

# Community Governance In Scholarly Communication

## Author

Dr. Samuel A. Moore, for Invest in Open Infrastructure, 0000-0002-0504-2897

## Summary

Part 1 of this document provides an overview of governance in the context of scholarly communication and open research infrastructures. With reference to the theoretical literature on governance in scholarly communication and open infrastructure, the piece illustrates some of the key considerations that relate to governance in this space, the importance of good governance and a discussion of some of the work that IOI is doing to improve our understanding of governance of open infrastructures. Part 2 of this document proposes a framework for community governance based on the elements discussed in Part 1, with relevant examples to demonstrate important pieces of what constitutes minimum viable governance in scholarly communication. The purpose of this exploration is to further our understanding of both the relevance and practice of governance in the scholarly communication space, particularly good governance that centres the needs and interests of the community in the operation of infrastructure services vital for research and scholarly communication.

## Part 1: The Foundations of Community Governance in Scholarly Communication

### The importance of good governance

Governance concerns the authority and oversight of an organization: how does stuff get done, who has the ability to make decisions, and to whom is the organization accountable? It relates to organizational structure, rules, norms, mission, and stakeholders, and how all these elements interact with one another. Irrespective of how informal, hierarchical or unspecified an organization's governance may be, it is still the case that all organizations are in some ways governed by a variety of internal and external factors. Good governance therefore necessitates durable structures and processes to allow an organization to adequately and equitably advance its mission.

Much of the discussion around governance in scholarly communication relates to the idea that the infrastructures for academic publishing and knowledge production are predominantly governed by the commercial imperative (Moore & Adema, 2020; Posada & Chen, 2018). Since the 1950s, the increasing marketisation of academic

publishing has led to governance by market forces and the need for publishers to sustain themselves through commercial operations (Fyfe et al., 2017). The corollary of this is that research communities are no longer in charge of the overall governance of their academic journals but are positioned through libraries as customers without a direct say in how each organization operates. As large commercial publishers look to control the end-to-end infrastructures for the entire scholarly communication workflow (Chen et al., 2019), the question of governance becomes one of how to enable control by a broader range of community stakeholders, rather than merely by shareholders and the market at large. This is all the more pressing in the face of increasing acquisitions and subsequent consolidation within publishing (Larivière et al., 2015), which leave the governance of critical infrastructures within the hands of a small number of large commercial organizations. In an open access world, for example, it has been shown that market governance is insufficient to provide a competitive market that may lower prices (Khoo, 2019), let alone oversight and accountability of the commercial publishing industry.

Taking this context as a starting point, it is clear that good – or at least better – community governance in scholarly communication is urgent. This report provides an overview of key considerations relating to governance of the infrastructures for open research.

## Key elements on governance in the scholarly communication space

In their 2018 report on community cultivation in scholarly communication, the Educopia Institute write that governance is often seen as a "distraction" for fledgling products and services (Skinner, 2018). Many of these initiatives start as labours of love, often managed entirely by one person, and community governance is often not considered until a product is self-sustaining or primed for acquisition, if at all. For Skinner and colleagues, this means that governance needs to be embedded as an organizational consideration as early as possible, as something that can build trust and accountability as an initiative matures (Skinner, 2018, p. 17).

But a number of tensions exist between the need for governance structures and the need for organizations to simply get things done. Firstly, as explored in a COPIM report on community governance, many organizations desire a kind of leanness that they perceive is inhibited by durable governance structures (Moore & Adema, 2020). This is perhaps because formal governance entails the relinquishing of control to a broader stakeholder community, something which may slow decision-making or will, for better or worse, work against the absolute control of what Nathan Schneider (2021) terms a "benevolent dictator". This is why many organizations are governed by a simple advisory board with no formal power except to give advice when called upon (as research by Educopia (2020) also confirms).

Indeed, there exists a related tension between organizational size and its governance structures. Many scholarly communication infrastructures are designed with scale in mind – that is, to expand without changing – and so governance processes need to be adaptable and have the potential to change. This is why, as the recent COPIM report on better practices for community governance shows, we can think of governance not as a static model but as a process of continually responding to changes within an organization and its landscape (Hart et al., 2022). This processual approach also means that governance is highly situated to the particular kind of organization in question, which limits the promise of complex and detailed off-the-shelf models.

With these considerations in mind, I believe it makes sense to look to so-called commons forms of governance – i.e. self-organized governance of a particular resource by a pre-defined community – for a more detailed understanding of some of the key elements of community governance. This approach is a formalized system of governance whereby a particular community has oversight and/or control of the maintenance and access to a resource. It does not refer to one particular thing but rather a continuum of procedures for sharing control and maintenance of the resource in question

Much has been written of the turn towards the commons and its application within digital infrastructures (Frischmann et al., 2014; Hess & Ostrom, 2007). For open-source communities in particular, commons forms of governance map neatly onto the ways in which many communities work. It is important, however, to note that "commons" refers not just to a resource but to the resource and its system of community-led governance, particularly the rules and norms around governing and maintaining the resource in question. Commons governance is often positioned as an alternative to market and state forms for this reason– as a third way of cooperation between these two modes of production and governance (Vercellone, n.d.).

