

Krogh, Simon

Doctoral Thesis

Anticipating Organizational Change: A Study of the Pre-implementation Phase of Sundhedsplatformen

PhD Series, No. 51.2016

Provided in Cooperation with:

Copenhagen Business School (CBS)

Suggested Citation: Krogh, Simon (2016) : Anticipating Organizational Change: A Study of the Pre-implementation Phase of Sundhedsplatformen, PhD Series, No. 51.2016, ISBN 9788793483675, Copenhagen Business School (CBS), Frederiksberg, <https://hdl.handle.net/10398/9396>

This Version is available at:

<https://hdl.handle.net/10419/209005>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/>

COPENHAGEN BUSINESS SCHOOL
SOLBJERG PLADS 3
DK-2000 FREDERIKSBERG
DANMARK

WWW.CBS.DK

ISSN 0906-6934

Print ISBN: 978-87-93483-66-8
Online ISBN: 978-87-93483-67-5

ANTICIPATING ORGANIZATIONAL CHANGE

Simon Krogh

ANTICIPATING ORGANIZATIONAL CHANGE

Doctoral School of Business and Management

PhD Series 51.2016

CBS  COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

PhD Series 51-2016

Anticipating Organizational Change

A study of the pre-implementation
phase of Sundhedsplatformen

Simon Krogh

PhD Thesis

Supervisor: Anne Marie Bülow

Submitted August 2016

IBC / LIMAC



**Copenhagen
Business School**
HANDELSHØJSKOLEN

Simon Krogh
Anticipating Organizational Change

1st edition 2016
PhD Series 51.2016

© Simon Krogh

ISSN 0906-6934

Print ISBN: 978-87-93483-66-8

Online ISBN: 978-87-93483-67-5

Doctoral School of Business and Management is a cross disciplinary PhD School connected to research communities within the areas of Languages, Law, Informatics, Operations Management, Accounting, Communication and Cultural Studies.

All rights reserved.

No parts of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without permission in writing from the publisher.

Acknowledgements

First of all, I would like to thank my supervisors, Anne Marie Bülow and Maribel Blasco for guiding me to the finish. I would also like to thank Mikkel Flyverbom and Finn Borum for critical and constructive feedback along the way. Thanks to Barbara Czarniawska and the team at GRI for an inspiring stay in Gothenburg.

A special thanks goes to all the great colleagues at Sundhedsplatformen, with whom I have shared the journey of Sundhedsplatformen from the early days at Blegdamsvej to 'go-live' at Herlev/Gentofte hospital.

Last, but not least, I want to thank Hanne and the boys for your endless patience during the entire three years. IOU.

Summary

Anticipating organizational change

Ph.D. dissertation submitted by Simon Krogh to the Department of International Business Communication (IBC), Copenhagen Business School, August 2016

This study reports on the extended time period prior to the introduction of the largest ever Health IT implementation in Denmark – Sundhedsplatformen. The focus of the dissertation is on organizational implications of introducing new technology and more specifically the anticipation of organizational members waiting for changes to take effect. The 3-year period leading up to the ‘go-live’ of Sundhedsplatformen has been a unique opportunity to study the anticipatory phase in connection with large scale IT project and has resulted in the development of a theoretical / conceptual framework for the analysis of this pre-implementation phase. Three major findings have come out of the study.

First of all, the study has demonstrated the presence of what I call the *Anticipation Cycle*. The Anticipation Cycle consists of recurring patterns of Sensemaking, Positioning and Scripting of the future in an organizational context, and the recurring nature is observed across professions. The anticipatory phase is in other words not passive, but characterized by anticipatory actions that can be studied systematically and used as cues in preparation of actual change. The Anticipation Cycle offers a view of the mechanisms inside the previously black-boxed pre-implementation phase of pending organizational change.

Secondly the study has shown that during the anticipatory phase negative reactions to organizational change is not a simple matter of resistance to change per se. The study has demonstrated that it is better understood as individuals’ resistance to giving up institutionalized rights and responsibilities. If pending changes, during the pre-implementation phase does not appear to pose a threat to rights and responsibilities of the individual, it is less likely to cause resistance. The *AS-model* presented in the analysis can be used to map how organizational members are affected by the pending changes and subsequently decide where to initiate activities to alleviate the problems and concern of the actual change.

The third major finding of the dissertation is that the seeds of future organizational conflicts are already laid in the pre-implementation phase. Organizational members motion through the Anticipation Cycle results in what can be described as an uninformed optimism the clouds realization of a possible brutal future. Future users tend to focus on the practical and material aspect of the change and underestimates the organizational implications.

The theoretical contribution of the dissertations is a proposal for how to expand the field of organizational change to include the anticipatory pre-implementation phase. The practical contribution of the dissertation is the introduction of theoretical / conceptual tools and models (the Anticipation Cycle and AS-model) which are both applicable in connection for analysis and design in connection planning of large scale organizational change program.

Resumé

Anticipating Organizational Change

Ph.d. afhandling indleveret af Simon Krogh ved Institut for International Business Communication (IBC), Copenhagen Business School, August 2016

Denne afhandling drejer sig om perioden der er gået forud for den hidtil største implementering af sundheds-IT i Danmark – Sundhedsplatformen. Fokus i afhandlingen er på de organisatoriske konsekvenser af at introducere ny teknologi og mere specifikt på forventningerne hos de organisations medlemmer, som har udsigt til tage den nye teknologi i brug. De tre år som er gået forud Sundhedsplatformens 'go-live' har været en unik mulighed for at studere forventningsfasen i forbindelse med et stort it-projekt og har resulteret i udviklingen af et teoretisk / konceptuelt framework til brug i forbindelse med analyse af en præ-implementeringsfase. Afhandlingen har resulteret i tre overordnede resultater.

For det første har studiet anskueliggjort, at der findes det jeg kalder en forventnings cyklus – Anticipation Cycle. Denne forventningscyklus består i organisationsmedlemmers gentagelser af Sensemaking, Positioning og Scripting i en organisatorisk kontekst og findes på tværs af professioner. Forventningsfasen er med andre ord ikke passiv, men snarere kendetegnet af forventningsadfærd, som kan studeres systematisk og bruges i forberedelsen af organisatoriske forandringer. Forventningscyklussen giver indsigt i hidtil afskærmede eller usynlige mekanismer i præ-implementeringsfasen forud for organisatoriske forandringer.

For det andet har studiet vist, at negative reaktioner blandt medlemmer af organisationen i forventningsfasen forud for organisatorisk forandringer, ikke blot skal ses som et simpelt udtryk for modstand mod forandring. Afhandlingen viser, at modstanden med fordel kan forstås som individers modstand mod at skulle opgive institutionaliserede rettigheder og forpligtigelser. Hvis en forestående forandring, i løbet af præ-implementeringsfasen ikke fremstår som en trussel mod individets rettigheder og forpligtigelser, så vil det i mindre grad resultere i modstand. AS-modellen (Autonomy vs Standardization), som præsenteres i analysen kan bruges til at kortlægge hvordan organisationsmedlemmer bliver påvirket af de forestående forandringer og

efterfølgende beslutninger om hvad der kan gøres for at afbøde de negative effekter af en forandring.

Det tredje overordnede forhold, som afhandlingen giver indsigt i er at kimen til fremtidige organisatorisk konflikter allerede lægges i præ-implementeringsfasen forud for organisationsforandringer. Organisationsmedlemmers brug af eller bevægelse i gennem forventningscyklussen resulterer i hvad der kan beskrives som en '*uinformeret optimisme*' der er baseret på forestillinger, som skygger for en erkendelse af de ubehagelige aspekter af den forestående forandring. Brugere af den kommende teknologi har en tendens til at fokusere på praktiske og funktionelle aspekter af forandringen og undervurdere de organisatorisk konsekvenser.

Ihukommende Kurt Lewins kendt dictum 'at intet er så praktisk som en god teori', så består afhandlingens teoretiske og praktiske bidrag med andre ord i introduktionen af teoretiske / konceptuelle modeller (Anticipation Cycle og AS-modellen), som dels kan bidrage til at udvide forståelsen af organisationsforandringer til også at inkludere præ-implementeringsfasen, samt bruges i forbindelse med analyse og planlægning af organisatoriske forandringsprojekter.

