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Accountability in the knowledge commons: lessons from Next Generation Library Publishing and the 2022 Values and Principles Summit

Values and principles provide a scaffold for community governance of the knowledge commons, engaging stakeholders in the construction of a system that encourages participants to adhere to a shared set of ethical and functional practices. This article introduces the FOREST Framework for Values-Driven Scholarly Communication, a toolkit and approach developed by the Next Generation Library Publishing project to assess a community or organization's alignment with scholarly values and principles. The article situates the FOREST Framework within the context of other initiatives advancing values-based scholarly communication and explains the importance of assessment mechanisms as a core element in governing an equitable and sustainable knowledge commons. It also synthesizes the findings of a half-day summit hosted in February 2022 that convened representatives of values-and-principles-based frameworks and initiatives in scholarly communication to strategize a collective future for these efforts.

Introduction

Over the last few decades, many values-based scholarly communication initiatives have described the power and promise of treating knowledge as a common good rather than as a commodity. Examples of the way open knowledge benefits society abound, perhaps most visibly today in the collaborative open science environments used to encourage and promote scientific and social discovery in response to the Covid-19 pandemic. People are becoming more concerned that trapping knowledge in a closed system is disadvantageous to most of the people who want to create, distribute and use that knowledge. Common mechanisms and business practices that promote information scarcity or primarily treat knowledge as a commodity rather than as a tool are under scrutiny.

This open vision starkly contrasts with the profit-driven work of publishing industry players who have used business practices that often impede, rather than advance, the broad diffusion of knowledge. Publishing models that rely on proprietary technology, artificial scarcity and enclosure are increasingly understood as incompatible with the characteristics of an equitable, effective and sustainable system of research communication, including interoperable infrastructure, reusable data and co-operative stewardship of information.[1]

Many groups have advanced the scholarly commons as an alternative to the profit-driven model, encouraging the development of an open knowledge environment designed to optimize information creation, diffusion and reuse by and for anyone, anytime and anywhere.[2] Many of these discussions build upon the work of economist Elinor Ostrom, a regular reference point in conversations about open knowledge. Supporting and maintaining such a commons will require the development of guidance and accountability mechanisms for commons contributors and users. The commons needs governance frameworks that set expectations for participants, ensure accountability to community norms and provide

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guidance around sustainable practices. The idea of 'knowledge democracy' as an alternative to the neo-liberal-aligned 'knowledge economy', further highlights the role of participatory and representative governance in a healthy and sustainable knowledge commons.[3]

The Next Generation Library Publishing (NGLP) project launched in 2019 with funding support from the Arcadia Fund, to encourage and empower libraries to take a leadership role in the development of this open knowledge commons through technologies and resources that facilitate values-driven, open publishing. NGLP seeks to improve and increase open publishing pathways and services for scholarly authors, editors and readers, and to support the fair and equitable production and circulation of knowledge.

This article introduces one of NGLP's key outputs, the FOREST Framework for Values-Driven Scholarly Communication, and documents its approach to assessing alignment with scholarly values and principles. It will situate the FOREST Framework within the context of other initiatives driving values-based scholarly communication and explain the importance of assessment mechanisms as a core element in governing the knowledge commons. Finally, it will synthesize the findings of a half-day summit hosted in February 2022 that convened representatives of leading values-and-principles-based frameworks and initiatives in scholarly communication to strategize a collective future for these efforts.

Accountability in the knowledge commons

The knowledge commons model of scholarly communication posits information as the inalienable resource of a regenerative system in which researchers continually build upon the work of others and return their own contributions.[4] It also assumes broad diffusion of knowledge as a public good, providing the means for communities to respond to the world's most urgent challenges.

'knowledge as a public good, providing the means for communities to respond to the world's most urgent challenges'

An equitable, efficient and sustainable commons requires robust governance mechanisms defined by and carried out by stakeholders. Values and principles provide a scaffold for such community governance, allowing stakeholders to construct a 'system for self-monitoring members' behavior' that aligns with and advances shared ideals.[5]

Shared values and accepted principles (standards of conduct derived from values and intended to provide guidance on translating values into action), can galvanize stakeholders around collective goals and simultaneously promote ethical and effective practices.[6] Ethical principles ensure that actors participate in good faith and operate in the best interests of all stakeholders. They provide heuristics that enable funders and decision makers to use values alignment to inform partnership and investment decisions. Effectiveness principles guard against 'the fragility of infrastructures that do not meet appropriate standards of governance, whether they are provided by large financially secure commercial companies, or small grant-funded academic initiatives'.[7] They provide guidelines for building resilient communities.

