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Challenging Dominant Frames in Policies for IS Innovation in Healthcare through Rhetorical Strategies

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Abstract:

Information systems (IS) innovation in healthcare is a contested area often characterized by complex and conflicted relationships among different stakeholders. In this paper, we provide a systematic understanding of the mechanisms through which various actors translate competing visions about health sector reforms into policy and action and, thus, generate contradictions in IS innovation. We argue that we can learn more about the source of such contradictions by examining how competing frames can affect IS innovation in healthcare. We adopt frame theory and rhetorical strategies analysis in the case of health sector reforms in Kenya and focus specifically on the deployment of health information systems (HIS). We make several contributions. First, we demonstrate that policy actors' adherence to the interests and values represented in a frame is important in determining the choice of a rhetorical strategy and its influence on policy transformation and IS innovation. Second, we develop an understanding of how technology mediates the rhetorical strategies of different actors. In particular, we demonstrate the role of technology in giving continuity to frames, which affects policy change and IS innovation.

Keywords: IS Innovation, Healthcare, Policy, Discourse Analysis, Frame Theory, Developing Countries.

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1 Introduction

IS innovation in healthcare, which Swanson (1994) defines as the evolution of information technology applications in the transformation of healthcare, is a contested area characterized by complex and conflicted relationships among different stakeholders (Boonstra & Van Offenbeek, 2010; Cho & Mathiassen, 2007; Constantinides & Barrett, 2006). The contested nature of IS innovation in the public health sector lies in the contradictions brought about by governments' policies and reforms.

Various scholars have demonstrated that health sector policies and the role that they assign to IT-enabled transformations are constructed in discourse (Brown, 1998; Doolin, 2003; Klecun, 2015; Klecun-Dabrowska & Cornford, 2000). Discourse influences how healthcare organizations implement IT systems and how such systems affect healthcare transformation (Klecun, 2015). Key stakeholders reinterpret the main vision and goals of policy documents, which affects how organizations translate policies into action and how such policies produce impact (Mueller, Sillince, Harvey, & Howorth, 2004; Pope, Robert, Bate, Le May, & Gabbay, 2006). Controversies over IS innovations in the health sector arise when IS users and policymakers do not share the same vision and expectations for health sector reforms that the policymakers set (Klecun, 2015; Morrison, Marsden, Cresswell, Fernando, & Sheikh, 2013). These stakeholders constantly renegotiate the purpose and meanings of IS innovations carried in policy documents and realign their interests with different parties as necessary, which leads to different forms of resistance and workarounds (Cho, Mathiassen, & Nilsson, 2008; Doolin, 2004; Payne & Leiter, 2013; Wainwright & Waring, 2007).

In addition, policymakers themselves often lack a common vision of how IT should transform the health sector (Klecun-Dabrowska & Cornford, 2000; Morrison et al., 2013). For example, some may view cost-savings from reducing hospital admissions as the main aim of remotely monitoring patients through telehealth. Others may envisage adopting telehealth for providing enhanced community services and improving patient care (Klecun-Dabrowska & Cornford, 2000).

Existing research acknowledges that the lack of a common vision in health sector policies can lead to contradictions in the implementations and impact of IS innovations (Klecun-Dabrowska & Cornford 2000; Morrison et al., 2013). Such contradictions manifest in different IS objectives, which, eventually, may generate conflicting organizational outcomes, such as increased spending on patient-centered care as opposed to efficiency gains. Yet, we lack understanding about how competing visions about health sector reforms translate into policy and action and, thus, how they generate contradictions in IS innovation.

In this paper, we draw on frame theory and rhetorical strategy analysis to better understand how actors shape and communicate their policy and vision on health sector reforms. "Frames" are socio-cognitive structures through which we make sense of the world (Cornelissen & Werner, 2014). Thus, policymakers use frames to make sense of problems and their solutions (van Hulst & Yanow, 2016). In addition, actors create and diffuse frames through rhetorical strategies, which they deploy to gain consensus about their policy (Barrett, Heracleous, & Walsham, 2013).

Policies are strategic resources used to drive change and are often thought to exercise hegemonic influence on societies and organizations (Brown, 2004). Our research stems from the assumption that competing frames can challenge the hegemony of a dominant frame, which generates contradictions in IS innovation. Actors question and transform policies not only as they formulate them but also as they implement them (Motion & Leitch, 2009; Mueller et al., 2004). As actors debate policies when implementing them, new and competing frames about health service innovation emerge (Pope et al., 2006) and potentially replace the dominant frame, which influences policy transformation (Greener, 2004).

To explore the role of frames in policy transformation, we adopt frame theory and rhetorical strategy analysis in a case study of health information systems in Kenya. The case study takes a historical perspective to show how policy and organizational actors deploy rhetorical strategies to persuade others about their own ideas of policy reforms and IS innovation in the health sector.

Our paper makes two contributions. First, we reveal the main rhetorical strategies that challenge the hegemony of dominant frames and explain how such strategies can generate contradictions that have an impact on IS innovation in healthcare (Currie, 2012; Currie & Guah, 2007; Klecun, 2015; Klecun-Dabrowska & Cornford, 2000; Morrison et al., 2013). In this way, we can learn more about the nature and source of IS innovation contradictions, how they evolve, and their implications for the design and implementation of IS innovation in healthcare. Second, we contribute to recent research about the role of technologies in influencing policy and IT-enabled transformation (Constantinides, 2013; Doolin, 2003;

Klecun, 2011). Thus, we help explain how technology mediates rhetorical strategies that influence changes in policy and the way IS innovations and possible contradictory outcomes unfold.

The paper proceeds as follows. In Section 2, we discuss the effectiveness of rhetorical strategies in influencing policy transformation. In Section 3, we propose frame theory to understand the political function of rhetorical strategies and the role of technology in policy transformation and IS innovation in the health sector. In Section 4, we describe our methodology and present a rhetorical strategy analysis of the case study. Main findings and implications are then discussed followed by conclusions.

2 Rhetorical Strategies and Policy Transformation

Policies constitute a major strategic resource through which policymaking organizations drive change in societal and economic systems, institutions, and organizations (Leitch & Davenport, 2005; Maguire & Hardy, 2006; Motion & Leitch, 2009). Primarily, policymakers aim to impose a unique view of reality on policy stakeholders and suppress differences in stakeholders' own view of reality. Suppressing differences is one way through which policymakers seek to protect a policy's authority. Yet, because readers ascribe authority to texts (Brown, Stacey, & Nandhakumar, 2008), policies do not have a fixed meaning: they are subject to contestation and reinterpretation (Brown, 2004).

Thus, whereas policymaking institutions institute policies, the legitimacy of their "associated truth" constitute the process by which stakeholder organizations may transform a policy (Motion & Leitch, 2009). These organizations become authors of policies and deploy their own knowledge and power to negotiate their meanings. A new policy's legitimacy and the meaning and practice changes that it involves occurs only after the organization successfully completes the negotiation process.

Stakeholder organizations can also negotiate and transform a policy's meaning when implementing it. The way these organizations connect and disconnect transformed meanings generates a policy-implementation gap, which translates into differences in how they implement and adopt health service innovations (Pope et al. 2006). As such, analyzing the linguistic turn in policymaking and implementation partially explains why local actors do not meet policymakers' expectations (Exworthy, Berney, & Powell, 2002).

One way in which organizational actors negotiate and transform policies is by deploying rhetorical strategies. Rhetorical strategies are mechanisms through which individuals shape their understanding of technologies, managerial practices, and, more generally, the organizational context in which they exist (Brown, Ainsworth, & Grant, 2012; Heracleous & Barrett, 2001; Suddaby & Greenwood, 2005). In particular, with the help of rhetorical strategies, actors may appropriate only a policy's meanings that best serve their own interests (Mueller et al., 2004).

In order to understand the influence of a policy on IS innovation in healthcare, one must consider the extent to which a rhetorical strategy is just ceremonial or does effectively effect change (Alvesson & Kärreman, 2011). A rhetorical strategy can have different functions that influence reality to a lesser or greater degree (Alvesson & Kärreman, 2011). We focus on understanding the effectiveness of rhetorical strategies in influencing the meaning negotiation and legitimization of health sector policies and IS innovation. To do so, we focus on frames—the cognitive structures that actors shape and manifest through rhetorical strategies to make sense of and influence reality (Barrett et al., 2013).

2.1 Frames, Power, and Technology

Frames are socio-cognitive structures that we use to make sense of the world (Cornelissen & Werner, 2014). Through these socio-cognitive structures or frames, policymakers make sense of problems and their possible solutions (van Hulst & Yanow, 2016). Frames used in policymaking may also include "technology frames" (Orlikowski & Gash, 1994), which influence how policymakers make sense of an information system and the way one should implement and use it to innovate the health service.

A key issue about IS innovation from a frame perspective concerns understanding how incongruent frames evolve over time and what implications they and their changes have on innovation processes. For example, researchers have understood shifts in frames as causing divergent patterns of, and conflict over, IS development, implementations, and use (Azad & Faraj, 2008; Barrett et al., 2013; Constantinides & Barrett, 2014; Davidson, 2006; Orlikowski & Gash, 1994). In particular, through rhetorical strategies, actors may develop, diffuse, and legitimate a new frame about a technology (Barrett et al., 2013) and policy issue (Jones & Exworthy, 2015) in or across their communities. Thus, rhetorical strategies can produce change by influencing actors' frames.

Through rhetorical strategies, frames become means through which actors consolidate their power. We perceive power as actors' capability to transform and safeguard their interests by shaping meaning through discourse (Avgerou & McGrath, 2007; Brown, 1998; Buchanan & Dawson, 2007; Currie & Brown, 2003). Thus, in analyzing rhetorical strategies, power relationships play a relevant role in influencing shifts in frames (Jones & Exworthy, 2015). In particular, incongruent frames can reflect a reconfiguration of interests and values, which alters the legitimacy and enactment of a policy (Pope et al., 2006). So, when it comes to a rhetorical strategy's political influence, one can see policymaking as an arena of political contests where power exercises its influence by subtly shaping problems and their solutions.