Contents

ACKNOWLEDGEMENTS	3
SUMMARY	5
RESUMÉ.....	7
PROLOGUE.....	11
CHAPTER 1 – INTRODUCTION AND RESEARCH QUESTION	13
1.1 – INTRODUCTION	13
1.2 – FOCUS OF DISSERTATION	16
1.3 – RESEARCH QUESTION.....	17
1.4 – STRUCTURE OF DISSERTATION	18
1.5 – CONTRIBUTION	21
CHAPTER 2 – LITERATURE REVIEW.....	23
2.1 – INTRODUCTION TO REVIEW	23
2.2 - ORGANIZATIONAL CHANGE AND DEVELOPMENT	24
2.3 – ORGANIZATIONAL IMPLICATIONS OF INTRODUCING NEW TECHNOLOGY	31
2.4 – SUMMARY – ORGANIZATIONAL BARRIERS TO ADOPTION OF HIT	40
2.5 – ANTICIPATION.....	43
2.6 – SENSEMAKING	46
2.7 – POSITIONING THEORY	49
2.8 – SCRIPTING THE FUTURE	59
CHAPTER 3 – RESEARCH METHOD AND DATA GATHERING	61
3.1 – RESEARCH METHOD	62
3.2 – DATA COLLECTION	67
3.3 – DATA OVERVIEW	77
CHAPTER 4 – SUNDHEDSPLATFORMEN – CONTEXT AND CONTNET	87
4.1 – ON CONTEXT AND CONTENT	87
4.2 – STRATEGIES FOR DIGITIZATION OF THE HEALTH SECTOR	88

4.3 – THE ROAD TO SUNDHEDSPATFORMEN	92
4.4 – WHAT IS SUNDHEDSPATFORMEN?	97
4.5 – ANTICIPATED BENEFITS	104
CHAPTER 5 – ANALYSIS	109
5.1 – INTRODUCTION TO ANALYSIS	109
5.2 – CATEGORIZATION OF THEMES	110
5.3 – THEMATIC ANALYSIS	116
5.4 – RECURRING PATTERNS – THE ANTICIPATION CYCLE	151
5.5 – ANTICIPATING ORGANIZATIONAL CHANGE	158
CHAPTER 6 – CONCLUSION AND REFLECTIONS	167
6.1 – ANSWERING THE RESEARCH QUESTION	167
6.2 – HOSPITALS – SPECIAL KINDS OF ORGANIZATION	170
6.3 – SUGGESTIONS FOR FURTHER RESEARCH	172
REFERENCES	175

#

Prologue

“Organizational change in connection with the introduction of new technology is often mentioned as a precondition for realizing the benefits of the investments. Often the old procedures and habits transferred from paper to IT. This usually has positive effects and the investment is probably not wasted. But it does not realize the full potential of the new technology.

In connection with the introduction of electronic health records the ‘technological infrastructure’ must be able to handle the new possibilities. This means that it is not just the physical resources that must be available, but equally important is it that the staff is motivated and ready to work with the new systems. The transfer to EHR therefore requires both education of staff and purchase of equipment.

Swedish studies point out that the vast majority of hospitals does not see the connection between organizational change and the introduction of EHR. In the study the internal structures of hospitals were in the focus. This may include change in distribution and responsibility between departments, establishment of centers, separation of diagnostic and treatment units from care units.

There seems to be good reason to consider organizational changes and changes in work relations before a new EHR system is introduced. Exactly to ensure the maximum effects of the investments made”
(Sundhedsministeriet, 1996, p. 22) own translation.

It is now 20 years ago that the Danish Ministry of Health pointed to the crucial relationship between technology implementation and organizational change. Today - in 2016 – Sundhedsplatformen has been put into production at the first hospitals, and even if it is still early days and development continues and implementation on several hospitals are still pending, early indicators of success and failure have emerged. On the positive side Sundhedsplatformen has been delivered on time and on budget and the ambitious launch date set almost three years in advance was met. This in itself is an achievement for a large scale public sector IT project and a tribute to the strong management of the program.

Within days of the first 'go-live' however, Sundhedsplatformen was exposed to massive critique from the clinicians using the new system. Doctors, nurses and secretaries were in despair over problems caused by Sundhedsplatformen, and even if a drop in clinical production were expected and planned for, technical problems and the harsh reality of a transformed clinical practice came as a shock to many.

Whether the critique, in the grand scheme of things, is important and has the potential to prevent the realization of the benefits of Sundhedsplatformen, or whether it is just an insignificant disturbance, is still too early to say when these lines are written.

One thing is certain however. Large scale IT projects, with potential to transform working conditions in public and private organizations are going to be a recurring phenomenon. Organizational members in all industries will experience extended pre-implementation phases lasting months or years leaving plenty of time to imagine and anticipate pending changes. This makes research in the organizational implications of new technology and research in the pre-implementation phase as important as ever.

1 – Sundhedsplatformen

Anticipating organizational change

Abstract

This study reports on the extended time period prior to the introduction of the largest ever Health IT implementation in Denmark – Sundhedsplatformen. The analysis points to the need to take into consideration what I call the anticipatory phase in connection with large scale IT project with extended pre-implementation periods. The study argues that the anticipatory pre-implementation phase is not simply passive waiting time for organizational members, but rather a period where individuals prepare for pending changes through recurring patterns of sensemaking, positioning and scripting of possible futures. During the pre-implementation phase, it is possible to identify seeds of future organizational conflicts, that may only surface once actual changes have taken effect. If the anticipatory mechanisms at work during the pre-implementation phase are ignored, they may cause resistance, rejection and other unforeseen organizational problems in the post-implementation phase.

Keywords: Anticipation, Positioning, Organization, Change, HealthIT

1.1 - Introduction

In 2012 Region Sealand and the Capital Region of Denmark formally agreed to initiate a joint project to upgrade the health IT-infrastructure in the two regions.

Sundhedsplatformen was envisioned as a shared HIT-infrastructure that would replace a large number of outdated and scattered IT systems with a common IT platform. The update has the potential to transform the health sector for the 2.6 million people in eastern Denmark and move the hospitals to HIMSS level 7 (HIMSS Europe, 2016) at which stage hospitals no longer use paper charts to deliver and manage patient care. The two regions employ 44.000 people in the health sector including doctors, nurses, secretaries and other clinical and administrative staff and an additional 9000 people in other non-health related areas, and they are all being affected by the significant changes imposed by the new technology. Sundhedsplatformen is in other words both a major technological, organizational and financial project, which Denmark's leading business newspaper, Dagbladet Børsen, has described as a relegation race between Danish and

international IT solution providers for a billion Danish kroner and one of the largest ever IT contracts to be signed in Denmark (Christensen, 2013).

This dissertation is a study of the early phases of this major technology implementation. More specifically it is a study of the organizational members' anticipation of the pending changes and a study of the patterns of anticipatory 'tactics' and coping measures employed by individuals in order to prepare for the organizational and relational consequences of pending (organizational) changes. The project has been conducted in concurrence with and as an integrated part of a three-year assignment as communication consultant at Sundhedsplatformen, which has given exclusive insider access to the organization. The dissertation is in other words the result of the unique opportunity to follow and be part of the pre-implementation phase of Sundhedsplatformen as events unfolded and Sundhedsplatformen took shape and gained momentum.

A common trait of much of the existing HIT is that it has been implemented to solve individual problems in clinics in hospitals. One system has e.g. been implemented to store test results from labs, another to store the doctor's notes about the condition of the patient. Yet another system is in place to keep track of appointments with patients. While the individual solutions may have solved specific problems in hospital units, they have over the years created an organizational landscape consisting of numerous isolated 'technology islands' with IT systems scattered over computers and servers solving individual problems.

This has resulted in often problematical clinical workflows causing cooperation between hospitals, departments and medical specialties to be constrained. The information that a patient e.g. has given at one hospital or even at one department may not be available to the next clinician because IT-systems do not 'talk to each other'. In 2015 the Danish Council of Nurses (Dansk Sygeplejeråd) estimated that 3,6 million hours are wasted annually on unnecessary clinical documentation (Astrup & Fahnøe, 2015).

