

Jörg Lehmann

The Tragedy of the Cultural Commons



CAIS Report

Fellowship

Oktober 2021 bis März 2022

The Tragedy of the Cultural Commons

Background and Context

The term “commons” (German: “Allmende”) designates a shared resource which is managed by a community for the benefit of its members. Classical examples of commons based on natural resources are pastures used by nomads, fishing grounds or community forests. The over-use of these resources and their depletion by users driven by self-interest and the incapability of the community to balance its use for the sake of all its members is known as the “Tragedy of the Commons”.

The concept of the commons has been adapted in the 21st century to understand phenomena such as Wikipedia. This example may support an understanding of the following characteristics of a digital cultural commons, which have been described by Haux (2021). A digital cultural commons is characterised as a (virtual) **space** defined as a place of social and cultural practices and the context of social interactions, and thus as a relation between the participants and the digital culture. The interactions and relations between them provide a normative structure which enables and accompanies cultural practices. This space is also the place for the creation of **digital culture**, which marks its second feature. In this way, a change from a classical understanding that captures material aspects to the comprehensive consideration of intangible goods to be assigned to the digital heritage is performed. **Access** may be granted based on Article 27 of the Universal Declaration of Human Rights, which says that everyone has the right to freely participate in the cultural life of the community. However, in the sense of the traditional “Allmende”, access is complemented by the implementation of duties. These obligations are necessary to build a sustainable commons. Examples of such duties are taking care of existing data by providing metadata or annotations, keeping licences up to date, or by financially supporting the technical infrastructure of the commons. Access to the digital cultural commons furthermore has to be ensured for example by interoperability, energy consumption, and server capacities. **Sustainability** is also warranted by a selection of the digital assets to be preserved; in this way, the function of selection and filtering is performed. Sustainability also includes ensuring social contexts as well as contexts of meaning; governing the commons implies therefore the creation of a protected framework to institutionalise exchange within its space and ensure equal participation. The question of **compensation** aims at funding sources that support the overall framework of the commons monetarily. It also touches upon the commercialisation of

digital culture and therefore challenges traditional binary decisions, such as intellectual property rights versus public domain. Consequently, a digital cultural commons has to establish and ensure **relationships** that both enable people to work together collectively in the digital space and to continue individual use and editing or appropriation of digital content.

In my research project at CAIS, I examined digital cultural heritage as a cultural commons and analysed the current situation in the Europe Union along the following research questions:

- In what way can the entirety of cultural heritage institutions be understood as a cultural commons community and who can be understood as a community member as opposed to non-members?
- What exactly constitutes the value of digital cultural heritage in contrast to physical cultural heritage?
- How can a possible “tragedy of the cultural commons” be mitigated?

Approach and Method

For the analysis and systematic comparison of cultural heritage institutions as a commons, an analytic framework was used which had been developed by Frischmann et al (2014). This “Knowledge Commons Framework” was adapted to the cultural sector. 14 interviews were conducted with cultural heritage practitioners, technical experts and law scholars, providing in-depth information on the current situation of cultural heritage institutions as well as the legal background in which they operate. The results were discussed in an online workshop with Professors Frischmann, Madison and Sanfilippo, who had established the Knowledge Commons Framework. The adapted framework was used for systematically analysing, comparing, organizing, and presenting the information gained from the interviews as well as from research literature on the topic.

Community Members and Non-members

The adaptation of the framework was necessary because a distinction had to be introduced with regard to the community of cultural heritage institutions and their users. The latter have to be differentiated into two groups: Users who visit a cultural heritage institution hold a library card or are in some way registered on the one hand, and external users and private companies who are just accessing the digital assets on the other hand. This deviation from the original framework reflects the fact that digitization implies as a consequence an involvement of **outside users** and the possible use they might make of the digital assets provided by cultural heritage institutions. The existence of outside users which are not members of the commons again points to the possibility of a **Tragedy of the Cultural Commons**. Because digital assets can be copied endlessly without the risk of the resource becoming exhausted, an over-use of the resource is not possible. A tragedy can rather be imagined as a potential loss of communal benefits due to actions motivated by self-interest: Outsiders may create profits out of the assets digitized mostly with taxpayers’ money, but these profits may not flow back into the commons. Such commercial use may also preclude cultural heritage institutions from potentials of value creation.

The Value of Cultural Heritage

Cultural heritage institutions fulfil a unique task: they select objects and collections from the vast pool of cultural products in order to preserve them and to provide access. In this way, **value** is created by institutions, most of which are not democratically legitimised. The value of cultural heritage is therefore created by the expert knowledge and the procedures centred

in these institutions, and this **valorisation** is only partly reflected by the free market (as, for example, by the art market). Even though there is no equivalent to these traditional cultural heritage institutions in the digital sphere, the task of cultural heritage institutions is extended to born-digital objects as well. This valorisation function of cultural heritage institutions can be demonstrated by contrasting them to the big tech companies: They tend to collect each and every digital asset without any further differentiation and store them as Big Data in their data warehouses. A consequence of the valorisation performed by cultural heritage institutions is the ennoblement of the selected cultural heritage and its placement in institutions endowed with high reputation and trust. The availability of cultural heritage as millions of digital items finally opens up the possibility to use it as **Big Data** – and therefore to monetise it, which implies a commodification of cultural heritage. Cultural heritage institutions can create **secondary products** out of it, such as establishing high-quality corpora fit for machine learning, constructing large language models (Bender et al, 2021), or providing machine learning models enabling machine translation. While the availability as Big Data offers opportunities for economic exploitation for both private companies and cultural heritage institutions, the latter have an excellent knowledge of the sources and domains from which the content they work with comes, they have metadata at hand which enable to curate it and may thus be able to provide high-quality products that serve their societies better than private companies would do. Since cultural heritage institutions have a good control of their collections, they may even be able to balance (or at least reach a good judgment of) possible biases in the data, in this way acting for the common welfare.

