and the world around, and with consideration for the wellbeing of current and future generations. This chapter traces how the work of human geographers builds on research in other fields, including ecology, political science and history. It shows how human geographers attend to processes of commoning with examples drawn from commons on land, air and sea.

Introduction

In recent years and across multiple disciplines, there has been increasing interest in the concept of the commons. For many researchers, and activists, the concept speaks to an interest in understanding how we are to live 'in common'—with other people and with the world around. What are the things we share? How can we manage these commons so that current generations benefit while the commons are still protected and sustained for future generations?

As these questions suggest, this area of research is exciting and dynamic. Researchers continue to study the topic area that is foundational to understanding the commons—the ways that humans interact with and manage so-called natural resources. But the concept is being extended into novel areas of research, such as digital commons, knowledge commons, urban commons, educational commons and health commons.

This diversity of research, of course, begs the question, what are commons? David Bollier, a long-time writer about the commons, presents us with a compelling definition: "*The commons is not a resource.* It is a resource *plus* a defined community *and* the protocols, values and norms devised by the community to manage its resources" (2011, np, original emphasis). This three-pronged definition draws our attention to the resource that comprises a commons, for example: a river; a children's playground; an open source software program. But we also have to consider the people who gather around that commons, for example: a diverse group of recreational kayakers, tourist operators, and Indigenous custodians; a group of parents and children who meet regularly at the playground; a collaboration of developers, coders and programmers from around the world. And we have to include the agreed-to 'rules' by which the group governs their shared resource, for example: take all waste home with you; take turns on the equipment; acknowledge the contribution of others.

This definition highlights three qualifications that come with commons thinking. Notice how there is no mention of legal forms of property. Commons can be created on any form of property, whether private property, public property or open access 'property'. Notice too how there is no mention of government bodies. State agencies may be part of the group that gather around the commons but their involvement is not always necessary (and sometimes state involvement can even undermine a

commons). Finally, there is a temporal element to the commons. Some commons such as a river that has been cared for by generations of Indigenous custodians may be thousands of years old; some such as a children's playground may only function for short periods during the day (indeed, other users at other times of the day, or night, may create their own commons around that same resource with a different set of shared 'rules').

Two researchers whose work has been pivotal to the study of commons are Garrett Hardin, an ecologist, and Elinor Ostrom, a political scientist. Their work has shaped how others, including geographers, study the commons especially those based on natural resources. This chapter starts with the contribution of Hardin and Ostrom, and then highlights how geographers have built on their insights, with examples of commons based on land, air and sea. The chapter concludes by outlining some of the ways that geographers are extending commons research into novel areas.

The contribution of an ecologist and a political scientist

In December 1968, the journal *Science* published an article by the ecologist Garrett Hardin, entitled 'The Tragedy of the Commons'. The article was significant in two respects. It was one of the first academic publications to focus on the commons (and worth noting that the article was published in *Science*, one of the most prestigious scientific journals). As Elinor Ostrom later noted, until this article was published there were virtually no academic publications on the commons (van Laerhoven and Ostrom, 2007, 5). However, Hardin's article introduced a catchy phrase, the tragedy of the commons, that has entered popular parlance and is frequently used in a misleading way to claim that self-interest inevitably overrides people's capacity to work together for shared benefit. Given the significance of Hardin's article—and his later recanting of parts of his article—it is worth spending a moment on this work.

Hardin explained the tragedy of the commons through an imagined example, a pasture that is shared by cattle herders. For a while, the number of cattle using the commons pasture is in balance with the carrying capacity of the pasture. However, over time, each herder adds more and more cattle to their individual herd. This leads to overgrazing and collapse of the pasture. From this example, Hardin concludes, "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all" (1968, 1244). Hardin also proposed that the commons can be ruined in other ways, for example, when pollutants are dumped into waterways because the cost of discharging waste into this commons is less than the cost of treating waste on-site.

As an antidote to the inevitability of ruin, Hardin advocated for closing the commons through institutions such as private property (to make each herder responsible for their own pasture) and taxation (to make waste generators pay for the cost of polluted waterways). Hardin saw this course of action, which he called "mutual coercion" (1247), as a continuation of the historical enclosure of shared agricultural land in western Europe, which in Britain culminated in the Enclosure Act of 1773. In essence, Hardin was arguing for private property and centralised government as the means for governing shared resources (Dietz et al., 2003).

Provoked by Hardin's article and his reliance on an imagined example, researchers undertook empirical studies of commons, especially of agricultural commons such as pastures, forests and fisheries, to better understand how commons worked in practice. Contrary to Hardin's imagined tragedy of the commons, these researchers found that commons were flourishing in diverse contexts around the world.

