

THE INTERPLAY AMONG INSTITUTIONAL LOGICS INFLUENCING HOSPITAL IT GOVERNANCE

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Abstract

Hospital Information Technologies (IT) promise medical error reduction, improved communication and increased efficiencies. However, governing hospital IT in a way that incorporates all stakeholders with their diverse institutional backgrounds remains a challenge. Understanding how institutional logics interconnect may provide the first step to managing stakeholders' sometimes conflicting beliefs and expectations. Therefore, we ask 'To what extent do the three main stakeholders in hospital IT governance enact different logics and how do these logics interconnect in practice?' We answer this question with 20 in-depth interviews with healthcare professionals, managers and IT-specialists of a large teaching hospital. Our analysis focuses on three key dilemmas within IT governance: centralized versus decentralized locus of control, IT standardization versus customization, and IT stability versus change. Findings suggest an interconnected and evolving set of conflicting and complementary institutional logics, related to differences in the values, beliefs and rules of the internal stakeholder groups. This implies that hospital IT governance involves interaction between stakeholder groups guided by and seeking legitimation in different institutional logics. Our results may raise IT managers' awareness that these logics are not uniquely coupled to one stakeholder group, and that the extent to which logics complement or conflict with one another is issue-dependent.

Key words: Institutional logics, IT governance, Health care, Stakeholders

1 Introduction

Information technology (IT) use in hospitals is growing and expanding from administrative support to clinical use, as exemplified by the increasing ubiquity of clinical decision support systems and electronic health records. Hospital IT promises medical error reduction, improved cross-boundary communications, and increasing efficiency of clinical and administrative tasks (Heeks, 2006). Both research and practice (Doolin and Lawrence, 1997; Lapointe and Rivard, 2005) warn us that implementation and adoption of information technologies in health care settings, such as hospitals, are complex and challenging undertakings. Especially the networked nature of health care implies that health IT impacts diverse stakeholders. Three main stakeholders in hospital IT include 1) hospital managers, 2) health professionals such as doctors and nurses, and 3) IT professionals (Heeks, 2006). These groups have been socialized within different worldviews through their education and work contexts (Greenwood et al., 2008). Through their different institutional backgrounds, these groups will have different perspectives on and expectations from hospital IT. Drawing on the institutional logics approach (Thornton and Ocasio, 2008), we expect multiple institutional logics to be enacted in the IT governance dilemmas in this organizational field (Wooten and Hoffman, 2008).

The institutional logics approach highlights *'how the cultural dimensions of institutions both enable and constrain social action'* (Thornton and Ocasio, 2008, p. 121). For stakeholders involved in hospital IT governance, it is paramount to understand the extent to which these logics are related to distinctive stakeholders and how the logics get connected in practice. Such an understanding promotes IT governance that recognizes the inherent diversity within health care organizations. To contribute to such an understanding, we ask the following question: *To what extent do the three main stakeholders in hospital IT governance enact different logics and how do these logics get interconnected in practice?* We conducted a series of interviews with diverse stakeholders in a large teaching hospital. We analyzed the data by first identifying the institutional logics enlisted in their accounts about hospital IT and its governance. Then we investigated how these logics either complemented or conflicted in their accounts on prevalent dilemmas within hospital IT governance, thus addressing our research question.

Our theoretical contribution is unraveling the interrelatedness of the institutional logics influencing hospital IT governance, which further clarifies the nature of hospital IT governance dilemmas. In doing so, our research answers the call to IT researchers for paying more attention to how institutions influence IT management (Orlikowski and Barley, 2001). Our practical contribution is for IT managers in hospitals to understand how institutionalized views may enable or slow down the IT development and adoption in their organizations.

