

CHAPTER 6

Reforms in Management Control and the Concept of Hybridization: The Diversity in Changes of Functions and Systems

Inger Johanne Pettersen

Norwegian University of Science and Technology (NTNU) Business School

Abstract: The chapter analyses how the concept of hybridization is used to develop an understanding of how management control reforms are designed, implemented, used and redesigned. Two longitudinal studies in reforming Norwegian hospitals are briefly presented to illuminate how functions and systems change over time, and how models are incrementally constructed and reconstructed. These cases show that the initiatives for steps both forward and backward in reforming processes, tend to take place on the borders between the organizations and the important stakeholders. These stakeholders are the Ministry and politicians, as they are key decision makers.

Keywords: reforms, management control, hospitals, stakeholders

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Introduction

This chapter describes some aspects of the great diversity in recent changes within public sector management control practices. It discusses one change process and one system in practice, by offering empirical data based on longitudinal studies. More precisely, the chapter discusses how models within the management control frame change from idea to practice in the public hospital sector. During the past decade several states – including the Nordic countries - initiated extensive reforms in their state administration and state institutions. These reforms include their structure, their systems of control, and the way they account for their activities. The reform initiatives have been put under one umbrella called the New Public Management reforms. However, the reforms reveal a variety regarding aim, scope and process (Hood, 1998), and research has pointed out a decoupling of reforms from effects (Nyland and Pettersen, 2004). In order to go deeper into the variety of changes and beyond the phenomenon of decoupling, the question of how management control systems are designed, implemented, used and redesigned is an issue that warrants attention.

Vital reform movements have swept swiftly across the international stage. Following these reform initiatives, it is striking that many of them have been driven by general ideas rather than by practical experience and evaluation. The “wrapping” of ideas has been based on the same rhetoric, often recognized as the necessary modernization of the public sector (Pettersen et al., 2009). And here is my point: Because these prescriptions were expressed as general recipes, such as those described by Hood (1995), the reform processes’ ideal prescriptions were met by change agents through diverse pathways, characterized by steps forward and backward, slow and speedy reforms (Olsen, 1996; Mellemvik and Pettersen, 1998), and counterreforms which mixed different organizational structures, control mechanisms, incentives and accountability relationships (Modell, et al, 2007).

Reformers have tried to increase rationality by introducing clear objectives, management by objectives, advanced management accounting systems for evaluation, clear lines of authority and incentive systems. But what have we got?

Hybridization has appeared as a concept useful for analyzing the processes and states of the reform elements. It embraces the perspective that the reform packages being introduced change on their way towards implementation, thus creating new organizational forms with diverse characteristics. This chapter first discusses the concept of hybridization. Thereafter, two empirical studies are presented to illuminate the theoretical arguments. Finally, some concluding reflections are offered to join theory and practice.

Hybridization

The term hybridization suggests a deep and fundamental change, such as the offspring of two animals, plants or species. Hybrids can take the form of organizational arrangements that do not readily fit ideal/traditional models of hierarchies or markets. They can also take the form of hybrid processes, practices and/or expertise: new phenomena produced out of two or more elements normally found separately. Here I will first describe the nature of hybrid management control practices, and thereafter present a brief discussion of perspectives explaining why hybrids develop.

Hybrid management control practices

The concept of hybrid organizations was used by Williamson (1991) to cover organizing in relation to hierarchies and markets. His work was basically theoretical, so the more practical view of hybrids was not very clear. In fact, all organizations can be said to have some hybrid aspects, since we find conflicting interests among participants and stakeholders. There are departments within organizations that have different cultures and competing logic and goals, and professional workers with different norms and values. However, this view of hybridization as an organizational form does not capture the practises and processes which create hybrid organizations (Miller et al., 2008).

In this chapter hybridization is based on Miller et al. (2008) who point out that hybridization takes the form of processes, practices or expertise, constituting new phenomena produced out of two or more elements

normally found separately (Miller et al, 2008:943). Consequently, actors, entities, objects and institutions can all be seen as hybrids. The literature on hybridization offers a variety of approaches. One examines hybrid management practices in expert organizations such as hospitals, focusing especially on the role of doctors as managers (Ferlie et al, 1996; Doolin, 2001; Llewellyn, 2001). In this material, hybrid management is seen as a role on the border between clinical work and management work, a kind of boundary-spanning role. In her study Kurunmäki (2004) claims that accounting has been incorporated into the competency of being a doctor in Finland, and she uses the term hybridization. Jacobs (2005) extends that view of hybridization, as he introduces the notion of polarization in order to emphasize that the phenomenon of including accounting in their professional role only applies to sub-groups of doctors who have financial and administrative responsibilities. A recent Australian study supports the hybridized configurations of leadership among healthcare professionals, also emphasizing the diversity within forms of leadership (Fulop, 2012).

