

Barbed wire on the Internet prairie: against new enclosures, digital commons as drivers of sovereignty

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Summary

The “digital commons” – which, like their physical counterparts (forests, groundwater, fish stocks, etc.) are resources which are managed collectively – refer to digital assets born out of information commons and the movement for free software which emerged in the late 1980s (GNU/Linux) and started to develop rapidly with the advent of the Internet in the 2000s (Wikipedia, Mozilla, OpenStreetMap, etc.).

While the Internet may originally have been seen as a “global commons”, the creation of “sovereign” networks by certain authoritarian regimes have led to its fragmentation, whereas the commodification of digital activity and the boom of monopolistic players pursuing lucrative ends led to new forms of “enclosures” comparable to those that transformed England’s agrarian system between the 16th and 18th centuries¹. By exploiting data from captive users, these monopolistic players have thus reintroduced “exclusivity” and “rivalry” in accessing the digital assets they produce, and created barriers to innovation detrimental to the creation of new value.

However, because they preserve a collective control of data and their use, digital commons indirectly challenge the hegemonic strategies of the major platforms. As a result, they constitute a significant lever for implementing multilateral governance – in the sense of mutual and mutually accepted constraints – of our data and the tools that use it, and to recover part of our digital sovereignty, in an open and non-hegemonic sense. It is therefore not only necessary to protect and strengthen the sustainability of existing digital commons, but also to encourage and support the creation of new commons.

Insofar as the development of digital commons is relatively absent from sovereignty policies at the European level, it is necessary to identify the resources likely to be jointly managed and exploited, while raising awareness among our partners, particularly European ones, of the strategic dimension of digital commons, in order to mobilize them accordingly.

The purpose of this article is therefore not to define the scope of digital commons in a technical, economic or political perspective, but rather to reflect on their strategic potential for Europe, within a digital world dominated by private monopolistic players, and driven by the structuring rivalry between China and the United States.

1. What are “digital commons”?

Two disciplines explain the specificities of the notion of digital commons: information theory and economic theory. With regard to the first, and because of the immaterial nature of digital resources, one can consider that the cost of copying and distribution of digital commons tends towards zero, which facilitates their sharing. Secondly, according to economic theory, digital commons own two main characteristics: they are (1) non-exclusive, to the extent that their large-scale sharing complicates attempts to limit access to them, and unlike their physical counterparts (forests, water tables), they are (2) most often non-rival, insofar as the

consumption of a digital resource by one does not prevent its consumption by another². In any case, digital commons are characterised by the collective management and sharing of resources created or made available.

A digital common is characterised by a number of rules³:

- Freedom of usage;
- Provision under free licence of the source code and the data produced by users (or even reuse via a non-exclusive sharing clause);
- The possibility to mobilize and exchange with its community (within which distinctions are not based on status but on differing levels of contribution);
- Provision of its brand (name, logo, graphic charter).

Among the resources that meet these conditions, distinctions can be made between the “minimal” digital commons, which can work without active contributions from the user community, and “contributory” commons, which require the full involvement of users⁴.

Various free licences⁵ – such as GNU-GPL, Creative Commons, ODbL, Contributive Commons, etc. – **clarify the rules governing the sharing and reuse of a digital common.**

Furthermore, governing commons⁶ requires guarantors (responsible for enforcing the rules or for public and legal representation) who supervise operators (financing and managing the allocated funds) most of the time affiliated to dedicated entities (foundations, associations, cooperative enterprises, etc.)

The most famous digital commons can be services (some free software and operating systems such as GNU/Linux), databases (Wikidata, National Address Database) or collaborative portals (Wikipedia, OpenStreetMap). Beyond the strict boundaries of the digital field, there are also hardware devices (open hardware) developed in open source and whose design (plans, software bricks) benefits from the use of common resources: projects such as Arduino (micro-controller), WikiSpeed (car) or RepRap/MakerBot (3D printer) bear witness to this, as do the “telecommons” – community and alternative telecommunications networks designed and governed jointly, usually on a local scale⁷.