Perhaps slightly ironically, the solution to the problems with inadequate technology seems to be more technology. In the numerous health and technology strategies issued by shifting public authorities (e.g. Sundhedsministeriet, 1999, 2012; Sundhedsstyrelsen, 2003), technology is identified as the solution and the public health mantra appears to be that better and more efficient use of technology is the solution to shortcomings of

the health sector. It is however well documented that successful implementation of new technologies is not merely a question of plugging in hardware, installing software and training the users. It is well established in Organization Studies that IT-implementations affect relationships in organizations (e.g. Barley, 1986; Orlikowski, 1992; Perrow, 1967) and that in order for IT implementations to be successful, the receiving organization needs to adapt (e.g. Burton-Jones & Grange, 2013; Orlikowski, 2000). From a health informatics perspective focus has e.g. been on the organizational consequences of implementation of Electronic Health Records (e.g. Berg, 2001; Greenhalgh, Morris, Wyatt, Thomas, & Gunning, 2013; Lorenzi & Riley, 2010)

A shared characteristic of the studies above and on the majority of the existing studies in the health sector is the focus on completed implementations or on the actual implementation process, and while this is obviously highly relevant this dissertation argues that by focusing exclusively on the experiences of the past and present technology implementations, we are missing an important aspect associated with implementations of new technology. What about the months and years that precede the actual implementation of large scale IT-solutions, where organizational members know that changes are coming but knows little or nothing specific about how they will be affected? What about the future? What can be learned from people's anticipations and the antenarratives (Boje, 1991, 2001) of the people on the receiving end of Health IT? It is not just the experiences from the past and possibilities of the present that forms people and their relationships. Time matters and possible futures influence people in the now.

This dissertation is in a sense taking a step back from the actual implementation and focuses on the time that precedes the introduction of new HIT. What happens while the clinical staff is waiting for the new technology? What happens when clinicians are waiting for the 'technology tsunami' to hit them? Are they simply passive receivers or do they prepare for it and how does the waiting time affect them? Greenhalgh et al. (2009) observes that only limited work has been done to answer this question. *"This review identified a number of studies on how actors made sense retrospectively of EPR projects, but we found very few published studies in which a sense-making or soft-systems approach was used prospectively in action research or comparable participatory designs. This may be partly because such studies are notoriously difficult to write up as short,*

focused case studies for academic journals." (Greenhalgh et al., 2009, p. 768) (underlining added). More on this in the literature review in the next chapter.

1.2 - Focus of dissertation

The implementation of Sundhedsplatformen is potentially open to a wide range of analytical approaches. Through a macro perspective it could be studied how HIT affects the organization as part of larger society. A meso-perspective could focus on the inter-departmental implication of introducing the new HIT. And finally a micro-perspective could e.g. focus on how individuals are affected by the new HIT. This dissertation is primarily applying a micro perspective on the case of Sundhedsplatformen and focus attention on three main groups of clinical staff members – doctors, nurses and medical secretaries. They are the main actors in the clinical work at hospitals and they are all being affected by the coming change in technology. As will become clear later, the focus on this group of staff members corresponds with the clinicians appointed to partake in the work on Sundhedsplatformen. More on the choice of case and analytical perspective in the method chapter.

Clearly other groups of internal and external stakeholders could be relevant to study and other aspects of the pending technology implementation calls for further research. Several practical and logical limitations have however been applied and outline the dissertation. The patient perspective has e.g. not been included because patients are not being directly affected by the pending technology change yet. The patient perspective is relevant for subsequent research. In a similar vein the general practitioners (GP's) whom play an essential role in the Danish health sector, are not included in the dissertation because Sundhedsplatformen is not made available to them yet. While the issues associated with a potential technological disconnect between hospitals and GP's warrants a study on its own it is outside the scope of this dissertation. Nor is the dissertation focused on the actual consequences of the implementation in the clinic. This may be explored in a subsequent project, following the go-live in May 2016.

Even though the dissertation is not directly focused on the political, economic or technological reasons for implementing the new technology, these aspects are never the less found implicitly e.g. in the description of the case of Sundhedsplatformen, just as the perceived macro-implications of Sundhedsplatformen also informs the anticipation of the interviewees.

The dissertation is concerned with the period following the decision to initiate the project in 2012 and prior to the actual implementation of the new technology in the hospitals in 2016. It is specifically focused on the clinical staff of the hospitals, since they are the ones immediately exposed to the pending change. This leads us to the articulation of the research question that guides the remainder of the work.

1.3 - Research Question

With the empirical delimitation above in mind and a keen focus on both empirical and theoretical aspects of the anticipatory pre-implementation phase of Sundhedsplatformen the main research questions of the dissertation are as follows;

- How do organizational members react to an extended anticipatory phase prior to pending major organizational change?
- Does anticipation amongst organizational members' act as an enable or barrier to pending organizational change?

The two research question can be seen to answer the call for further research made by Greenhalgh et. al. *"Prospective, theory-driven primary studies of large-scale EPR systems are urgently needed"* (Greenhalgh et al., 2009, p. 768), and in a wider context the dissertation can be seen to answer the call made by Leonardi and Barley (2010) to investigate how *"various social construction processes come into play and entwine with the technology's material properties, as well as with the existing social structure of the context in which it is used"* (Leonardi & Barley, 2010, pp. 5–6).

The effort to answer the research questions and more generally to shed light on the implications of the pending Sundhedsplatformen amongst organizational members is structured around three distinct theories / concepts, which were identified during early analysis of interviews. Early analysis of data suggested that a combination of Sensemaking, Positioning Theory and Scripting would enable a comprehensive analysis of the anticipation of organizational members. These concepts are crucial in the conceptual foundation of the dissertation, and while this early presentation of essential concepts to some extent pre-empts the first research question it serves to ensure that the concepts and theories required in the analysis are clarified in the literature review.

Additional proposition:

In addition to the main research questions of the dissertation, work on Sundhedsplatformen has continually fueled a pondering about the unique character of hospitals as organizations. It is remarkable how many landmark studies have used hospitals and health organizations as their cases. Glaser and Strauss (1967) studied death at hospitals. Goffman (1961) studied an insanity asylum. Silverman (1987) followed a general practitioner and the list goes on.

But during my work at Sundhedsplatformen I have experienced what best can be described as the organizational equivalent of the cosmic background noise. There is something not quite right! There is 'something' in the organizational background of work amongst clinicians that blends into the buzz of everyday organizational life, but what if hospitals and health organizations, despite the widespread use are in fact not typical organizations?

What if the unique character of work done at hospitals, make them – unique?! What if the individuals inhabiting the hospital organizations – the clinicians – are in fact not like other organizational members, because they are working with things that would be considered too extreme or even life changing to other people. What if hospitals are not suitable to be used as generalizable models for the mechanics of all other types of organizations?

I close the dissertation by problematizing what appears to be a general assumption that findings from organizational studies conducted at hospitals can readily be generalized to a wider context and that findings from studies conducted at hospitals can be used to explain the inner workings of other types of organizations. My proposition is that due to the often extreme nature of work at hospitals it cannot automatically be assumed that organizational findings originating from hospitals can be generalized to other organizations. This discussion is picked up once the analysis is completed.

1.4 - Structure of dissertation

The dissertation consists of the four main chapters (theoretical overview, research method and data presentation, presentation of case, followed by the analysis). These chapters are preceded by this introductory chapter and followed by the conclusion and recommendation for further research.

Chapter two contains the literature review of the dissertation. The literature review consists of two main parts. Part one is focused on organizational change and the role played by technology in connection with change, and it presents an overview of the research in organizational barriers and drivers to the adoption of IT. Particular attention is given to the presence or lack of attention to the very early phases of IT implementations. This is followed by Part II, in which the analytical framework of the dissertation is developed. As described above the anticipation phase is not simple passive waiting time, but consists of distinct elements/processes. Sensemaking, Positioning and Scripting of the future

In order to present the theoretical framework of the dissertation in the literature review it is as mentioned necessary to make a slight analytical and chronological short cut. Even though the main analytical categories of the dissertation (Sensemaking, Positioning and Scripting of the future) were present in the data in early interviews, it was only later that they solidified into an actual theoretical/conceptual framework. Data-gathering, theoretical immersion and analysis has been a truly dynamic process, with striking parallels to the methodological challenges observed by Becker et al. (1961) in the landmark qualitative study of the Boys in White, in which it is explained that “*we necessarily had to use methods that would allow us to discover phenomena whose existence we were unaware of at the beginning of the research*” (p.18)

Chapter three is the Method Chapter in which the approach to the research is described and methodical challenges above are elaborated. A defining characteristic of Sundhedsplatformen is that it is a long running and large scale development project, which has undergone numerous changes since the inception. The inherent uncertainty of scope and direction in the early phases of Sundhedsplatformen has called for a high degree of methodological flexibility. If a theoretical perspective had been decided prematurely it could seriously have limited the ability to perform adequate analysis of later phases of Sundhedsplatformen. In order to alleviate this threat the work on data, theory and analysis has been strongly inspired by the principles laid out in grounded theory (Glaser & Strauss, 1967). The continuously evolving nature of the research project makes this an appropriate methodical choice because closeness to the data and sensitivity to the field of study helps to prevent a situation where the content and conclusions of the dissertation is being ‘taken over’ by developments in the real world of Sundhedsplatformen.