By acknowledging the political function of rhetorical strategies, we also consider change as emerging from the mutual relationship between discursive and non-discursive elements, such as institutions and political interests (Alvesson & Kärreman, 2011). The focus on non-discursive elements allows one to acquire a better understanding of the extent to which technology becomes embedded in policy and, simultaneously, shapes its content. Related to this issue is how technology becomes implicated when actors construct frames that represent a policy (Constantinides, 2013; Doolin, 2003; Klecun, 2011). On the one hand, local actors construct frames that influence IS innovation according to their interests and values. On the other hand, actors shape and diffuse frames not only through social interactions, such as human communication, but also through material artifacts, such as texts and technologies (Doolin, 2003). This perspective not only considers how frames and their rhetorical strategies can shape IS innovation (Barrett et al., 2013) and the popularity of an IT concept that drives its diffusion (Wang, 2009); IS innovations and the frames and rhetorical strategies that drive their diffusion can also influence how health service delivery is conceived in policy and in action (Klecun, 2015; Mathar, 2011). In this way, existing technologies shape and sustain key policy ideas and future innovations (Klecun, 2011; Raviola & Norbäck, 2013). An example is how the information, rules, and resources embodied in information systems in healthcare provide "concrete representations" (Doolin, 2003) of how accountability should be enacted (Doolin, 2004; Madon, Krishna, & Michael, 2010; Noir & Walsham, 2007). Thus, information technology both constitutes and is constituted by the frames actors draw on to construct their rhetorical strategies. In this way, information technology can mediate how a policy becomes legitimized or contested.

As such, in this paper, we base our case study analysis on the concept of frames and rhetorical strategies to identify different assumptions and expectations in health sector policies and their implications for IS innovation in healthcare. We view rhetorical strategies as mechanisms that policy and organizational actors use to shape and diffuse frames of how one should reform the health sector. We acknowledge the political function of rhetorical strategies that actors deploy to pursue their own interests. We also consider how technology mediates the rhetorical strategies that drive policy transformation. In Section 3, we provide more detail about the type of rhetorical strategies considered in our case study.

3 Methodology

3.1 Research Context

The research is based on a historical analysis of the development of information systems in the public healthcare sector in Kenya. The Kenyan context suits the purpose of our study since, like in many other developing countries, health information systems in Kenya have been the target of institutional reforms meant to improve the planning and management capacity of the health sector for more than 30 years (Odhiambo-Otieno, 2005). These reforms seek to, among other things, integrate health information systems (Kimaro & Sahay, 2007; Saltman, Bankauskaite, & Vrangbaek, 2007) to provide decision makers across all levels of the health sector (hospital managers, district health managers, senior health policy managers) with timely and accurate health data to better deliver health services (Chilundo & Aanestad, 2004; Madon et al., 2010; Smith, Madon, Anifalaie, Lazarro-Malacela, & Michael, 2008). Yet, available studies show that the integration of health information systems has been unsuccessful in many developing countries (Kimaro & Sahay, 2007; Odhiambo-Otieno, 2005) where national governments and donor agencies still use fragmented health information systems to monitor and account for performance and health spending (Madon et al., 2010; Mekonnen & Sahay, 2008; Noir & Walsham, 2007). Thus, given the historical perspective we adopt, the case study in Kenya constitutes an ideal setting to analyze how, over time, incongruent frames and competing rhetorical strategies influenced the integration of health information systems as part of the effort to innovate development interventions in the health sector in Kenya.

In addition, given the importance of power in rhetorical strategies, the case study in Kenya represents an ideal setting due to the presence of a variety of actors standing at different relational and power positions.

Hence, like in many other developing countries, global managerialist reforms driving health service innovation are subject to continuous international political pressures (Hayes & Rajao, 2011; Rajao & Hayes, 2009). In such a context, understanding how competing frames and their rhetorical strategies influence policy formulation and implementation acquires even more significance.

3.2 Data Collection

We collected data from interviews and documents between 2007 and 2011. We conducted 47 interviews as we show in Table 1.

Table 1. List of Interviews

Organization/department	Number of informants
Two multilateral donor agencies	3
Three bilateral donor agencies	3
Senior government officers	4
HMIS (Kenya's Ministry of Health)	12
Immunization program (Kenya's Ministry of Health)	11
HIV/AIDS program (Kenya's Ministry of Health)	14
Total	47

In Kenya's Ministry of Health, the sample of informants included health records information officers and medical officials of three main organizational units: the Division of Health Management Information Systems (HMIS) and two national health programs on immunization and on HIV/AIDS, respectively. The Division of HMIS was part of the national strategy of integrating Kenya's health information systems under a unique system. The two national programs constitute two examples of vertical health information systems in the country.

We selected informants from the Ministry of Health and the Government of Kenya based on the relevance of their role in relation to health sector reforms and the restructuring of health information systems in Kenya. Whenever possible, we also selected participants based on their date of deployment given the importance of gathering historical accounts to trace relevant narratives. We also interviewed six informants from international donor agencies to gain the perspective of the main international actors involved in implementing health sector reforms and health information systems in Kenya.

We used primary data from interviews to recollect past and more recent accounts of the health information system. In addition to interviews, a sample of approximately 6,000 pages of documents we took from the archives of Kenya's Ministry of Health represents a key resource for this study. These documents included government policy documents, minutes of meetings, letters, and reports from the information systems that covered from 1977 to 2008. We also collected relevant international agencies' policy and project documents available from the Internet. With respect to the interviews, documents were a valuable historical source of information for tracing past events and practices that the memory of informants could not recall. In particular, documentary resources were fundamental to identifying the core rhetorical strategies that have shaped health sector policies and IS innovation in Kenya in the past 40 years.

3.3 Data Analysis

We used rhetorical strategy analysis to understand how actors have created, revisited, and modified frames in policy that influence IS innovation in healthcare. We first read through our interview transcripts and document extracts several times to build a chronology of significant events that "speak about" relevant themes such as aid effectiveness, accountability, and so on because "Chronology is the starting point of the narrative building of a plot that feeds the sensemaking process" (Boudes & Laroche, 2009, p. 383). Based on the presupposition that "texts are elements of social events; they bring about change" (Fairclough, 2003), we pieced together a chronology of events by relating each event to key texts including both documents and interview transcripts.

At this stage, we could identify key frames representing healthcare policies. For example, the frames of "health as a human right" or "social justice" represented primary healthcare, whereas "cost-effectiveness" and "accountability" constituted the policy of selective primary healthcare.

Hence, we next focused on rhetorical strategies as mechanisms through which actors seek to gain consensus over what makes sense to them. Drawing on Fairclough's (2003, pp. 41-42) typology, we focused on five rhetorical strategies as Table 2 illustrates. In Fairclough's words, one can use these strategies to understand how actors interpret and negotiate differences in meaning. For example, openness to difference (a) assumes one's effort to understand and accept differences. When one accentuates conflict through polemic (b), the acceptance of differences of power may prevail leading to consensus through the suppression of meanings (e). Rhetorical strategies (c) resolution and (d) bracketing of differences relate to a less conflictual and softer way of dealing with differences. In both rhetorical strategies prevails the mutual understanding that differences in meanings and values may coexist. For example, two actors may overcome differences (c) by proposing alternative points of view or solutions that mediate between opposite meanings. Alternatively, they may set aside differences and decide to focus on commonalities only (d). The case study analysis that follows revealed four of the five strategies illustrated in Table 2: polemic (b), resolution (c), bracketing (d), and normalization (e). In analyzing these strategies, we paid particular attention on the role of unbalanced power relations and misalignment and realignment of interests among different actors (Constantinides & Barrett, 2006; Doolin, 2004).

Table 2. Rhetorical Strategies*

a) openness: accepting and recognizing difference.
b) polemic: accentuating difference and conflict over meaning, norms, and power.
c) resolution: an attempt to resolve or overcome difference.
d) bracketing: a bracketing of difference; a focus on commonality, solidarity.
e) normalization: a consensus and acceptance of differences of power that suppresses differences of meaning and norms.
* Adapted from Fairclough's scenarios (2003, pp. 41-42).

4 Case Study and Analysis

The case that follows focuses on the main rhetorical strategies that policy actors used to create, re-create, and challenge three key policies in international health: primary healthcare (1970-1978), selective primary healthcare (1979-1994), sector-wide approaches (SWAps) (1994-2011). The case study shows how the translation of international policies and their frames influenced health information systems in Kenya in five phases. In addition to the summary tables at the end of each phase, we provide more detail on how we identified frames and their respective rhetorical strategies from interviews and policy documents in the appendix.

4.1 Phase 1: the Creation of Primary Healthcare (PHC) in the International Health Arena (1970-1978)

The failure of the global malaria eradication program in the 1960s prompted the World Health Organization (WHO) and members of the scientific community to deploy a polemic rhetorical strategy. Through this rhetorical strategy, they dismissed old models of delivering healthcare, such as vertical control programs. Instead, they acknowledged that strengthening health infrastructures in developing countries would be a more adequate approach to malaria control (Bennett, 1979; Brown, Cueto, & Fee, 2006). Based on new socio-economic theories of development and the views of human rights movements, they argued that a new approach, primary healthcare (PHC), could support the integration of community-based health services (Brown, Cueto, & Fee, 2006; Gish, 1982).

Starting with a study of community-based rural health services carried out in 1971, subsequent policy and scientific texts molded the PHC concept over the principles that health is "a fundamental human right" and its attainability by all a matter of "social justice" (WHO 1978). Primary healthcare promoted "equity of distribution of health care" (Bennett 1979, p. 505) by focusing on the "basic health needs" of a community within "existing resource constraints" (Gish 1982, p. 1050).

The international community legitimized PHC at the Alma-Ata Conference, where, in 1978, 134 nations adopted the Declaration of Primary Health Care (Brown et al. 2006). The Declaration set the goal of "Health for all in the Year 2000" and promoted an "intersectoral" and systemic approach to "health care and health education" in developing countries (Brown et al. 2006; WHO 1978). Table 3 summarizes the key findings for this period.