2 Theoretical background

Governance of IT includes domains where IT related dilemmas have to be addressed. These domains include but are not limited to architecture and infrastructure, business application needs, and prioritization and investment (Weill and Ross, 2005). Various stakeholders have their own particular views on these domains and exercise their power to influence decision-making (Xue, Liang and Boulton, 2008; Weil and Ross, 2005). This study focuses on three IT governance dilemmas: 1) locus of control of IT, 2) standardization versus customization of IT, and 3) stability versus change. We selected these dilemmas both because of their close link with the decision domains suggested by Weil and Ross (2005), and the debate they raised in the hospital studied. Within health care, Heeks (2006) suggests that three principal sets of stakeholders, managers, clinicians and IT professionals influence IT decision making. They do so from their own rationalities and world views. Such rationalities and world views have been called institutional logics (Thornton and Ocasio, 2008), which serve to legitimize human decisions and activities. More precisely, institutional logics are *'the organizing*

principles that govern the selection of technologies, define what kinds of actors are authorized to make claims, shape and constrain the behavioral possibilities of actors and specify criteria for effectiveness and efficiency' (Lounsbury, 2002, p 253). Neoinstitutionalism poses that organizational structures and practices, such as IT governance, will converge through institutional forces. These forces are socially constructed rules guiding action within an organizational field (DiMaggio and Powell, 1983). More recent institutional logics literature adds that within one organizational field multiple logics can co-exist (Lounsbury, 2007; Reay and Hinings, 2009), offering room for human agency (Whittington, 1992). The core values, beliefs, and rules that shape the behaviour of participants may differ across stakeholders groups within an organizational field (Friedland and Aflord, 1991), like health care (Reay and Hinings, 2009). It follows that IT governance is not pre-determined by institutional forces, but results from the enactment of these logics in the stakeholders' shared sensemaking and negotiation (Jensen et al., 2009). This implies that the logics can be competing (Lounsbury, 2007), and when enlisted the logics may complement or contradict one another (Heeks, 2006; Currie and Guah, 2007). In case of contradicting logics, through conflicts and negotiations among actors within and between institutions the dominant logic may change (Reay and Hinings, 2005). Alternatively, hybrid logics may emerge in which elements of contradicting logics are combined (Thornton and Ocasio, 2008). However, competing logics can also continue to co-exist in a relatively stable way over time (Reay and Hinings, 2009).

Two institutional logics standing out in the literature are professionalism and managerialism (O'Reilly and Reed, 2011). These also prevail in the health care literature (Scott, Ruef, Mendel and Caronna, 2000), e.g. in terms of medical professionalism versus 'business like' management (Reay and Hinings, 2009). Within the health care field, contributions of the institutional logics literature have focused on how these logics fuel the technological choices and get inscribed in the technology (Spicer, 2005; Currie and Guah, 2007; Nigam and Ocasio, 2010; Hayes and Rajão, 2011). What seems to be missing, however, is the recognition that a third main institutional logic will be at play in hospital IT governance, i.e., the logic brought in by the IT profession itself. Especially in view of the rapid technological developments and health care's fast growing dependency on IT, we expected technical professionalism to strongly influence IT governance. Both health care managers and medical professionals will have to rely on IT professionals in making IT governance related decisions and choices. Therefore, recognizing and understanding the logics that govern the IT profession and how these interact with managerialism and medical professionalism seems of critical importance (Kraemer et al., 1989; Heeks, 2006; Mok, 2010). Each of these three institutional logics represents distinct sets of values, beliefs and rules with consequences for how IT in hospitals should be legitimately governed. Based on the available literature, we initially characterized these three logics following the ideal types method prescribed by Thornton and Ocasio (2008, p 119). A shortened summary of each ideal type follows below. Against this analytical model we compared our empirical observations in the hospital studied.

In conceptually defining the logic 'managerialism' in hospitals we draw on the 'business like health care-logic' described by Reay and Hinings (2009), which rather closely reflects what others have labeled 'managerialism' (e.g. Enteman, 1993; Doolin and Lawrence, 1997; Kitchener, 2002; Nigam and Ocasio, 2010; O'Reilly and Reed, 2011). Translated to an IT context, these sources suggest that managerialism leads to hospital integration, coordination and cooperation through information sharing. IT should augment overall cost efficiency, promote accountability and strengthen patient satisfaction. Finally, IT expenses should be controlled and relatively low.