Instead of defining the hybridization of roles, we can also look at the functions of managers as hybrids. Llewellyn (2001) uses the term “two-way windows” as a metaphor to illuminate the idea that doctors as managers can act in two worlds, the clinical and the managerial. We notice here that Llewellyn’s (2001) focus differs from the views of the hybridization of roles. This implies that hybridization can take multiple forms and definitions. Further, the hybridization of processes can be associated with the term accountingization (Hood, 1998; Power and Laughlin, 1992). Accountingization features the growth in the power and influence of accounting practices in the management of public organizations. Accounting measures and controls have now been accepted as central to the production aspects of public services, such as hospitals and higher education (Modell, 2001; Nyland and Pettersen, 2006). However, few studies have shown how this transformation takes place and how management control practices hybridize. This paper aims at contributing to fill this knowledge gap as to how practices and systems hybridize.

In their article Miller et al. (2008) show that hybridization as a process takes variable forms. Once formed, a hybrid can revert, or the recently formed hybrid can stabilize for a while and then be termed an

“institution” or organizational form. Once a hybrid is formed, it can take new forms as it is affected by contextual elements. Because of the interrelation between organizations/hybrids and their contexts, hybrids often emerge on organizational borders – they develop due to the interrelations between organizations and institutions. Here management control practices may evolve, since accounting systems and accounting information (more or less) are devices by which transparency can be developed across organizational entities. Thus, accounting practices take the form of hybrids in the processes of organizational change – as a part of reforms. Accounting is constantly present in dual hybridization processes, seeking to make visible and calculable the hybrids that it encounters, while at the same time hybridizing itself through encounters with a range of other practices (Miller et al., 2008:945).

In particular, hybrids may be most prevalent at the intersection of calculative practices and the experts producing services and knowledge such as curing, caring and education. Here, one might say that calculating is a hybrid, as management tools change and evolve. As earlier noted by Hopwood (1996) budgeting, planning and performance evaluation have traditionally been conducted in vertical terms, and accounting practices have continued to focus on hierarchical relationships and vertical information flows. Lateral information flows have been neglected, and thus, the lateral processing of information had to be considered as networking, and inter-organizational cooperation developed as an organizational form.

Thus, the strategic aspects of management control became focused since conventional accounting information had not given managers relevant information in decision situations (Kurunmäki, 2004; Kurunmäki and Miller, 2006). Accounting extended the boundaries of organizations, and management control recipes, such as balanced scorecards and performance measurements, were introduced and implemented – and became hybrids of practice and calculation (Pettersen and Nyland, 2012). Gradually, management practices changed to include the integration of actions within networks of organizations – and hybrid practices emerged. In these interactions of calculative practices and diverse professional expertise, professions may also hybridize under certain conditions.

Hybrids and the construction of organizations

Several theoretical perspectives have tried to explain why hybrids develop. One branch of literature focuses on the relationship between management and professions and hybrid organization identities (Brandsen, et al., 2005; Llewellyn, 2001; Kragh Jespersen, 2005). The other main theoretical frame is new-institutional theory, which considers the hybrids as a means to balance differing institutional logic, and to balance the diverse interests and goals in the interaction between the organizations and their contexts. Doolin (2001) considers hospitals as loosely coupled systems, and some authors connect hybridization with actor network theory (Miller et al., 2008). Latour (1993) points out that the contexts of organizations consist of hybrids in constant change in relation to culture and nature combining into new forms. In an overview article on hybridity in the management of hospitals, Nordstrand Berg et al. (2010) conclude that there exists no clear definition as to what constitutes a hybrid management form. They also argue that different areas of expertise mix together and interpret reality in order to constitute diverse patterns of competence in the process of producing healthcare in hospitals.