Inspired by the grounded theory methodology the researcher has literally ventured into the field asking '*what is going on here?*' (Silverman, 2011a). As a consequence, the theoretical framework of the dissertation, as described above, only gradually emerged after focused work with data and a variety of theoretical perspectives. The work with data / theory has been very dynamic and as such a good example of the often cluttered process of grounded theory.

An important methodological aspect has to do with the role of the researcher. The method chapter thus includes a description and discussion of my dual-position in Sundhedsplatformen, on one hand as communication consultant reporting to the management of the project and on the other hand as a CBS-researcher. In addition to the methodical consideration the chapter also contains an overview of the data of the dissertation including considerations regarding sampling of the data.

Chapter four contains an overview of the case of Sundhedsplatformen. The overview is focused both on the context of the pending implementation which includes the historical backdrop of the implementation process and the actual content of the coming HIT.

Chapter five is where data and theory comes together in the analysis. First part of the chapter contains an overview of themes and subthemes identified in the interviews. The themes are categorized in accordance with the three main analytical concepts described in the literature review.

The next part of the analysis is also structured in accordance with the theoretical /conceptual framework as developed in the literature review. This means that the analysis cuts across all of the data of the dissertation focused respectively on sensemaking, positioning, scripting of the future and an additional fourth final category elaborating on aspects relating to organizational culture. As a result of the broader analysis I develop a model which combines the dimensions and mechanisms identified in the analysis. The model, as I will suggest may prove applicable in other organizations with pending large scale IT-implementations.

Chapter six contains the conclusion, summary of findings, further reflections and suggestions for further research. In addition to the findings of the core analysis, the chapter also contains reflections on the proposition presented above on the use of

hospitals and the health sector as such in organizational research. The chapter contains a discussion of whether hospitals are too unique as organizations to allow findings to automatically to be generalizable in other organizations?

1.5 - Contribution

The main theoretical contribution of the dissertation is the demonstration of the importance of the anticipatory phase in connection with organizational change. The dissertation argues for the expansion of the concept of organizational change to include previously neglected aspect of organizational change and it develops a theoretical / conceptual framework that allows for the systematic analysis of mechanisms at work in this phase. Particular focus is on positions, rights and responsibilities of the affected organizational members, and as such it lends itself to the discussion and research community as found in 'Journal of Organizational Change Management', and in a wider sense 'Organization Studies' and 'Human Relations'.

The main practical contribution of the dissertation is that it offers an analytical tool to be used in organizations when preparing for organizational change induced by new technology. By using the concepts of the proposed analytical framework it is possible to prepare for and possibly alleviate concerns of affected organizational members in advance of actual implementations.

In terms of a more overall contribution the findings of the dissertation can be taken beyond the realm of hospitals and considering the introduction of Sundhedsplatformen as an example of organizational change generally. A widely used and referenced model of change is the model conceived by Kurt Lewin considering change process as an unfreezing and refreezing of the organization. Organizations and their members start in a frozen state. Change requires a 'liquid' state that allows for change after which organizations can return to a new frozen state. Implicitly in this thinking is the notion of normality being a solid state to which refrozen organizational members fit and organizational normality can be continued. It is a good example of a traditional thinking with regards to change in organizations. More on this in the literature review.

In this dissertation I argue that we need to rethink what represents organizational normality, along the lines of Liquid Modernity of Bauman (2000) and subsequently by Clegg and Baumeler (2010). The reality of contemporary organizations is that there is

always something new on the way. Normality is fluid. We live in an age of globalization and the internet. New possibilities and game changing technologies can come out of virtually nowhere. Change and transformation is the new normal. Change and transition is no longer the exception to periods of organizational stability. New systems, new procedures, new organization, new collaborations, new regulations, new markets, new expectations etc.

The period leading up to the implementation of Sundhedsplatformen is a case of this new organizational normality, and by studying the people waiting for the new HIT to be implemented we get a glimpse of how people act and react in this new organizational normality of perpetual pending change. In the case of Sundhedsplatformen the period of instability is so extended that, what in smaller projects might appear as an intermezzo in organizational stability, is clearly a prolonged state of something else. It is not an intermezzo. It is an example of the new organizational normal.

2 - Literature review

1. Introduction
2. Organizational change and development
3. Organizational implications of introducing new technology
4. Summary - Organizational barriers to adoption of HIT
5. Anticipation
6. Sensemaking
7. Positioning Theory
8. Scripting

2.1 - Introduction to review

The purpose of the literature review is to lay the theoretical and conceptual foundation for the analysis of data from Sundhedsplatformen.

First part of the review consists of a conceptual clarification of organizational change and development, which is followed by a focus on organizational change in general, including a discussion of the classic Lewinian concept of Unfreeze, Change, Refreeze. This is followed by a review of studies relating to barriers and drivers to organizational adoption of HIT including seminal works by Perrow, Barley and Orlikowski. The section on organizational barriers to adoption of HIT amongst other things focuses on identifying to what extent the pre-implementation phase is considered in past and recent research.

In part two attention turns to the concept of *anticipation* and the development of the theoretical framework required to analyze the data of the dissertation. As noted in the introduction early analysis suggested that the concept of *anticipation* can be studied empirically through the lenses of sensemaking, positioning and scripting.

The inductive approach of the dissertation, through which general principles are derived from specific observations, and a decision to work with an open theoretical agenda until late in the research process is similar to what is found in Becker et al. (1961) whom were also “*working with an open theoretical scheme in which variables were to be discovered rather than with a scheme in which variables decided on in advance would be located and their consequences isolated and measured*” (Becker, 1961, p. 18). They too were

allowing the pertinent themes to emerge from the data rather than pursuing a predefined theoretical perspective.

In the case of Sundhedsplatformen the sheer size of the program and the time perspective involved in the development would have caused a premature emphasis on one pre-defined theoretical perspective to be an analytical restraint that in effect would have rendered interesting aspects of the case inaccessible. The knowledge available about Sundhedsplatformen in 2013 was different and limited compared to spring of 2016 simply due the ongoing development of the project. As a consequence, the content of the literature reviewed has emerged and evolved in parallel with data collection and the organizational immersion of the author. This in term has aided in securing alignment between the ever progressing development of Sundhedsplatformen, my own growing understanding of the effects of Sundhedsplatformen and the theoretical apparatus most suitable to analyze the data.

2.2 - Organizational change and development

First question to be addressed is whether we are dealing with organizational change or development and whether upholding the distinction between the concepts contributes to clarity? In relation to the introduction of Sundhedsplatformen one may ask whether we are observing change or development in the affected hospitals or perhaps both?

Conceptual clarification

Weick and Quinn (1999) makes a distinction between organizational change and development focusing on temporal aspect. They break it down and operate with a distinction between episodic change and continues change. *Episodic change* is what can be observed from a distance in the flow of events that constitute organizing and is episodically interrupted by change on a larger scale. In contrast *continues change* is constituted by the ongoing adaption and adjustment (Weick & Quinn, 1999, p. 361). Along the same lines Martins (2011) explains that “*They both refer to a difference between a current and a past state, or a current and a future state, of individuals, groups, systems, processes, and other aspects of organizations*” (Martins, 2011, p. 693).

Behind the definition of Weick and Quinn is a distinction between planned and the unplanned change, which is e.g. similar to the distinction made by Zorn et. al in Lewis (2014) whom defines planned change as referring to “*any alteration or modification of*

organizational structures or processes [...] and unplanned changes are those brought into the organization due to environmental or uncontrollable forces or emergent processes and interactions in the organization” (Zorn et. al in Lewis, 2014, p. 504). In keeping with Weick and Quinn's view, some agreement appears in defining Organizational Development (OD) as “planned change effort” (Martins, 2011, p. 693). According to Martins OD is the more applied and practice oriented of the two streams struggling for academic legitimacy and Organizational Change (OC) is the concept used to cover the more theory-centric literature.

The consistent use of the two concepts is confirmed Sandberg and Tsoukas (2015). In a review of sensemaking perspective in organization studies they identify five broad categories within existing literature: (i) major planned events, (ii) major unplanned events, (iii) minor planned events, (iv) minor unplanned events, and (v) hybrids of major/minor planned/unplanned events (Sandberg & Tsoukas, 2015, p. s12).