The second logic, medical professionalism, was also mainly characterized by the values and rules specified by Reay and Hinings (2009). Medical professionalism focuses on the central role of medical professionals in health services delivery. Medical professionalism influences IT governance in that it provides a view that IT should support clinicians in their care provision. Legitimated by their evidence-based knowledge and clinical experience, medical professionals determine their own information needs, required functionalities and other IT design specifications. As their patients are at

risk and they are accountable, information technology and data exchange should be tailored to the requirements of medical professionals.

Lastly, technical professionalism can be characterized by ‘technocratic elitism’ (Kraemer et al., 1989) and ‘technical rationalism’ (Heeks, 2006; Mok, 2010). Although Hirschheim and Klein (1989) demonstrate different worldviews and accompanying assumptions on IT, the acknowledged dominant rationality centers around IT’s instrumentality. Emphasis is put on the beneficial role of computerized technologies in organizational life with the computer user as central actor (Kling 1980). According to this view, being in control is important, and therefore, IT should be available, reliable, compatible, maintainable, and secure. Technical professionalism is also associated with technological advancement and determinist viewpoints (Postman, 1992).

3 Research method

Research design – Given limited theory about the influence of institutional logics on IT decisions (Orlikowski and Barley, 2001), a qualitative approach is taken for this study to develop theoretical insights (Ozcan and Eisenhardt 2009). This qualitative approach revolves around the notion that individuals assign meanings to their experiences (here, with hospital IT and its governance), which are situated within a social context with different stakeholders (Tesch 1990). As institutional logics are maintained or changed through this meaning-making process, a qualitative approach is a right fit for this study. The in-depth interviewing used, allowed us to derive interpretations from respondent talk.

	IT professionals	Managers	Medical Professionals
Interviewee numbers	1, 4, 6, 8, 11, 14, 15, 16	2, 3, 5, 7, 9, 10, 12, 13	17, 18, 19, 20
Number of interviews	8	8	4

Table 1. Interviewed Stakeholders (n=20)

Data collection –Twenty semi-structured interviews were collected with 20 key informants (table 1) of the three main stakeholder groups from a large teaching hospital in the Netherlands with annual revenue of more than 900 million euros. This hospital presents a typical example of a large teaching hospital, making it likely that results may be generalized to similar hospitals. We gained access through a senior employee, who helped identify respondents from different, representative parts of the organization. While the focus of the hospital is patient care, it is also tasked with education and scientific research. A consulting company characterized the organization as bureaucratic and hierarchical with isolated departments and a high level of internal politics. By selecting key personnel from different parts of the organization, we aimed at capturing the logics at play. The interviews are conducted with a semi-structured protocol that covers IT projects and the interviewee’s experiences with them, the IT strategy and vision, IT planning process and the involvement of business, and communication between the IT function and the other groups. The protocol included open-ended questions, and a list of prompts to be used in case the interviewee does not address the specific areas of interest. With this approach, we aimed at influencing the interviewees as little as possible while still ensuring some consistency across interviews. The interview was piloted on 4 professionals leading to the clarification of some questions and prompting for examples. Each interview lasted between 30 to 90 minutes. Our transcriptions ranged from 5 to 9 pages per interview with an average of 7 pages and a total of 135 pages. In the four interviews that took only 30 to 40 minutes the individuals provided more direct answers and gave fewer examples.

Data analysis process – The transcribed data were analyzed using Atlas-Ti, which enables both inductive and deductive coding. We first coded inductively by identifying espoused values, beliefs and

rules as manifestations of institutional logics. The inductive coding was performed independently by two of the authors, who then discussed the codes until agreement was reached. The identified quotes were then recoded deductively based on the modeled ideal types of the three institutional logics. The same quotes were also categorized within themes in light of the dilemmas in the IT governance literature. In identifying themes, we used Eisenhardt's (1989) suggestion on identifying cross-case patterns. Within three dominant themes related to well-known dilemmas in the IT governance literature, we looked for within-group similarities coupled with intergroup differences among the stakeholders following Bourgeois and Eisenhardt (1988).