The most noteworthy commons scholar, Elinor Ostrom, provides a number of theoretical ways of thinking about commons governance, aimed primarily at natural resources but applicable much more broadly. For example, Ostrom’s eight "design principles" are an empirically-informed description of some of the elements of successfully managed common-pool resources (CPRs). These principles are shown in Table 1:

Principle	Description
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<b>Clearly defined boundaries</b>	Individuals or households who have rights to withdraw resource units from the CPR must be clearly defined, as must the boundaries of the CPR itself.
<b>Congruence between appropriation and provision rules and local conditions</b>	Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labor, material, and/or money.
<b>Collective-choice arrangements</b>	Most individuals affected by the operational rules can participate in modifying the operational rules.
<b>Monitoring</b>	Monitors, who actively audit CPR conditions and appropriator behavior, are accountable to the appropriators or are the appropriators.
<b>Graduated Sanctions</b>	Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to these appropriators, or both.
<b>Conflict-resolution mechanisms:</b>	Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials
<b>Minimal recognition of rights to organize</b>	The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.
<b>Nested enterprises</b>	For resources part of larger systems, appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

Table 1. Ostrom's "Design principles illustrated by long-enduring CPR institutions" (Ostrom, 2008, p. 90)

From this table, we see that governance is intentional, rule-based and involves a number of institutional arrangements to make it work, such as conflict-resolution

and systems of democratic self-rule. Ostrom's work also offers a way of thinking about how larger organizations have smaller organizations within them, what she was later to explore under the banner of "polycentric" governance (Ostrom, 2010). Polycentric governance explores the ways in which self-organized common-pool resources are maintained by complex systems of decision-making that are formally independent from, but still interact with, one another. It is therefore highly applicable to the work of maintaining open source infrastructure and scholarly communication projects.

Yet, in this brief overview of commons governance, it is also important to stress that Ostrom is working within a rational choice theory of political economics that presupposes an understanding of humans as self-determined and self-interested "individuals". Many commons theorists have criticised this presupposition and instead offer an understanding of humans as necessarily bound to one another through situated forms of care and collectivity that are at odds with market-based models (De Angelis, 2017; De Angelis & Stavrides, 2010). A more collectivising understanding of human subjectivity moves us away from the rigidity of rules for commons-based governance and towards the cultivation of norms and cultures. This normative understanding of commons governance is cultivated in part through an organization's mission, vision and the values underpinning its work (Moore & Adema, 2020). More on these elements is explored below.

## IOI's work and recommendations for future research

Much of this theoretical paper has been quite abstract and seeks to explain the elements associated with good community governance of scholarly communication infrastructures. This abstract nature is due in part to the situation described at the start of this report that community governance of scholarly infrastructures is often quite a marginal concern in the face of commercial ownership. Furthermore, newly launched services may be hesitant to prioritise governance, in part due to the resources it requires but also due to the perceived competitive disadvantage that comes with opening up control of an organization to a broader stakeholder community. As the turn to community governance of infrastructure is currently underway, it is necessary to take stock of what the landscape looks like and what work still needs to be done to better nurture inclusive forms of governance in scholarly communication.

IOI's [Catalog of Open Infrastructure Services](#) (COIs) provides a helpful framework for understanding the health of the open infrastructure ecosystem. It is sensible to divide the governance assessment into structures and processes, on the one hand, and governance activities on the other, largely because structures can exist without evidence of their being actioned. Similarly, as the creators note, "there is a

fundamental difference between an advisory board or steering committee offering advice the organization can choose to ignore and a board of directors with a legally binding fiduciary responsibility to the financial health and good reputation of the organization". It is important, then, to document evidence of how governance takes place in the organization, not least because governance is a process that is continually being updated and shaped over the course of an organization's lifetime. An audit trail of these processes is vital for building trust in organizational accountability.

However, there is also the possibility that, in the absence of more detailed information available within the catalog, governance could be seen as too simplistic when presented as yes/no/partial in this way. As discussed above, all organizations are "governed" even if this governance is not intentional, community-led or particularly well thought through. For example, the mere existence of missions, visions statements and associated descriptions are forms of governance that shape an organization's work. Is it possible to achieve a minimum viable form of "governance" that makes sense for open infrastructures? What would be required for this?