An important question is then under what conditions hybrids arise and develop. Some authors show that hybridization has to be developed by the actors who define the main functions, roles and practices (Nordstrand Berg et al., 2010). In expert organizations these are the professional workers who have to adapt to a kind of collective understanding and acceptance of the changes (implicitly or explicitly). According to this view, professionals in these organizations are the main actors who have to translate and adapt to the new requirements, as most impulses to change come from outside. Organizations have to respond to these changes, and the adaptation and/or implementation due to external pressures are the impulses leading to hybrids. These hybrids may enable organizations to construct diversity and ambiguity in order to cope with diverse expectations from society. In other words, the complexity of contextual demands can be met by complexity in the implementation processes (Kraatz and Block, 2008).

Hybridization is very close to the concept of constructing organizations, as researchers have argued that reforms in the public sector can

be interpreted as attempts to construct and change social systems like organizations (Brunsson and Sahlin-Andersson, 2000). Reforms can thus be described as a way of turning public services into organizations. An organization can be defined by its conceptual boundaries, and the ability to coordinate action is often viewed as the main function of organizations (Mintzberg, 1979). Coordination takes place in hierarchies, and managing hierarchies also presupposes control. This implies that changes in boundaries affect coordination – and changes in coordination affect the means of controlling activities. And here is the main function of accounting, namely to give relevant information to managers in managing organizations. This is why accounting plays a vital role in hybridizing organizations.

Constructing organizations implies introducing the factors of identity, hierarchy and rationality to create an organization. If some of these factors are lacking, one can question whether it can be called a full-fledged organization. Thus, organizations may not exhibit all aspects of being organizations. And reforms in the public sector have often aimed at making more complete organizations by creating rational units and bodies. Here various systems of management by objectives have been implemented, introducing accounting systems to permit evaluation and transparency. Furthermore, performance measurement and management systems have been introduced, and units and subunits have been constructed to be managed through contracts (Nyland and Pettersen, 2006). The main point here is that hybrids develop since the organizations in the public sector being constructed, most often do not have the most common/ideal characteristics of organizations, such as clear autonomous structures and clear boundaries to the environment (Brunsson and Sahlin Andersson, 2000, among others). In other words, ambiguity fosters hybridization.

State subunits, especially, have been transformed into formal independent organizations, such as state enterprises like hospitals in Norway, self-governing universities and other state institutions. But still, they remain incomplete organizations, since these state units/bodies do not have a high degree of autonomy, but act within a network of state owned subsidiaries and have to adjust to ministries' and politicians' shifting views and agendas. Further, public agencies such as hospitals

have multiple objectives and stakeholders, which blur the concept of a complete organization.

Because of this incompleteness in the construction of these organizations, there arises a discrepancy between the idea of the reforms and the practices following the changes (Brunsson and Sahlin Andersson 2000). The construction and reconstruction of public organizations take different pathways, and hybridization characterises these processes. Organizational reforms attempt to re-construct organizations by making new governing models, new accounting systems, new lines of reporting and ownership, by merging organizational units and dividing organizations into new sub units with new lines of responsibility.

Functions and Systems as Hybrids

In this part of the chapter the case studies are described, and some perspectives on research methods are briefly presented.

The case studies

Hybrids may take the form of management functions and systems, and hybridization should be studied through longitudinal empirical research, allowing for the changes to emerge, be implemented and be reconstructed. The empirical data presented in this chapter meets these requirements, as it is based on two different cases, based on the Norwegian enterprise reform launched in 2001. I will illustrate my points in relation to reforms and counter reforms generating hybrids through two distinct cases found in the Norwegian Hospital Enterprise Reform: These cases are:

- a. The boards of hospital enterprises were established according to formal functions based on rational organizational models. However, these boards operate in political environments, which create ambiguous environments for the hospitals. Detailed milestones over the course of several years showed that the functions of the boards gradually changed towards seeking legitimacy more than acting as strategic decision-making bodies.

In other words, a functional model of boards based on the notion of rational organizations was gradually changing in order to adjust to the political context. By analyzing this case, one can observe the hybridization of functions.

- b. The accrual accounting system was introduced into the hospital sector according to a normative and rational model. The implementation process itself became hybridized over the years, and the accounting system itself changed and became a hybrid.

Consequently, the accrual accounting system (radical model) which was introduced into the organizations according to a quite simple model changed through external pressures and the resulting practices were different from the ideas that motivated the reform.

Research into longitudinal changes - some methodological remarks

The research is based on both quantitative and qualitative methods (Ryan et al., 2003; Tengblad et al., 2005) in order to understand changes taking place during the course of several years. Before the empirical data was gathered, studies were made of relevant documents from the government, the Ministry of Health and from hospital enterprises during 2001–2010. White papers from the government and reports from the regional and local hospital enterprises were studied in order to develop a broad understanding of the research context.

