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# Infrastructuring Social Science Data Archives: The Role of Field Level Organizations

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**Abstract**

This paper examines the coordination work involved in maintaining data infrastructures in the social sciences by examining the role of field-level organizations. Part of a larger study of the history and sustainability of social science data archives as information infrastructure, this paper briefly analyzes the role of three meta-organizations IASSIST, IFDO and CESSDA and how they have enabled collaboration and communication among Social Science Data Archives (SSDA) over decades and discusses implications for understanding other social science infrastructures.

**Author Keywords**

Data archives; inter-organizational relationships; cyberinfrastructure; information infrastructure; social science.

**ACM Classification Keywords**

H.5.3 [Group and Organization Interfaces]: CSCW

**Introduction**

Social Science Data Archives (SSDA) are socio-technical information infrastructure (II) that support research across subfields of the social sciences (e.g., sociology, political science). SSDA collect, harmonize and archive

(predominately quantitative) data, making possible longitudinal, comparative, and cross-sector research. SSDA support the collaborative production of knowledge and shape communities of scholars and their research directions [7]. Typically housed at universities or (in Europe) in national government agencies, SSDA are amongst the earliest and most long-standing examples of science II. The social sciences created shared data archives in the 1940s, digitized them in the 1960s and 1970s, networked them in the 1990s and implemented web indexing and analysis tools in the 2000s. SSDA's longevity and stability provide a unique opportunity to examine how coordination and communication work required across institutional settings to maintain II over a long time period and across many different local contexts [8].

In this paper, we examine the role of "meta organizations" in the infrastructuring work of SSDA. Using case studies of individual SSDAs (ICPSR, UKDA, EDINA, and LIS) and their relations with each other and three meta organizations (IASSIST, IFDO, and CESSDA) from the 1970s to the early 2000s, we examine the interactions that have enabled the distributed work of creating and sustaining an international federated network of SSDA II [6].

Prior studies in CSCW have pointed to the role of intra-institutional relationships in determining the trajectories of infrastructuring, an area we argue need greater analysis in social science II studies. For example, Kee explored the relationship between II, their extramural funders and their host institutions in shaping work arrangements [5]. Monteiro, et al. argued that dependencies between II and external elements such as vendors, standards or related technological systems

are integral to understanding the evolution of II, which our own work supports [8]. Lee showed how actors' professional identities and disciplinary allegiances shape human networks of communications and collaboration that enable (or not) the distributed work of sustaining II [6].

In the rest of this paper, we briefly describe how SSDAs, distributed geographically and institutionally, use three key "meta organizations" as "scalar devices" or ways of managing scope and scale of their separate and joint endeavors [10], and discuss the role of institutional work such as ours in the CSCW of social science research infrastructures.

### **Social Science Data Archives as Information Infrastructure**

Like other federated II, SSDA are discrete organizations, hosted by individual campuses and staffed by employees of the host institution. They share (some) data and collaborate on solutions to field level problems. They share goals of promotion of research in the social sciences, preservation of important data sets, increasing access to and use of data, and education of scholars about methodologies and tools. But they are also standalone collections of data and services that compete with each other (to some extent) over data coverage, audience and funding. Our historical analysis suggests that SSDA often divide up the data market and establish their collection specializations through informal agreements and practices. Taken as a set, they form a federated II supporting social science research.

Individual SSDA are organized differently in different nations, in part reflecting that nation's ideological

approach to science funding. For example, some European nations have national level data centers funded by and/or housed within government agencies. In the USA, SSDA are distributed and tend to be housed at universities. They operate under a variety of funding models including government allocations, local university funding, grant funding, and membership/use dues.

Three SSDA field level organizations are important to field-level SSDA infrastructuring: IASSIST, IFDO and CESSDA. These organizations (to some degree) shape the communications and collaboration amongst discrete SSDA. And, as we demonstrate, the three organizations themselves also collaborate. For each of the three field level organizations we attempt to ascertain how they have advanced SSDA II by promoting (or not) intra-organizational relationships and how they have influenced local SSDA practices.

### **Field Level Organizations as Infrastructuring Devices**

IASSIST, or the International Association of Social Science Information Services and Technology is a professional organization for individuals who work with SSDA. Individuals become members of IASSIST by paying individual dues. Established in the 1970s, one of IASSIST's explicit goals is to "Advance infrastructure in the social sciences"[3]. IASSIST advances SSDA II by providing platforms of professionalization, communication, and collaboration through its annual conference, a peer reviewed journal, a newsletter, and working groups, and recognition of professional achievements. Analyzing traces of SSDA interaction represented in IASSIST publication, we found a hub and spoke pattern with large SSDA collaborating with

many smaller SSDA, rather than large SSDA collaborating with each other [2]. IASSIST develops the human connections of II by providing means of recognition and achievement in the field through leadership positions, and organizational achievement awards.

IFDO, or the International Federation of Data Organizations, was established in the late 1970s with the goal of coordinating data services globally to enhance social science and humanities research [4]. Many nations have one national member of IFDO, but the USA has 7 members based at different US universities. IFDO projects have contributed to SSDA II in the areas of data documentation standards, and development of data privacy and confidentiality practices.

While IASSIST and IFDO are global in scope, CESSDA is an organization of European SSDA. Like the others, its goal is to promote social science research by "supporting national and international research and cooperation." [1] With recent European Commission funding, CESSDA now explicitly refers to itself as "large-scale infrastructure" as opposed to merely a network of data providers [1]. Analysis of the literature points to influential recent CESSDA workshops for qualitative data archiving best practice, digitization training, and conferences on privacy and social science data. Most importantly, CESSDA developed and maintained a multi-lingual index of European social science data collections which provided an important means for social science scholars to discover available collections.

These field-level organizations provide coordination opportunities and venues for individuals, SSDA, and networks of SSDAs. As a result, they have been deeply influential in the daily work of SSDA through standards development, networking opportunities, and information dissemination, all of which are important dimensions of the strategic development of the “planned permanence” [9] of SSDA.

### Conclusion

This paper takes to heart Lee and Paine’s [9] suggestion that CSCW pay greater attention to diffuse “systems of systems.” Our ongoing analysis raises important topics for the future of social science infrastructure studies: sustainability, institutional relationships, professionalization, and even geography. We are exploring how, over the long term, distributed organizations of social science data coordinate, collaborate, and compete, and what tools and strategies they develop and deploy to stay relevant. In short, SSDAs and their field-level organizations illustrate intra-organizational coordination and communication to develop and sustain II for the social sciences.

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