Table 3. Phase 1: The Creation of PHC in the International Health Arena (1970-1978)

Authors	World Health Organization
Rhetorical strategies	Polemic rhetorical strategy to legitimize the strengthening of health infrastructures through PHC
Frames	Vertical control programs, such as malaria eradication, cannot deliver desired results. Integrating healthcare in community-based services. Health is "a fundamental human right" and a matter of "social justice". PHC promotes "equity of distribution of health care".
Technology	-
Outcomes	International community endorsed PHC in the "Alma-Ata Declaration" (WHO, 1978)

4.2 Phase 2: the Creation of Selective Primary Healthcare (SPHC) as a Substitute of PHC in the International Health Arena (1979-1980)

An alternative approach proposed by major international organizations such as the World Bank and UNICEF at the Bellagio Conference in 1979—selective primary healthcare (SPHC)—soon challenged PHC. Through a polemic rhetorical strategy, these organizations used Walsh and Warren's (1979) work to delegitimize PHC (Cueto, 2004) as being "unrealistic" and "unattainable" (Brown et al., 2006, p. 67). By contrast, they considered SPHC as a better approach to achieve "cost-effectiveness" and rapid "tangible results" through vertical health programs (Tejada de Rivero, 2003; Walsh & Warren, 1980).

These organizations came to a consensus over the concept of cost-effectiveness that underpinned SPHC through a rhetorical strategy of normalization, which suppressed the difference between "comprehensive" and "selective" to the extent that SPHC became the only possible solution in the resource-deprived context of most developing countries (Walsh & Warren, 1979):

> *Since it must be acknowledged that resources available for health programs are usually limited, the provision of total primary health care to everyone in the near future remains unlikely… services targeted to the few most important diseases may be the most effective means of improving the health of the greatest number of people.* (Walsh and Warren 1980, p. 148)

Major donor agencies approved SPHC because it legitimized institutionalized models of international aid such a short-term development programs as the only option to attain rapid results in health interventions (Brown et al., 2006; Gish, 1982; Walsh & Warren, 1979). One can read this message in the words attributed to the executive director of UNICEF, James Grant, at the time: "Grant believed that international agencies had to do their best with finite resources and shortlived local political opportunities. This meant translating general goals into time-bound specific actions" (Cueto, 2004, p. 1869). Thus, major international organizations' rhetorical strategy successfully gained widespread support for SPHC as demonstrated by the implementation of selective interventions such as the GOBI program (Cueto, 2004). GOBI comprised four interventions: growth monitoring, oral rehydration, breastfeeding, immunization. According to UNICEF and other major donor agencies such as the World Bank, monitoring indicators constituted an essential toolkit to measure GOBI targets and achieve rapid results: "[GOBI] appeared easy to monitor and evaluate. Moreover, [its interventions] were measurable and had clear targets. Funding appeared easier to obtain because indicators of success and reporting could be produced more rapidly" (Cueto, 2004, p. 1869). Thus, "monitoring indicators" helped to demonstrate how selective interventions can be easy to measure and able to produce rapid results—one of the SPHC policy's key frames.

On the one hand, the core principles of SPHC sparked a lot of criticism among the main supporters of the original concept of primary healthcare. Kenneth W. Newell, one of the architects of primary healthcare, noted: "[selective primary health care] is a threat... Its attractions to the professionals and to funding agencies and governments looking for short-term goals are very apparent" (Newell, 1988, cited in Cueto, 2004, p. 1971). On the other hand, the supporters of SPHC criticized the lack of clear targets in PHC. To reconcile these opposite views and garner support for PHC, the WHO reviewed the PHC policy through a rhetorical strategy of bracketing differences; in a paper entitled "Indicators for Monitoring Progress Towards Health for All", the WHO proposed using indicators to monitor the implementation of "health for all" strategies and plans, all concepts that PHC opponents commonly accepted (Brown et al., 2006). Monitoring indicators helped to demonstrate how one could use measurable targets to gauge health interventions progress as spelled out in the SPHC policy. Thus, monitoring indicators were at the heart of

the rhetorical strategy that the WHO deployed to create commonalities between PHC and SPHC. This example shows how an IS innovation, such as using indicators in monitoring and planning health interventions, can shape health sector policies (Klecun, 2015; Mathar, 2011).

An attentive analysis of the "health for all" strategy of 1979 unveiled a set of "technology frames" (Orlikowski & Gash, 1994). Through these frames, the WHO re-interpreted the design and use of health information system (HIS) monitoring indicators with a focus on community healthcare needs as advocated in PHC. The strategy recommended "developing locally suitable indicators" and using "sampling" to avoid "overloading health workers with routine data collection", "inaccurate reporting", and "unused information" (World Health Organization, 1979). Against the top-down approach of disease control programs, the strategy proposed a bottom-up approach to monitor indicators to make them "manageable" and "meaningful" for the local populations (World Health Organization, 1979, p. 30).

By adhering to SPHC principles, international organizations such as UNICEF acquired legitimacy and access to donor funding, whereas the WHO lost its dominant position in international health to the advantage of the World Bank (Brown et al., 2006; Silver, 1998). Table 4 summarizes our key findings.

Table 4. Phase 2: The Creation of SPHC as a Substitute of PHC in the International Health Arena (1979-1980)

Authors	World Bank and major international organizations		World Health Organization
Rhetorical strategies	Polemic rhetorical strategy to delegitimize PHC and legitimize SPHC.	Rhetorical strategy of normalization to suppress differences between comprehensive and selective care and replace PHC with SPHC.	Rhetorical strategy of bracketing differences to review PHC and create commonalities with SPHC.
Frames	PHC is unrealistic and unattainable. Vertical health programs can deliver "cost-effectiveness" and rapid "tangible results".	Cannot sustain "comprehensive" PHC in resource-deprived context of most developing countries. SPHC is the only possible solution.	Indicators should be used to monitor the "Health for All" strategy. Monitoring indicators should be "manageable" and "meaningful" for local populations. One should use "sampling" to avoid "overloading health workers with routine data collection", "inaccurate reporting", and "unused information".
Technology	Monitoring indicators helped to demonstrate how "selective interventions can be easy to measure and able to produce rapid results" (an SPHC frame).		Monitoring indicators helped to demonstrate how one can use "measurable targets…to gauge health interventions progress" (an SPHC frame).
Outcomes	Major international organizations legitimized SPHC. SPHC contributed to spreading vertical health interventions and IS (e.g., GOBI).		

4.3 Phase 3: Contestation between PHC and SPHC in Kenya (1980-1994)

In the 1980s, the WHO was committed to integrating multiple health projects and information systems created by donor organizations under unique programs. In this strategy, the WHO promoted the establishment of Kenya's national program of immunization in 1980 and the creation of Kenya's national program of HIV/AIDS between 1987 and 1990. The WHO justified the creation of both programs through a rhetorical strategy of bracketing differences similar to that employed to gain opponents' support to PHC. This rhetorical strategy shared commonalities with SPHC by legitimizing managerial practices, including using information for planning and monitoring programs activities. In particular, epidemiological and surveillance systems constituted the SPHC's frame that legitimized the production of "managerial data to measure program performance and results". The 1990 plan of the national HIV/AIDS program notes: *"Epidemiology and surveillance will… generate managerial data to measure… program performance and results"* (NASCOP, 1990).

At the same time, the WHO's rhetorical strategy challenged the SPHC idea of short-term, ad-hoc health interventions by putting forward principles and concepts that were more in line with the comprehensive care values of PHC. Such principles and concepts included integrating such interventions as immunization (Atun, Bennett, & Duran, 2008; World Health Organization, 1974) and the prevention of sexually transmitted diseases, such as HIV/AIDS, into Kenya's national and rural health systems as noted in the 1990 plan of the national HIV/AIDS program: *"The Sexually Transmitted Disease (STD) Control Program*

will not be a vertical program but will be decentralized and integrated with other programs based on… PHC principles…" (NASCOP, 1990).

National health programs became an umbrella under which various donor agencies funded targeted health interventions, which also led to the establishment of national program information systems. For example, in 1989, the WHO supported the installation of a computerized EPI information system (CEIS), which the national immunization program used to analyze vaccines data that field workers collected through dedicated reporting forms (e.g. MOH702/710). A few years later, the World Bank supported setting up an HIV/AIDS sentinel surveillance system (World Bank, 2002). The national HIV/AIDS program gained data under this system from a national blood donor HIV surveillance form (MOH723)—used by blood screening centers to report on test results—and the national AIDS register (MOH345)—used by surveillance sites to report AIDS cases.

Hence, instead of setting up their own information systems, donor agencies relied on national programs' information systems to monitor health indicators and account for their funding. For example, in the first half of the 1990s in the immunization sector, various donor agencies were interested in using information systems to account for vaccines supply and to plan and monitor ad-hoc initiatives such as polio immunization campaigns (Brown et al., 2006). An officer of the immunization program explained as much during an interview: "When we started the first national immunization day campaign for polio in 1996, we had to use a lot of this information to do the planning for the districts". Yet, the lack of integration across national programs' information systems overburdened health workers at the health facilities with data-collection duties to the extent that they could not efficiently report the data they were supposed to collect (Odhiambo-Otieno, 2005). Table 5 summarizes the main findings of this period.

Table 5. Phase 3: Contestation between SPHC and PHC in Kenya (1980-1994)

Authors	World Health Organization
Rhetorical Strategies	Rhetorical strategy of bracketing differences to appropriate elements of SPHC while keeping some of the principles of PHC.
Frames	"Generate managerial data to measure…program performance and results". Integrate health interventions into national and rural systems in line with comprehensive care values of PHC.
Technology	Epidemiological and surveillance systems constituted the SPHC's frame that legitimized the production of "managerial data to measure program performance and results". .
Outcomes	Standalone IS integrated under health programs. Lack of integration across national programs' information systems overburdened health workers at the health facilities with data-collection duties.