4 Results and Analysis

This section presents the data analysis from an institutional logics perspective. The first sub-section shows how elements of the three logics distinguished are enacted by the stakeholders in their accounts about hospital IT governance. The second subsection discusses how these institutional logics interconnect within three IT governance dilemmas: 1) locus of control, 2) standardization versus customization and 3) stability versus change. We selected these dilemmas because they are closely linked with topical issues in IT governance, as suggested by Weil and Ross (2005), and surfaced in the debate among stakeholders in the hospital studied.

4.1 Institutional logics and stakeholders

Managerialism – Hospital managers at different levels expressed views on IT governance that clearly revealed managerialism. Examples given by hospital managers are *'the board gave too much room to IT-experts. The board has to prioritize IT and use it for competitive advantage'* [M3; competition with other hospitals]. Another manager was concerned about the vulnerability of IT *'we had computer malfunctioning, the whole system went down. Then you become aware how the hospital is dependent on IT'* [M10; controllability of the hospital]. The same manager said *'We are currently rolling out this system over the whole outpatient clinic. That brings enormous efficiency gains, which is nice and helps our program to reduce expenditures'*. [M10; cost-efficiency]. Interestingly, we also identified managerial logic reasoning from other stakeholders. For example, an anesthesiologist said *'it is essential that we achieve our cost savings and that we get our IT priorities right'* [HC19; effectiveness; cost efficiency]. Within this managerial logic we found evidence for the following IT governance related core values and beliefs: integration, common standards, controllability, cost effectiveness and patient satisfaction.

Medical professionalism – Physicians from different specialisms provided us with their views that as expected revealed a medical professional logic. This is exemplified by a doctor insisting: *'if you want to heal the patients, you have to make sure that the person who is treating them has the most optimal IT. So, the IT unit should ensure that doctors have the IT support to do this even better'* [HC17, patient care]. The same doctor, a cardiologist said: *'we developed digitalized anamneses form, which generates an automatic letter and input for a database'*. [HC17, medical professionals determine their information needs; systems are designed around medical requirements]. Another medical professional, from anesthesia said: *'it would be ideal if we have our own IT expert who can help to solve IT issues. We are missing the flexibility to change and to experiment with IT'* [HC18; IT designed around changing needs of medical professionals]. Like with managerialism, the other two stakeholder groups also seemed to enact elements of medical professionalism. Especially department managers and IT-professionals who work closely with practicing medical professionals tend to enlist medical professionalism and merge it with their own logics. The manager of the oncology center said: *'our starting point is patient care, that is our main concern'* [M3, convenience and care for patients]. He also argued in the spirit of medical professionalism: *'The multi-disciplinary care for the patient, requires a facilitating IT. Such care is not department oriented but patient oriented'*. An IT professional who advises a medical unit said: *'IT unit should advise and deliver what the customer*

expects. IT should listen what the customer wants. At the moment IT knows what is good for the customer' [IT11, physicians are at the core of the delivery of health services]. Within medical professionalism we found evidence for the following IT governance related core values and beliefs: patient-centered, though IT support is for professionals, clinical diversity and professional autonomy.

Technical professionalism – We found typical expressions from IT staff that demonstrate a logic of technical professionalism: A co-worker from corporate IT said *'new applications require new hardware. However, we identify many old pc's which cannot handle new software. We recommend to replace those computers'* [IT15, systems have to be maintainable]. Another IT expert argued *'when we introduce a new system, things have to change'* [IT11]; technology changes continuously and rapidly]. Technical professionalism reveals a strong belief in technology push. A director from corporate IT said: *'history shows that technology determines the changes, not the business'* [IT4; technology push]. Similar with the other two logics, managers and health care professionals do also enact this technical professional logic. A staff member of anesthesia said: *'they [IT people] are real professionals who like to help but are bounded by their own procedures'* [HC18, IT standards]. We found evidence for a technical professionalism logic with the following corresponding IT governance values and beliefs: technical quality of IT, systems need to be reliable, compatible and maintainable, technical problems have to be solved, technology push, standardization.