Survey studies were developed in order to analyze the first case concerning hospital boards. The surveys were based on knowledge gathered from the document studies. Descriptive statistics were used to analyze data from the surveys. The results from the descriptive statistics and patterns found in the surveys were developed into interview guides, and followed up later by interviews conducted with key decision makers. The intention was also to include the opinion and viewpoints of the members of the hospital boards. Therefore the survey included a national sample of members of hospital boards (2008). In this survey 130 board members replied (50% response rate). A somewhat similar survey was undertaken in 2003 in the same population. A comparison between 2003 and 2008

indicated changes over time. The survey included questions on the following themes:

- The boards' functions, responsibilities and roles
- Information on main topics and the budgetary processes
- The key actors' influence and contracts
- The relationship between the local health enterprise and the regional hospital enterprise

Interviews were also conducted with board leaders and hospital managers (CEOs) in different health regions. A follow-up study was done with key respondents in one university hospital (2009).

The second case study was mainly based on thorough document studies, as an investigation was done based on documentary sources to evaluate the formal layers of the financial management reform in the public hospital sector (Pettersen and Nyland, 2011). The formal layers of the accounting practices are seen as conceptual instruments found either in the documents or as technical instruments developed by procedures and key actors' practices. Accordingly, the research focus was on the formal documents and the corresponding practices as these emerged in accounting and other relevant reports. Through the investigation, the researchers were able to clarify the milestones of the accounting system changes, please see table 2 below.

The boards of the local hospital enterprises

The enterprise organization is built upon a clearly defined role as to ownership control, which has to be implemented through legal contracts, through budget decisions or through decisions made in the enterprise meeting (the general assembly). ... [T]he hospital enterprises must have real responsibility in their operating activities. (Minister of Health, Speech, 1 August 2000)

Over the last three decades the governance of Norwegian hospitals has been changed several times. In the middle of the 1970s the state transferred hospital ownership to the county councils. From that time and

until the Hospital Enterprise Act (2001) there were large recurring challenges including long waiting lists and increasing costs in the hospital sector. This situation motivated the parliament to change the governance structure and to transfer hospital ownership directly to the state by the Hospital Enterprise Act (2001). A main part of this act was the introduction of regional hospital enterprises as autonomous purchasers, and local hospital enterprises as providers of health services, as stated in the government document:

It is not the introduction of state ownership as such, but the implementation of hospitals as autonomous enterprises which is supposed to enhance more efficient hospital management. (The Ministry of Health, White Paper 2001: State ownership of hospitals)

The Hospital Enterprise Reform is heavily based on the functions of the hospital enterprises' boards, and the politicians no longer had any direct role in strategic decisions on the hospital level. The Hospital Enterprise Act prescribed the main criteria for the composition of the hospital boards and the responsibilities given to these boards:

The board's mission is to manage the hospitals on behalf of the state as owner. ... this is to say the state through the Ministry in relation to the boards of regional health enterprises, and the state through the regional health enterprises in relation to the boards of local health enterprises. (White paper 2001, Ot.prp.nr.66 (2000–2001), pp. 106)

These regulations implied that the boards had an overall responsibility to ensure that the hospital enterprises fulfill the goals set by the Ministry and that the hospital enterprises “*on all levels are managed adequately, and that the activity is kept within the economic frames and other frames that have been set.*” (White Paper 2001, Ot.Prp.66 (2000–2001), pp. 106). Implicitly, this includes making budgets and plans, and creating long term plans. The minister at the time the Hospital Enterprise Reform was implemented, argued that professional and autonomous boards with only a limited number of participants were necessary to carry out the functions of the boards. At that time, board members with experience from the private business sector were preferred by the Ministry, and according

to the law, only 1/3 of the members should be employed in the health enterprises. After a few years, the government wanted to regain some political dominance on the boards, and in 2006 it decided that politicians should also be nominated to these boards. The motive was to include a broader stakeholder representation on the boards.

When considering the hospital boards as the highest decision making body, the board is expected to be the owner's (the state's) main strategic instrument: setting goals and supervising the activities and performance of the hospital enterprise. Consequently, the strategic role of the board should be overruling the control functions and taking care of stakeholders' interests. This is to say that the Hospital Enterprise Act (2001) painted a picture of the hospital enterprises' boards as *top management boards*, deciding strategies and making sure that strategies and budgets are linked together.