4.4 Phase 4: National Policy of Integrating HIS and Translating International Sector-wide Approaches (SWAps) into Kenya (1994-2000)

In 1994, Kenya's Ministry of Health adopted the "National Health Policy" that endorsed some of the SPHC principles. Following the recommendations of the World Bank's report "Investing in Health" published in 1993, the policy envisaged introducing "essential health packages" that involved identifying the most cost-effective health interventions (Segall, 2003). Yet, in opposition to the SPHC frames that legitimized ad-hoc health interventions for rapid results, the new policy supported integrated health information systems to improve performance monitoring and financial accountability (Ministry of Health, 1994; Ministry of Health, 1996). Kenya's national HIS department confirmed that a lack of integrated HIS constrained its ability to provide health planning and management information to the ministry's officials (HIS, 1991; HIS, 2000b). In various meetings, the department complained that its officers were delayed in performing their duties since they had to repeatedly ask for data about the various health programs such as family planning and immunization (HIS, 1992). Reiterating "the need for accurate and timely information… for decision making and proper planning", during one meeting, the deputy chief economist of the department of planning raised serious concerns about the poor performance of the national health information system (HIS, 2000a).

Thus, the technology constraints of fragmented health information systems contributed to making Kenya's Ministry of Health realize that accounting for results, as originally spelled out in SPHC, could not work without integration. Thus, such technology constraints were a key factor that led to the creation of the new

frame that legitimized integrating HIS for better performance monitoring and accountability. More specifically, in formulating the new policy, the ministry adopted a rhetorical strategy of resolving differences that reflected the need to integrate and strengthen "key health management information systems to support the policy making role of the Ministry of Health in disease surveillance, planning, monitoring and evaluation" (Ministry of Health, 1994, p. 47).

After the Ministry of Health implemented this new policy, it turned the Department of HIS into the Division of Health Management Information Systems (HMIS) and put HMIS in charge of integrating HIS and monitoring the health sector's performance. The new policy of integration envisaged that all information collected at district level would be sent to HMIS at the national level. HMIS was then in charge of supplying health programs with relevant information. Figure 1 illustrates the vertical and centralized HIS on the left-hand side and the planned integrated HIS in Kenya on the right-hand side.

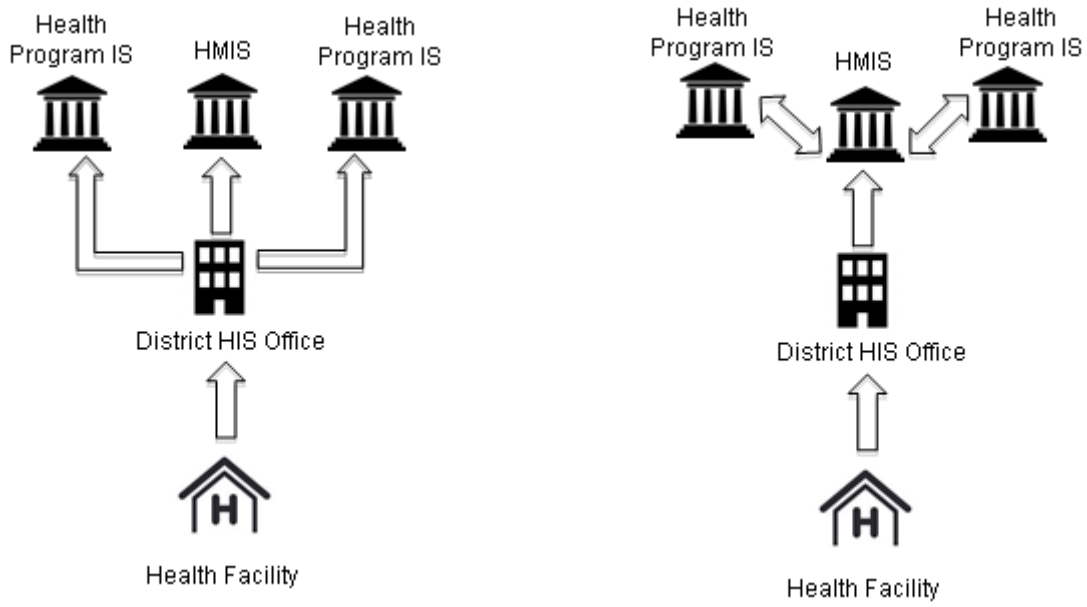

Figure 1. Vertical and Centralized HIS (on the Left-hand Side) vs. Planned Integrated HIS in Kenya (on the Right-hand Side)

The new policy led to a series of changes in the HIS, which included HMIS's designing and testing a new data-reporting form (MOH711) that integrated information from reproductive health, HIV/AIDS, Tuberculosis, Malaria, and child nutrition IS. With the introduction of this new form, the Division of HMIS hoped to reduce the data-entry workload of health facilities (Ministry of Health, 2008). In addition, it equipped a considerable number of districts with computers and file transfer protocol (FTP) tools to accelerate data transfer to the national level.

Thus, the Ministry of Health's rhetorical strategy that shaped the health sector policy in Kenya reflects only partially the original SPHC approach. Such a rhetorical strategy carried new concepts of cost-effectiveness that legitimized ad-hoc and vertical health interventions. It still gave importance to performance monitoring and accountability, but, this time, to support integrated health information systems for more effective health sector planning and management.

In the second half of the 1990s, under the leadership of the World Bank, the international community agreed to support the sector-wide approaches (SWAps) (Ruger, 2005). SWAps were shaped through a rhetorical strategy of resolving differences meant to respond to critiques against the World Bank's lending policies and practices in providing international aid (World Bank, 1992, as cited in Jones, 2000). In particular, SWAps were meant to overcome the limitations of the donor-driven fragmentation of vertical programs in most developing countries. For this purpose, SWAps supported a holistic approach to health sector interventions by pooling donor and government funding into a common health budget (Cassel, 1997). SWAps envisaged integrating health sector interventions under the principle of "aid effectiveness" (Jones, 2000). This new policy had little to share with PHC's legitimizing the integration of community-based health services in the late 1970s. Instead, aid effectiveness became a rhetorical device that

legitimized central monitoring systems as fundamental for tracking funding and results (Cassel, 1997; Hill, 2002; Lambo & Sambo, 2003; World Bank, 1993).

While negotiating SWAps' international agreements, donor agencies enacted a polemic rhetorical strategy. Through this rhetorical strategy, they established that governments of developing countries needed sound management, monitoring capacity, and accountability to qualify for budget support (Cassel, 1997; Lambo & Sambo, 2003). Thus, instead of committing to budget support and the integration of health sector interventions, most donor agencies preferred to maintain separate funding channels and monitoring systems. They focused on protecting their interests from what they perceived as a lack of financial capacity and accountability by national governments. In Kenya, one donor agency experienced [a situation in which it considered budget support as too risky. Indeed, one representative from this donor agency said: "Our decision has always been not to contribute money directly into Kenya's healthcare budget since its financial systems are not robust enough". Official documents from the World Bank confirmed that the Kenyan Government maintained a certain degree of resistance to accountability. For example, technical assistance documents of the World Bank highlight the government's lack of commitment to implementing an integrated financial management system (World Bank, 2004).

Notwithstanding the government's effort to set up performance management and monitoring systems, these findings suggest that the government's institutions were still not fully committed to accountability. Many donor agencies interpreted poor accountability as a form of resistance to health sector reforms, which restrained them from fully committing to coordinating aid and integrating health information systems. Official reports from HMIS confirmed how disjointed data-management procedures and practices embedded in vertical health information systems had not been resolved yet (Ministry of Health, 2006). At the same time, a lack of coordination between different donor partners was still a problem; one donor agency consultant said: "[Most of the time the Global Fund, The Global Alliance for Vaccines and Immunizations (GAVI), HMIS, and so on…are even trying to achieve the same objectives, but they are not talking to each other in a structured manner". Table 6 summarizes the key findings for this period.

4.5 Phase 5: Incongruent Frames of Integration in Kenya (2000-2011)

Kenya's HIV/AIDS sector in particular felt the pressure to coordinate aid and harmonize monitoring and evaluation as one donor representative explained: "When I started working in Kenya [in 1999]…, the Government, [the HIV/AIDS program], and all the donors… offered a strategy… to work jointly on monitoring and evaluation because everyone was monitoring and evaluating their own project with their own finance". To harmonize HIV/AIDS interventions in Kenya, the World Bank and other U.N. organizations supported the creation of the National HIV/AIDS Control Council (NACC) in 2000 and the National HIV/AIDS Monitoring and Evaluation (M&E) Framework in 2005. NACC's mission included: "Coordinat[ing] and superviz[ing] [the] implementation of AIDS programs through a multisectoral, multidisciplinary approach…, mobiliz[ing] government ministries and institutions, NGOs, etc. to participate in AIDS control…, [and] developing management information systems for AIDS control" (Government of Kenya, 1997).

The World Bank led the creation of NACC through the rhetorical strategy of resolving differences similar to that used in generating the SWAps. This rhetorical strategy included frames of integrated and coordinated action spelled out in SWAps. The strategy's aim focused on reducing the fragmentation of HIV/AIDS interventions and increasing aid effectiveness (NACC, 2009). Under the influence of this rhetorical strategy, the Government of Kenya conceived the coordination and integration of HIV/AIDS programs as a "multisectoral approach" (Government of Kenya, 1997). Paradoxically, the multisectoral approach contradicted the sector-wide approaches. As such, NACC became a system on its own that collected information from all HIV/AIDS policy stakeholders but was not integrated with other information systems in the health sector. Hence, multisectoral HIV/AIDS policies further fragmented the HIS in the country. For example, Kenya's national HIV/AIDS program's information system collected data from all healthcare providers for the National Monitoring and Evaluation Framework. Besides the national HIV/AIDS program's information system, the framework collected data from other sources such as NACC's community-based program activity reporting (COBPAR) for data generated by local volunteering organizations. NACC would then input data received from all sources into the Country Response Information System (CRIS).