Our data show the three distinct logics identified in section 2 to operate in the context of IT governance. Although each stakeholder is strongly connected to its 'own' logic, interviewed actors of one stakeholder group sometimes also use elements of the logic brought in by another stakeholder. Institutional logics are not exclusively enlisted, and thus reinforced, by the actors of the respective professions. One department manager stressed how their local IT professional has had a very useful, *'crucial'* bridging function *'over the past few years'* [M10]. Likewise, health care professionals participating in leading IT platforms in the hospital got acquainted with IT professionalism. A medical specialist acknowledges: *'You might say I am not just any unbiased IT user. For someone on the workfloor, I have reasonably close ties with IT'* [HC19].

4.2 Interacting institutional logics within topical governance dilemmas

In the interviews the three aforementioned prevalent dilemmas in the hospital's IT governance debate surfaced that correspond with the decision domains put forward by Weil and Ross (2005). The 'central versus decentral' dilemma concerns the question whether central management or various medical units have the discretion to decide about strategic IT issues. The IT standardization versus customization dilemma involves the question whether standard packages are to be used and to what extent IT should be adapted to the different clinicians' diverse needs. The IT stability versus change dilemma asks whether the hospital's need for a cost-effectiveness and technical stability outweighs values of being up-to-date and taking initiatives. Below we present three tables showing how within hospital IT governance the enlisted logics get interconnected in debating each of these dilemmas.

IT governance dilemma 1: centralized versus decentralized locus of control – Table 2 depicts examples of how the logics within the 'centralization – decentralization' debate are related. Our analysis reveals that clinicians are mostly in favor of decentralized IT decision making legitimated by the primacy of their professional expertise, which is located in the operating core. Their professional accountability requires such. Medical professionalism is ignorant of the IT-costs issue related to decentral IT governance. According to medical professionalism, IT staff should be organized around physicians. This is seen this as required due to physicians' specific data exchange needs and their alleged ultimate accountability.

Medical professionalism	Managerialism	Technical Professionalism
<p><i>'In the medical domain, there are many interests that are not related to benefits and costs. Professor X wants that, and then he gets it.'</i> [HC20]</p>	<p><i>'So we stick to the overarching master plan. We don't like all those local IT applications.'</i> [M02]</p>	<p><i>'We have a vision on hospital-IT. Now we are developing an IT-vision.'</i> [IT04]</p>
<p><i>'I was going to develop a digitalized form... but I was not supported whatsoever'</i> [HC17].</p>	<p><i>'The number of local systems is incredible.'</i> [M02].</p>	<p><i>'We should no longer allow any local room for IT, which is something of the past.'</i> [IT04].</p>
<p><i>'The central IT unit is too distant from us, also physically. You cannot walk by and receive support you need'</i> [HC18].</p>	<p><i>'The decision to replace hundreds of departmental systems for one Electronic Patient Record is important'</i> [M03].</p>	<p><i>'At the level of the board of directors, nobody is IT-minded.'</i> [IT06].</p>
<p><i>'IT should be much closer to the daily work of the hospital'</i> [HC18].</p>	<p><i>'We try to connect the processes with the IT systems.'</i> [M13].</p>	<p><i>'IT should assess if solutions match with the overall IT landscape'</i> [IT16].</p>
<p><i>'Within each unit, the medical staff makes its own decisions regarding IT. We keep each other informed, but there is no single IT vision that we follow.'</i> [M13].</p>	<p><i>'The board of directors should be more dominant. The IT department became too autonomous.'</i> [M03].</p>	<p><i>'I don't think that the board has a coherent vision on IT.'</i> [IT01].</p>

