Chapter 8.14
Shifting Ground for Health Information Systems:
Local Embeddedness, Global Fields, and Legitimation

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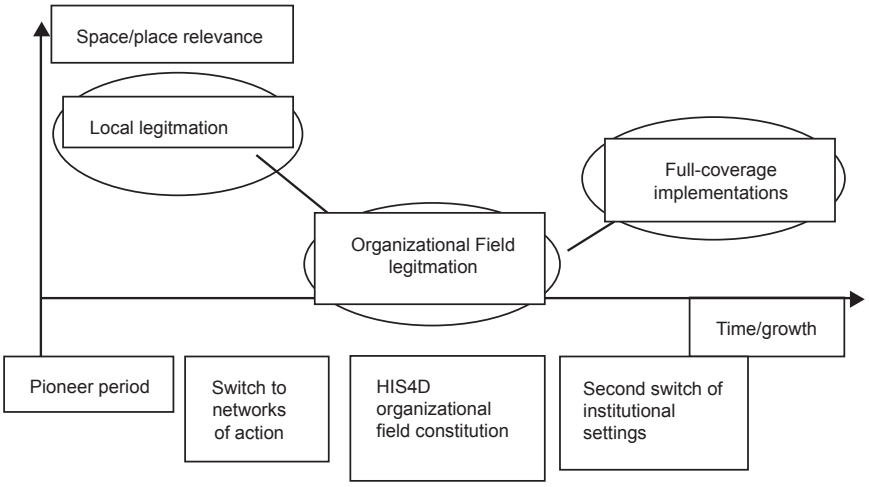
ABSTRACT

This article addresses the institutional scaling of information systems through the interplay of globally distributed free and open source software development with organizational processes. Through examining various phases of a long term project to implement information systems for the public health care sector in resource-poor countries, we highlight changing sources of acceptance and legitimation. The analysis centers on the balance between local and global levels, from pilot sites, through an emerging broader organizational field, to increasingly involving national level institutional settings. In parallel to the established view of the scaling of ICT implementations as relating to complexity and risk in the form of unintended side-effects of the growth of a system, the authors highlight the qualitative switch between regulatory contexts. Shifting relations to local institutions means that scalability requires actors to interact with quite different organizational cultures, accountabilities and communicative practices.

INTRODUCTION

ICT infrastructure and information systems have come to play a vital role in globalization. Walsham (2008) highlights three major aspects of this phenomenon: software outsourcing, virtual

Figure 1. A model to interpret shifts in PHIs over time



teams, and information system (IS) rollout. In this article we examine shifts over several years of globally distributed development and rollout of an open source information system targeted at the public health care sector in developing countries, which touches on all three aspects. In following the development of a system as it co-evolved with the various settings in which it was embedded, we highlight shifting sources of legitimation in institutional processes involved in health information systems implementation. The attention to changing sources of acceptance and legitimation frames our view on knowledge between local cultures and related stakeholders, in the interplay with global free and open source software (FOSS) development.

Paraphrasing Bowker (2000), health information systems operate simultaneously at the concrete level of design and implementation (fields in a database, capacity building, integration of datasets and organizational practices…) and at an abstract level (dealing with the relationships between information science, organization, public health, and global software development, among others). Thus, social studies of science and organization have a significant contribution to make to the process of growing information systems in order to create tools for health monitoring and policy making. For this, we need to historicize our action and its organization: "it is vital to dissolve the current disjunction between database (as technical storage medium) and policy (as way of acting in the world). The production of the database is productive of the new world we are creating." (ibid).

By examining the scaling of development and implementation of health information systems in developing countries, this article aims at understanding collaborative knowledge development across heterogeneous networks of local, national and global actors, and between public health workers and FOSS developers in dissimilar contexts. We will use "PHIs" as an acronym to refer jointly to PHI (Project for Health Information) and HIS (Health Information System, the principal software developed within the project). This hybrid acronym represents the socio-technical nature of the actor-network. PHIs began in South Africa in 1994 as health services underwent major restructuring post apartheid, aiming at standardization of information for local action. Subsequent international expansion underscored tensions between the local and the global (Rolland and Monteiro: 2002) related to knowledge gaps and communication practices affecting rollout and institutionalization. After nearly five years, the