



A Perspective on the Future of Studying the Commons

EDITORIAL

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INTRODUCTION

We live in interesting times. The 2020s might be the decisive decade for meaningful action to combat climate change. The COVID-19 pandemic, the war in Ukraine, and the rise of autocratic leadership have made this decade even more challenging. The future might be frightening, and many scholars wonder what kind of career to strive for. Do we continue business as usual?

In this guest editorial, I provide a personal perspective on these challenges informed by my Presidency of the International Association for the Study of the Commons (IASC) in 2019 and 2020 and organizing a series of 10 virtual IASC conferences in 2021 (<https://2021.iasc-commons.org/>).

We should change the way we do research, and various developments are demonstrating the direction of this change. I would like to address four topics, namely the broadening scope of commons research, the change in the nature of scholarship, the importance and challenge of sharing data, code, and protocols, and increasing opportunities to make our knowledge more inclusive.

TOPICS OF RESEARCH

Traditionally the commons literature has focused on natural resource governance as demonstrated by the influential work of Ostrom (1990). Comparative analysis of case studies of (rural) communities governing their shared resources of fish, forest, land, or water led to important insights into the conditions to avoid a tragedy of the commons.

Increasingly we see the commons' perspective being used in other application domains. I address four of them and do not aim to be complete. But they provide examples of potential collaboration across application areas.

Knowledge commons might be an application area that is well known to the readers of this journal. Elinor Ostrom and Charlotte Hess spearheaded the application of the commons concepts to the study of the knowledge commons, especially scholarly communication (Hess and Ostrom, 2007; Hess, 2012). Frischmann et al. (2014) elaborated on this work and broadened the scope of the knowledge commons literature. The Knowledge Commons virtual conference (<https://2021knowledge.iasc-commons.org/>) in June 2021 provided a good overview of the current discourse.

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Technological developments have made it easy to share knowledge, but this is not always desired or sustainable. The rise of open access journals, data sharing requirements, and open-source software has provided numerous case studies as a basis for analysis. Knowledge commons have also been applied to genetic information, cultural knowledge, traditional knowledge, etc. The digital world also has provided us tools, like using blockchain to monitor supply chains, and experimental platforms (online communities), that can be studied from a commons perspective.

Urban commons started to emerge as an application around 2010 to study the use of space in cities as a commons (Foster and Iaione, 2019). Topics varied from community gardens and parks to urban infrastructure and affordable housing. Collaborative comparative research has led to a global dataset of more than 200 examples (<https://commoning.city/>). Cities are also used as laboratories and urban living labs, where practical solutions are implemented and tested to enable self-governance at a local level. The LabGov initiative (<https://labgov.city/>) is a hub that networks initiatives among cities.

The 2021 Urban Commons virtual conference (<https://2021urban.iasc-commons.org/>) provided a vibrant overview of the current state of the field. This research domain has a strong collaboration between practitioners and academics in various parts of the field.

Outer space is unregulated and is getting crowded. Scholars from the space policy community have started to use the commons' perspective in their studies (Weeden and Chow, 2012). One of the critical issues is the problems caused by space debris (Rao et al. 2020), which may hinder the use of satellites in the near future (and therefore impact many technologies modern societies depend on). In 2020, President Trump declared that outer space is not a global commons, aiming to enable American entrepreneurs to compete in the space race for the mining of celestial bodies and other commercial activities.

The 2021 Commons in Space virtual conference (<https://2021space.iasc-commons.org/>) brought together for the first time scholars from traditional and space commons as well as industrial partners and practitioners in the space industry. It was remarkable how many similarities there are in discussions on outer space versus traditional commons, including the importance of inclusion of relevant stakeholders (we all are), the role of indigenous knowledge, and decolonizing the traditional space policy debate.

The recent COVID-19 pandemic demonstrated the importance of commons thinking in adaptation to challenging circumstances (community responses to provide local services such as food distribution), as well as medical challenges in the creation and dissemination

of vaccines, PPE and other medical technology. Although some work has been done on the health commons (e.g., Abimbola et al., 2014, McGinnis, 2018, Handfield et al., 2020), this seems to be a relatively unexplored application domain.

SCOPE OF SCHOLARSHIP

In the various debates during the virtual conferences as well as during the IASC membership meeting in October 2021 the nature of scholarship was discussed. The highly interdisciplinary nature of the field was well represented, including collaborations with art and humanities. But there is an increasing involvement with practical applications that might change the nature of scholarship and may experience some challenges.

It is well recognized that research in the scope of sustainability needs to become actionable (Palmer, 2012; Miller et al., 2014). Instead of expecting research findings to be useful and will find their way to the right stakeholders, actionable science aims to craft research questions together with stakeholders. This is a laudable endeavor, but academia provides some barriers for individuals to make this change. Incentives, like rules for tenure and promotion, are focused on traditional scientific activities and value the number of publications versus any societal impact of the research. Moreover, there are incentives for universities to continue the status quo to meet requirements in college rankings, department rankings, etc.

Change is happening. For example, the San Francisco Declaration on Research Assessment (DORA) calls for other assessment methods than the usual focus on Journal Impact Factors in evaluating research (<https://sfdora.org/>). I am fortunate to be a faculty at Arizona State University which has a long tradition of stimulating transdisciplinary research. Transdisciplinary research refers to research that integrates knowledge across academic disciplines and with non-academic stakeholders to address societal challenges.