In light of this, this study could appear to be focused on the implications of the organizational development rather than the organizational change. Sundhedsplatformen is quite clearly a planned effort and the dissertation is not focused on the implications of the individual change events, e.g. the concrete introduction of the new technology. On the other hand, a main interest is the unintended and unforeseen consequences of Sundhedsplatformen and the interpretations of change processes by organizational members, which clearly turns attention to OC and unplanned changes. Upholding a sharp distinction between the two, may in other words cause confusion rather than clarity. In order to avoid this I will follow the example of Martin (2011) whom, in contrast to Weick and Quinn suggests the combined term Organizational Change and Development (OCD) which is defined as the *“study and practice of creating or responding to differences in the states of individuals, groups, organizations, and collectives over time”* (Martins, 2011, p. 692). In this dissertation I will follow Martins and use Organizational Change and Development (OCD) *“as the umbrella construct encompassing phenomena within these two interrelated and overlapping areas of research and practice”* (Martins, 2011, p. 694). This is suitable since the main interest is on the implication of change -regardless of it being episodic or continuous.

This study is concerned with how changes/developments affect individuals. Whether a reaction to anticipated future states is triggered by one or the other is less relevant in

this particular context. Certainly the case of Sundhedsplatformen can be examined from the perspective of change vs. development or planned vs. unplanned change, but again, this is not the focus of the present study. The present focus is more on the micro/ meso level of the organization, with a focus on individuals and relationships than macro aspects which would be the focus on the organizational /societal mechanisms at play.

Taking a step back from the field of organizational change and development it can be observed that change and development to a wide extent is the new normal of organizational living. 'Change is the only constant' is one of the clichés pointed to by Martins causing the study of organizational change and development to take center stage in the social science (Martins, 2011, p. 691). So despite appreciating the question whether *"we are so dazed by change today that we've forgotten the values of continuity, loyalty, and stability?"* (Cheney, Christensen, Zorn, & Ganesh, 2010, p. 3), I agree that if we are to take this new view of organizational reality seriously *"we need to shift our lenses and research methodologies from mechanistic ones to more fluid, dynamic ones that are based on change as the normal state of organizations"* (Martins, 2011, p. 695). This is consistent with the views put forward by Clegg and Baumeler in the introduction, and as suggested in this dissertation, such a shift should include focus on the previously neglected pre-implementation phase.

Change unfolding in organizations

Many bestselling business classics are in one way or another relating to OCD. Under the headings of Total Quality Management, Business Process Reengineering, Learning Organization and a liberal sprinkling of the latest buzzwords, management gurus promise quick solutions to 'the puzzle' of managing and organizing effectively – for a modest fee, obviously. These can be seen as practitioners or managerial approaches to change and development. As such they have been useful and gained popularity in practical efforts to introduce and manage organizational change and development.

The interest of the dissertation is rather the scholars approach to OCD as described and analyzed by Van de Ven and Poole (1994). They identified four different strands of organizational change/development research, examining a variety of aspects including transitions in individuals' jobs and careers, group formation and development, and organizational innovation, growth, reorganization, and decline (Van de Ven & Poole, 1994, p. 510). The four basic types of process theories (life cycle, teleology, dialectics,

and evolution) in fundamentally different ways explain how and why changes unfold in social entities (Van de Ven & Poole, 1994, p. 511).

Of the four approaches this dissertation is firmly placed in the teleological tradition. The teleological school of thought *“explains development by relying on teleology, or the philosophical doctrine that purpose or goal is the final cause for guiding movement of an entity. [...] Proponents of this theory view development as a repetitive sequence of goal formulation, implementation, evaluation, and modification of goals based on what was learned or intended by the entity”* (p.515-516).

Van de Ven and Poole stresses that since goals in this school of thought are seen as socially constructed (as opposed to the natural or social determinism of the other schools of thought) a state of equilibrium will not be obtained. *“Influences in the external environment or within the entity itself may create instabilities that push it toward a new developmental path. Theories that rely on a teleological process cannot specify what trajectory development of an organizational entity will follow”* (Van de Ven & Poole, 1994, p. 516).

The work of Kurt Lewin is generally recognized as foundational in the development of research in OCD (Burnes & Cooke, 2012), and has a prominent place in the teleological tradition in OCD. In the posthumously published article *“Frontiers of Group Dynamics: Concept, method and reality in social science, social equilibria, and social change”* (Lewin, 1947), Lewin argues that the new stages in development of social sciences *“indeed may prove to be as revolutionary as the atom bomb”*(Lewin, 1947, p. 5). While slightly bombastic this view goes to show the great expectations Lewin had in the field he himself had served to develop.

In the shadows of the Second World War the development of social science theory had taken on an urgent character to Lewin. *“The theoretical development will have to proceed rather rapidly if social science is to reach that level of practical usefulness which society need for winning the race against the destructive capacities set free by man’s use of the natural science”* (Lewin, 1947, p. 5). Lewin is most likely referring to the invention of the nuclear bomb and the industrialized murders of the holocaust, and social science had as such become a matter of life and death. Social science in the view of Lewin was obliged to move into the society it was examining and play an active role.

Referring to Cassirer, Lewin in a sense anticipates the social constructivist thinking which has a dominant position in present day social science, by pointing out *“that scientific progress has frequently the form of a change in what is considered to be ‘real’ or ‘existing’”* (Lewin, 1947, p. 6). So despite a style and argumentation in the article resembling that of natural sciences his focus on groups and social dynamics calls him to think along the lines of the social constructivists that only later was to follow in his footsteps.

Lewin is making an effort to underline that social science, despite its interest in ‘soft’ aspects of reality is no less proper science than the natural sciences. *“Gradually, the period is coming to an end when the natural scientists think of the social scientist as someone interested in dreams and words, rather than as an investigator of facts, which are not less real than physical facts, which are not less real than physical facts, and which can be studied no less objectively”* (Lewin, 1947, p. 7). With this last remark on objectivity it does however also become clear that we Lewin is still some distance from the present day acceptance of the subjectivity and the acceptance of the active role played by the researcher in much social science. Lewin is as such rounded by the deterministic and positivist logic of the natural sciences and attempts to secure legitimacy of his research by aligning it closely with that of the natural sciences, and in 1940’s the ‘hot science’ was nuclear science. Consider the following argument to downplay the oddity of the new social science. *“There is no more magic behind the fact that groups have properties of their own, which are different from properties of their subgroups and their individual members, than behind the fact that molecules have properties, which are different from the properties of the atoms and ions of which they are composed”* (Lewin, 1947, p. 8).

The main feat of Lewin in the 1947 article is the development of a model and a conceptual apparatus to deal with organizational change in a coherent way. At the heart of Lewin’s thinking is the notion of change and constancy being relative concepts. He argues that group life is never without change. It is just a question of what kind of change and the amount of it (Lewin, 1947, p. 13). This implies that the condition of no change must be understood and analyzed against a backdrop of potential change (p.13). It seems that this notion of ever present latent change in groups / organizations has been neglected in later readings of Lewin, in that the constancy / stability at the onset of change should not be thought of stability per se, but rather of latent change.

Resistance to change

In order to explain the mechanisms at play in relation to group change and the resistance to change Lewin introduces the notion of Social Field, which is the *“totality of coexisting social entities, such as groups, subgroups, members, barriers, channels of communication, etc.”* (Lewin, 1947, p. 14) The Social Field in other words contains the aspects of organizational life that one in the present day would consider in preparation of organizational change initiatives, which goes a long way to explain the durability of Lewin’s thinking even today.

Another concept used to describe the mechanisms of change and resistance is what Lewin calls ‘Phase Space’. Phase Space is a system of coordinates, each corresponding to different amounts of intensities of one ‘component’. Referring to *system of coordinates* and *amounts of intensities* again makes the positivist tendencies apparent. It would almost seem that Lewin is torn between the realist and the constructivist approach and a drive to legitimize the research by aligning style and argumentation with the positivist approaches of the natural sciences. *“For the discussion of the conditions of change we make use of such a phase space, realizing that one has finally to refer back to the actual social field”* (Lewin, 1947, p. 14).

In order to bring about a desired change Lewin argues that one should think of it as a change from the present level to the desired one, rather than in terms of a goal to be reached (Lewin, 1947, p. 32). Behind this slightly cryptic formulation is an understanding of changes being a matter of shifting level in Force Fields. Lewin writes that in order to decide *“how best to bring about such an actual change, it does not suffice to consider one property. The total circumstances have to be examined. For changing a social equilibrium, too, one has to consider the total social field”* (Lewin, 1947, p. 32). Despite the dated deterministic comparison to the changing of the flow of a river, the holistic approach taking into account all aspects of a social field when attempting to bring about change, contributes to maintaining the viability of Lewin.