NACC also faced criticism that it was not properly fulfilling its coordinating responsibilities because it was too busy implementing the World Bank's HIV/AIDS project. The perception was that the World Bank created NACC to gain more political control over HIV/AIDS interventions. Indeed, an international organization officer said: "The reason why you have multiple AIDS control programs is that donors wanted to have more control over how the money was spent in that particular area. So they created new

institutions of management…[and] more fragmentation and duplication". Thus, donors' desire to secure political control over funded activities drove the lack of integration between various HIV/AIDS programs and their respective information systems. As a result, the national HIV/AIDS program became more accountable to NACC and other international donor organizations than to the Ministry of Health's central HMIS. In this regard, one information officer working for the national program of HIV/AIDS explained: "[The national program of HIV/AIDS] has to report to NACC… UNAIDS… WHO, and even for further funding they need to keep the partners abreast of what is happening". Hence, incongruent frames about the definition and conditions of integrating international health interventions challenged the harmonization of health information systems and undermined aid effectiveness.

A further challenge to SWAps came from national programs that considered accountability as a source of opportunity to raise donor funding. For example, one information officer working for the national HIV/AIDS program said: "In the beginning we really did not have many [donor] partners on board, but gradually they are coming in…and demand for information has really gone up. Everybody is [now] very sensitive [about the need for information] to solicit funds". The national HIV/AIDS program's information officers enacted a rhetorical strategy of normalization to enforce accountability on health workers who collected data at health facilities. The officers used a rhetorical strategy in which they persuaded the health workers that they needed to "document" drug expenditure to access funding and carry on their activities. One of these officers said: "Issues of documentation have been problems among health workers… [We tell] them: 'I wouldn't give you drugs before you tell me what you spent on drugs…. [You can use reported data to]…replenish whatever stock you need.".

Thus, the national HIV/AIDS program's information officers drew on HIS outputs, such as data reports that "documented" results, in their rhetorical strategy to demonstrate how field workers should use the HIS to account for results. In this way, they gave continuity to the accountability frame. The normalization of accountability contributed to the strong centralization of program information systems. As a result, local health managers did not value using information to improve health service management and delivery in their communities. Table 7 summarizes these findings.

In summary, in spite of a series of international and national reforms that affected the health sector in Kenya for almost 40 years, by 2011, the country's HIS showed little change. Apart from small technological improvements, the HIS was still fragmented and being used as a centralized data-reporting tool. Only in recent years has Kenya begun to work with its international partners to decentralize the HIS in an attempt to increase the local ownership of information. In this paper, we focus on how policy transformation affected HIS innovation in the years that preceded decentralization. Table 8 summarizes the key phases, actors, actions, and outcome we derived from analyzing the case study.

Table 6. Phase 4: National Policy of Integrating HIS and Translating International SWAps into Kenya (1994-2000)

Authors	Kenya's Ministry of Health	World Bank and international community	Major donor agencies
Rhetorical strategies	Rhetorical strategy of resolving differences to integrate and strengthen HIS in support for "disease surveillance, planning, monitoring and evaluation".	Rhetorical strategy of resolving differences to overcome the limitations of donor-driven fragmentation of vertical programs.	Polemic rhetorical strategy to protect donor interests from lack of financial capacity and accountability of national governments.
Frames	Integrated HIS can improve performance monitoring and accountability.	Integrate health sector interventions through budget support to achieve aid effectiveness. Central monitoring systems are fundamental for tracking funding and results.	Sound program management, monitoring capacity, and accountability are essential to qualify for budget support.
Technology	Technology constraints of fragmented HIS contribute to the realization that accounting for results cannot work without integration, thus, leading to the creation of the new frame that legitimizes integrating HIS for better performance monitoring and accountability.	-	-
Outcomes	Limitations to budget support and aid effectiveness undermined efforts to integrate HIS.		

Table 7. Phase 5: Incongruent Frames of Integration in Kenya (2000-2011)

Authors	World Bank and international community	Information officers at the national HIV/AIDS program
Rhetorical strategies	Rhetorical strategy of resolving differences to reduce the fragmentation of HIV/AIDS interventions and increase aid effectiveness.	Rhetorical strategy of normalization to enforce accountability on health workers who collect data at health facilities.
Frames	"Multisectoral approach" to the coordination and integration of HIV/AIDS programs and M&E	"Documenting" individuals' drug expenditure is vital to access funding.
Technology	-	Information officers draw on HIS outputs, such as data reports "documenting" results, to demonstrate how field workers should use the HIS to account for results and give continuity to the accountability frame.
Outcomes	Multisectoral HIV/AIDS coordination contradicted SWAps. Multiple monitoring systems exacerbated contradictions with integrating HIS under SWAps. Centralized HIS undermined local health managers' use of information.	

Table 8. Summary of Phases, Actors, Actions, and Outcomes of Policy Transformation in Kenya

Phases	Actors	Actions	Outcomes
Creation of primary healthcare (PHC) (1970-1978)	World Health Organization	Create the PHC approach to integrated health interventions.	International community endorsed PHC in 1978.
Selective primary healthcare (SPHC) substitutes PHC (1979-1980)	World Bank and other major international agencies World Health Organization	Delegitimize PHC to replace it with SPHC. Reconcile PHC with SPHC by appropriating some SPHC frames and legitimizing monitoring indicators.	Most international agencies adhered to SPHC. SPHC contributed to spreading vertical fragmented health interventions and IS.
Contestation between SPHC and PHC (1980-1994)	World Health Organization	Draw on PHC to integrate health projects under national programs. Enact SPHC by supporting HIS for monitoring performance.	Standalone IS were integrated under health programs Health programs IS were not integrated, which overburdened health workers with data-collection duties.
National HIS-integration policy and International sector-wide approaches (SWAps) (1994-2000)	Kenya's Ministry of Health World Bank and international community Major donor agencies	Advocate for integrated HIS to effectively monitor performance. Lead the adoption of SWAps to improve aid effectiveness. Prioritize accountability over aid effectiveness, which undermines budget support and health interventiosn integration.	Health interventions and IS integration was unsuccessful.
Incongruent frames of integration (2000-2011)	World Bank and international community Information officers at the national HIV/AIDS program	Support multisectoral HIV/AIDS coordination and M&E to achieve aid effectiveness. Advocate for using HIS for vertical reporting and accountability.	Multisectoral HIV/AIDS coordination contradicted SWAps. Multiple monitoring systems contradicted IS integration and undermined local health managers' use of information.

5 Discussion and Implications

Large-scale ICT innovation programs arise from interdependencies between the macro policy level and the micro implementation level (Greenhalgh & Stones, 2010; Pope et al., 2006). The rhetorical strategies analysis we adopt in this study clarifies the mechanisms through which policymaking and enactment intertwine. In particular, we help explain the effectiveness of rhetorical strategies in influencing IS innovation in healthcare.

Our analysis shows how some rhetorical strategies (e.g., normalization and polemic strategies) that powerful actors influence are more likely to set in place dominant frames with hegemonic influence. For example, as the second phase of the case study shows (see Table 4 for a summary), major international donor agencies displaced PHC with rhetorical strategies of normalization and polemic. In addition, the national HIV/AIDS program's information officers extended the hegemonic influence of the dominant frame of accountability by adopting a rhetorical strategy of normalization (see phase 5 summarized in Table 7). Thus, rhetorical strategies constitute an instrument of power (Barrett et al., 2013; Bartis & Mitev, 2008; Jones & Exworthy, 2015), which international policy actors can exercise also with the help of less powerful actors at the local level.

We also reveal how the voice of the less powerful (Boje, 2001) can challenge the hegemony of dominant frames. In various instances, less powerful actors enacted less confrontational rhetorical strategies. For example, the WHO enacted the rhetorical strategy of bracketing differences to compromise between PHC and SPHC (see Tables 4 and 5, which summarize phases 2 and 3, respectively). In phase 4, the Ministry

of Health enacted the rhetorical strategy of resolving differences to support efforts to integrate HIS and revert the fragmentation of HIS (see summary in Table 6). The rhetorical strategies enacted by less powerful actors eroded the hegemony of dominant frames at different levels of effectiveness and, therefore, had different effects on possible contradictions in IS innovation. In the discussion that follows, we link the choice and effect of a rhetorical strategy to the set of interests and values on which policy actors construct frames. In particular, we argue that a lack of coherence in the interests and values that underlie competing frames can generate further contradictions in IS innovation. Indeed, in the case study, the World Bank supported two distinct policies based on the same principle of aid effectiveness but did so to achieve different interests (see Tables 6 and 7, which summarize phases 4 and 5, respectively).

In addition, our findings complement existing research on technology's role in influencing policy and innovation (Constantinides, 2013; Doolin, 2003; Klecun, 2011) by demonstrating how technology contributes to shaping frames inherent in rhetorical strategies. In Section 5.3, we illustrate how elements of health information systems, such as monitoring indicators, both constitute and are constituted by frames that actors draw on to construct their rhetorical strategies and legitimize the use of HIS. Below, we discuss our findings (which Table 9 summarizes) in more detail.

Table 9. Frames and Rhetorical Strategies in the Transformation of Policy and IS Innovation

	SPHC replaces PHC	PHC vs. hegemony of SPHC	New policy for integrating HIS and SWAps	Accountability vs. SWAps and integration
Rhetorical strategies	Polemic and normalization	Bracketing	Resolution	Polemic and normalization
Technology	Monitoring indicators help to demonstrate how "selective interventions can be easy to measure and able to produce rapid results" (an SPHC frame).	Monitoring tools help to demonstrate how to use data to measure results (an SPHC frame).	Technology constraints contribute to the realization that "HIS integration is needed for performance monitoring and accountability", a frame of the new policy for integrating HIS.	Data reports that "document" results are drawn on to demonstrate how field workers should use the HIS to account for results.
Policy supporters' adherence to interests and values that underpin frames	Strong adherence to interests and values represented in SPHC frames.	Strong adherence to some SPHC principles and core principles of PHC.	Weak adherence to interests and values represented in the accountability and aid effectiveness frames.	Strong adherence to interests represented in the accountability frame.
Effectiveness of rhetorical strategies	SPHC delegitimizes and replaces PHC.	PHC mitigates hegemony of SPHC.	Reduced effectiveness of competing frames (HIS integration and SWAps).	Dominant frame of accountability limits diffusion of competing frames (e.g., integration, aid effectiveness).
IS innovation outcomes and contradictions	Diffusion of fragmented HIS.	Standalone IS integration under national programs.	Multiple monitoring systems contradicted integrating HIS under SWAps.	Centralized HIS undermined local health managers' use of information.

