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Publishers’ Policies for Data Citation: Do they ease data discovery and use?

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Publishers’ Policies for Data Citation: Do they ease data discovery and use?

Objective
Publisher policies have long guided researchers on how to cite publications, but now many publishers have adopted policies for data citation and sharing. This project examines the data sharing and citation practices of MIT authors in atmospheric sciences, a field that has seen a recent rise of publisher data policies. Through a multipronged approach, we sought to understand how research groups in this discipline find and cite data used in their research, share their own produced research data, and what variables (specifically funder and publisher mandates) may alter or influence this behavior.

Current Results

We are still in the process of completing both of these activities. This poster presents our work completed thus far.

Methods

We identified 7 atmospheric sciences research groups to include in this study. For each of these groups, we approached our research question via the following methods:

Bibliometric Analysis. Research articles published by each of the research groups between January 2011 and November 2015 were included in the study, totaling 231 publications in our dataset. This time period was selected to encapsulate pre- and post-implementation of major publisher data policies.

We aimed to systematically review each article, utilizing a Google Form, identifying source and produced data types, their acknowledgement/citation within the paper and shared data availability.

Group Interviews. We aimed to sit down with each of the 7 groups to discuss, in the context of recently published and ongoing work, how they find and retrieve data they need and how they’ve responded to mandates to cite data and make the data they produce open and findable by others.

We expanded this interview format to include members of the research groups beyond the faculty PI, acknowledging that the groundwork for data management and sharing may be carried out by additional members of the research group.

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Interview Takeaways
• Personal contact (asking individuals directly) is the major mechanism by which this community shares data.
• There is a desire to communicate directly with those who want to use the data to help them interpret it correctly.
• Is it the underlying data that is useful or is it the models that produce this data?

Preliminary Conclusions

Premarital results show that while researchers are not yet consistently providing persistent identifiers to datasets or making full data sets publicly available, they perceive their data sharing efforts to be in line with the expectations and needs of their community. Such inconsistencies in publisher language and researcher behavior highlight the need to further explore definitions of data sharing, underlying data, etc., across stakeholders.

It is very possible that as the publisher data policies mature, this research community will begin to adjust the mechanisms and documentation surrounding their obtained and derived data, but it may be too early yet to observe such impacts of these policies.

Next Steps
• Finish our coding of the remaining research articles
• Finish the interviews of the remaining research groups
• Examine articles’ approaches to data sharing more directly with their publishers’ policies, data types used, etc.

Publisher (top 5 in study set) | Publications in Study Set
--- | ---
American Geophysical Union (AGU/Wiley) | 66 (28.6%)
European Geosciences Union (EGU) | 53 (22.9%)
American Meteorological Society (AMS) | 31 (13.4%)
American Chemical Society (ACS) | 17 (7.4%)
Nature | 16 (6.9%)

These top 5 publishers account for ~79% of the total (231) publications in the study set.

36.6% (84) of the articles have been reviewed

0 of these articles provide information on how to find their ‘underlying’ data

“Maybe 1 out of 100 papers I read [has a citation to a data set].”

“I do think it’s good that they [publishers] are pushing in that direction [requiring sharing data]. You can misinterpret your own data too... extra eyes can always help with that.”

“There’s a reason why data is worked up and written into a paper. If we just shared the data, why would I write it up and put it into a paper?”

“Plus, it [the data] would be misinterpreted”

“I don’t think it [publisher policies] will change anything. We’re already in a culture of sharing.”

“Data availability...should exist, I think, to ensure the quality of the science that we do.”

Interviews

2 of the 7 lab groups have been interviewed

Challenges
• Defining our source & produced data types to provide consistent coding for more in-depth analysis
• Securing time with research groups to conduct interviews

AGU Publications Data Policy (revised Dec 2013)
AGU requires an explicit statement in the “Acknowledgments” section of a paper that clarifies how users can access the data from a paper (via supplements, repositories, authors, other sources, etc.) and states any restrictions on access

EGU Publications Policy (July 2015)
Authors are required to provide a statement on how their underlying research data can be accessed in the “Data availability” section at the end of the manuscript before the acknowledgements.