Editorial

Is *C&RL* Ready for a Data Sharing Policy?

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Introduction

In the summer of 2020, *C&RL* received a request from the ACRL Board of Directors to establish a registered report submission track as a major step to ensure *C&RL*'s high standards of rigorous methods. The request letter was signed by a group of ACRL members, led by Amy Riegelman, who later published an editorial on this topic (Amy Riegelman, 2021), calling *C&RL* to be more proactive in supporting open research practices. In order to increase *C&RL*'s rigor in supporting and implementing open research practices, it was recognized that both access to research data and transparency of research methods are necessary. From this line of thought, the *C&RL* Editorial Board, former Editor Wendi Arant Kaspar and Editor Kristen Totleben, have been engaged in an ongoing conversation on the possibility and the journal's capacity to implement a data sharing policy. For the past three years, Editorial Board member Minglu Wang has been researching academic journals' data sharing policies and reaching out to journal editors and editorial board members for consultation. Her efforts culminated in fall 2022 when she, Totleben, and Editorial Board member Adrian Ho conducted a survey (see Appendix) requesting input from colleagues in academic libraries regarding their perceptions of a data sharing policy and what types of data management support they would need or recommend.

This editorial aims to provide context and discuss the survey responses and next steps in terms of *C&RL*'s data guidance for authors. As the survey indicated that all responses will be confidential, we are not sharing the responses but rather providing an overview of the findings and interpretations for how to take action. In the spirit of transparency and straightforwardness, based on our findings and Editorial Board discussions, our next steps do not involve the implementation of a data sharing policy and at this time, no data sharing policy will be issued for *C&RL* in the foreseeable future. We have decided that it will remain the authors' choice of whether or not to share their data. It is recognized that as stewards and facilitators of information in its many stages of existence, it would be negligent not to keep up with what is happening with data in scholarly publications and how journals are evolving with data policies and related practices. For *C&RL*, it is the intention that reserving this choice for authors allows them the freedom to publish whether or not they are ready and willing to share data. Further, we

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realize that, in general, authors seek support in working with their research data. In candid discussion of what survey respondents shared and what the journal in its current state can provide, we are planning to include data management and sharing resources in the Author Guidelines and corresponding *C&RL* guide to assist *C&RL* authors, existing or prospective.

Overview of Research and Scholarly Environment

Open Science and Data Sharing

Originating in Europe (European Commission, Research and Innovation, 2019), open science has now spread to the whole world. The publication of the *UNESCO Recommendation on Open Science* (UNESCO, 2021) at the beginning of the 2020s marked a broader and deeper movement of open science. The White House Office of Science and Technology Policy (OSTP) has announced that 2023 is the Year of Open Science and there will be a series of open science policies, guidelines, services, trainings, funding programs, and initiatives, including the National Institutes of Health's expanded data management and sharing policy (NIH, 2023) and the Transform to Open Science initiative led by the National Aeronautics and Space Administration (NASA, 2023). Open science, as defined by the OSTP and the National Science and Technology Council, is beyond providing access to research articles and data. Instead, it refers to "the principle and practice of making research products and processes available to all, while respecting diverse cultures, maintaining security and privacy, and fostering collaborations, reproducibility, and equity" (OSTP, 2023). Similarly, the Canadian federal government has moved one step further toward open science with the implementation of the Tri-Agency Research Data Management Policy (Government of Canada, 2021).

The open science movement is not just a matter of government agencies or funders' policies or requirements. Research societies are already engaged and have generated positive impact on the development of open science, especially in terms of data management-related principles and frameworks. From 2021 to 2022, 11 societies and federation collaborators across disciplines co-hosted a 12-month Data Sharing Seminar Series for Societies in an effort to bring research communities' voices to the table and to provide societies and their journals with expertise and resources to share data and software (AAAS/Science et al., 2022).