One researcher whose work has been pivotal to these studies is Elinor Ostrom. Her contribution was recognised by the awarding of the Nobel Prize in Economic Sciences in 2009 (the first woman to be awarded the prize) for her "analysis of economic governance, especially the commons" (The Nobel Prize, 2009, np). Ostrom's research has shown how shared resources can be effectively self-governed when two elements come into play. First, there have to be "evolved norms" (Ostrom et al., 1999, 279) which develop over time as users build a shared understanding of the resource and how it is wisely used. Second, out of these norms users need to establish rules of use that confirm things such as how much can be used, when use can occur, monitoring arrangements and sanctions for when the rules are not followed.

Initially, Ostrom studied agricultural commons at a local scale. One of her examples was the zanjera irrigation commons in the northwest region of Luzon in the Philippines (Ostrom, 1990). There are between 1,000 and 1,200 zanjera, and they range in size from two to 4,000 acres. The centuries-old zanjera commons is based on an ingenious method of apportioning land so that farmers have access to equal amounts of water, even during dry times. This helps to minimise conflict during drought. There are rules too that govern how the irrigation channels are maintained and managed. Some of the farmland on which the zanjeras are built is privately owned. But the evolved norms mean that access agreements with the landowners are respected, and that as a rule farmers pay landowners twenty-five per cent of their crop (or the cash equivalent) for use of the land.

Other self-organising agricultural commons that Ostrom and her colleagues have written about include mountain commons in Switzerland (see Figure 65.1) and Japan, forest commons in Nepal, and pastural commons in Eastern and Southern Africa. From this basis, research has examined commons in which institutions play an important role (such as the groundwater basins located beneath the Los Angeles metropolitan area), commons that are in a fragile state (such as some inshore fisheries in parts of Nova Scotia, Canada) and commons that have failed (such as some inshore fisheries in parts of Sri Lanka and Turkey). In research before her death in 2012, Ostrom was extending her work to look at knowledge commons (and pressures to privatise or enclose knowledge) and the digital commons.

Figure 65.1
Self-organising agricultural commons such as those found in the mountains of Switzerland have been a long-standing focus of research. Source: Photo by Daniel Seßler on Unsplash

As a result of the extensive empirical work of Ostrom and other researchers, Hardin reconsidered his initial proposition, and in 1998 he wrote a statement acknowledging that he made a "mistake" through "omission of the modifying adjective 'unmanaged'" (683). In other words, the tragedy is that of the *unmanaged* commons that are not governed by the types of norms and rules identified by Ostrom and others. We only need to think of the current context to recognise what can result when commons are unmanaged. Globally, we are experiencing a climate breakdown that is occurring because decades of greenhouse gases have been pumped into the unmanaged atmosphere that encases our planetary home. As researchers such as Ostrom have pointed out, it is crucial for the commons to be well-governed so that resources, including the resources on which life on this planet depends, will be sustained now and into the future. Geographers have contributed to this understanding of how these types of commons might be governed effectively. In follows we look at work of geographers who are researching commons based on land, air and sea.

Dimensions of the Commons

One of the contributions for geographers has been to expand on the idea of evolved norms and rules that are used to govern commons. Gibson-Graham et al. (2013) have done this through their Commons Identi-kit which identifies six dimensions of the commons and emphasises the relationships within a community that are drawn on to navigate these dimensions (see Table 65.1).

One of the examples Gibson-Graham et al. use to explore these dimensions of commoning is the West Arnhem Land Fire Abatement (WALFA) project in the Northern Territory of Australia. This initiative is based on the traditional practice of fine-scale mosaic burning in which regular controlled fires are used to prevent large-scale and highly destructive savanna wildfires. WALFA and four adjacent fire abatement areas cover over 80,000 square kilometres of land (an area slightly larger than Scotland). *Access* to the WALFA land is shared between five Indigenous ranger groups, and they negotiate *use* of the land through an annual meeting to plan and map the areas for burning. Each Indigenous group takes *responsibility* for the one of the five fire areas (including responsibility for following rules for monitoring, record-keeping and reporting), and they exercise *care* for the country by conducting mini-burns early in the dry season.

Table 65.1: Commons Identi-kit

Access	Use	Benefit	Care	Responsibility	Property
Shared and wide	Negotiated by a community	Widely distributed to community members and beyond	Performed by community members	Assumed by community	Any form of ownership (private, state or open access)

Adapted from Gibson-Graham et al. (2013) under creative commons licence.
https://www.communityeconomies.org/take-back-economy/tools-taking-back/5-property

What is striking about this example is how widespread the *benefits* are. The impetus for the project came from Indigenous custodians who were concerned that without customary fire management the country had become physically and spiritually sick. With traditional practices reintroduced the ecosystem is being rejuvenated and the destructive impacts of uncontrolled wildfires is minimised.