Over the last several decades, scholars and scholarly communication stakeholders have collectively issued dozens of manifestos, declarations, open letters and other incarnations of principles documents. In 2015, the FORCE11 Scholarly Commons Working Group inventoried more than 100 of these documents. Notably, over half of the documents included in this list were created between 2014-19.[8] A 2020 analysis of these initiatives conducted by the NGLP team identified remarkable consensus around core values and principles, providing a ready foundation for work that translates values and principles into concrete and accountable behaviors.[9] Values and principles are a starting point, the basis for collective action, but not its manifestation.[10] Assessment mechanisms provide the next layer of governance architecture, a means of evaluating adherence to accepted principles and providing a basis for holding participants accountable for their actions.

'Values and principles are a starting point, the basis for collective action, but not its manifestation'

Next Generation Library Publishing and the FOREST Framework

In June 2020, the authors proposed and vetted an initial methodology for auditing scholarly communication communities to ensure adherence to agreed-upon academic values and principles, with the dual goals of helping to guide values-informed decision-making by academic stakeholders and encouraging values alignment efforts by infrastructure providers.[11]

The authors invited community comment on the draft and commissioned an external review and pilot implementation with a cohort of NGLP project partners. Based on the public comment period feedback and the pilot findings, the authors worked with the library publishing community to refine and publish the FOREST Framework for Values-Driven Scholarly Communication, to connect commonly agreed upon values and principles with evidence-based, measurable criteria.[12]

The FOREST Framework defines six core values in terms of concrete and measurable actions and characteristics. The values include:

1. **F**inancial and organizational resilience
2. **O**penness
3. **R**esponsible governance
4. **E**quity, accessibility and anti-oppression
5. **S**haring of knowledge
6. **T**ransparency.

> 'The FOREST Framework defines six core values in terms of concrete and measurable actions and characteristics'

This framework prompts communities to consider the values they hold and how they demonstrate and communicate their commitment to these values. It provides guidance on concrete actions they can take to manifest their values more effectively, and it encourages communities to see themselves as part of an interconnected system (or commons) in which their actions and decisions directly affect other participants.

The FOREST Framework provides instruments for self-assessment and reflection that can be used by scholarly communication communities, including library publishers, infrastructure and tool developers and service providers. These instruments have been designed to recognize growth and progress (rather than just results), identify strengths (rather than only deficits) and center aspirations (rather than descriptions of the current state).

> 'The FOREST Framework provides instruments for self-assessment and reflection'

For each value, the FOREST Framework elaborates a hierarchical set of principles, indicators and evidence, defined as follows:

- Value: A quality considered intrinsically desirable
- Principle: A standard of conduct derived from a value and intended to provide guidance on translating values into action. The principles defined in this Framework concern both ethics and effectiveness. That is, they are designed to articulate standards of conduct that indicate good-faith, co-operative participation in the scholarly communication system and that contribute to organizational success
- Indicator: The practical, context-appropriate manifestations of principles in a community's operations and activities
- Evidence: The specific and concrete documentation substantiating a community's adherence to an indicator.[13]

These elements work together to enable scholarly communication stakeholders to first consider what values and principles are most relevant and meaningful to the communities with whom they work, and then to consider how best to manifest those values and principles in their daily work. The Framework encourages them to engage in critical reflection about what values they care about and how their own commitment to those values is, or is not, demonstrated by their activities. This might lead a practitioner to perform a self-assessment of its internal adherence to values and principles, as demonstrated by the Framework's

defined indicators and evidence. It might also provide a framework that a practitioner can use to assess prospective partners or service providers against the values and principles that they most value.

A library publisher, for example, might approach the FOREST Framework to help it make decisions about what tools and platforms to use in its publishing work. An editor might use it to advocate for specific improvements in the alignment of their publisher's actions with academic values and principles. A procurement office might use the framework to support the choice of one vendor over another, or even to challenge a vendor to improve its contract or offerings. A service provider might use it to conduct a self-assessment of its internal practices and policies.

Released in May 2022, the FOREST Framework builds on, and with, a variety of other values and principles approaches. It is explicitly designed to complement, not compete with, the myriad of other approaches being used to define, study and understand the values and principles that drive many scholarly communication practitioners towards openness, transparency, interoperability, community governance, equity, diversity and accessibility. It introduces new tools that can be used in conjunction with other approaches (e.g. Principles of Open Scholarly Infrastructure [POSI] or HuMetricsHSS or DORA) to begin evaluating adherence to and alignment with these commonly held academic values.