Since they deploy horizontal and transparent governance within the communities that define their contours, digital commons embody **emancipation and empowerment of civil society**. Like other commons, they can thus be the object of a “utopian overload”⁸. Moreover, they do not escape the usual criticisms against the idea of common goods, suspected of calling into question the foundations of capitalism, but also of conveying naivety (be it economic, political, or even strategic). In practice, the commons actually help to “bridge the gap that apparently separates a purely collectivist and public management from and management by the “invisible hand of the market””⁹. In a context where the economic model of the digital giants is increasingly questioned, the commons offer a different approach which helps to conceive another political economy, complementary to the reflections on the taxation or even the dismantling of the digital giants.

2. The strategic interest of supporting digital commons

a) Private giants and the limits of the Internet prairie

While the Internet may have been considered at its origins as a “global commons”¹⁰ – due to shared protocols, interfaces and standards ruled by decentralized governance –, it has to be said that the numerous attempts at “enclosure”¹¹ (by the major technological platforms) and fragmentation (by authoritarian states)¹² that it has been facing over the last two decades are

increasingly putting this vision to the test. **Indeed, major private actors tend to introduce exclusivity and rivalry over access to the resources they produce.**

By deploying a platform strategy, they phagocytize value creation, limit innovation (barriers to entry)¹³, concentrate data enhancement and increase captivity within their ecosystems (barriers to exit, which are reflected in particular in poor interoperability and the capture of ever more personal data). In doing so, they prevent potential new value creation, while our dependence on their products increases accordingly. This structural dependency exposes us to multiple risks for our sovereignty that are already tangible (leaks of personal and commercial data, espionage, foreign interference...). **Controlling our data and the tools that benefit from them is thus a vital issue**, which cannot be reduced to the essential but partial protection offered by the GDPR.

b) Commons as levers for sovereignty and promotion of our values

Regaining sovereignty requires the production of one's own data. But it also requires preserving access to data and value creation, where necessary through adequate free licences, which can facilitate reuse for the benefit of the many and not just for the exclusive use of the hegemonic players¹⁴. Reinforcing this sovereignty for the benefit of commons obviously means rebalancing powers through an ambitious industrial technological policy as supported by France and the new European Commission. However, the management of the commons, which are shared, assumed and supervised by communities ensuring compliance with the rules they have imposed on themselves, allows the preservation of both personal user data (which would no longer be recovered in exchange for the “free” service, unless the community expressly decides otherwise) and access to the resources created.

By guaranteeing collective control of data and their commercialization, digital commons avoid being exclusively dependent on the major platforms and their capture strategies. Therefore, **these commons indirectly challenge the hegemony of monopolistic players and constitute a significant lever for recovering collective sovereignty over our data and tools that use them.** While initial efforts in certain strategic sectors have been encouraging¹⁵, promoting digital commons implies a dedicated policy if it is to be effective.

Furthermore, in an innovation-based economy, which requires combining accessibility to resources and the circulation of ideas, openness is a central value; it is the best guarantor of continuous innovation, much more than monopolistic projects and enclosures¹⁶, but also than protectionism (taxes and subsidies). **From this perspective, digital commons are a means of favouring innovation, to the detriment of position revenues established by monopolistic actors.** Supporting the commons would stimulate the diffusion of knowledge and thus innovation, while enabling users to create “sovereign” alternatives (independent of big players' specific interests).

This logic of commons is perfectly aligned with the values and vision of the digital space defended by France and promoted to our European partners and beyond: a safe, open, unique and neutral space¹⁷. In addition, **because they directly defend a model and priorities which are also those of the EU** (preserving general interest, fair competition, net neutrality, personal data protection, environmental sustainability, etc.), **digital commons should also become one of the pillars of a European sovereignty policy, from which they have so far been absent.**

c) *A convergence of interests between public authorities and digital commons*

As Valérie Peugeot puts it¹⁸, there are at least three reasons for creating greater convergence between public authorities and [digital] commons:

- “**convergence around a stated objectives** – both are expected to contribute to pursuing public interest;
- **a theoretical realism** – the commons don’t have an all-encompassing aspiration to respond to all collective needs and are not intended to fall within the field of democratic delegation;
- **political pragmatism** – the commons do not have enough political power to constitute a strong alternative to the excesses of capitalism”.