In the meantime, research data management and sharing have been recognized as important scholarly activities in the research lifecycle. Funding agencies and academic journals have formulated data sharing policies to support open science and to facilitate reproducibility and innovative reuse of data. It is believed that data sharing is conducive to safeguarding research integrity and strengthening the public's trust in scientific studies.

In 2015, a group of researchers organized as a committee through the Center of Open Science (COS) published The Transparency and Openness Promotion Guidelines (TOP Guidelines) in *Science* (Nosek et al., 2015). The TOP Guidelines offer a framework of eight areas of openness and three levels of increasing rigor for each of the areas, providing journals with the flexibility of adoption with reference to their disciplinary contexts and cultures (COS, 2020). The TOP Guidelines Committee has since quantified the framework into a TOP Factor metric that can be used to assess a journal's steps to implement open science practices. Currently, *C&RL* is at level 0 in all areas of open research implementation.

Our review of the 53 articles published in *C&RL* in 2020 and 2021 reveals that the authors employed a variety of empirical methodologies to conduct their research. On the whole, seven articles included a statement about data availability while the authors of nine articles provided

links for access to their research data. Additionally, 42 studies shared research instruments, such as research questionnaires or interview questions. Despite not being required to share data, some *C&RL* authors were apparently cognizant of the open science movement and embraced the practice of data sharing when publishing their research.

LIS Journals' Data Sharing Policies

In his article examining open data policies among library and information science (LIS) journals, Brian Jackson (2021) observed that those journals published by large commercial publishers are more likely to have a data sharing policy when compared to small independent LIS journals because the large publishers had already adopted the policy and had ready-to-use author instructions for their LIS journals. However, such data sharing policies tend to serve as an encouragement rather than a requirement. Jackson predicted that some small independent LIS journals may potentially develop more rigorous data sharing policies.

To complement Jackson's findings, we investigated some LIS journals' data sharing policies and concluded that most of them encourage rather than mandate data sharing. Among the library association journals, the *Journal of the Medical Library Association* and *The Journal of the Canadian Health Libraries Association* have established policies that require authors to deposit de-identified data in repositories. However, they allow rare exemptions due to contractual or privacy concerns. Viewing these policies as inspirations, we contacted the colleague who spearheaded the development of the policies, Kevin Read. He generously shared with us insights about the policy development process, organizing working groups, author engagement, and areas that need special consideration and discussion, e.g., reaching a consensus on the definition of data. Read's advice was echoed by a study on journal data sharing policies in the sciences around the world (Christian et al., 2020). Specifically, both Read and Christian pointed out that the success in implementing a data sharing policy hinges on engaging stakeholders early in the policy development process.

With that in mind, the Editorial Board decided that soliciting authors' input should come before drafting a data sharing policy.

Survey on Data Sharing

Understanding the importance of authors' awareness and perceptions of research data sharing, we created a brief online survey (see Appendix for survey questions) and sent out invitations to participate via ALA Connect and multiple mailing lists. The survey was open from early October through mid-November 2022, and we received 161 valid responses. Based on the nature of the responses, we divided them into three categories:

1. Positive: These responses consisted of supportive comments with no concern or reservation (79 out of 161 responses; 49%)
2. Neutral: Each of these responses comprised a mix of supportive comments and specific concerns or reservations (57 out of 161 responses; 35%)
3. Negative: These responses were made up of noteworthy questions and/or comments that pointed out potential problems (25 out of 161 responses; 16%)

The three most frequently mentioned concerns pertained to:

- Data privacy and security
- Respondents not having access to an institutional repository for data sharing
- Respondents not willing to share data at the time of publication

Additionally, the respondents provided a number of recommendations with respect to data sharing. The three most frequent recommendations are as follows:

- Provide preferred and acceptable repository options as well as a comparison of the options
- Provide guidance, standards, and examples regarding metadata, file formats, licensing, documentation, etc.
- Elaborate the data sharing policy in the author guidelines

