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Why Does the ArXiv Work so Well?

- The ArXiv is an example of successful scholarly open access communication: a thriving information ecology (Nardi & O’Day, 1999).
- It has been considered a holy grail for OA communication and there have been attempts to replicate it for other disciplines and even to translate it for an institutional setting.
- Building ArXiv-model repositories for other disciplines or institutions has not yet proved consistently successful.
- There are many theories about why the ArXiv works but very little empirical research to prove or disprove them.
- Using anthropology to understand why and how the ArXiv works is the cornerstone of my research.

Gathering Authorship Data

In order to test whether the ArXiv was used universally among a group of active physicists, data were gathered from the Proceedings of the 2008 Meeting of the German Physical Society or Deutsche Physikalische Gesellschaft (DPG).
- The conference was divided into 10 major divisions, which was regarded as a way to divide physics into subdisciplines.
- The names of 2316 lead authors were searched on arXiv.org and the total number of publications attributed to that author was noted.
- Initially, data has been analyzed with greater precision when the number of articles was close to zero.

Variations in Usage

In three DPG Divisions with low ArXiv participation i.e. Surfaces, Thin Films and Semiconductors, there are some interesting, if slight, variations between these divisions in terms of ArXiv usage.

Using Anthropology to Improve Technology Design

- Anthropology, the study of culture, utilizes the techniques of participant observation (Rock, 2001) to gather large amounts of qualitative data such as interviews, photographs, field notes and ‘thick description’ (Geertz, 1973) so that an outsider can better understand the world as a ‘native’
- These initial data on ArXiv usage will inform the selection of my study population and are a method of triangulating my qualitative data.
- Based on Andrew Abbott’s (Abbott, 2001) model of academic disciplines and Bonnie Nardi and Victoria O’Day’s (Nardi & O’Day, 1999) theory of information ecologies, I argue that the cultures of our target audiences play a large role in the success or failure of the services that we design.
- By better understanding the culture of our users, we can design better services.

References