Data Reuse Practices Across Disciplines

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In the past decade, federal agencies, such as the National Science Foundation, the National Institutes of Health, and the Institute for Museum and Library Services, have begun to require data management and sharing plans. The impetus for this is clear in the 2013 White House Office of Science and Technology Policy memorandum which mandated federal granting agencies to develop policies to increase public access to federally funded research outputs.

Yet, research has shown that sustainable data reuse requires more than simply depositing data in a repository. Data curation involves preserving both the bits as well as the meaning in the data. Both of these pose challenges. This research project is interested in what it takes to preserve the meaning in data over time and how that varies between disciplines (archaeology, zoology, education, and quantitative social science) and data (statistical data, video, text, specimen, etc.).

This research project will enhance our knowledge of data curation and reuse as well as highlight the similarities and differences between disciplines. The findings will also contribute to our knowledge of cyberinfrastructure in by informing the design of tools and services to better support research and data curation practices.

Student Role:
The student will serve as a research assistant for the project and be involved in research meetings with my research team (other masters and Ph.D.) students working on projects. In this way s/he will peripherally participate in a research team and be exposed to all aspects of the research. The student will be assigned specific duties leading to peer-reviewed papers or presentations.

The student will be involved in analyzing existing data (interviews) as well as collecting new interview, observational, and survey data. For the interview data, the student will use NVivo, a qualitative data analysis application, the student will be guided by the mentor in developing a coding scheme, coding and developing interrater reliability, and analysis of the results to better understand how the decisions about data reuse are made. In collecting new data, the student will gain experience implementing interview and observational protocols.

Contribution to Student Academic and Professional Development. The student will gain experience with collecting, analyzing, and presenting qualitative data and what is required to develop a publishable scholarly paper. The student will also gain exposure to different software for data analysis (e.g., NVivo).

Mentoring Plan:
I will meet with the student several times weekly throughout the project. Additionally, I and my doctoral student will monitor the student closely during several key phases of the project, including data collection, (interviews, survey, and observation). I will give the student constructive and iterative feedback on all aspects of the research. Finally, I will involve the student in the development of the final article on this topic.