This includes a reduction in the damaging greenhouse gases (especially methane and nitrous oxide) that are concentrated in the high intensity wildfires that typically occur late in the dry season. Using technological know-how, WALFA is able to quantify the contribution the smaller early season burns make to reducing GGE. As a result, WALFA is registered with the Australia's Clean Energy Regulator and they are issued Australian carbon credit units which they sell on carbon markets. The funds raised are used for initiatives such as Indigenous-led educational, employment and training activities, long-term management programs for threatened flora and fauna, and protection of customary ecological knowledges.

The WALFA commons is held on land with Aboriginal tenure, which means it is a form of *private property* 'owned' by traditional custodians. Gibson-Graham et al. use this example to highlight how commons can be created on any type of property. As they argue, "ownership of property is largely a legal matter and does not deter land or other resources from being managed as a commons" (132).

Implicit in the Commons Identi-Kit is a focus on the community that gathers around the commons and the ways the community draws on evolved norms to navigate the various dimensions of the commons. In the case of the WALFA commons, these evolved norms are based on tens of thousands of years of living 'on country' and a deep and embodied understanding of the ways that humans are inseparable from the world around. The community that gathers around a commons need not be homogenous. Gibson-Graham illustrate this through the example of the Avocet Nature Reserve, a 2,700 acre reserve on privately owned land that has been protected from development (in perpetuity) through a voluntary conservation agreement with the state government. The Spooner family established the reserve on their cattle property to protect the endangered bridled nailtail wallaby, a small species also known as 'flashjack' wallabies. Around this flashjack commons a community comprised of diverse members has formed. This includes cattle pastoralists, researchers, conservation volunteers, state government program officers, and sporting shooters (who shot the wild pig population that would otherwise damage the grasses on which the wallaby depends for both food and shelter). This diverse group works together to navigate use and access, and take care and responsibility for the wellbeing of the flashjack commons.

Commoning as Doing

A second contribution from geographers has been to deepen the understanding of commoning as a process. The historian Peter Linebaugh has argued emphatically for the importance of this approach:

> To speak of the commons as if it were a natural resource is misleading at best and dangerous at worst—the commons is an activity and, if anything, it expresses relationships in society that are inseparable from relations to nature. It might be better to keep the word as a verb, an activity, rather than as a noun, a substantive. (2008, 279)

Building on this insight, Gibson-Graham et al. (2013) have expanded their Commons Identi-Kit to incorporate processes of commoning (see Figure 65.2). The Ways of Commoning diagram shows how commoning can involve reconfiguring enclosed property, on the one hand, or unmanaged open-access resources, on the other. The example of the flashjack commons above illustrates how what was once private individual property has been commoned. The WALFA commons is an example of commoning an unmanaged resource that was to some extent open access because of how the colonisation process had removed people from their traditional homelands. Thinking of commons in this way draws our attention to the work that goes into creating new commons as well as the ongoing work of maintaining commons, whether those that have only recently been created (such as

the flashjack commons), those that are centuries old (such as the zanjera commons) or those that have been reclaimed (such as the WALFA commons).

The commons discussed so far involve relatively localised endeavours. What of enclosed property and unmanaged resources that are more large-scale? Can processes of commoning apply at these scales? As alerted to earlier, we can think of the atmosphere as an unmanaged open-access resource into which humans have pumped decades of greenhouse gases—with devastating impacts for life on this planet. With each passing United Nations Climate Change Conference it seems that time is ticking away and the likelihood of building a robust global atmospheric commons is being lost. Yet, there is an example of an atmospheric agreement, discussed by Gibson-Graham et al. (2016), that shows how commoning is possible at a global level.

From the 1930s to the 1970s chlorofluorocarbons (CFCs) and other ozone-depleting chemicals (ODCs) were widely manufactured and used in products such as aerosol sprays, foams and other packing materials, and refrigerators. In 1974, two researchers hypothesised that ODCs were depleting the earth's ozone layer, that part of the stratosphere that absorbs most of the sun's damaging ultraviolent radiation. This could not be confirmed until 1985 when two research teams using different types of technology found that the layer was indeed being depleted. One team even produced images of a hole in the ozone layer. The impact was like a scene from a disaster film. One of the scientists recounted that when the images were first shown "All hell broke loose, particularly in the media. People were scared and thought this could be a real disaster that could kill us, give us cancer" (Hansen 2012). The global response was rapid. Within two years the Montreal Protocol on Substances that Deplete the Ozone Layer was agreed to and it came into force two year later in 1987. By 2005 all 191 countries that ratified the Protocol had cut their production and consumption of ODCs by 95 per cent. Gradually the ozone layer is being replenished and the hole is repairing itself.