An important aspect of bringing about permanent change is to break habits or unfreezing existing habits and inner resistance to change by applying force. According to Lewin the existing habits or inner resistance to change takes on mainly two forms. *“Social life proceeding on a certain level leads frequently to the establishment of organizational institutions. They become equivalent to ‘vested interests’ in a certain social level”* (Lewin, 1947, p. 33). Lewin continues to write that *“a second possible source*

of social habits is related to the value system, the ethos of groups” (Lewin, 1947, p. 33). This second source of resistance has remarkable resemblance to what in later organizational theory is referring to as organizational culture, e.g. Schein whom explains that *“Culture can be thought of as the foundation of the social order that we live in and the rules we abide by” (Schein, 2010, p. 3).*

While short lived change can often be achieved by giving a ‘shot in the arm’ more permanent change includes the hallmark three-steps defined by Lewin. Unfreezing, moving and freezing at a new level. In order to make this unfreezing happen Lewin argues that it is often necessary to ‘break open the shell of complacency and self-righteousness’ by deliberately bringing about an emotional stirrup (Lewin, 1947, p. 35).

The actual changing, following the unfreeze, is to be understood on two distinct levels. It can be a matter of individuals making decision and of groups making decision to change. Lewin concludes that the group level decisions are more likely to be established as permanent in part because *“the individual seems to act mainly as ‘group members”* (Lewin, 1947, p. 37). It is again interesting to observe how e.g. the thinking of institutional theory and diffusion theory is already present in Lewin’s work.

A misunderstood model?

Lewin’s change model has a special status in organization theory. It is widely referred to as foundational in the field (Cummings, Bridgman, & Brown, 2015). It is however remarkable how short and in a sense scarce in detail Lewin’s own explanation of the change process is considering the prominence it has achieved in the subsequent work of organizational scholars. It literally is a matter of nine short lines, followed by examples of the permanence of group decision vs. individual decisions. Following a closer reading of the article I agree with Cummings et.al (2015) in arguing that the model often referred to in subsequent research on organizational change (Unfreeze->Change->Refreeze) is in fact not found in Lewin’s own work. It is an alluring interpretation that with an intuitive simplicity has come to live its own life separate from the origins of Force Fields and the mathematically inspired Phase Space.

An important reason for the respect held against the work of Lewin and the 1947-article specifically can hinge on his effort to in building bridge between the hard sciences of mathematical economics (particularly in the very last section of the article), and the cognitive aspects of group life previously governed by psychology. Lewin’s continued

standing in the field of organizational change is very likely fueled by the early articulations of themes that would only later rise to prominence in organization studies, incl. institutional theory, organizational culture and diffusion theory. In the area of organizational culture e.g. Edgar Schein stands out as a self-proclaimed Lewin fan, *“I am struck once again by the depth of Lewin’s insight and the seminal nature of his concepts and methods . . . [they] have deeply enriched our understanding of how change happens and what role change agents can and must play.”* (Schein, 1996 in Cummings et al., 2015, p. 2).

At this point the review moves on from the basics of organizational change and development, to dealing with the specifics of organizational change and development induced by new IT.

2.3 – Organizational implications of introducing new technology

A significant stream of theorizing on OCD is related to the implementation of new technology. In what follows I will review a number the seminal works from the cross field of Organization studies and IT studies. The section is concluded with a meta review of studies from the field, particularly aimed at identifying to what extend past research have included pre-implementation periods of IT-implementations as a factor.

Barley and Orlikowski stand out as scholars spearheading the research attempting to build bridge between the Org. studies and IS studies. So in addition to the obvious connection in focus on organizational change Barley / Orlikowski’s academic kinship with Lewin is also evident in that they both attempt to span the boundaries of their areas and tie bonds between organizational science and related fields. And while Barley and Orlikowski stands out as particularly relevant in relation to this dissertation an important brick in the foundation of their work is found in a time before IT was a mere commodity, and it was laid by another theoretical ‘bridge-builder’; Charles Perrow.

Prior to modern IT (Perrow, 1967)

When Charles Perrow wrote *“A framework for the comparative analysis of organizations”* (1967) modern IT was still in its infancy. Punch cards were still in use and it was e.g. not until 1971 the Intel Corporation was founded and introduced the first complete microprocessor on a chip (Maney, Hamm, & O’Brien, 2011). Never the less

Perrow is widely referenced by present day scholars in the fields of IT studies, because of his pioneering effort *“to pay systematic attention to the role of technology in analyzing and comparing organizations as a whole”* (Perrow, 1967, p. 195).

In order to understand the argument made by Perrow it is necessary to make a note of his conception of organizations. In essence Perrow sees organizations primarily *“as systems for getting work done, for applying techniques to the problem of altering raw materials – whether the materials be people, symbols or things”* (Perrow, 1967, p. 195). This view of organizations, as places that transforms something into something else, causes Perrow to focus on types of problems to be solved and the ways in which it happens. In a slightly cryptic way Perrow identifies two aspects of technology with particular relevance to organizational structure;

1. The number of exceptional cases in the work, which has to do with the (un)familiarity of a situation/stimuli
2. The nature of the search process initiated by individuals in case of exceptions.

The exceptions have to do with how standardized the tasks or problems to be undertaken by individuals are. This will vary on a scale from very familiar and routine to something that is highly unfamiliar and non-routine. When confronted with a task, whether routine or non-routine, the associated search process can be described as the way in which individuals go about analyzing and solving problems. Perrow summarizes the two dimension in the model included below.

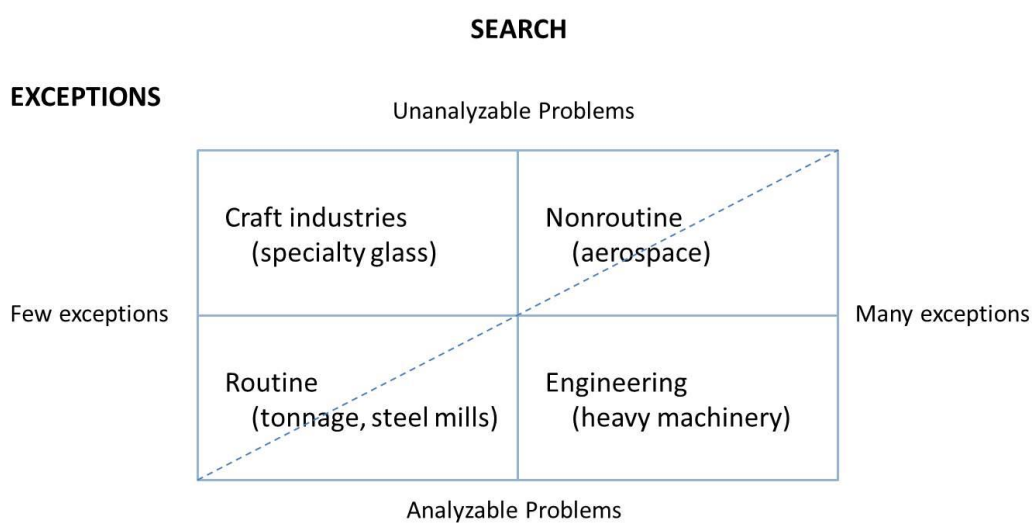


Figure 2.1: Search and exceptions (Perrow, 1967, p. 196)

As an example of a highly non-routine type of work Perrow includes psychiatric casework, and it seems logical to include e.g. highly specialized medical work in this quadrant too. In the opposite quadrant of Routine, it seems logical to place very standardized secretarial work (e.g. transcription of doctors notes), which is characterized by clearly defined tasks with a relatively few exceptions.

The dotted line across the model illustrates a possible one-dimensional representation, and Perrow argues that *“Organizations uniformly seek to standardize their raw material in order to minimize exceptional situations. This is the point of de-individualizing processes found in military academies, monasteries and prisons”* (Perrow, 1967, p. 197). Notice that hospitals are not mentioned.

According to Perrow the main dimensions of task related work in organization are *control* and *coordination*. Control has to do with the *“degree of discretion an individual or group possesses in carrying out its tasks, and the power of an individual or group to mobilize scarce resources and to control definitions of various situations, such as the definition of the nature of the raw material”* (Perrow, 1967, p. 198). Perrow stresses that discretion does not mean freedom from supervision or even the right to work in the way found suitable. Power and discretion are as such closely related, but not the same. *“Power affects outcomes directly because it involves choices regarding basic goals and strategies. Discretion relates to choices among means and judgments of the critical and interdependent nature of tasks”* (Perrow, 1967, p. 198). Discretion is in other words power within boundaries. Goals and strategies are defined by someone with the power to do so. Coordination, the second of the task related dimensions, is achieved through planning and feedback. Planning entails interaction defined by rules and feedback entails degrees of negotiations of alterations.