But this is not yet sufficient. In our School of Sustainability we recently also changed the bylaws related to tenure and promotion to provide pathways for scholars to do more applied work and have this counted towards the scholarship. Obviously, the applied work needs to meet high standards of research design and analysis. But instead of only rewarding the number of publications, engagement with real-world problems is explicitly part of the evaluation process. Our School of Sustainability is housed within the Global Futures Lab, a university-wide initiative to provide an equivalent of a medical center for the planet where academic research coexists with formal collaborations with the business sector, non-governmental and governmental

organizations. The research of the faculty includes use-inspired basic research in line with Pasteur's Quadrant (Stokes, 1997) where different types of knowledge systems are explicitly included (like indigenous knowledge).

What could this more actionable research focus on? For example, given the need to transition rapidly to a low carbon, resilient and just society, commons scholars may contribute to the study of how self-governance could facilitate change at different scales and levels of social organization. We could especially learn here from the urban commons community who have been experimenting and networking with such laboratories.

OPEN SCIENCE SCHOLARSHIP

If scientific progress is supposed to happen by standing on the shoulders of giants, we are handicapped by the lack of sharing our work. Yes, we publish a lot of results, but we lack the capacity to share the details of how we do the research. This has been recognized for quite some time (Gewin, 2016; Stodden et al. 2016). Tools to facilitate open science are increasingly available via public archives, and journals and sponsors increasingly require more information on the data and code being shared. Just allowing authors to say that data is available upon request is found not to be happening (Tedersoo et al. 2021; Gabelica et al., 2022). We also see that at least one university, Utrecht University, will reward its faculty for their commitment to open science in lieu of the impact factors (Woolston, 2021).

However, within our community of commons scholars, we could do more to embrace open science and discuss its pitfalls (Carroll et al., 2021). Knowledge commons scholars may study institutional arrangements related to open science. But more could be done.

Given the collective action challenges, it would be daunting and ineffective to create one standard database, but we could set an example for better governance of our knowledge commons. Although this journal (IJC) strongly encourages authors to share their data in public archives, this is not sufficient. For all journals, it should be standard to require a statement on the availability of data (but availability is not required), information about ethics approval, and sharing scripts or code to reproduce the computational analysis.

As commons scholars know, having the technology available does not mean that they are used in an appropriate way. There is an opportunity for the commons community to find ways to improve our commitment to knowledge sharing in a just and equitable way. What are sustainable open access publishing models leading to high-quality work instead of predatory journals dominating

open access publishing? What would be effective ways to share data in an ethical and meaningful way using existing technical infrastructure? What are research opportunities to do big data social science of the many knowledge commons available?

INCLUSIVE SCHOLARSHIP

One of the highlights of the 10 virtual IASC conferences we organized in 2021 was the number of practitioners from all over the world who engaged in our events. From a bookstore owner in Hong Kong to an indigenous mother with her child in Siberia, Zoom allowed us to connect in real-time even if we did not speak the same language (using real-time translation services). Although the COVID-19 pandemic has hindered us from meeting in person, it forced us to experiment with new forms of engagement.

This form of virtual engagement should remain part of our networking portfolio since it allows us to be more inclusive due to low costs, no visa restrictions, and lower environmental impacts. We recognize that the experience is still not the same for everyone, since reliable internet is not available everywhere.

How to organize engaging virtual conferences is a collective action problem too. We find that most participants in the conference only attend a few sessions live, mainly those where they are contributors. This lack of engagement might be caused by the purposeful and selective attendance of sessions, leaving out accidental encounters in hallways and random meetings at conference dinners that could change the trajectory of one's career. When one is physically in a place, those encounters happen. More specific ways to connect early-career scholars with more established scholars can be envisioned, but there will always be variations in the availability of time, technology, and cultural accommodation. Time will tell whether improved ways of online engagements could improve the experience.

Inclusiveness also relates to the composition of the members of our community. Historical legacy has created roadblocks for a more diverse community and change is needed to remove those roadblocks (Rudd et al., 2021).

MOVING FORWARD

There is a need and an opportunity to change the way we conduct our study of the commons. Research has become more collaborative and transdisciplinary, and we see trends to focus more on actionable science in collaboration with non-academic partners.

Does a more actionable science mean that we are more normative and critical as a research community? Actionable science does not mean being an activist. Even if we have normative motivations, it might be most effective when one focuses on quality scholarship that evaluates the problem from diverse perspectives.

Our community could benefit from solving some of our own collective action problems. With the increasing awareness and available tools to support open science, there are opportunities to improve sharing of data and code. Technology also allows us to connect real time from different parts of the world, making knowledge exchange less exclusive.

The pandemic revealed the unsustainable workload and stress that many of us have to keep up with the expectations in the academic system (Gewin, 2021). Hence with the many opportunities we have, we can only make this a reality if we are able to change some of our incentive systems. Incentivize quality instead of quantity, allow for different types of academic outputs beyond articles, reward contributions to society as well as contributions to knowledge, and embrace diversity. Besides changes in bylaws at academic institutions, one can also start using an alternative Résumé as proposed by the Royal Society: <https://royalsociety.org/topics-policy/projects/research-culture/tools-for-support/resume-for-researchers/>.

To conclude, there are many exciting opportunities for novel research on the commons that could contribute to better governance of shared physical and virtual resources. But it also requires a change in the way we operate in academia. Change science practice to allow science to enable change.

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COMPETING INTERESTS

The author has no competing interests to declare.

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