As part of our work to produce this framework, the NGLP project team planned and hosted a half-day summit involving many of the values and principles initiatives currently underway in scholarly communication.

Convening a community of values-focused initiatives

In February 2022, the authors of the FOREST Framework convened the Values and Principles Summit that brought together representatives from over a dozen related initiatives (see Appendix A for a full list of participants). Summit participants explored the synergies and differences in intentions and approaches, shared lessons learned (positive and negative) and devised strategies to bridge and align work across initiatives. Specifically, the summit provided an opportunity for participants to:

- explore synergies and differences in approaches to values and principles definition and assessment
- analyze risks/benefits of defining values and principles in terms of measurable actions, so these statements can be readily assessed and audited
- consider ways to bridge existing approaches to provide a streamlined and easier-to-understand and implement values and principles framework
- share strategies for ensuring equitable evaluation of organizations at different stages of maturity and different resourcing levels
- devise structures for incentivizing values and principles alignment that encourage genuine rather than superficial change.

Values and principles-based frameworks as catalysts for change

The facilitators (Skinner, Lippincott and additional NGLP project principal investigators and team members, Kristen Ratan, Catherine Mitchell and Brandon Locke) asked participants to reflect on the ways in which frameworks effect change and what factors make them more or less successful in doing so. Themes that emerged from the conversation are summarized below.

'Shared frameworks can provide strength in numbers around aspirational values'

Frameworks shift power dynamics

Shared frameworks can provide strength in numbers around aspirational values. They can normalize ideas or behaviors that might otherwise be dismissed as idealistic but not practical and provide communities with evidence of consensus when they negotiate or

collaborate with other initiatives that may push back. Broad adoption of a framework, or even adoption by a few influential organizations, can rapidly establish norms and exert pressure on other organizations to align. Leveraging the strength of established community members can empower smaller or marginalized groups. Conversely, frameworks allow smaller communities to band together to exert pressure on large and powerful groups to change the status quo. Frameworks that resist 'paying lip service' or 'gaming the system' are particularly powerful in this regard. Frameworks must oblige genuine, positive changes or contributions and must be continually re-evaluated to ensure that unintended consequences are remedied and loopholes are closed over time.

Frameworks facilitate collaboration

Frameworks acknowledging that values manifest in both process and product can help scholarly communication communities build more effective and supportive collaborations. Collaborations thrive when partners set expectations upfront; they can also stumble when misalignment is discovered late in the process. Frameworks allow partners to express and compare their assumptions and expectations efficiently and in common language. They can help to establish concretely and early on each collaborator's expectations about how internal and collective decisions will be made, how project outputs will be licensed and distributed, or how participants expect to resolve disagreements or handle abuse. Frameworks also bring nuance into conversations with new collaborators. Rather than reducing actors into different judgment-laden categories (e.g. for-profit versus non-profit), they allow stakeholders to evaluate the specific processes and activities their partners have in place to ensure a productive partnership.

Frameworks are tools of engagement, not checklists

Good frameworks encourage ongoing reflection and decision-making work by those that use them, and they recognize that not every element of a framework needs to be useful to or used by everyone. A framework should not be used as a checklist with the expectation that you 'mark off' evidence as though it demonstrates completion of a value or principle. Instead, activities should be considered on a spectrum, and frameworks can be used to help identify weaknesses and strengths and to plan changes. Engagement is ongoing and iterative, not a one-time activity.

Frameworks encourage informed decisions

Money talks, and procurement decisions have the potential to create large-scale change in scholarly communication. When community members are choosing where to invest their resources, values-based frameworks give them the tools to make and justify values-based decisions. The Publisher Scoring System, for example, provides libraries with a rubric for evaluating publishers based on practices that make them compatible with library values.[14] When integrated into a library's purchasing process this rubric can establish clear guidance for acquisitions.

Moving from aspiration to implementation

Even when communities fundamentally agree with the aims of a framework and espouse its values, implementation can lead to friction, discomfort and resistance. To be effective, frameworks must help communities bridge the gap between expressing support and transforming practices. Existing, entrenched heuristics provide accepted shorthand for value, influence and performance and can be difficult to disrupt.