In what can be considered a summing up of the consequences of the findings in the article Perrow writes that *“For a radical change in goals to be a successful one, it may require a change in technology, and thus in structure, or else there will be a large price paid for the lack of fit between these variables”* (Perrow, 1967, p. 203). Interestingly Perrow uses the example of a nursing unit at a hospital and points to implications of divergence between technology and structure as an indicator of goal realization. The point is that if the level of discretion and type of supervision is not aligned with tasks to

be solved and the technologies used, this will have consequences on the social structure of the organization. And this is where Barley picks up in 1986.

Not just technology (Barley, 1986)

In 1986 Stephen Barley published "*Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments*". It stands as a momentous study of the implications of introducing new technology in the health sector, and more generally in the implications on roles and relations by the introduction of new technology in organizations. The case-study investigates the introduction of CT-scanners in a clinical setting on the roles and relationships of the clinical staff (Barley, 1986, p. 78).

The main feat of the Barley is to treat technology as a social factor rather than purely as a physical object and conceptualizing structure not as an entity but rather as a process. This is a significant break with the intuitive logic of simply viewing technology as things used by people in some context, and moving towards a view of technology acting and interacting in the context of its use. This is in contrast to Perrow e.g. and other contingency theorists who thought of technology as production systems and had "*a strongly determinist vision of technology that gave materiality a strong causal role: different production systems spawn different forms of organizing*" (Leonardi & Barley, 2010, p. 4).

This changes significantly with the CT-scanner study. Technology is not 'just there'. It affects the users and the organizations in which it is used. As an alternative and illustrative example from a different realm one should e.g. not just think of a typewriters as just a smarter way of writing. By altering the process of writing it has the potential to alter the people involved in writing and the people dependent on it. The new technology changes the relationship between those involved in getting documents written. The technology both dictates a very certain way of doing it, but also vests power in the people able to operate the technology. In the same vein the CT scanner is not just a smarter way to examine people, but a significant change in the *process* of examining patients, which in turn affects the organizational members involved and their relationship to each other. In order to analyze the organizational implications of new technology Barley suggests using the notion of Script as defined by Goffman. "*Scripts appear as standard plots of types of encounters whose repetition constitutes the*

setting's interaction order" (Barley, 1986, p. 83). Later in this chapter I go into further details about scripts as one of the analytical handles on the concept of anticipation.

One of the striking consequences of the introduction of CT scanner was a gradual shift in the level of autonomy of the technicians vis-à-vis the radiologist and the rights to perform certain action. Barley concludes the paper referring to Perrow (1967) writing, that "*technical uncertainty and complexity are social constructions that vary from setting to setting even when identical technologies are deployed*" (Barley, 1986, p. 106), marking a significant break with the technological determinism of the past.

In continuation of the work on roles and the organizational implications of introducing new technology in organization, Barley published "The alignment of Technology and Structure through Roles and Networks" (1990), which is a further investigation of roles in relation to organizational change. Pointing to the data of the CT-scanner study of 1986, Barley illustrates that change in technology affects the individual, which in term results in changes in the relationships between the affected individuals, which eventually affects the social networks of an organization. Barley describes it as a reverberation of microsocial dynamics occasioned by new technology up through levels of analysis. (Barley, 1990, p. 61).

Soft determinism (Orlikowski, 1992)

Following the work of Barley, at least in terms of chronology, Orlikowski's work in the cross field between organizations and technology, started in early 1990's with "*The Duality of Technology - Rethinking the Concept of Technology in Organizations*" (1992) standing out as a breakthrough article. In the paper Orlikowski develops a new theoretical model which is used to examine the interaction between technology and organizations (Orlikowski, 1992, p. 398).

Orlikowski identifies three streams of technology research distinguishable by their definitions of the role played by technology in organizations (1992, p. 399). One stream sees technology as external e.g. to the structures of an organization. Orlikowski describes this as the "Technological Imperative" model, which is characterized by an underlying assumption that technology is "*an independent influence on human behavior or organizational properties, that exerts unidirectional, causal influences over humans and organizations, similar to those operating in nature*" (Orlikowski, 1992, p. 400)

A later stream sees technology more as a *“product of shared interpretations or interventions”* (p.400). This is referred to as the "Strategic Choice" model and is characterized by an understanding that *“technology is not an external object, but a product of ongoing human action, design, and appropriation.”* (p.400).

In the third and most recent stream as identified by Orlikowski in 1992 *“work on technology has reverted to a ‘soft’ determinism where technology is posited as an external force having impacts, but where these impacts are moderated by human actors and organizational contexts.”* (p.400)

Orlikowski (1992) , argues that *“the divergent definitions and opposing perspectives associated with technological research have limited our understanding of how technology interacts with organizations”* (Orlikowski, 1992, p. 398). This essentially means that technology and organizations needs to be studied in unison rather than as separate entities. This view is elaborated in the joint article by Orlikowski and Barley (2001) in which they ask; *“Technology and institutions: What can research on information technology and research on organizations learn from each other?”* (Orlikowski & Barley, 2001). They conclude that *“information technology research can benefit from incorporating institutional analysis from organization studies, while organization studies can benefit even more by following the lead of information technology research in taking the material properties of technologies into account”* (Orlikowski & Barley, 2001, p. 145). The main reason for this is that new ways of working and organizing caused by new technologies and changing institutional contexts can only be understood by including both perspectives. Rather than thinking about organization studies and IS studies as separate they should, in the present day society be seen as overlapping. The fusion of the two is described as *“more carefully attuned to explaining the nature and consequences of the techno-social phenomena that increasingly pervade our lives”* (Orlikowski & Barley, 2001). In the context of the present study it can be noted that the pervasive nature of technology in organizational life is observed perhaps more clearly in hospitals, then most other places.

Leonardi and Barley (2010)

Leonardi and Barley (2010) identifies a pendulum-like tendency in organization studies not entirely unlike the tendency observed by Orlikowski (1992), which has to do with the way focus shifts between IT studies and Organization studies. This has caused

researchers to lose track of a main question – *“how is the shift to a computational infrastructure shaping the way people work and organize?”* (Leonardi & Barley, 2010, p. 3) While this is closely related to the focus of this dissertation, it does however also point to a difference in nuance. The question asked by Leonardi and Barley is about the specifics of work and organizing, and can be answered by observing behavior. This dissertation is about perception and anticipation, which requires an entirely different kind of data. People’s opinions and insights into how individuals make sense of their experiences are required. It can never the less, as described in the introduction, be seen to answer the call made by Leonardi and Barley (2010) to investigate how *“various social construction processes come into play and entwine with the technology’s material properties, as well as with the existing social structure of the context in which it is used”* (Leonardi & Barley, 2010, pp. 5–6).

Leonardi and Barley (2010) identifies five distinct constructivist perspectives employed by authors in research of mutual influence of organization and IT. Perception, interpretation, appropriation, enactment, and alignment. The *perception* perspective is described as focused on *adoption*, which according to Leonardi and Barley is the earliest phase of implementation. Authors have in other words not considered the time preceding actual adoption. Stated differently – research appears only to have been conducted in organizations once IT has been implemented. People’s reactions while waiting for the new technology has not been considered. The pre-implementation phase is apparently not considered and no attention has been offered to the interpretation, sensemaking and attitudes formed prior to ‘switching on the computer for the first time’, so to speak.

Organizational implications of HIT from Denmark

If we turn from the international scene to the studies conducted in a Danish context, Vikkelsø (2003) is an obvious starting point. Vikkelsø’s focus is on the implementation of first generation electronic health records, and the literature review is structured around two main questions; *“how come, despite a rich body of literature on the relationship between technology and organizational change, we are still surprised that technology seldom fulfills our expectations? And how can it be that the theoretical literature seems divided on the power of technology?”* (Vikkelsø, 2003, p. 38)

The present dissertation is in a sense a continuation of Vikkelsø's project and the pending implementation of Sundhedsplatformen can be considered an excellent opportunity to restudy the consequences of EHR implementation at hospitals. In contrast to Vikkelsø whom is exploring how EHR affects the actual medical practice, this dissertation is exploring how clinicians anticipate next generation EHR. Of particular interest to this dissertation is chapter seven which is dealing with the way test results are distributed after the introduction of EHR. Vikkelsø writes that *"Results are communicated both electronically and in paper, giving rise to a reshuffling of roles and responsibilities among physicians, nurses, and secretaries"* (p.14). This reshuffling of roles and responsibilities is repeated with the introduction of Sundhedsplatformen, but on a much broader scale. It is not just the dealing with test results but virtually all aspects of the clinical work that is reshuffled. Vikkelsø also observes that *"Paradoxically, the relations between the three groups [ed. Doctors, Nurses and Secretaries] end up being enacted in a manner very close to the traditional organizational hierarchy. And yet, new work temporalities seem to emerge and the traditional ordering principle for the physicians' workday is challenged. Also the new temporalities make it more difficult for the occupational groups to align their work. This introduces new risks of mistakes."* (p.14)

In 2010 Bruun Jensen also approaches the EHR from a distinctly Danish perspective and concludes that despite numerous implementations having been conducted through the 2000's it not yet a firmly stabilized actor in health care practice (C. B. Jensen, 2010, p. 19). Similarly, to the approach of the present dissertation Bruun Jensen deliberately starts out with simple (naïve) questions in his investigation. Following Latour he argues that because of the flexibility and attentiveness promoted by this approach it is useful in the study of a thing whose existence is still only partial (C. B. Jensen, 2010, p. 19).