The introduction of the Hospital Enterprise Reform in 2002 underlines the strategic role of the "enterprise meeting" between the Ministry and the board leader as the main strategic device, where contract requirements are formulated. This meeting has the same formal function as the general assembly. Further, the Ministry developed an annual strategic document including the detailed number of performance indicators and main objectives for the next budgetary year – the steering documents, where the economic and organizational performance measures are formulated. Together with laws and regulations these tools aim to establish vertical governance structures with clear lines of authority and hierarchical responsibility patterns all through the hospital enterprises from the top and down to the clinical departments.

To summarize, these routines and procedures were regarded by the Ministry as establishing the boards according to certain rules of good hospital governance. In line with Scandinavian tradition, the boards also included employees' representatives (1/3). By including politicians (a majority) on the boards from 2006, the role of the hospital boards was changing more *towards the stakeholder perspective of the functions of the boards*.

The board is the formal link between the owner (the Ministry) and the management of the hospitals. According to normative perspectives, the boards have the strategic function of these enterprises.

The implementation of the Norwegian Hospital Enterprise Reform can be mapped and analyzed in light of the decision space left to the hospital boards. The decision space characterizes the relationship between the center (the Ministry of Health) and the local level through the hospital boards. The decision space is defined for the various functions in which the boards have the power of real choice. Functions may be disaggregated into the areas where the boards have a real range of discretion, instead of treating decentralization as one block in the line of authority. The main functions empirically derived are according to Bossert (1998:1518–1519).

Based on the reform initiatives in the Norwegian hospital sector and changes during 2002–2008, the decision space has been reduced (Nyland, Pettersen and Østergren, 2010). *The legitimating function of the boards* has increased, as politicians have now been introduced into the boards. The following functions are described by empirical indicators:

Table 1 Map of decision space (applied from Bossert, 1998). (Nyland, Pettersen and Østergren, 2010).

Function	Indicator	Range of Choice
Finance		Narrow
Sources of revenue	Mainly from the state	
Contracts	40% activity based	
Operation maintainance	Strict regulation of investment levels, regulated supply of loans	
Service Organization		Narrow
Hospital autonomy	Formal autonomy	
Governance structures	Strictly regulated	
Payment mechanisms	Regulated in detail	
Service distribution	Regulated by patient rights and norms for waiting time.	
Human Resources		Narrow
Salaries	Central negotiations	
Contracts	Standardized	
Civil service	National	
Governance Rules	Detailed regulations	

The aim of the Hospital Enterprise Reform (2001) was to establish a governance model with professional and autonomous boards, which could secure the state's efficient management of hospitals. The expected main function of hospital boards was to act on behalf of the state. Our findings indicate that according to a principal agency (PA) approach, the reform has not been implemented according to its original aims. Our data indicate that the role of the hospital boards has changed from the idea of a top management board, through a stakeholder perspective on the boards' functions. Eventually, after 6 years the boards' functions were found to be similar to legitimating bodies, as the boards are composed according to principles of political representation. Further, the decision space for the boards has been narrowed, which illustrates the reduced strategic functions of the boards.

Accounting system changes

One of the most important aims of the Hospital Enterprise Reform is to enable better maintenance of the values that are tied up in invested capital, and also to ensure better resource management by giving the hospital enterprises the overall responsibility for both running costs and maintaining the values of invested capital resources.

(The Ministry of Health and Social Affairs, 2000–2001, pp. 57)

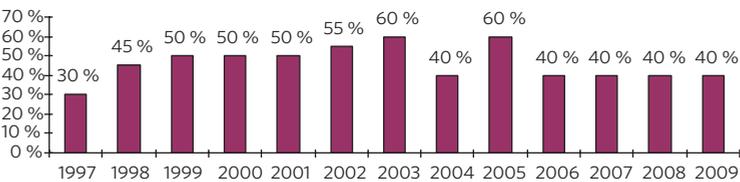
Accounting practices are central to issues of implementation in purchaser–provider organizations in the Norwegian public hospital sector, because accounting is involved in the process of making the organizations visible and calculable (Miller *et al.*, 2008). To make hospital activity visible, attempts to calculate medical and clinical activity have formed a part of international managerial reforms since the early 1980s. Encounters between clinicians and the New Public Management (NPM) reforms (Hood, 1995) have been observed in a variety of financing systems and accounting regulations (Nyland and Pettersen, 2006; Nyland *et al.*, 2009).