Adhering to the principles detailed in the FOREST Framework, for example, requires substantial resource investment. It also calls for actions, such as executive pay transparency, that are not yet commonplace and that can make some organizations uncomfortable.

'Leveraging the strength of established community members can empower smaller or marginalized groups'

'values manifest in both process and product'

'Engagement is ongoing and iterative, not a one-time activity'

Communities may also worry that evaluating themselves against a framework will show them in a bad light.

Fundamentally, values and principles have to resonate with the community. Intentionally and thoughtfully involving diverse voices during the process of creating values-based frameworks and paying particular attention to involving stakeholders from marginalized groups (rather than asking for endorsement after the work is done) facilitates stronger frameworks and yields broader adoption and alignment.[15] Values and principles are not immutable and community engagement is ongoing work.

> 'values and principles have to resonate with the community'

A core challenge for implementation is balancing the need for frameworks not to reinforce existing power dynamics, privileging better resourced or mature organizations. Frameworks must be flexible enough to not disadvantage communities purely based on their resourcing or stage of maturity, while being robust enough to hold communities accountable and prevent individual players from 'gaming the system'.

Conclusion

Governing an equitable, ethical and sustainable knowledge commons requires mutual agreement on shared values and principles, bolstered by indicators and evidence. Distilling values, principles, indicators and evidence into frameworks developed and vetted by the community encourages participants to reflect and report on how their values manifest in practice.

Frameworks themselves require ongoing assessment to remain effective. Going forward, the NGLP project will apply principles-focused evaluation to understand how well the FOREST Framework and peer frameworks resonate with our stakeholders, whether communities adhere to the principles in practice (and if not, explore the reasons), and whether adhering to the principles produces the intended results.[16]

The FOREST Framework encourages practitioners to understand scholarly communication as a fundamentally values-laden practice in which policies and actions (or inactions) serve either to bolster or subvert inequitable and oppressive power dynamics.[17] Through a combination of introspection, such as completing an internal audit using the FOREST Framework, and public accountability, such as openly sharing the results of that audit, communities can hold themselves and their peers accountable to the values they espouse.

Appendix A: Summit participants

- HuMetricsHSS[18]
  - ∞ Nicky Agate, University of Pennsylvania
- Principles for Open Scholarly Infrastructures (POSI)[19]
  - ∞ Geoffrey Bilder, Crossref
  - ∞ Ginny Hendricks, Crossref
  - ∞ Cameron Neylon, Curtin University
  - ∞ Ed Pentz, Crossref
- Library Partnership (LP) certification (formerly PAPPI)[20]
  - ∞ Rachel Caldwell, University of Tennessee (UT) Knoxville
  - ∞ Robin Sinn, Iowa State University Library
- CoreTrustSeal[21]
  - ∞ Jonathan Crabtree, Odum Institute
- FAIRsFAIR[22]
  - ∞ Joy Davidson, Digital Curation Centre (DCC)
- Ethical Framework for Library Publishing[23]
  - ∞ Joshua Neds Fox, Wayne State University
  - ∞ Melanie Schlosser, Educopia Institute
- Innovations in Scholarly Communication[24]
  - ∞ Bianca Kramer, Utrecht University

- FOREST Framework[25]
  - ∞ Sarah Lippincott, Educopia Institute
  - ∞ Katherine Skinner, Educopia Institute
- Library Publishing Workflows[26]
  - ∞ Brandon Locke, Educopia Institute
- Principles of Transparency and Best Practice in Scholarly Publishing (COPE/DOAJ/OASPA/WAME)[27]
  - ∞ Catriona J. MacCallum, Hindawi
  - ∞ Claire Redhead, OASPA
- Next Generation Library Publishing[28]
  - ∞ Catherine Mitchell, California Digital Library
  - ∞ Kristen Ratan, Stratos
- Curtin Open Knowledge Initiative (COKI)
  - ∞ Cameron Neylon, Curtin University
- Good Practice Principles (COAR/SPARC)[29]
  - ∞ Nick Shockey
- Catalog of Open Infrastructure Services (COIs)[30]
  - ∞ Kaitlin Thaney, Invest in Open Infrastructure
- Digital Preservation Services Collaborative, DP Declaration of Shared Values[31]
  - ∞ Hannah Wang, Educopia Institute

Abbreviations and Acronyms

A list of the abbreviations and acronyms used in this and other *Insight*s articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: **http://www.uksg.org/publications#aa**.

Competing interests

The authors have declared no competing interests.

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