Relatedly, it is not clear what the ideal organization should be aiming for from their governance procedures. At the moment, many of the organizations in the catalog have been assessed as having governance processes and activities on display, despite their being a huge variety of governance operations and accountability within these services. Is it possible, then, that the form of certification here elides the differences between minimum and best practice? This is perhaps due to the fact that many of the organizations take as their starting point the Principles of Open Scholarly Infrastructure (Bilder et al., 2015) which intentionally ducks the question as to what good community governance is, despite arguing for its importance. It is a difficult question but one that the community can no longer avoid answering.

Ultimately, as the varying quality of governance processes within these services shows, much more work is needed to determine what good infrastructural governance looks like and how to achieve it. Funders should be investing heavily in working out the difference between good and minimal practice here, not just for open infrastructure but across all forms of knowledge production too, both open and closed. This is because part of the ethical selling point of open infrastructure is that it is – or at least has the potential to be – governed better through its more equitable distribution of power. Exposing the shortcomings of both the "open" and "closed" ecosystems of infrastructures requires us to assess them by proper standards and more information is needed on what these standards are and what support is needed to make them a reality. It also will allow us to understand what kinds of governance intentions are possible into large, closed, commercial organizations and where it is possible to dilute commercial imperatives through community control.

A final area of consideration is the relationship between community governance and trust: how much of our governance work can be determined by rules and punitive sanctions, and how much of it should be dictated by normative behaviours, values and good cultures? Governance is just as much about trust as it is about procedure. How is it possible to capture whether organizations in the Catalog are actually trustworthy members of the research community, or is this even worth striving for? Such an approach could potentially allow organizational flexibility for "trusted" organizations and would allow for experimentation in a range of governance structures, rather than those imposed on them from various understandings of best practices. For untrusted organizations, the community could look to impose a variety of required processes and structures in order to decide whether to interact with them. Again, more research is needed here on the best approach for ensuring adequate accountability of the scholarly communication landscape.

## Part 2: Proposed framework of the essential components for better governance of open scholarly communication infrastructures

### Introduction

The first part of this report illustrated the importance of good governance of open infrastructures and some of the key considerations relating to how governance works in practice. Drawing on work on the scholarly communication landscape and its relationship to commons systems of governance, Part 1 above suggests how infrastructural governance could be improved in scholarly communication and what work would be needed to make this happen. In recognition of the fact that this area is currently increasing in importance, and that community governance is somewhat poorly practiced in scholarly communication, it was suggested that a minimum system for governance would be beneficial to advance the conversation. This document aims to provide a speculative and non-exhaustive framework for this minimum viable system of governance, offering context for the items suggested and recommendations for how to support this work.

As discussed in Part 1, these recommendations are aimed at the kinds of open infrastructure organizations that are amenable to increased stakeholder governance. The prototype may, therefore, help organizations increase community oversight of the work they do, while they may also help customers of organizations to demand greater oversight of the services they use. In any case, the situational nature of governance must be kept in mind while reading this document, which is a characteristic of governance that precludes the possibility of off-the-shelf models.

### Organizational structure

Governance can be embedded within the structure of an organization. For external oversight, for example, many boards rely on a simply advisory board structure of stakeholders and experts from whom strategic direction and counsel are sought (Moore, 2021). Advisory boards also set the tone of an organization and build trust and reputation through their membership. This simple structure is used as the primary method of governance by many of the organizations listed in the [Catalog of Open Infrastructure Services](#). It is at once a useful method for quick, reactive decision-making, while also affording a degree of stability through the permanence of its membership. Yet its simplicity is also a drawback as a method of community governance, especially if no actual power is formally devolved to this board. At a minimum, the power and responsibility of these boards need to be documented in writing, including to whom they are accountable and how they are subject to certain processes relating to how the organization operates (see more on process below).

The use of multiple boards that remove centralized decision-making from an organization, including through subcommittees and community-led approaches to decentralization, is strongly encouraged. These structures allow for individual communities both within and external to organizations to govern the work that they are responsible for or most affected by. Such examples of multiple board structures include [arXiv](#) and the [OPERAS](#) project. OPERAS, for example, is governed by various assemblies of external and internal members, including special interest groups and a scientific advisory committee, that are answerable to an overall executive committee. This approach is useful for larger, more complex organizations who each have a specific area of oversight.

A further approach to community governance through organizational structure is through innovative organizational models such as those proposed by the [CommunityRule](#) governance toolkit. CommunityRule is based on the idea that the values, communities and missions of different organizations can be well suited to specific kinds of organizational models. A series of [templates](#) are proposed to reflect the tension between pragmatic decision-making, consensus and community oversight, including models based on polycentricity, democratic consensus and self-appointed task managers. organizations can consult and tailor these templates for their own structures, allowing for models that move beyond simple commercial or "[benevolent dictator](#)" approaches.

Thinking about structure also forces an organization to consider who its stakeholders are, how they are involved, the diversity of the board, and what levels of power or oversight they have within the organization. It is important that the structure of these boards is documented publicly on the organization's website. In addition to this, as the next section discusses, democratic process is also necessary to consider, document and share.