When hospitals are transformed into self-governing enterprises whose role is provider, and the state assumes the role of purchaser, the contracts between these bodies are changed into inter-firm transactional relationships. One main element in the Hospital Enterprise Reform in Norway

was the introduction of this logic of the purchaser–provider split, based on the contractual principles from the economic theory of PA relationships. Through that reform, the Norwegian government established autonomous entities that had to be governed differently from the former public agency organization of the hospitals. These principals are expected to define the professional activities of the agents, and these contractual expectations were translated into accounting-type output measures linked to input resources.

In order to analyze these changes between 1997–2009, the following milestones were developed:

Table 2 Milestones and key events in the change process (Source: Pettersen and Nyland, 2011).

1997	<p>The financing system was changed from fixed grants to a combination of fixed grants and activity-based financing (The Ministry of Health and Social Affairs, 1995–1996). The activity-based share of the funding was changed in the years to come.</p>  <table border="1" data-bbox="264 760 1004 942"> <thead> <tr> <th>Year</th> <th>Activity-based share of funding (%)</th> </tr> </thead> <tbody> <tr><td>1997</td><td>30%</td></tr> <tr><td>1998</td><td>45%</td></tr> <tr><td>1999</td><td>50%</td></tr> <tr><td>2000</td><td>50%</td></tr> <tr><td>2001</td><td>50%</td></tr> <tr><td>2002</td><td>55%</td></tr> <tr><td>2003</td><td>60%</td></tr> <tr><td>2004</td><td>40%</td></tr> <tr><td>2005</td><td>60%</td></tr> <tr><td>2006</td><td>40%</td></tr> <tr><td>2007</td><td>40%</td></tr> <tr><td>2008</td><td>40%</td></tr> <tr><td>2009</td><td>40%</td></tr> </tbody> </table>	Year	Activity-based share of funding (%)	1997	30%	1998	45%	1999	50%	2000	50%	2001	50%	2002	55%	2003	60%	2004	40%	2005	60%	2006	40%	2007	40%	2008	40%	2009	40%
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1999	<p>A new act on patients' rights was approved in the parliament (The Ministry of Health and Social Affairs, 1998–1999). Patients were given the right to choose in which hospital they wanted to be treated.</p>																												
2001	<p>A group of external accounting professionals was hired to issue an opening balance sheet and accounting guidelines. They recommended replacement costs with a deduction for wear and tear (The Ministry of Health and Social Affairs, 2002). This provided a total valuation of capital assets of 15 billion Euros (model 1). The valuation caused higher capital costs than budget allocations could cover.</p>																												
2002	<p>Ownership of all public hospitals was transferred to the state and five¹ RHEs were established. Accrual accounting is introduced (The Ministry of Health and Social Affairs, 2000–2001).</p> <p>Funding is set to cover about 60% of depreciation costs based on the average investment budgets in the 1990s (The Ministry of Health and Social Affairs, 2002). This caused increasing accounting deficits in the hospital enterprises.</p> <p>All long-term loans had to be obtained with Ministry approval. Cash credit loans can be obtained from private banks.</p>																												
2003	<p>The Ministry of Health recommends that the valuation of capital assets is adjusted to match revenues allocated to cover capital costs (5.6 billion Euros; model 2) (The Ministry of Health and Social Affairs, 2002–2003. The annual state budget).</p>																												

(Continued)

¹ In 2007, two of the RHEs merged into one.

Table 2 (Continued)