The responses suggested that most of the respondents were aware of data sharing and almost half of them expressed support for it. However, it seemed that some respondents understood the significance of data sharing but did not have (enough) hands-on experience with it. Thus, there existed a wide array of questions and concerns regarding how data sharing is carried out in practice. Among the respondents who were conversant with data sharing, some enthusiastically approved and advocated for it whereas others conscientiously brought up conceivable problems and were skeptical of a successful implementation of a data sharing policy for *C&RL* at this point. On the whole, the responses revealed that not all potential authors were willing or ready to share research data. Moreover, it is apparent that *C&RL* needs to engage in a variety of preparation work before we should roll out a data sharing policy in earnest. As such, it has been determined that no such policy will be issued for *C&RL* in the foreseeable future.

Next Steps

Thanks to all who filled out last fall's survey, the Editorial Board gained a better understanding of what needs to be addressed in order to facilitate a successful implementation of a data sharing policy. We realize from survey responses and Editorial Board discussions that some authors are not able to share their data for one reason or another. We respect that and do not intend to erect barriers to publication by requiring authors to share their data.

On the other hand, in the past few years, some *C&RL* authors have voluntarily shared their research data by indicating in their articles where readers can access it. To encourage this voluntary act and to present data information systematically, *C&RL* will include a non-required field on the submission form for a data availability statement. In the Author Guidelines and corresponding *C&RL* guide, the Editor and Editorial Board will provide resources and examples about handling data in different parts of the research lifecycle and about the optional "Data Availability Statement." In addition, the Editorial Board will create an online guide that aims to assist authors in finding and using free resources for data management and sharing. Resources listed may include checklists, best practices and other types of guidance. Its contents will be based on the comments and recommendations we received from the survey. We believe that providing such a guide will help prepare authors for data sharing in the long run. Further, *C&RL* will consider what a data sharing policy entails in terms of peer review and peer reviewers' expertise.

Concerns raised in our author survey also confirmed and remind us of increasing findings in studies and discussions on the equity and ethics issues with data publication. For example, authors do not have equal access to data sharing support or resources (Santoro, 2021); libraries and library practitioners are accountable for what and how they share data and in effect, need more training in responsibly and ethically handling users' data and publishing analytical results (Briney, 2019; Jones & Hinchliffe, 2023). *C&RL* Editorial Board members will continue learning about emerging equity and diversity frameworks for open research

(Klinkhamer, 2022), best practices of conducting learning analytics studies (Jones et al., 2020), and practical guides on research data publishing ethics for journals (Puebla et al., 2021). All of this information will help inform what the Editorial Board decides in terms of guidance and/or policy for authors and reviewers.

Regarding the development of a data sharing policy in the future, the Editorial Board will seriously take into consideration the comments and suggestions collected from our survey. Additionally, we will refer to the data policy framework developed by the Research Data Alliance (RDA) Data Policy Standardization and Implementation Interest Group (Hrynaszkiewicz et al., 2020). The framework was built on extensive reviews of journal publishers' research data policies and identifies 14 features of the policies. It also presents six policy types (or tiers) based on different combinations of the features, ranging from mandated data deposit and sharing to encouragement of data sharing best practices. Thinking ahead, *C&RL may choose an appropriate level to start and gradually progress based on our community's readiness in the future.*

In sum, this is the beginning of *C&RL*'s journey in support of research data management and sharing. The Editorial Board will keep authors and readers posted of *C&RL*'s plans and decisions. If you would like to provide input in the meantime, you are welcome to contact the Editor or any of the Editorial Board members.

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Appendix. *C&RL* Data Policy Survey (October 4 through November 18, 2022)

Question 1
If data sharing was necessary for future *C&RL* articles, do you have any thoughts about where your data and related documentation (e.g., codebooks, data use guide, survey instruments, etc.) would be deposited so that others can access and reuse it?

Question 2
What concerns or input do you have about *C&RL* adopting a data sharing policy?

Question 3
What information or guidance would be helpful for you to comply with a data sharing policy?

Question 4
If you are willing to help review the data policy draft, please provide your name and email address, so that we can contact you later.

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