Table 2. Competing logics within the centralized versus decentralized locus of control debate

Managerialism clearly points towards centralized IT support and a top down alignment of the – acknowledged- diverse information needs within an overarching information strategy. This logic sees a centralized approach not only as the most cost-effective, but also as required for an integrated hospital and increased overall performance resulting in higher patient satisfaction. Remarkably, in this hospital interviewees felt top management to be hesitant in following this managerial logic, as indicated by some of the quotes in table 2. Technical professionalism leans towards centralization too in emphasizing maintainability and compatibility of the IT infrastructure. In conclusion, the medical professional norms of organizing around physicians competes with the managerial logic of centralized guidance by a coherent IT vision and strategy and the technical logic of overview and maintainability.

IT Governance dilemma 2: IT standardization versus customization.—Table 3 summarizes interacting logics within the standardization versus customization dilemma. The upper part of the table illustrates how managerialism and technical professionalism favor efficiency and transparency, which contradicts with medical professionalism's emphasis on legitimate diversity in needs. However, the quotes show management to be ambivalent within itself. On the one hand, management resists the time and effort it will cost to realize a uniform IT environment. On the other hand, they yearn for the economies of scale and other synergies a standard environment may bring and want to prevent costly redundancies. In both arguments the pressure to economize is paramount, which is an intra-logic dilemma. The lower half of the table shows how especially the decentral IT employees criticize too much uniformity and enlist medical professionalism in their arguments. While the institutional logics would suggest the medical professionals to aim for tailor made solution and the technical professionals to be in favor of standardized solutions. However, here, technical professionalism partly complements values of diversity and patient uniqueness in medical professionalism. This illustrates how technical professionalism may also combine with medical professionalism instead of managerialism.

Medical professionalism	Managerialism	Technical professionalism
<p><i>'I find it truly strange that we have to organise our processes exactly like the department that accidentally happened to be the one...to act as pilot' [M13].</i></p> <p><i>'All these various little databases being developed.. they emerge from a need that requires a response. [Yet] 'if you want to try something the IT [staff] is far away' [HC18].</i></p> <p><i>'Many, especially younger doctors that handle IT very easily, they develop and implement their own IT. This leads to many different ways of working and applications that we need to maintain' [M12].</i></p>	<p><i>'We are currently rolling out this model over the whole outpatient clinic. That also brings enormous efficiency gains, what is nice with the budget cuts imposed on us' [M10].</i></p> <p><i>'You try to prevent that a comparable project is started twice... still opportunities exist for departments to do so.. without our knowledge... in your own unit' [IT11].</i></p>	<p><i>'If you make sure [IT runs] smoothly...they will easier come to accept that certain issues are organised differently than they would have preferred' [M13].</i></p> <p><i>'Standardization facilitates transparency towards the user, but you have to beware that it doesn't become a straightjacket' [IT14].</i></p> <p><i>'Together we created the monster of Frankenstein' [IT06].</i></p> <p><i>'A disadvantage of scrumming... while you directly tune in to what the client wants, which is fine... is that different wishes can ultimately boil down to the same need' [IT08].</i></p>
<p><i>'Within our cluster of specialties our processes – e.g. registration-differ tremendously... also legally the registration rules differ... renders it difficult to develop things together' [M13].</i></p> <p><i>'People hope their specific wishes to be fulfilled. That they get what others don't have, but is useful for them in their daily work' [HC20].</i></p>	<p><i>'It would cost too much time to let the whole hospital adopt this application' [M12].</i></p>	<p><i>'Sometimes deviations are necessary because the patient cannot be captured in a protocol. However, you should not let the 20% dominate the 80%' [IT11].</i></p> <p><i>'We follow the principle that we do not develop or build anymore, I do not believe in this principle ...would be curious if a teaching hospital can do with a standard package' [IT06].</i></p>

Table 3. Competing logics within the debate on IT standardization versus customization.