5.1 Actors' Adherence to the Interests and Values Underlying Frames and its Influence on IS Innovation in Healthcare

In this section, we discuss how the set of interests and values on which actors constructed frames influenced what rhetorical strategy they chose and those choices' consequences on IS innovation. In particular, we base the discussion that follows on two main examples: 1) WHO, a weak actor that tried to limit the hegemony of a dominant frame; and 2) the national HIV/AIDS program's information officers, also weak actors but who differed from WHO in that their rhetorical strategy supported the dominant frame of accountability.

Starting with the first example, as the second and third phase of the case study (see summary in Tables 4 and 5) show, the WHO adopted a rhetorical strategy of bracketing differences to integrate some of SPHC

frames into its policy. By doing so, the WHO reconfigured its interests and values. On the one hand, the WHO accepted the managerialist principles of result-based management that characterized SPHC: it included monitoring indicators into its "Health for All Strategy" and it actively supported the HIV/AIDS epidemiological and surveillance systems, including the computerized epidemiological information system (CEIS) of the national immunization program in Kenya. It intended these initiatives to strengthen health sector planning and management systems. On the other hand, the WHO maintained core principles and values that underlay key PHC frames. For example, in the "Health for All Strategy", the WHO complied with the community healthcare principle of PHC by envisaging that policymakers should design monitoring indicators that were "meaningful" to local populations. Likewise, its policy of integrating health interventions into national and rural health systems was consistent with PHC's comprehensive healthcare values. Thus, the WHO adhered to some SPHC principles while demonstrating coherence with core PHC values.

As the WHO example shows, adhering to the principles that underlie frames in a rhetorical strategy is particularly important when a weak policy actor seeks to compromise between dominant and competing frames. By adopting a rhetorical strategy of bracketing differences, the WHO successfully limited the hegemony of the dominant frame of SPHC while translating some of PHC frames into action. It reduced IS innovation contradictions by integrating donor-driven reporting systems under the umbrella of overarching health programs. On the other hand, unresolved contradictions included overburdening health workers with collecting health data for each national health program.

Thus, the frames and rhetorical strategies that actors adopt reflect how they reconfigure their interests and values (Pope et al., 2006). Similarly, by becoming more accountable to their donors, the national HIV/AIDS program's information officers assimilated dominant frames that legitimized accountability through a rhetorical strategy of normalization (see phase 5, which Table 7 summarizes). The rhetorical strategy of normalization represented these information officers' remissively accepting accountability to preserve access to donor funding and, therefore, protect their interests. The program's information officers adhered strongly to the interests that underlay dominant frames of accountability. Thus, these officers contributed to limiting the effectiveness of competing frames that supported aid effectiveness and integrating health information systems. The example of these officers assimilating the dominant frames of accountability shows that dominant frames of international policies can intensify and extend their influence thanks to the support of local actors. Hence, national programs that normalized accountability contributed to the strong centralization of these programs' health information systems. HIS centralization contradicted the need for local health managers to use information, which undermined health service management and delivery.

Past research has acknowledged that donor agencies' accountability interests are among the major sources of fragmented HIS in developing countries (Madon et al., 2010; Sahay, Saebo, Mekonnen, & Gizaw, 2010; Smith et al., 2008). Our findings suggest that one cannot simply associate contradictory outcomes of IS innovation with powerful actors who seek to establish the hegemony of dominant frames. Frames inherent in the rhetorical strategies of less powerful policy actors also matter and may have further controversial effects. In particular, the two examples above illustrate that the effect of rhetorical strategies depend on whether authors adhere to the interests and values on which frames are constructed.

In Section 5.2, we illustrate the opposite case of two policy actors, one less powerful than the other. These two actors did not successfully use their rhetorical strategies to affirm a new policy because they did not strongly adhere to the interests and values that underlay the frames carried in their rhetorical strategies. We also discuss the impact of these rhetorical strategies on IS innovation contradictions.

5.2 The Ambiguous Political Function of Frames in Policy Transformation and IS Innovation

In this section, we discuss how actors can use frames that apparently support a system of common values to deliver different rhetorical strategies and, therefore, produce different effects in IS innovation. For example, as narrated in the fourth phase of the case study (see summary in Table 6), Kenya's Ministry of Health enacted a rhetorical strategy of resolving differences to integrate health information systems. Together with sector-wide approaches (SWAps), it intended its new policy for integrating HIS to reverse the fragmentation trend that SPHC set. In particular, it stressed the importance of integrating HIS for better heath sector planning, performance monitoring, and accountability. On the other hand, donor agencies considered poor accountability as a legitimate reason for limiting budget support envisaged in sector-wide approaches. Donor agencies defended the principle of accountability through a polemic rhetorical strategy. By doing so, they neutralized SWAps' effect and, in particular, aid effectiveness. Most of all, they challenged the integration of health programs and information systems.

Whereas the Ministry of Health used the lack of accountability as a rhetorical device to formulate and legitimize integration policies, donor agencies used the lack of accountability as a rhetorical device to delegitimize such policies and limit integration where possible. Accountability assumed different legitimation roles according to the different meanings that various actors gave it in practice. Kenya's Ministry of Health legitimized accountability in its rhetorical strategy but not so much in practice. As we point out in Section 4.4, the ministry's lack of capacity and effort in setting up financial control systems demonstrated its poor legitimacy of accountability. However, for donor agencies, accountability was an important institutional requirement to safeguard their interests. Thus, as some donor agencies perceived little commitment to accountability from the ministry's side, they were reluctant to provide budget support and sponsor the integration of health interventions and information systems under the new policies (e.g., national health policy and SWAps).

Based on these findings, we can conclude that the Ministry of Health did not fully adhere to the accountability principles and practices that underlay the frames of its new policy. As a result, the new integration policy did not successfully diminish the effects of donors' dominant frames. Hence, initial attempts to integrate the HIS, which included integrating data-collection forms, contradicted donors' continuous support to vertical HIS.

Another example of misalignment with the values that underlay a frame concerns the World Bank's role in supporting SWAps and, later, HIV/AIDS multisectoral policies. The World Bank actively contributed to shaping both policies on the principle of aid effectiveness. Yet, multisectoral policies contradicted SWAps and diminished their effects, which undermined efforts for integrated HIS. One can explain the contradictions between these two policies by analyzing the interests that drove the World Bank's rhetorical strategies. As Table 6 summarizes, the World Bank used aid effectiveness as a rhetorical device to defend its lending policies and practices and revert the fragmentation of health programs. It drew on the same principle of aid effectiveness to construct the frame that legitimized multisectoral coordination in HIV/AIDS. Yet, in this case, the World Bank used the principle of aid effectiveness as part of a rhetorical strategy to legitimize its power and control over HIV/AIDS interventions, an area that had begun to attract much political and economic interest (see phase 5 summarized in Table 7). Thus, the rhetorical strategy of the World Bank supported a new frame of multisectoral coordination that contradicted SWAps' frame of sector-wide integration. Hence, two frames that appeared to build on the same principle ("aid effectiveness") in reality preserved different political interests. One can see this rhetorical strategy's failure in NACC's creating multiple monitoring systems, which contradicted integrating health interventions and information systems under SWAps.

Previous studies have found how rhetorical strategies may influence the legitimacy of IS innovations and how user communities adopt and diffuse such strategies (Barrett et al., 2013; Kaganer, Pawlowski, & Wiley-Patton, 2010). Our findings add to these studies by demonstrating that one needs to understand a rhetorical strategy's effectiveness not only in relation to its recipients but also in relation to its authors. In addition to what previous studies have suggested (Barrett et al., 2013), we found that actors may not always act coherently with the interests and values that underlie the frames inherent in their own rhetorical strategies. This finding extends existing studies (Constantinides & Barrett, 2014) by explaining why actors can use similar frames in different rhetorical strategies to legitimize different roles of IS innovation in the health sector. Moreover, we further extend previous studies by demonstrating that ambiguity in policy does not only depend on incongruent frames that reflect a misalignment of interests and values among various actors (Pope et al., 2006). By constructing frames onto principles that do not fully align with its particular interests or values, a policy actor may generate policy and IS innovation contradictions. Indeed, one can see as much in the World Bank's constructing multisectoral policies and SWAps frames on the same principles. Yet, it sought to achieve misaligned interests, which resulted in one policy damaging the other.

These findings unveil the complexity of the economic and political dimensions of discourse and their influence on IS innovations (Barrett et al., 2013). In particular, they shift attention to the ambiguous political function of frames by disconnecting the discursive justification for change and innovation from the interests that motivate them.

5.3 The Role of Technology in the Context of Rhetorical Strategies

In Section 5.2, we illustrate how frames can influence the effectiveness of rhetorical strategies in relation to their alignment with actors' interests and values. In this section, we discuss technology's role in shaping frames to better understand its influence on policy enactments.

Previous research has acknowledged IS innovations' role in influencing policymaking in the health sector (Klecun, 2015; Mathar, 2011). Yet, existing studies do not explicitly show how a technology's material features influence policy transformation (Constantinides, 2013; Doolin, 2003; Klecun, 2011; Raviola & Norbäck, 2013). In the discussion that follows, we demonstrate how our study fills this gap. In particular, we argue that policy actors draw on technology to construct frames, which they then diffuse through rhetorical strategies. In this way, technology contributes to policy transformation. We also argue that technology's resulting effects on IS innovation contradictions are linked to how actors relate their values and interests with the frames technology shapes and the consequent rhetorical strategies that they enact.

In this study, we consider HIS as comprising such material components as monitoring indicators and systems, data reports, health information, and so on. For example, as we discuss in Section 4.2, monitoring indicators helped to demonstrate how selective interventions can be easy to measure and able to produce rapid results—one of the key frames of SPHC.

WHO also integrated monitoring indicators and the SPHC frames that they represented in the rhetorical strategy (i.e., bracketing differences) that it enacted to create commonalities between PHC and SPHC. In particular, as we can see in phase 3, monitoring tools, such as epidemiological and surveillance systems, helped to shape the SPHC frames that legitimized the use of managerial data to measure program performance.