	Model 1 is still being used, and the Ministry introduces a separate income measure including corrections to compensate for a proportion of the depreciation costs (and later also increases in pension costs) that are not covered by the state (The Ministry of Finance, 2003–2004).
2004	The Ministry recommends a compromise whereby capital assets are valued to three-quarters of replacement cost (model 3) up to 10.6 billion Euros (The Ministry of Health and Social Affairs, 2003–2004. The annual state budget). Model 1 is still being used. Two separate income measurements are used.
2005	A new compromise is suggested; now two-thirds of the original valuation (model 4) (The Ministry of Health and Social Affairs, 2004–2005 c). This demands a change in the Hospital Enterprise Act. A suggested change is put forward and sent on a consulting round to different accounting organizations in Norway. All comments from the accounting professionals are negative ² , and the act is not passed (The Ministry of Health and Social Affairs, 2004–2005 b).
2006	A new model for calculating pension costs is introduced, causing increasing pension costs that are not covered by the state. Corrections to compensate for the proportion of the depreciation costs are made in a separate income measure.
2007	Revenues to cover depreciation costs are increased by 125 million Euros (The Ministry of Health and Social Affairs, 2006–2007. The annual state budget).
2008	Revenues to cover depreciation costs are increased by 210 million Euros. Increased grants are tied to pension costs (The Ministry of Health and Social Affairs, 2007–2008. The annual state budget). Depreciation costs are now fully covered, but not the full pension costs. Still two separate income measurements are used.
2009	Increased grants to cover full pension costs (The Ministry of Health and Social Affairs, 2008–2009. The annual state budget) Instruction from the Ministry to use liquidity surplus from the pension grants to pay off cash credits. The health enterprises can no longer obtain cash credit loans from private banks. All loans have to be obtained from the state from now on.

At the end of the 1990s the Ministry considered the cash accounting system not to be an effective information system, and accrual accounting was introduced to make “capital costs in the hospital enterprises’ annual reports” more visible. In the political debate on these matters, it was claimed to be a problem that within the budgetary system presented above, the hospitals had no incentive to use their capital resources efficiently.

The hospital organizations have no incentive to balance the use of capital with the use of other input resources. (The Ministry of Health and Social Affairs, 2000–2001, pp. 43)

² <http://www.regjeringen.no/nb/dep/hod/dok/hoeringer/hoeringsdok/2004/horing-utkast-til-endring-i-helseforetak.html?id=96337>

By providing information on an ex ante basis, which includes both current operating costs and capital costs, the government hoped that the accounting reports would indicate what kind of liabilities were being transferred to future generations. There was a widespread expectation among parliament politicians that the new system would produce more relevant information as to long term resource consumption and the financial situation:

As the regional health authorities' reports on economic performance are based on the accrual system..... the Ministry is supposed to have the necessary control in the evaluation of the hospitals' performance indicators and the hospitals' ability to comply with main health policy goals. (The Ministry of Health and Social Affairs, 2000-2001, pp. 45)

But the government did not explicitly state which consequences the agents (the hospitals) had to expect if they did not behave according to the principles behind the accounting system changes. On the contrary, the principal's (the Ministry's) specifications were ambiguous, and they were incrementally changed.

Further, the most important challenge in the implementation process from 2002 onwards was the valuation of capital assets and the setting of depreciation time. Due to the arguments from accountants, the Ministry decided to use a full replacement cost model for calculating depreciation rates in the funding of the hospitals from 2006–2008. Four different valuation models were developed between 2001 and 2006, please see Table 2.

The accrual accounting information indicated to the government the consequences of capital decisions and investments. But these ex ante reported consequences did not fit into the frames of the state budgets since they were decided in parliament. In order to match the information in the accrual accounting numbers on long term consequences with the one-year short term conditions in the state budgets, the Ministry of Health introduced different performance measurements, and it changed the contract specifications with the hospital enterprises.

As the Ministry excluded parts of the capital and pension costs from the performance measurements in the contracts with the hospital enterprises, the agents could keep on acting according to a cash accounting logic. Cash accounting logic was even strengthened as the state (2009)

increased cash management control. The aim of the reform was to create lateral relationships between the state and the hospitals, but the state regained even more hierarchical control by also centralizing asset management. Although the accounting system was changed, the accountability bases were still built upon cash accounting logic.

Concluding Discussion

In this chapter hybridization is used as a concept to develop a deeper understanding of how management control reforms are designed, implemented, used and redesigned. Two longitudinal studies in reforming Norwegian hospitals have been briefly presented. The studies have especially illuminated how functions and systems change over time, and how models are incrementally constructed and reconstructed. These cases show that the initiatives for steps both forward and backward tend to take place on the borders between the organizations and the important stakeholders, such as the Ministry and politicians as key decision makers.

Changes of functions

The boards of the hospital enterprises were established according to formal functions based on rational organizational models, and in the course of a few years were transformed into legitimating bodies. Through a longitudinal study it was possible to describe how this reform was adjusted and changed due to external and contextual pressures. Most importantly, a new government and a new Ministry of Health signaled new claims and changes in the laws which regulate the composition and functions of the hospital enterprises' boards. As a consequence, the hospital enterprises' boards were changed towards more legitimating functions and roles as stakeholder boards, a change which was not according to the initial reform initiatives.