## Democratic process

Alongside a well-designed structure, organizations need to define the rules around democratic participation and make these rules available for public consultation. These rules – and who can change them – are crucial to having intentional community oversight of a project, despite often being absent from community-led organizations in the scholarly communication space. The following sections detail some of the elements to consider in designing these structures.

## Bylaws, voting and conflict resolution

From the outset, organizations need to codify a variety of processes for how they operate. For example, bylaws determine the actions of members and set out the

processes for how the organization is governed. These are generally presented in numbered order with the date on which they were agreed upon coming into effect. In the scholarly communication space, ORCID is exemplary in many of its [governance practices](#), but especially its well-detailed [bylaws](#). These cover all the activities, policies and remits of the various committees that sit within the organization and the operations they perform, alongside the rules around how decisions can be taken. Importantly, organizations should document how these rules can be changed and the processes of conflict resolution in the case of disputes. See the following [blogpost by Janneke Adema](#) on how COPIIM crafted its own code of conduct.

While it is not in the remit of this framework to suggest how an organization governs its work through specific bylaws, it is important to note that these processes are what make an organization accountable and so they cannot realistically be avoided for true community governance. Community governance is situated and so the framework can only indicate the sorts of processes that organizations may want to consider as part of their governance activities. Nevertheless, the most important point here is that the more these processes are transparent and detailed, the greater the possibility for transparent community oversight.

## Ownership

Another aspect of democratic process is to define who the legal owners of an organization are and the conditions under which its resources are shared. While it is expected that "open" organizations share their infrastructures, data, code and publications as widely as possible, it is by no means taken for granted that they will do. Again, the conditions for sharing resources should be codified to allow for maximum dissemination of open resources. But conversely, particularly in the context of datafication and user surveillance (Moore, 2020; Pooley, 2022), rules around sharing user data should be established and agreed upon.

Ownership also relates to the future of the project or service. For example, what happens if the organization sunsets its operations or a key member of staff leaves the organization; under what conditions (if any) can the organization be sold; can the organization fundamentally change its mission or profit status; and so on? These questions can only be answered with respect to issues of community ownership. For example, the not-for-profit publisher Open Humanities Press approaches this issue through a legally agreed charter between itself and Open Book Publishers. In the event that [Open Humanities Press](#) winds down its operations, [Open Book Publishers](#) will take charge of any outstanding assets and resources according to the legal agreement. Similarly, DataCite [documents its processes for ceasing its operations](#), specifically who can enact this and how, and to whom any assets should be donated if any remain.

## Values/Norms

One final area of consideration is the more indeterminate practices of trust and community-building that come from an organization's culture, particularly the values and norms it espouses. Traditionally, these can be codified in instruments such as mission, values and vision statements. For example, the Dryad Data Repository outlines its [mission and vision](#) as follows:

*Dryad's vision is to promote a world where research data is openly available, integrated with the scholarly literature, and routinely re-used to create knowledge.*

*Our mission is to provide the infrastructure for, and promote the re-use of, data underlying the scholarly literature.*

These two statements provide the foundation for everything that the organization does. All activities should in some ways conform to these two statements. They therefore set the culture of the organization and encourage a certain kind of practice, especially when combined with an agreed set of principles that the organization abides by, often including codes of conduct and detailed commitments to diversity, equity and inclusion.

Yet values and principles can only do so much to build trust and accountability in an organization. The situated nature of governance means that much of the work to make an organization accountable to a community is also down to the cultures and norms on display. These are much more indeterminate and do not lend themselves well to formal codification. Instead, taking inspiration from the work of commons theorist Massimo De Angelis, we can look to the organization as a social system of interactions that are underpinned by a shared space, place or commitment to a political horizon (De Angelis, 2017, p. 75). This means that the relationships within an organization – and the forms of labour undertaken in them – should be valued and cared for as an ethical imperative.

As a recommendation, organizations should think hard about their politics and interpersonal cultures and document their work related to these areas. Many organizations, also host regular events to advance these agendas and bring people together from different communities for strategic alliance-building. It cannot, therefore, be ignored that it is a political decision to introduce and nurture cultures of governance in this way.

## Conclusion

The minimum viable system of governance outlined above includes a clear description of the organizational structure, including the governance approach adopted by the

organization; a well-designed structure for democratic participation codified in a set of bylaws proscribing the activities, policies, and remits of the governance body, as well as clearly define ownership and succession planning; and a codification of the organization's vision and norms in a clearly defined statement of purpose and mission. These elements, while necessarily different in their exact form and content for each organization, create the foundational elements of good governance for scholarly communication organizations, shifting the frame of reference in the operation of these structures from purely market forces to the larger needs and interest of the community, helping create durable structures and processes to allow an organization to adequately and equitably advance its mission.

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