IT governance debate 3: IT stability versus change – Table 4 provides evidence of interacting logics within the 'IT stability versus change' debate. The upper part shows how clinicians' call upon 'medical urgency', reinforced by managerialist entrepreneurship, competes with technical professionalism's stress on IT quality and staying in control of IT-changes and managerialist efficiency norms. The bottom part provides evidence that rapid IT developments and innovation minded professionals compete with managerial need for predictable, stable IT environment. The managerialist pressure for short term cost-cutting combined with the technical professionalist emphasis on control and ensuring technical quality (in terms of reliability, connectivity and compatibility) work towards slower innovation. This is especially true in a context where medical professionalism suggests that diversity in needs simply has to be answered by the IT because the clinicians are the ones accountable in the end. These institutional pressures in the direction of a slow step-by-step, gradual innovation clash with a number of other logics. First, it is not aligned with the technological professionalist value of keeping systems up-to-date, staying ahead of the rapid technological developments, delivering advanced technology. Next, the valuing of entrepreneurship within managerialism stresses the importance of goal-directed grabbing of opportunities and taking

initiatives. These logics are often enlisted decentrally by managers and clinicians, who further legitimize their local initiatives by referring to the professional autonomy derived from the logic of medical professionalism. Table 4 shows how these logics tend to work out in this debate, which is summarized in the following quote: ‘In fact, nothing is happening anymore, except maintaining what we have got...a fairly stable IT environment, and getting change or innovation is very longwinded’ [IT01].

About:	Medical professionalism	Managerialism	Technical professionalism
Medical autonomy	<p><i>‘Professor X wants it, and he gets what he wants.’ [IT16].</i></p> <p><i>‘I needed some service. We waited and waited... And as soon as a physician got angry, the service was provided within a day,’ [IT11].</i></p>	<p><i>‘If you want something and you cannot get it through the usual procedures, you go to the board and if you know how to sell it.’ [IT16].</i></p> <p><i>‘The project was put aside for being too expensive... then someone came along promising that a number of FTEs would become superfluous ... They believed in the project and the project got restarted.’ [HC19].</i></p>	<p><i>‘Sometimes you can allow it [decentral initiatives], provided the consequences ... need to be very clear. Often this was left undone. IT is then saddled up with a problem they will have to tackle, but actually can barely solve in any decent manner....business will then react: “What a bunch of fumlbers at IT, it all takes too long, it is too expensive, and you don’t even get what you want.’ [IT16].</i></p>
Medical Diversity	<p><i>‘There is no single culture. We have got 28 medical departments ...teaching, research, patient care...it is like comparing apples and pears.’ [HC20].</i></p>	<p><i>‘Next year [when government auditors visit], you cannot get away with saying “We did not get the job done, because we are reorganising our IT”. That is just not an acceptable answer.’ [M10].</i></p>	<p><i>‘There are too many IT-related components that can go wrong. You’ll have to accept that it [IT] has become this complex, and you need to ensure there is a layer in between that on the global level monitors that complexity.’ [IT16].</i></p>
Self-directed needs determination	<p><i>‘Developments are so fast that every [medical] department thinks: Oh, that we will do ourselves, but that’s simply not always possible.’ [M02].</i></p>	<p><i>‘We said: “Sept 1st the people will start visiting this new centre, therefore, it’ll just have to be ready”. They were still adding all kinds of things. I said: Now we stop developing, and let this be version 1.0, and you make sure it...operates.’ [M10].</i></p>	<p>[About IT]: <i>‘IT looking for its own direction in innovation.’ [M9].</i></p> <p><i>‘For example, I am convinced nobody will walk around with a laptop in a couple of years.’ [IT04].</i></p> <p><i>‘This equipment is 20 years old , 5 years ago it was taken of the market...now the supplier has run out of components. We have to force change down their throats, you do not have another option’ [IT15].</i></p>

Table 4. Competing logics within the debate on IT stability versus change and innovation.