These three dimensions should encourage us to strengthen the coordination between public action and digital commons. As the guarantor of preserving general interest and public resources, the State has a role to play, all the more when it is a contributor and a member of a commons’ community because of investments (financial, material and/or human) that it would have made. **This role as a safeguard or even as a facilitator is essential to keep the hope of seeing the emergence of an alternative to the products of monopolistic actors.** The State has proven this in the past, particularly by supporting the “le.taxi” initiative, which “limits Uber’s hegemony in France”¹⁹. The issue is therefore also to support a normative framework favouring the sustainability of the commons: Net neutrality, which ensures equal treatment of all data flows on the network; support for innovation; open data in public and general interest domains²⁰; reappropriation of public data by competent authorities²¹; reasonable management of digital resources for ecological ends²², etc. Such principles of digital governance must be defended, not only by France, but collectively at the European level.

Beyond this, collection of data by and for users often serves, in the end, public authorities; such projects can be good investments at low cost and with non-negligible economic benefits²³. By having it done or by letting it be done, public authorities saves resources while demonstrating their confidence in their citizens, who are all the more inclined to serve the general interest when they have the necessary autonomy to do so. Direct examples of this include OpenFisca and the Global Biodiversity Information Facility (GBIF) which are developed and optimised by their respective communities, are now points of reference in France and worldwide respectively²⁴. **As a consequence, digital commons offer an opportunity to set out a new social contract with user communities: co-construction enables the comeback of public authorities in a new role, as guarantor and facilitator of the emancipation of the individual.**

3. A role for Europe

France could take the initiative of convincing its European partners to complement the current EU digital strategy throughout a better inclusion of digital commons. The proposals below could feed a genuine European policy in this area.

a) *Protect and support the existing digital commons*

Major monopoly platforms have a proven ability to integrate open source into their strategy as illustrated by various initiatives (Open AI supported by Tesla, TensorFlow developed by Google, GitHub falling into the bosom of Microsoft for \$7.5 billion, Red Hat into that of IBM for \$34 billion, etc.). **However, the support of monopolistic actors to the development of**

open source technological bricks allows them to save resources (by imposing standards, pre-empting recruitment, and guaranteeing sovereignty over essential bricks), while communicating about their generosity and values. These bricks are then incorporated in their final products, which are closely guarded and monetized. While open-source software is making progress on the market compared with the crushing weight of proprietary software players, a phenomenon which is forcing even these players to invest in the open source field, such funding and buy-outs are both a question of image (“common washing”) – through the promotion and even strengthening of “openness” or open data – and of more or less subtle (re)enclosures²⁵.

This shows the urgent need to protect and therefore guarantee the sustainability, especially economic, of digital commons projects; their non-rival characteristic and lack of inclination to capital accumulation makes it difficult to finance them nor make them profitable. This would imply the creation of a support fund for existing digital commons, along the lines of the EU-FOSSA project²⁶. This fund could be fueled by European private and public players to start with, before being potentially extended to any other actor sharing our concerns.

Reinforcing this sustainability would also require **special incentive mechanisms to be created**, be they financial adjustments, statutory clarification, specific administrative and legal support, rewards, etc. **Legal guarantees about the status of commons and licences²⁷, and establishing a right to contribution** – like the right to training – will probably be necessary to bolster the resilience and sustainability of the commons and to prevent contributing communities from exhaustion. In this respect, the EU would be able to rely on researchers and activists communities (such as Commons Network or netCommons)²⁸ who have been exploring these issues for several years.

b) Encouraging and supporting the production of new commons

In addition to protecting, the EU can also actively support and promote the production of digital commons, either through making public and general interest data freely available, directly contributing to a pre-existing project or an “ex-nihilo” creation, which would aim at co-producing with third parties a digital service meeting its own needs.