Figure 65.2: Ways of Commoning

	Access	Use	Benefit	Care	Responsibility	Ownership
Commoning enclosed property	Narrow	Restricted by owner	Private	Performed by owner or employee	Assumed by owner	Private individual Private collective State
Creating new commons	Shared and wide	Negotiated by a community	Widely distributed to community and beyond	Performed by community members	Assumed by community	Private individual Private collective State Open access
Commoning unmanaged open-access resources	Unrestricted	Open and unregulated	Finders keepers	None	None	Open access State

Adapted from Gibson-Graham et al. (2013) under creative commons licence.
https://www.communityeconomies.org/take-back-economy/tools-taking-back/5-property

In their analysis of what enabled this global commoning of a previously unmanaged open-access resource, Gibson-Graham et al. (2016) highlight how a diverse community gathered to take responsibility for this component of our atmospheric commons. As expected, it included scientists, politicians and national and international policymakers, but other groups were involved as well. Media reporting on the status of the hole had a large public impact; this helped raise awareness and led to citizens pressuring for action. Unionists refused to work with ODCs and multi-national corporations that produced ODCs pro-actively developed alternatives. There was a concerted effort on multiple fronts to care for the ozone layer, and to agree to standards for use and access. All this has resulted in significant benefits for life on the planet with humans, plants, animals and ecosystems being protected from excessive ultraviolet radiation.

In reflecting on the process of commoning, the political economist Massimo de Angelis argues that "there are no commons without *incessant* activities of commoning" (2006, 1, added emphasis). This statement is a reminder of two important aspects of commoning. First, it is a reminder that commoning is not a one-off activity. Once created commons need to be continually maintained and nourished. For example, even the highly successful Montreal Protocol has had to be revisited and revised. In 2016, the Kigali Amendment was introduced to address the new risk that comes from the use of hydrofluorocarbons as a replacement for ODCs. In the same way, groups that gather around a commons such as WALFA commons meet regularly to review and plan their activities and to respond to changes that inevitably occur. To reiterate, commoning is a doing.

De Angelis's statement is also a reminder of how we need to be vigilant about those commons that we take for granted and be alert to attempts to enclose these commons. Currently there is a commons battle raging over outer space. The 1967 UN Outer Space Treaty establishes that outer space is *terra communis* or common 'land'. The first principle of this treaty is a pretty good statement of the widespread benefit that should come from the commons: "the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind" (UNOOSA, nd). However, this commons is at risk. There are pressures to change the legal status of outer space to *terra nullius*, literally 'land' belonging to no one (see Figure 65.3). This would open-up outer space as a new frontier for nations to colonise and corporations to privatise. This form of enclosure would bring individual nations and corporations new-found wealth and power through activities such as asteroid mining for so-called 'rare earth' minerals. Closer to home, there are similar pressures on our polar regions and the deep ocean seabed. The same sort of effort that was needed to build a commoning community around the ozone, will be needed for these and other commons that are under threat.

Mapping the Commons

A final contribution that geographers have made to the study of commons is through mapping activities that highlight not just the extent of commons but the communities that help to constitute the commons through their commoning activities.

In much the same way that Hardin talked about the tragedy of the commons in his initial *Science* publication, there is a widespread view that the oceans currently represent a tragedy of the commons with fish and other marine life being depleted and degraded through overfishing, pollution and ocean warming. There is no doubt that the oceans are under great pressure; however, just as Ostrom and her colleagues told a more nuanced story of commons on land, so too there is a

Figure 65:3
With interest in the potential of outer space for activities such as asteroid mining, debates about the commons are being applied in new settings.
Source: https://media.gettyimages.com/

more nuanced story to tell about our ocean commons. Kevin St Martin is one geographer who is doing through using GIS technologies in a novel way with fishers to map communities and commons at sea.