The fourth phase of the case study (see summary in Table 6) shows how technology constraints contributed to making the Ministry of Health realize that it needed to integrate HIS for performance monitoring and accountability, which represented a key frame of its new policy. Likewise, in the last phase of the case study (see summary in Table 7), we show how the national HIV/AIDS program's information officers drew on data reports that "documented" results to demonstrate how field workers should use the HIS to account for results. In this way, they gave continuity to the frame of accountability and legitimized centralized reporting systems while undermining the local health managers' use of information.

These examples demonstrate how technology influences how actors construct frames and, thereby, mediates rhetorical strategies. Dominant frames of accountability legitimized technology as enabling health sector policies (Klecun, 2015) such as performance monitoring. Fundamental material components of Kenya's HIS, such as monitoring indicators and data reports, contributed to shaping frames that legitimized performance monitoring and accountability in health sector management. While policy actors diffused such frames through rhetorical strategies, HIS influenced policy transformations and IS innovation in healthcare.

As we discuss in Section 5.2, frames that legitimized accountability became part of different rhetorical strategies to shape different visions of how health information systems should work to support Kenya's health sector's performance and how various actors monitored it. Actors debated whether Kenya needed to integrate its HIS under a health sector performance-monitoring framework as SWAps advocated or whether each national program needed its own IS to account for quick results and donor funding as spelled out in the SPHC policy. These considerations highlight the importance of how actors relate their values and interests to the frames that a technology shapes. In this way, one can better understand how technology mediates a rhetorical strategy and its influence on IS innovation.

In addition, the persistence of technology-shaped frames may lead to little changes to actors' vision of how technology can innovate the health sector. For example, as our case study shows the HIS gave continuity to the hegemonic frame of accountability that legitimized the centralized reporting of health data to account for results. As a result, local health managers' poor usage of information in the provision of health services contradicted the HIS function that advocated for supporting health service planning and management at the local level.

We acknowledge the role of existing technologies in performing future innovations (Raviola & Norbäck, 2013). We add that, by contributing to shaping dominant frames, existing technologies can constrain policy change and the development of new IS innovations that may come with it. This point is particularly important because we believe that existing research (Klecun, 2015) explains little about how competing frames can challenge dominant frames that technologies shape and, thereby, influence technological change and IS innovation. With the introduction of new innovative technologies, new frames should come into existence and be diffused to trigger wider policy change.

In summary, our findings provide insights into the influence of frames and rhetorical strategies on IS innovation and the role that different actors play in enacting policies that affect IS innovation. We also increase the understanding of the role that technology plays in enacting policies that affect IS innovation Figure 2 clearly represents our theoretical contribution. In the figure, dominant and competing frames

carried in rhetorical strategies stand in a mutual shaping relationship with technology. Policy actors' adherence to the interests and values represented in such frames may influence the effectiveness of rhetorical strategies and how actors enact policies that affect IS innovation.

Even though our case study evidences the sets of relationships we portray in Figure 2, we recognize the limitations of generalizing them to other settings. However, our representation below demonstrates how using frame theory in rhetorical strategy analysis can deepen our understanding of the implications of policy transformation for healthcare IS innovation.

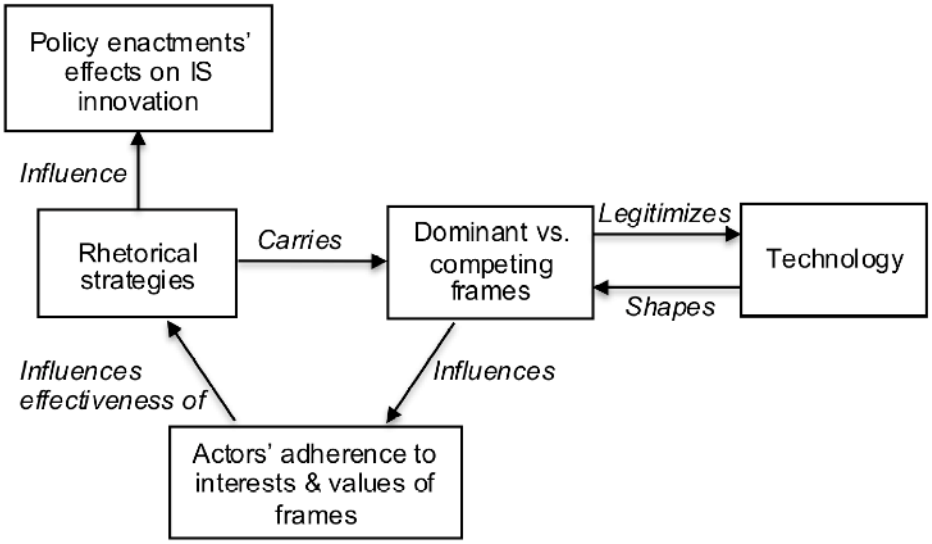

Figure 2. Frames, Rhetorical Strategies, and Technology Relationships in Policy Transformation and Healthcare IS Innovation

6 Conclusion

In this paper, we systematically explain the mechanisms through which policy creation and enactment affect IS innovation in the health sector. We adopt frame theory and rhetorical strategies analysis to better understand the effectiveness of rhetorical strategies in challenging dominant frames and the resultant implications for policy and IS innovation. Thus, we extend the application of discourse analysis methods in IS research (Wagner, 2003; Webb & Mallon, 2007) and existing discursive approaches to IS innovation (Barrett et al., 2013; Constantinides, 2013; Constantinides & Barrett, 2014).

By focusing on frames, we demonstrate how actors exercise the "insidious" political influence (Jones & Exworthy, 2015) of rhetorical strategies on IS innovation by disconnecting the discursive justification for an innovation from the interests that motivate it. Thus, the way an IS innovation unfolds and produces its effects is only in part driven by dominant frames (Barrett et al., 2013) and the popularity of innovation concepts (Wang 2009). The power-balance between actors and how actors relate their interests and values with frames are two important factors that determine which rhetorical strategies actors use and these strategies' role in diffusing and establishing frames that influence IS innovations.

We also contribute to better understanding the role of information technology in shaping policy and IS innovation. In particular, we highlight the role of technology in shaping dominant frames. We need to know the way in which actors relate their interests and values with technology-shaped frames to understand the implications of technology for policy transformation and healthcare IS innovation. We also demonstrate the implications of a technology's materiality in giving continuity to a dominant frame, which limits policy change and further IS innovation.

We acknowledge the limitations of focusing on one type of technology such as health information systems in a specific context such as Kenya. Such limitations concern the implications of our findings for

understanding the role of other types of technology in shaping health sector policies in other contexts. This fact notwithstanding, we demonstrate how one can use rhetorical strategy analysis to better understand the implications of policy transformation for IS innovation.

Our theoretical contribution (see Figure 2) and the methodological approach that we develop in this paper could serve as a basis for future research to further our understanding of how different types of technology (e.g., electronic health records systems, telehealth, mobile health, etc.) shape policy and lead to new trajectories of action in IS innovation. Past research has found how IT concepts that drive the diffusion of IS innovations become taken for granted and acquire legitimacy (Wang, 2009). But we also need to understand how IT concepts translate into policy that influences IS innovations and their institutionalization at a large scale. The applicability of a discursive approach to analyzing how technology performs policy is not restricted to IT-enabled transformation in healthcare and the wider public sector. A rhetorical strategy analysis could benefit research that focuses on how technology standards (Backhouse, Hsu, & Silva, 2006) are developed and shape technology and innovation policies.

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Appendix

Table A1. Phase 1: Rhetorical Strategies and Frames Shaping PHC in International Health (1970-1978)

Actor: World Health Organization
Rhetorical strategy Polemic rhetorical strategy to legitimize the strengthening of health infrastructures through PHC. **Frames** Vertical control programs, such as malaria eradication, cannot deliver desired results. "During the 1960s, malaria eradication was facing serious difficulties in the field; ultimately, it would suffer colossal and embarrassing failures. In 1969, the World Health Assembly, declaring that it was not feasible to eradicate malaria in many parts of the world, …emphasized the need to develop rural health systems and to integrate malaria control into general health services" (Brown et al., 2006, p. 65). Integrating healthcare in community-based services. "*[PHC] is the first level of contact of individuals, the family and community with the national health system* bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process" (emphasis added) (World Health Organization, 1978). Health is "a fundamental human right" and a matter of "social justice". "The [Alma-Ata] Conference strongly reaffirms that health…is a *fundamental human right*" (emphasis added) (World Health Organization, 1978). "A main social target…should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of *social justice*" (emphasis added) (World Health Organization, 1978). PHC promotes "equity of distribution of healthcare". "*Equity of distribution of health care* has now become the yardstick by which nations will be measured. Primary Health Care has become a recognized field" (emphasis added) (Bennett, 1979, p. 505).

Table A2. Phase 2: The Creation of SPHC as a Substitute of PHC in International Health (1979-1980)

Actors: World Bank and other international agencies
Rhetorical strategy Polemic rhetorical strategy to delegitimize PHC and legitimize SPHC. **Frames** PHC is unrealistic and unattainable. "A number of governments, agencies, and individuals saw WHO's idealistic view of Primary Health Care as "unrealistic" and unattainable" (Brown et al., 2006, p. 67). Vertical health programs ("disease control programs") can deliver "cost-effectiveness" and rapid "tangible results". "The selective approach to controlling endemic disease in the developing countries is potentially the most *cost-effective* type of medical intervention" (emphasis added) (Walsh & Warren, 1979, p. 972). "Despite the universal rhetorical support being given to the idea of PHC…, many governments and agencies remain tied to more traditional views of the causes of disease and the best ways of *organizing scarce resources within disease control programs* (emphasis added) (Gish, 1982, p. 1050). "It is regrettable that afterward the impatience of some international agencies, both UN and private, and their emphasis on achieving *tangible results* instead of promoting change…led to major distortions of the original concept of primary health care" (emphasis added) (Tejada de Rivero 2003, p. 4). **Rhetorical strategy** Normalization rhetorical strategy to suppress differences between comprehensive and selective care and replace PHC with SPHC. **Frames** Cannot sustain "comprehensive" PHC with few available resources. "Since it must be acknowledged that resources available for health programs are usually limited, the provision of total primary health care to everyone in the near future remains unlikely… services targeted to the few most important diseases may be the most effective means of improving the health of the greatest number of people" (Walsh & Warren, 1980, p. 148). SPHC is the only possible solution. "Until *comprehensive primary health care* can be made available to all, services targeted to the few most important diseases may be the most effective means of improving the health of the greatest number of people" (emphasis added) (Walsh & Warren, 1979, p. 973). **Technology** Monitoring indicators help to demonstrate how "selective interventions can be easy to measure and able to produce rapid results" (an SPHC frame). "[GOBI] appeared easy to monitor and evaluate. Moreover, [its interventions] were measurable and had clear targets. Funding appeared easier to obtain because indicators of success and reporting could be produced more rapidly" (Cueto, 2004, p. 1869).