As regards cooperation, implementing projects (collecting and archiving data, cartography, developing applications and local portals) that are shared and co-constructed between public authorities and citizens at local level could be encouraged both in intra-European and extra-European formats. For greater agility and efficiency, these initiatives may require public authorities to be more of a facilitator or a partner, rather than a leader. With this in mind, **public-common partnerships, whose premises have already been drawn out in France and Italy²⁹, could be encouraged outside Europe**, and even replicated by interested local government bodies, as part of development aid.

Support for digital commons can also be provided through **direct financing of existing and future digital commons** identified as being of key importance. It may be possible to direct European subsidies towards both the protection and creation of new digital commons through the “Digital Europe” and “Horizon Europe” programmes and potentially through the ERDF. **Indirect financing, by providing dedicated resources such as hosting or storage** (today largely provided by private actors)³⁰, **should also be encouraged**, especially as it would not be expensive. The provision of such resources, which could potentially be pooled at European level, would help to increase the sustainability and, therefore, the independence of the commons in question.

Lastly, we need to identify, in conjunction with the already active communities of contributors, **the digital resources which could be exploited jointly and for which the EU could become one of the contributors**. This identification process is probably the most complex but also the most fundamental task if sovereign infrastructures are to emerge at national level and beyond.

c) Build a European doctrine, acquire the tools to embody it and drive it on the multilateral stage

All of this would, of course, require us to **raise the awareness of our European partners of these issues in order to build and feed a European doctrine on creating and protecting the digital commons**, together with an action plan (funds and protection mechanisms, incentives, regulation and support for contributing bodies, etc.).

In addition, it may be possible to **create a European foundation for the digital commons**, an entity that would be responsible for managing the financing mentioned above, but which could also host and support new initiatives (through legal advice, labeling, hackathons and code sprints, calls for projects, etc.). In order to counter possible attempts at recapitalisation, looting or exclusive capture, it could ensure that licences are respected, but also establish possible transfers of ownership and therefore of responsibilities – financing, governance, optimisation, etc. – within itself.

Lastly, the European strategy in this field should include an international component. Our vision of digital sovereignty is non-hegemonic and **this sovereignty must therefore show how it fits with a concept of international governance** which guarantees a “free, open and safe” digital world through multilateralism – as a mutual and mutually accepted constraint. **The commons are, here again, useful** in guaranteeing open digital infrastructures – be it against attacks on confidence and security in cyberspace (according to the Paris Call wording)³¹ but also against risks created by political control, technological mastery or financial domination.

¹ The enclosure movement refers to the restructuring process of the English agricultural system which saw heathlands and common pastures, managed collectively by peasant communities, being requisitioned, enclosed and distributed among large landowners for animal husbandry purposes, which later paved the way for the development of the first textile factories.

² In economic science, a “common good” is a non-exclusive good (it is not possible to prevent consumers from accessing it), but rival (consumption by an individual reduces the consumable quantity). A non-exclusive and non-rival good is rather referred to as a “public good”. Due to their immaterial nature, this distinction is not satisfactory for digital goods. In practice, the term “digital commons” has been used to refer to them - thus emphasizing the governance and collective management of these resources.

³ Matti Schneider, <https://communs.mattischneider.fr/>

⁴ *Ibid.*

⁵ According to the terms of the Francophone Association for Open-Source Software (AFUL), “the law automatically and implicitly protects all intellectual property by copyright”. Under this copyright, the protection is granted to the author and against any usage by third parties. Putting work, be it software or not, on the Internet, must therefore be a voluntary and explicit act. This act is expressed by the addition of a licence, which is a standardized contract provided to those that acquire the work (for free or for a fee) indicating the rights accorded, and any obligations imposed in exchange”, see: <https://aful.org/ressources/licences-libres>

