Research Summary
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Broadly, my research interests have evolved around the interplay of socio-technological contexts: a) Socio-technological interplay between information systems and the organizing structures within which they are embedded; b) Theoretical and methodological approaches that enable the understanding of socio-technological contexts; and c) Socio-technological interactions in different contexts: open access, digital libraries, SOA, converged telecommunication and information services, user experiences, etc.

My dissertation is a qualitative study that examines and elucidates the implications of the technological and organizational layers of access tools and open access repositories as well as researchers' lived experiences and perceptions, on researchers' individual and localized knowledge production context and how that is related to the construction of specific disciplinary knowledge production contexts. Considering the co-constructionist and socio-technological nature of the open access phenomenon related to scholarly publishing, studying the technological and the social factors of the open access resources as one network is an extension of their continuity in naturally-occurring settings in which the information practices of researchers take place across technological and social dimensions. The actor-network theory (ANT), which posits that technological and social actors reciprocally affect each other, is used to explore and understand the researchers in two major disciplinary shared knowledge repositories—arXiv (as used by astronomers and astrophysicists) and PhilSci (used by philosophers of science), across the technological, organizational and live experiences and perceptions layers. For example, open access repositories are software systems with features and capabilities (such as EPrints, the technological) that appropriated for specific use by researchers (such as PhilSci, the social and organizational).

ANT has contributed to my study at three different levels. First, as a meta-theory it suggests the co-constructionist approach because a set of actors, whether social or technological, are presented and expressed at an congruent interpretive level, and are associated and linked to each other. Second, it is applied as a guide to knowing where to look and how to look in building a socio-technological network and especially identifying associations and links and tracing them. Third, it is applied as a mechanism to analyze the technological and the social together, instead of analyzing the social separately, as that leads to reductionism and comparison of conclusions with impoverished results. With the technological and social being analyzed together at the very detailed level, a more granular view of the co-constructionist dynamics emerge.

In addition to the contextual contribution related to the implications of OA for scholarly communication and the domain-analytic approach, this study shows that the socio-technological co-constructionist theoretical approach guide by ANT, in conjunction with grounded theory methods is a viable methodological approach for describing, interpreting and understanding relationships between lived experiences and the socio-technological context within which researchers' lived experiences are enacted. To this extent, the theoretical and methodological approach of this study may be used to understand other contexts where users access socio-technological resources through intermediaries such as access tools. In order to transplant this theoretical and methodological approach to address others contexts, the level of congruency between the context of this study and other potential context needs to be assessed, which will guide the choice of the appropriate research methods.

Next, as I proceed with my research beyond my dissertation I like to explore the following:

a) Same context: Expand my study to include other disciplines, perhaps those disciplinary fields that use arXiv who have not necessarily adapted arXiv to the extend astronomers have.
b) Different context – transferability: The socio-technological co-constructionist approach that provides the theoretical and methodological framework for this study can be assessed for applicability to analyze and explicate similar context that exhibit socio-technological manifestation. Of special interest would be contexts where users interact with information environments through intermediaries, with the goal of using the information environment to create new knowledge or enhance innovation. For example, the collaborative but loosely coupled Wikipedia material construction may be one such context. Should the collaborative production of Wikipedia materials be studied as "open access" (the approach used in this study), "open source" (the framework used to understand the dynamics in the production of open source software) or "open content" (the framework of the production of media content)?
c) Methodological research: As a long-term thinking, if the methodological approach used in this study emerges as a congruent approach for understanding and analyzing socio-technological contexts, it will be beneficial to extract the methodological approach out of the context and build it into a more inclusive (with respect to context and type of users) approach that may be used to analyze other user experiences. A key element of such a study will be to determine the level of applicability and congruency of this approach by assessing the variations in the lived experience contexts, the variations of intermediaries used, and the variations with respect to the resources being accessed.
d) Design: How can the understandings of socio-technological phenomena be used to inform the design of information structures and information systems/technologies for optimal, effective and efficient contextual use.

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