Changes of system

The accrual accounting system was introduced into the hospital sector according to a normative model. The implementation process turned it into a modified system, which had other qualities and effects than one

would expect from the textbooks. By studying the implementation processes over eight years, the challenges became visible. In particular, problems arose as the accrual accounting model was introduced to calculate hospital costs, whereas income was still to be measured according to the cash based system with a one year time horizon. In this way, the accrual accounting system developed into a hybrid system.

Due to the need for balancing budgets and the risk of escalating future capital costs, the decision space left to the hospital enterprises was reduced and the government increased its cash management control. This was not the motive for introducing changes in the accounting system. As noted by Miller et al. (2008), accounting takes part in dual hybridization processes, as it aims to make calculable the hybrid it encounters. In this case this hybrid was the value of hospitals' equity. As the valuation models changed, the accounting system itself transformed and hybridized.

The diversity of hybrids

Longitudinal studies are necessary to understand how hybrids develop and revert, and to understand the outcomes of hybridization. By studying these processes one can watch how hybrids change in relation to the needs expressed by external actors, political processes and legitimation considerations.

Table 3 Changes in system and functions as hybrids.

Case	Hybrid	Caused by
Accrual accounting	System	Funding gap
Hospital Enterprise Boards	Functions	Need for legitimation

Although the hybridization processes are different, we can point out some common driving forces behind these processes, such as the time dimension, unexpected consequences and external changes.

Implementation takes more time

The studies have lasted for 6–8 years and we have observed how the reforms have been changing along the way. The decision makers planned for a much shorter timespan; as an example the case with accrual accounting

was planned to take half a year to implement. Years of changes drive hybridization.

Unexpected consequences

All the processes described here turned out to have immediate consequences, which were not predicted. The valuation of the hospitals' assets turned out to be higher than planned by the Ministry. These challenges arose from the way capital was funded, which in turn increased the hospitals' total budget deficits.

As for the introduction of professional hospital boards, this construction separated the hospitals from political influence, which in turn increased conflict within the geographical areas where the hospitals were located, and in turn reduced their legitimate standing. The hospital boards' decision space had also been reduced, which meant that the professional boards could not operate according to their normative role.

Contextual changes

In both cases it was observed that implementation processes take time, and we notice that initial models adjust to important changes in the hospital enterprises' contextual conditions. One such main change was the new government which came into power in 2006. It introduced a new law to regulate the composition of the hospital boards. Furthermore, the large budget deficits which characterized the hospital enterprises during the years after 2002 also weakened the position of the hospital boards, and their roles changed. Hybrids then emerged to balance changes in political conditions which affected the objectives of the reforms.

Hospital deficits exposed the gap between costs and income, and the procedure of using capital to finance hospital buildings was not adequately funded. The accrual accounting model was moderated and several performance measurements were calculated. These various models blurred the transparency which had motivated a move towards the new accounting models. These challenges which turned into budget deficits for the hospital enterprises motivated the hospital owner (the state) to centralize decisions on investments, which signaled a step back in relation to the accrual accounting models.

Implications

This study shows that contextual changes and the complexity surrounding public organizations drive hybridization (Latour, 1993; Kraatz and Block, 2008), and it also shows how hybrids emerge and incrementally change over time (Miller, 2008). The hybridization concept is used here to illuminate the diversity in processes of change. The concept also indicates that hybrids are the rule, and that normative models are the exceptions. These empirical studies also show that longitudinal studies, including many contextual elements, are necessary to understand how and why hybrid forms emerge.

Studies of reform processes should therefore not only include comparisons of the situation at the beginning with a defined end some years later. If evaluations are based on comparing a beginning with an end, conclusions may lead to a decoupling or a loose coupling of reform intentions and effects. Our study has revealed a diversity in reform processes, and that hybrids and not decoupling are the answer to many changes. Such adaptation to contextual changes is most often the situation when there are multiple objectives and stakeholders, constructing ambiguous social systems in incomplete organizations (Brunsson and Sahlin-Andersson, 2000).

Hybrids indicate that these mixtures of models can be even stronger than the idealistic aims of changes, as hybrids have profound effects on the organizations where they are observed. A lesson to be learned is that when ideal models are introduced into a landscape governed by political actors, the outcome might easily turn out to become – hybrids.

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