Mitigating a Possible “Tragedy of the Cultural Commons”

Seen from a commons framework, digital cultural heritage which is freely accessible via the internet can be characterised as a digital commons, as a shared good or resource that is managed by a community for the benefit of its members, or, in a broader sense, is accessible for society, or even for the global population as a whole. Cultural heritage institutions, on the other hand, can be perceived as institutions governing these assets; just like the classical commons communities who manage the resources, they neither pertain to the market nor the state. Rather, the emphasis is on self-organisation. But the state – or the European Union – provides the regulatory framework in which these institutions act. This framework consists in the legal context of the two **rights regimes** of public domain and intellectual property rights which apply to the works under consideration here. The European Directive on Copyright in the Digital Single Market (European Commission, 2019) has introduced two mandatory exceptions for cultural heritage institutions: The first exception allows for making digital reproductions for the preservation of works which are permanently in their collections. Cultural heritage institutions can therefore digitize works which are still under copyright; however, they are not allowed to provide access to these digital assets. The second exception allows to make use of their assets for the purpose of text and data mining; it thus enables the application of machine learning procedures and the development of artificial intelligence (AI) applications.

A **Tragedy of the Cultural Commons** can therefore be mitigated by cultural heritage institutions developing secondary products on their own, like establishing machine learning models, providing parallel corpora for machine translation, establishing large language models for text generation etc. The European Directive on the Legal Protection of Databases (European Commission, 1996) provides the legal basis for cultural heritage institutions to license their contents and thus to regulate access for their users as well as for private companies. Moreover, and following the example of the Data Governance Act (European Commission, 2020), it is possible for institutions providing data and models to **demand fees and to realise profits**; with respect to fees, it is even possible to differentiate between small and medium-sized businesses (SMBs) and larger companies, such as the big tech

companies. While digitization is mostly state-funded, the significant maintenance costs associated with the management of the digital assets – such as technical equipment and human resources – can therefore be covered, at least partly, through such fees.

Moreover, if cultural heritage institutions aim to develop secondary products on their own, this would open up the possibility to **strengthen their bonds with registered users**, for example by including them in the establishment of machine learning procedures. Users may become engaged in crowdsourcing activities, such as annotating images or collectively putting captions, labelling data or enriching metadata. Such approaches would carry forward the traditional idea of the commons, where members of the community are obliged to fulfil specific duties, and they would strengthen the commons as a whole and foster the management and sustainability of the resources.

These developments point to a maintenance of the commons which enables digital sovereignty and self-organization of cultural heritage institutions within current legal regimes. The consequence of these trends lies in reviving a classical and historical conception of commons as closed spaces with resources to which only an elite has access. In these **elitist communities**, self-regulation, trust in the normative framework, and the importance of obligations serve the maintenance of the resources, while non-members of the community have to ask for access to licensed content and have to pay fees. The downside clearly lies in a compartmentalisation of the internet and in a disbanding of the idea of open access for everyone.

Open Access Publication

An extensive research report as well as the redacted interview transcripts and an export of the codes used for the analysis of the interviews was published. It is available open access at <https://doi.org/10.5281/zenodo.6513596>.

CAISZeit Podcast

Matthias Begenat and Silke Offergeld (Referentin für Digitale Gesellschaft und Medienkompetenz in der Staatskanzlei NRW) recorded an interview podcast with me on April 22nd, 2022 in German language. This was published on the CAIS website on May 17th, 2022 (CAISzeit podcast #11 Digitale Allmende? Kulturgüter im Netz, available on <https://www.cais-research.de/aktuelles/caiszeit-der-podcast/>)

Conference Presentation

The topic of digital commons has been discussed during the 2022 Weizenbaum Conference on “Practicing Sovereignty. Interventions for open digital futures”. On June 10th, 2022, the researcher has presented on “Digital commons as a model for digital sovereignty: The case of cultural heritage”.

Acknowledgement

I want to express my sincere gratitude to the CAIS and the Ministerium für Kultur und Wissenschaft NRW, which funded this research project. I am particularly indebted to the wonderful team at CAIS College, and to the fellow researchers with whom I exchanged vividly on this subject.

References

Bender, Emily M., Gebru, Timnit, McMillan-Major, Angeline, & Shmitchell, Shmargaret. (2021). On the Dangers of Stochastic Parrots: Can Language Models be Too Big? *Proceedings of the Conference on Fairness, Accountability, and Transparency (FAccT '21)*, March 3–10, 2021, Virtual Event, Canada. ACM, New York, NY, USA: 610–623. <https://doi.org/10.1145/3442188.3445922>

European Commission. (1996). Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31996L0009&from=EN>

European Commission. (2020). *Proposal for a Regulation of the European Parliament and of the Council on European data governance (Data Governance Act) – COM/2020/767*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020PC0767&from=EN>

Frischmann, Brett M., Madison, Michael J., & Strandburg, Katherine J. (2014). Governing Knowledge Commons. In B. M. Frischmann, M. J. Madison & K. J. Strandburg (Eds.), *Governing Knowledge Commons* (pp. 1–43). Oxford University Press.

Haux, Dario Henri (2021). *Die digitale Allmende: Zur Frage des nachhaltigen Umgangs mit Kultur im digitalen Lebensraum*. Dike Verlag. <https://doi.org/10.3256/978-3-03929-012-3>

Table of Figures

Photo Titlepage: CAIS

Contact

Dr. Jörg Lehmann
Project Coordinator Literature Studies and Digital Humanities
Eberhard Karls Universität Tübingen
Email: joerg.lehmann@uni-tuebingen.de