⁶ A key theorist on the “commons”, Elinor Ostrom has defined the principles which should ensure the longevity of a common: (1) groups with defined borders; (2) rules governing the use of collective goods which respond to

local specific features and needs; (3) the ability of individuals concerned to modify them; (4) respect of the rules by external authorities; (5) monitoring of compliance with the rules by the community which has a stepped system of sanctions; (6) access to inexpensive conflict resolution mechanisms; (7) resolution of conflicts and governance activities organized in various overlapping layers. See: <https://www.ritimo.org/Histoire-et-theorie-des-biens-communs-numeriques#nb6>

⁷ Primavera De Filippi et Félix Tréguer, “Expanding the Internet Commons: The Subversive Potential of Wireless Community Networks”, *Journal of Peer Production*, 2015, <http://peerproduction.net/issues/issue-6-disruption-and-the-law/peer-reviewed-articles/expa>

See also: Félix Tréguer & Mélanie Dulong de Rosnay, “The Political Defence of the Commons: The Case of Community Networks”, *Triple C*, July 2020.

⁸ Valérie Peugeot, « Les Communs, une brèche politique à l’heure du numérique », in Carmes & Noyer, *Les débats du numérique*, Presses des Mines, Paris, 2013.

⁹ Ghislain Delabie, “Les communs à l’heure du numérique, comment créer de la valeur pour l’intérêt général”, *Medium*, September 2017, <https://medium.com/le-lab/communs-num%C3%A9rique-3a4f5127862b>

¹⁰ Hervé Le Crosnier, “Communs numériques et communs de la connaissance”, *tic&société*, vol. 12, n°1, 1/2018, <https://journals.openedition.org/ticetsociete/2348>

¹¹ Among several examples: extending the fields covered by intellectual property rights, management of digital copyright, increasing number of patents, limits on conditions of access and reuse, etc. For example, while the Linux code remains open and protected by open source licences, the progressive contribution of businesses to the operating system has not only enabled them to profit from the resource by pooling their R&D spending, but also to have partial control over the governance of the project, which is therefore no longer managed solely by the community of contributors.

¹² They tend to impose their views of a sovereign national network which can be isolated from the global network, while some even try to influence the technical structure of it. See:

<https://www.ft.com/content/ba94c2bc-6e27-11ea-9bca-bf503995cd6f?shareType=nongift>

¹³ Currently, a European innovator is often forced to use a set of resources (infrastructures, data, payment systems) that are owned by monopolistic players (Google Maps for map backgrounds, Apple Store for purchases, Facebook Connect to verify the identity of users, PayPal for payments, etc.). In so far as these players can modify the functioning or conditions of use – particularly pricing – of their services, they create a very strong and unequal relationship of dependence with innovators outside their companies.

¹⁴ Such as AGPL or EUPL free licences with “obligation of reciprocity” (sharing and reuse under a licence compatible with the original conditions) or Creative Commons CC BY-SA (attribution and sharing under the same conditions). While they are made publicly available, most resources that come out of digital commons are not destined to be in the public domain (i.e. without conditions for use and sharing).

¹⁵ For instance, the French Minister for the Armed Forces recently declared that “a study to achieve a completely free workstation[computer]” was ongoing, <https://www.senat.fr/questions/base/2019/qSEQ191012547.html>

¹⁶ Silicon Valley, which for a long time embodied this reality, now reflects it only partially, due to the platforms’ major hold on the local ecosystem.

¹⁷ The commons lead to collective management of our data and our technological bricks (“safe” aspect); the promotion of the Internet as an area of free movement and exchange of ideas, information and resources without restrictions (open); accessible to all (single); without distinction or discrimination (neutral).

¹⁸ See Valérie Peugeot, “Les Communs, une brèche politique à l’heure du numérique”, *op.cit.*

¹⁹ See Henri Verdier et Charles Murciano, “Les communs numériques, socle d’une nouvelle économie politique”, *Esprit*, n°5, May 2017, pp.132-145. NB. “Le.taxi” is a digital registry freely provided by the State which enables applications to provide taxis to their clients across France.