5 Discussion and Conclusion

This paper contributes to the understanding of hospital IT governance by studying it from an institutional logics perspective. We build on earlier studies that analyze IT from an institutional logics perspective such as Currie and Guah (2007) and Jensen et al. (2009). Currie and Guah (2007) analyze a national program for information technology and Jensen et al. (2009) focus on one particular information system. Our study has a wider applicability through its focus on three classic dilemmas within hospital IT governance. We contribute by showing how an institutional logics perspective deepens our understanding of why these dilemmas are so difficult to tackle.

First of all, we demonstrate that hospital IT governance dilemmas can be better understood by recognizing a third logic, that of technical professionalism. Technological professionalism operates next to the two logics earlier described in the literature as ‘managerialism’ (Enteman, 1993; Doolin and Lawrence, 1997; Kitchener, 2002) or ‘business like healthcare’ (Reay and Hinings, 2009) and ‘medical professionalism’ (Ferlie et al., 2005; Reay and Hinings, 2009; Korica and Molloy, 2010). IT governance is not the outcome of the interplay between these two logics, but the technology also brings organizing principles, values, beliefs and rules that shape the behavior of those actors who manage, design, implement, operate or maintain information technology (Mok, 2010). Building on Kraemer et al.’s (1989) ‘technocratic elitism’ and Heeks’ (2006) ‘technical rationalism’, we articulated technological professionalism as a third main logic influencing hospital IT governance. This recognition adds to the notion that technology is not neutral, but a constraining or enabling force for the actors in the field (Barley and Tolbert, 1997).

Furthermore, we find that the three logics are not unequivocally coupled to one stakeholder group. In general, managerialism is related to hospital managers, medical professionalism to clinicians and technical professionalism to IT staff. However, we found ample examples of technical experts who expressed medical professionalism, of managers communicating technical professionalist assumptions, and vice versa. One explanation for the loose coupling between an institutional logic and one’s professional background is that some actors switch or combine roles, e.g. from medical professional to health care manager (Llewellyn, 2001; Kitchener, 2002). In that new position they may enlist different logics rather than merely adopting a new logic. In our study a medical specialist who had switched to the IT business was well aware of his changing professional view. Moreover, actors from different stakeholders who worked closely together, borrowed or partially bought into each other’s logic, e.g. decentrally located IT experts who work close to doctors enlisted more medical professionalism than IT staff located at the central IT unit.

The governance debate gets especially complicated by the fact that the different logics alternately complement, or contradict one another. The accounts demonstrate how the same logics can have a complementary influence in one dilemma and a contradicting in another. These switches seem dependent on the dilemma at hand as well as the context in which a logic is enlisted. On a positive note, we find the main logics to be only loosely connected with the different stakeholder groups, opening up opportunities for shared sensemaking and ultimately field-level logic reconstruction. However, in our case the rivalry between the competing logics did not lead to a new dominant or to the emergence of one hybrid logic. Rather our findings suggest that competing hybrid logics may emerge as elements of two main logics tended to be enlisted in combination and the third logic remained competing leaving the dilemma unresolved. Longitudinal research is needed to further analyze these dynamics.

A first implication for practice is that close collaboration and physical proximity between actors who represent different logics might facilitate reconciliation of contradicting institutional logics, but the direction is contingent on other factors. Likewise, joint responsibility of different professions for hospital IT governance can increase mutual understanding, but this may not predetermine hospital IT governance outcomes. A next implication concerns the communication about IT governance. Many

IT-governance policies in health are communicated via the locally dominant logic. Future research can investigate whether the conscious enlisting of the different prevailing logics, and explicating any inherent conflicts and complementarities, will promote the discussion, fruitful development, and sustained adoption of IT-governance policies. As our study was conducted in one Dutch hospital, the findings may only be generalized to hospitals with similar cultural and hierarchical structures. Replication of this study in other countries may increase the findings' generalizability.

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