Researchers' Access to Security Related Research Results

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Abstract

This poster presents research-in-progress which seeks to evaluate a proposed theoretical framework in the context of unequal access to research results and data with national security implications among collaborators. The study surveys faculty and students in US university laboratories which receive federal funding, regarding: their levels of access, instances of barriers to access, and regulatory restrictions on their own data. Implications of results will be both practical and theoretical, informing policy design regarding access to research results and theoretical, in empirically evaluating the Framework for Evaluation of Security Related Research Results.

Keywords: barriers to access, scholarly information needs, information policy

1   Introduction

Digital open access to publically funded research data and papers presents an interesting area of confluence between library and information science (LIS) and government accountability (Peled, 2011; Sprehe, 1999). Research has shown that open information policies have unequal compliance levels between United States government bureaucratic agencies, with instances of low compliance often attributed to national security interests, such as in the Department of Defense (Oltmann, Rosenbaum, & Hara, 2006). Barriers to access regarding national security may have benefits, but there is considerable evidence that access to information classified in this way often benefits research in this domain (Kramer, 2010; Rao & Singh, 2007).

Despite the clear documentation that research with security implications may only be disseminated on a limited basis and that government classifications govern the work of researchers who receive federal funding, it is not entirely clear what the impact of barriers to access has on research practices or how often researchers encounter these barriers.

2   Theoretical Framework

Policy and technology interact in complex ways to impact access to publically funded research (Belanger, 2009), and the environment is most complex when information under government control has security implications (e.g. Carr, Henchal, Wilhelmsen, & Carr, 2004). Previous scholarship has evaluated digital access and digital open access from many scholarly perspectives, focusing on policy (e.g. Câmara & Fonseca, 2007; Feltren, 2012), technology (e.g. Bélanger, 2009; Kim, 2010), and implementation (e.g. Marcial & Hemminger, 2010; Miguel, Chinchilla-Rodriguez, & de Moya-Anegón, 2011) under various criteria, which can be categorized as: success and failure (e.g. Joseph, 2008; Marcial & Hemminger, 2010), infrastructure (e.g. Joseph, 2008; Kumpulainen & Järvelin, 2012), scope (e.g. Davis, 2008; Gostojić, Sladić, Milosavljević, & Konjović, 2012; Sprehe, 1999), and accessibility (e.g. Davis, 2008; Joseph, 2008; Kumpulainen & Järvelin, 2012). A framework has been developed through synthesis of the literature that characterizes each parameter within these categories and identifies the breadth and depth of scholarship in each area (Under Review).

The utility of this framework is in its integration of multidisciplinary perspectives, as many past studies have neglected the dynamic nature of the relationship between policy and technology, with respect

to their impacts on access. This work in progress will also seek to provide an integrated socio-technical perspective.

In applying this framework, this study shall seek to answer the following questions: how do policy and technology control access to research data resultant from Department of Defense, National Security Agency, and Department of State funded projects; How prevalent are barriers to access; how do socio-technical controls to access create unequal access within collaborative research; and are there patterns of unequal access regarding collaborative hierarchies?

3 Methodology

In order to answer these questions, an online survey will be distributed to all principal investigators, as well as independently funded students and post-doctoral scholars, listed as currently operating on federal grants from the Department of Defense, National Security Agency, and Department of State. A preliminary letter of information regarding the nature of the study and its goals will comprise the body of the email. The online survey will be prefaced by the statement of informed consent, asserting the anonymity of all participants and their responses, which must be completed prior to viewing the survey.

Questions will be divided into three sections: the first will assess controls exerted on their own research, the second will assess encounters with barriers to access in their information seeking processes and those within their laboratories, and the third will request information about the respondent's experience as a scientist, so as to characterize who is most impacted by barriers to access. Sections one and two will include a variety of likert scale, open-ended, and multiple choice, in which respondents can choose all that apply, questions.

In the first section, questions regarding grant restrictions on storage and dissemination of results will determine how policy controls access to information from the point of view of the researcher. This self-reported information will be compared to actual policy documents pertaining to data and publication. Questions regarding the normative practices for storage and dissemination will elucidate the compliance with policy barriers to access. Data gathered from these questions will address policy barriers, as well as how policies lead researchers to use technological constraints to control access.

In the second section, questions regarding the experiences of respondents and members of their laboratory in seeking information will assess how access is constructed, socially and technologically. Questions will specifically address: ease of access, problems experienced, limits to access, and strategies employed to access restricted data or publications. From results gathered through this line of inquiry, it will be possible to assess: the extent to which policy barriers successfully constrain access; social and technical barriers to information sharing and access; and relative levels of inaccessible information sought.

Following these categorical questions, key to the research questions asked, will be a section requiring identification of more personal characteristics, and is placed as such to follow conventions regarding demographic information gathering (Dillman, 1978). Participants will be asked to: identify their role in research (principal investigators; post-doctoral researchers; doctoral students; master's students; undergraduate students), the duration for which they have worked on their current project, and the duration for which they have worked on federally funded research. These questions will help to characterize inequality of access within collaborative research. Furthermore, respondents will be asked to indicate whether they would be willing to participate in a follow-up interview.

In addition to statistical assessment of correlations between accessibility issues, controls, and researcher attributes, in terms of hierarchy and experience, and qualitative assessment of open-ended descriptions of access problems and subsequent interviews, contextual policy analysis of funding agencies' guidelines and restrictions will be employed to evaluate these research questions.

4   Conclusion

This research seeks to assess levels of access and identify where access ought to be increased, either through improved compliance with open access policy or identification of secure access mechanisms for collaborative research groups. Improved facilitation of research with security implications is important to efficiently and effectively design projects in this domain.

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