²⁰ Open data policy should not be seen as a magic solution; data are rarely reusable outside of the uses for which they were originally collected. It must therefore be accompanied by data quality enhancement whenever necessary, through standardized formats and templates which are accessible to all and documented to ensure they are understandable for as many individuals as possible. This work must be carried out upstream by the data producer (ministry, local or regional authority, State agency, etc.) and in close collaboration with future users (community of contributors), once again in a mindset of co-construction. It can take the form of public data infrastructures (IGN mapping, Météo France weather) or private collaborative infrastructures (OpenStreetMap). In the long term, the challenge will also be to create and provide civil society with the tools to comprehend this data and therefore ensure its usability.

²¹ For example, the data captured by players such as Uber or Airbnb should be made accessible to the local councils and government bodies that request it, as many elements (crowded places, traffic flows, maps, etc.) should not be the exclusive property of private actors, as they directly concern public authorities in charge of optimising the management of public space.

²² The “non-exhaustible” nature of digital resources leads to environmental predation that is contrary to the general interest, which must be able to be confronted with the ecological realities. This therefore implies thinking about the ecological sustainability and durability of the commons, in order to develop frugal and emancipating technological solutions vis-à-vis the dominant players in the digital market. This could notably involve a right to repair free hardware equipment. See Lionel Maurel, “Low Tech, logiciels libres et Open Source : quelles synergies à développer ?”, *Passerelle*, January 2020, <https://hal.archives-ouvertes.fr/hal-02550011/document>

²³ This is the case with the opening of the IGN survey and mapping institute’s “large scale database” to bodies responsible for administrative public service tasks, which has led to social benefits of €114 million per year. See Mohammed Adnène Trojette, “Ouverture des données publiques, les exceptions au principe de gratuité sont-elles toutes légitimes ?”, Prime Minister’s Report, July 2013.

²⁴ The GBIF gathers data on global biodiversity in open access (under a Creative Commons licence) and aggregated according a standardized format that facilitates their reuse. See <https://www.gbif.org/fr/what-is-gbif>

²⁵ For instance, the famous proprietary web browser google Chrome is based on the code of Chromium, a free web browser, to which it has added an overlay of various functionalities, allowing Google to capture personal data in a finer and more extensive way.

²⁶ https://ec.europa.eu/info/departments/informatics/eu-fossa-2_en

²⁷ It might be interesting to examine the notion of “reciprocal licences”, which would prohibit monopolistic players or exclusively profit-making entities from using digital commons, in the event that they do not make a prior contribution to the funding of these resources, or are not in line with the social values promoted by the projects concerned. Cf. Calimaq (Lionel Maurel), “Comprendre le principe des licences à réciprocité en 5 minutes”, - S.I.Lex -, 22 September 2014, <https://scinfolex.com/2014/09/22/comprendre-le-principe-des-licences-a-reciprocite-en-5-minutes/>

²⁸ <https://www.commonsnetwork.org/>

<https://netcommons.eu/>

²⁹ Similar to the French National Address Database (which came out of cooperation between the IGN French survey and mapping institute, the French postal service and OpenStreetMap France) and the projects supported by the Fondation Internet nouvelle génération (FING), in connection with the international MyDataGlobal initiative. See <http://mesinfos.fing.org/mydata-france/>. In Italy, this type of partnership has been created to manage water supply in certain cities such as Bologna. See

https://www.rtes.fr/sites/default/files/IMG/pdf/bolognaregulation_1_.pdf

Regarding public-common partnerships, see Jonathan Piron et Samuel Cogolati, « Vers des partenariats Public-Communs », *P2P Foundation*, 9 June 2017, <http://blogfr.p2pfoundation.net/2017/06/09/vers-partenariats-public-communs/>

³⁰ It must be noted that OpenStreetMap must use the infrastructure of a private actor (French ISP “Free”) to ensure its hosting and thus the continuity of its service.

³¹ <https://pariscall.international/en/>