Table A2. Phase 2: The Creation of SPHC as a Substitute of PHC in International Health (1978-1980)

Actor: World Health Organization
Rhetorical strategy Rhetorical strategy of bracketing differences to review PHC and create commonalities with SPHC. **Frames** Indicators should be used to monitor the "Health for All" strategy "It is expected…that agreement on acceptable *indicators for assessing progress towards health for all* will gradually be evolved" (emphasis added) (World Health Organization, 1979, p. 8). Monitoring indicators should be "manageable" and "meaningful" for local populations. "High selectivity has to be employed so that the use of *indicators* becomes *manageable* and *meaningful*" (emphasis added) (WHO 1979, p. 30). One should use "sampling" to avoid "overloading health workers with routine data collection", "inaccurate reporting and unused information." "*Sampling*…has the advantage of *avoiding overloading health workers with routine data collection*, which often leads to *inaccurate reporting and unused information*" (emphasis added) (World Health Organization 1979, p. 32). **Technology** Monitoring indicators help to demonstrate how one can use measurable targets to gauge health interventions progress as spelled out in the SPHC policy. "It is important to attempt to specify, national, regional and global *targets* such as those adopted by the WHA when it resolved to provide by 1990 immunization for all the children of the world…" (emphasis added) (World Health Organization, 1979, p. 8). "It is important that [governments] introduce…a process of evaluation. This will include the *assessment of the effectiveness and impact of the measures* they are taking and the *monitoring of the progress and efficiency* with which these measures are being carried out" (emphasis added) (World Health Organization, 1979, p. 30).

Table A3. Phase 3: Contestation between SPHC and PHC in Kenya (1980-1994)

Actor: World Health Organization
Rhetorical strategies Rhetorical strategy of bracketing differences to appropriate elements of SPHC while keeping some of the principles of PHC. **Frames** Integrate health interventions into national programs and rural systems based on PHC principles. "The Sexually Transmitted Disease (STD) Control Program will not be a vertical program but will be decentralized and integrated with other programs based on…*PHC principles*…" (emphasis added) (NASCOP, 1990). "Generate managerial data to measure…program performance and results". (see quote under "Technology" below) **Technology** Epidemiological and surveillance systems constitute the SPHC's frame that legitimizes the production of managerial data to measure program performance. "Epidemiology and surveillance will…generate managerial data to measure…program performance and results" (NASCOP, 1990).

Table A4. Phase 4: National Policy of Integrating HIS and Translating International SWAps into Kenya (1994-2000)

Actor: Kenya's Ministry of Health
Rhetorical strategy Rhetorical strategy of resolving differences to integrate and strengthen HIS in support of "disease surveillance, planning, monitoring and evaluation" (Ministry of Health, 1994, p. 47). **Frames** Integrating HIS can improve performance monitoring and accountability. "[The HIS is] characterized by a *lack of integration*…with no effective central coordination to ensure that information… is readily available to all who need it" (emphasis added) (Ministry of Health, 1994, p. 5). "There will be strengthening of the existing *health and management information systems*…for improved *financial accountability*, personnel management and performance monitoring. This will be accorded a very high priority" (emphasis added) (Ministry of Health, 1996, p. viii). "[Monitoring and evaluation] will be supported by the use of explicit *indicators and enhanced health management information systems*, particularly those pertaining to *financial accountability*" (emphasis added) (Ministry of Health, 1996, p. viii). **Technology** Technology constraints of fragmented HIS contribute to the realization that accounting for results cannot work without integration, which leads to creating a new frame that legitimizes efforts to integrate HIS for better performance monitoring and accountability. "HIS does not get reports on immunization during some months…. The central processing of immunization data should be done solely at HIS…. Data on immunization should be sent to HIS for analysis" (HIS, 1991). "The chairman [the Deputy Chief Economist of the Department of Planning] reiterated the need for accurate and timely information…for decision making and proper planning…. He reportedly accused the staff of the HIS's low level of performance" (HIS, 2000a). "Harmonization of health data was important for taking action… the information needed by health planners and health managers should be amalgamated… vertical programs have to be integrated with HIS" (HIS, 2000b).

Table A4. Phase 4: National Policy of Integrating HIS and Translating International SWAps into Kenya (1994-2000)

Actors: World Bank and international community
Rhetorical strategy Rhetorical strategy of resolving differences to overcome the limitations of donor-driven fragmentation of vertical programs. "In January 1997, the Danish Government and the World Bank hosted an informal meeting of bilateral and multilateral agencies concerned with sector-wide approaches to health development.… To achieve sustained improvements in people's health, it was agreed that *sector-wide approaches offer a better prospect than the piecemeal pursuit of separately financed projects*" (emphasis added) (Cassel, 1997, p.1). "Donor concerns about *aid effectiveness* are matched by government frustrations with the *fragmentation and managerial overload caused by disparate projects*. For both parties there is an interest in moving towards *broad-based partnerships*…." (Emphasis added) (Cassel, 1997, p. 7). **Frames** Integrate health sector interventions through budget support to achieve aid-effectiveness. "The aim [of SWAps is] to gradually increase the proportion of expenditure channeled through the government budget, and to decrease reliance on separate projects funded by individual agencies" (Cassel, 1997, p.12). "[One of the main factors] influencing the development of the [SWAps] concept by the World Bank […] was consideration of the far-reaching criticisms of the Bank's project lending policies and practices" (World Bank, 1992, as cited in Jones, 2000, p. 4). "[SWAps is an instrument] that the World Bank has taken the lead in promoting as a way of increasing *aid effectiveness*, especially in Africa" (emphasis added) (Jones, 2000, p. 1). Central monitoring systems are fundamental to track funding and results. "In moving from projects toward a sector-wide approach the aim is not just to harmonize donor procedures, but for donors to *use national systems for monitoring performance*, financial management and procurement of goods and services. …To *ensure financial accountability*, the key challenge is to develop national management systems, which *link the use of funds with measures of performance*" (emphasis added) (Cassel, 1997, p. xvii). Interview: "We clearly defined a monitoring framework…and that plan is being implemented under the strategy of SWAps." Interview: "M&E unit has been set up to monitor the sector wide approach".
Actors: major donor agencies
Rhetorical strategy Polemic rhetorical strategy to protect donor interests from lack of financial capacity and accountability of national governments. **Frames** Sound program management, monitoring capacity, and accountability are essential to qualify for budget support. "Most technical agencies, development banks and bilaterals support the idea of sector-wide approaches in principle. Issues which will influence whether principle translates into practice include: concerns about *accountability* and the political risks of being associated with corrupt or unproductive spending" (Cassel, 1997, p. xiv). "A number of international standards have been defined which could form the basis of an agreed *minimum standard of financial management capacity* to allow most donors to participate in common arrangements" (Cassel, 1997, p. 45). For those agencies that are not in a position to channel all or part of their funds through national systems, project funding remains a second-best, and ideally temporary, alternative" (Cassel, 1997, p. 56). Interview: "The decision in Kenya has always been that their financial systems are not robust enough, so we do not put budget support money through Kenya".

Table A5. Phase 5: Incongruent Frames of Integration in Kenya (2000-2011)

Actors: World Bank and international community
Rhetorical strategies Rhetorical strategy of resolving differences to reduce fragmentation of HIV/AIDS interventions and increase aid-effectiveness. **Frames** Multisectoral coordination of HIV/AIDS interventions and integrated M&E to achieve aid-effectiveness Interview: "When I started working in Kenya [in 1999]…, the Government, [the HIV/AIDS program], and all the donors…offered a strategy…to work jointly on monitoring and evaluation because every one was monitoring and evaluating their own project with their own finance". "[NACC's mission] include coordinate and supervise implementation of AIDS programs through a *multisectoral*, multidisciplinary approach…, mobilize Government ministries and institutions, NGOs etc. to participate in AIDS control…, [and] develop management information systems for AIDS control" (Government of Kenya, 1997). "The [Kenya National Strategic Plan] has been jointly designed to respond directly to the five Paris Principles for *Aid Effectiveness*, namely: (i) ownership; (ii) harmonization among all partners; (iii) alignment with national strategic planning processes; (iv) a focus on results; and, (v) mutual accountability. This strategy aims to build upon and deepen NACCs achievements…in the coordination of stakeholders working on HIV in Kenya nationally, including development partners and Government ministries, departments and agencies" (NACC, 2009, pp. xi, 14).
Actors: Kenya's national HIV/AIDS program's information officers
Rhetorical strategy Rhetorical strategy of normalization to enforce accountability on health workers collecting data at health facilities. **Frames** "Documenting" drugs consumption is vital to access funding. Interview: "We need to keep [donors] abreast of what is happening [to solicit] further funding. So… we have to work extra hard to ensure that we have information at our fingertips". **Technology** Information officers draw upon HIS outputs, such as data reports "documenting" results, in their rhetorical strategy to demonstrate how field workers should use the HIS to account for results and give continuity to the frame of accountability. Interview: "Issues of documentation have been problems among health workers… [We tell] them: 'I wouldn't give you drugs before you tell me what you spent on drugs… [You can use reported data to]… replenish whatever stock you need".

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