In the northeast of the US, where St Martin is based, fisheries scientists and managers tend to think of commercial fishing as an activity carried out by utility-maximising fishers who are tragically overfishing the marine commons and therefore need to be policed. In discussions about the future of these fisheries, the voice of the commercial fishers has been largely silenced. However, St Martin worked with the fishers along the coast to map their use of the ocean, thereby making visible the ways that fishers from different ports and using different fishing gear interacted in different ways with the marine environment (St Martin 2009; St Martin and Hall-Arber, 2007). These maps become a talking point for fishers helping them to articulate the contribution they were already making to the management of the marine commons (for example by using their local knowledge to fish only in certain areas so that other areas had time to replenish, and by fishing in collaboration rather that competition with each other). Through these discussions, the commercial fishers became interested in devising their own area-based fisheries management plans. One plan had the commercial fishers catching fewer fish to achieve a balance between conserving fish stock while providing them with viable livelihoods that would support their land-based families and the local communities in which they lived (Snyder and St Martin, 2015). To help make this plan feasible the fishers formed a Community Supported Fishery which is based on community members purchasing a share of the catch in advance, with the fish delivered each week. This gives the fishers certainty about their income and means that they only catch what they have already pre-sold. The model has been taken up by over forty fishing-based communities across the US and Canada as a means of contributing to the sustainability of the marine commons while securing ongoing livelihoods for

fishers. This work of negotiating how the marine commons is used and accessed by the commercial fishers, and how they enact their responsibility and care for the commons is ongoing (see Figure 65.4) with the fishers now involved with the fisheries scientists and managers to deliberate on what fishing futures might look like in oceans that are under pressure from climate change and other threats (see also Bresnihan, 2016).

Figure 65.4
Concerns about the entwinement of environmental and human wellbeing are prompting users of open access spaces, such as the oceans, to act as responsible commoners
Source: Photo credit: Marc Guitard/Getty images

Conclusion

This chapter has focused on the ways that humans interact with and manage so-called natural resources and in so doing help to create commons that provide benefits for humans and the diversity of other forms of life on this planet. Through this focus we have seen how research conducted by human geographers is in conversation and collaboration with the work of others, including ecologists, political scientists, historians and political economists. But this is only one area of study through which geographers are making a contribution to our understanding of commons and processes of commoning. This contribution is perhaps most notable in the study of urban commons, with geographers exploring the role of initiatives such as community gardens and community centres, housing cooperatives, food-rescue networks, refugee and asylum-seeker camps in building urban commons (e.g., Huron, 2018). Others are building on the later work of Ostrom to explore commons of the future, including knowledge commons and digital commons (e.g., Dulong de Rosnay and Stalder, 2020). Finally, other geographers are exploring day-to-day practices of commoning and how these practices are both shaped by and shape a conception of 'personhood' that positions people not as insular individuals but as collective beings whose existence is interdependent with all those around (including the non-human) (e.g., Singh, 2017).

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Discussion Points

- What commons do you encounter in your everyday life? Following Ostrom, what are the evolved norms and rules which govern the use of these commons?
- Which of these commons do you think are robust and which are fragile?
- What are some examples of commons on different forms of property? Can you identify any commons on privately held property?
- Who can be involved in commoning? Explore this by using the Commons Identikit (above) to analyse one of the commons you have identified.
- What commons are most under threat? Can you identify some commons within your local area as well are international commons that are under threat. What are these threats? What's needed to maintain the commons? What role might state agencies play? What role is there for other commoners?

Further Reading

Bauwens, M., Kostakis, V. and Pazaitis, A. (2019). *Peer to Peer: The Commons Manifesto*. University of Westminster Press. London – Explores the creation of diverse digital commons by small peer-based groups cooperating around the globe.

Bollier, D. and Helfrich, S. (eds) (2015). *Patterns of Commoning*, Commons Strategies Group – A collection of over fifty essays by researchers, practitioners and activists that showcases examples of functioning commons the world over.

Hudson, B., Rosenbloom, J. and Cole, D. (eds) (2020). *Routledge Handbook of the Study of the Commons*. Routledge, London – A collection that introduces a range of analytical frameworks for studying commons in various contexts.

Linebaugh, P. (2014). *Stop, Thief!: The Commons, Enclosures, and Resistance*. PM Press, Binghamton, New York – A classic text that examines histories of various commons that have relevance today.

Vivero-Pol, J.L., Ferrando, T., De Schutter, O. and Mattei, U. (eds) (2019). *Routledge Handbook of Food as a Commons*. Routledge, London – A collection of essays that tackle the challenge of reframing food as a commons rather than a commodity.

Websites

- https://www.bollier.org/ - Covers news and perspectives on current commons issues.
- https://thecommoner.org/ - A web-based open-access journal that has regular contributions on issues related to the commons.
- https://www.thecommonsjournal.org/ - The website for *The International Journal of the Commons*, an interdisciplinary peer-reviewed open-access journal.
- https://www.onthecommons.org/ - Includes the *Commons Magazine* and a range of other resources related to the commons.