One of the complications encountered by Bruun Jensen in the study, was an inability to identify or classify EHR as a technological object (p.20). It did not behave like a technology object. Despite a common interest in in the EHR I have not been plagued by this problem due to the fundamentally different approach taken. Rather than studying the EHR itself as Bruun Jensen, I am studying the anticipations sparked or fueled by the partially existing or emerging HIT-infrastructure. As such this particular dissertation is in a sense a study of the concerns of Bruun Jensen, amongst the clinical staff. In essence Bruun Jensen is studying the EHR, whereas I am studying the anticipation of the

emerging EHR/HIT. The situations in which the technologies are constructed and transformed does not exist yet. But as will become evident however, it is not just partial existing objects that affect users, but also the non-existing objects influence. It is merely a matter of shifting the lens or analytical perspective in order to observe the reaction. This is where positioning theory comes into play. More on this later.

Standardization

Looking across the research presented above, one concept appears to tie it all together. The concept of *Standardization* and the reasoning behind and consequences of introducing standardization in organizations is pervasive. It is essentially about new technologies that requires organizational members to conform to some standard embedded in technology in order to work together in an efficient way.

This on the one hand goes to show that regardless of what new technologies emerge, organization are still at the most fundamental level still simply systems of coordinated action among individuals and groups (March & Simon, 1993). It might be argued that not much have changed since Merton (1940) observed that unanticipated outcome / response of organizational members will result in increased demands for control made by organizational management which in term will result in an increased emphasis on reliability (conforming to standards) and behavior within the organization (March & Simon, 1993, p. 57).

On the other hand, as observed by Orlikowski (1992), the new IT-tools will constrain the work of individuals in the organization because they have to conform to dictates of the tools, and that *“work mediated by a technology that emphasizes standardization is no longer performed under the discretion of individual consultants”* (Orlikowski, 1992, p. 416). It is in other words not just task execution that is influenced, but also cognition about the task. Orlikowski also observes that most of the consultants of ‘Beta’ and in particular the younger ones/recruits *“do not recognize the way in which tools generate processes of reality construction both for themselves and the clients whose jobs are being automated”* (Orlikowski, 1992, p. 417).

Moving closer to the Health IT Berg (2001) takes a more normative stance and warns against standardizing, because the *“core business process’ of healthcare consists of highly knowledge-intensive, professional work, typified by a complexity that defies the predictability and standardization required for simple reengineering”* (Berg, 2001, p.

150). This should be seen as a contrast to the traditional hierarchical organization in which work processes are more predictable, but also organizations where the professionals ultimately responsible for this process are not as powerful as high ranking clinicians of the health organization. Berg argues that they cannot simply be told to change their work patterns by the management, in the same way it can be done in a traditional top-down managed organization.

Also coming the Health IT angle Bloomrosen et al (2010) observes that *“Implementation of HIT may blur the distinctions among traditional role lines, such as those of clinicians and information technology providers and administrators”* (Bloomrosen et al., 2010, p. 86), which makes it necessary to balance standardization of systems with some measure of flexibility. The changes may exactly be what causes the resistance of powerful professionals foreseen by Berg. An entirely different conclusion could however be that *“Indeed, HIT implementations are opportunities to review existing workflow processes to make sure that all are effective and up to date”* (Bloomrosen et al., 2010, p. 86).

Finally, applying an IT studies perspective, Aanestad and Jensen (2011) offers an overview over the history of the Danish EHR standardization initiatives. In a comprehensive review of governmental documents including strategies, regulations and standards Aanestad and Jensen analyzed the ways in which standardization initiatives and interoperability issues have been dealt with. They concluded that *“The standardization has had little effect on securing interoperability. Deloitte’s review uncovered 23 different and non- interoperable “EPR landscapes” across Denmark, i.e., combinations of core elements (modules) that comprised core clinical systems such as PAS and EPR. As a consequence, the Minister of Health decided to put the B-EPR development on hold. He approached the critics of B-EPR by arguing that “not even the international market can deliver a common solution”* (Aanestad & Jensen, 2011, p. 168).

2.4 - Summary - Organizational barriers to adoption of HIT

This section is concluded by taking a step back and return to the question asked in the introduction of the dissertation. As stated in the introduction one of foci of this review is to what extent the pre-implementation phase is addressed in research on the organizational consequences of implementing new technology? A first indication was found above in the study of Leonardi and Barley (2010), in which the pre-implementation phase was not considered.

Lluch (2011) performed an equally comprehensive literature review in which she identifies the barriers to HIT adoption from an organizational management perspective. The review of literature covers the period from 1995 -2010 and in contrast to past reviews it included research emanating from both health studies and organizational / management studies. A total of 31 sources were searched, returning 4035 references. This was filtered into the final qualified list of 79 unique studies. The identified studies consisted of 40 qualitative studies, 12 studies using a quantitative method and 12 using mixed methods (Lluch, 2011, p. 852).

Lluch (2011) has fitted the identified barriers / drivers into five main categories. (I) Structure of healthcare organizations, which includes aspects relating to hierarchy, generational differences, teamwork and autonomy; (II) Tasks, which includes change in work processes and routines and ways of interacting ; (III) People policies, e.g. has to do with level of personal accountability, training and IT skills, support, trust and autonomy ; (IV) Incentives, is about how and for what people are being rewarded in the organizational setting; and (V) Information and decision processes is concerned with how healthcare professionals cooperate and work as a team (Lluch, 2011)

While all the aspects above are applicable to the case of Sundhedsplatformen, a number of particularly relevant conclusions can be drawn from the review. First of all, the review identifies a potential clash between older generations of clinicians and the Generation Y (Born after 1978) clinicians whom may be the organizational change agents. According to Lluch (2011) it cannot be taken for granted that the new generation of hospital professionals will conform to the institutionalized ways. *“As a result, there is a strong need to re-engineer the healthcare hierarchical system in order to best leverage the potential of generation Y workers”* (Lluch, 2011, p. 852). Related to the question of generations and hierarchy is the question of collaboration. How do people work together? And the review shows the current structure of healthcare organizational systems is a barrier that does not encourage teamwork, even though *“team-based care strategies were needed for successful implementations and that this was the only way forward for care coordination supported by EHR’s”* (p.852). Along the same lines Winthereik and Vikkelsø (2005) argues that *“the current inefficiency in the cooperation between healthcare organizational units within the system has become more severe through the use of HIT”*.

Several studies in the review also emphasize the importance of roles, tasks and workflows and how technologies should be designed to adapt to these (p.854). It is noticeable how it seems taken for granted that technologies should be designed to adapt to what already exist in the organization, rather than the other way around with roles, tasks and workflows adapting to the new technology. This is contrasted by another group of scholars who insists that *“incentive policies to promote HIT adoption are not enough and that changes in workflow and processes are of paramount relevance”* (p.856). It is in other words not sufficient simply to map new technology to existing processes and then try to ‘motivate’ clinicians to use it – things need to change at a more fundamental level. This brings us to what seems like a main conclusion from the review. Lluch sums up the review of literature on barriers and driver to the organizational adoption HIT saying that *“New implementations require healthcare organizational systems to build an understanding of their processes so that it is understood how a new system will fit in”* (p.857). Further research in this is required, and Lluch specifically points out that *“more information is needed regarding organizational change, incentives, liability issues, end-users HIT competences and skills, structure and work process issues involved in realizing the benefits from HIT”* (p.859). This dissertation is offering just that.

Since the review of Lluch (2011) several studies have followed the call for further research and investigated e.g. the use and adoption of clinical decision support systems (Khong, Holroyd, & Wang, 2015), the implications of HIT implementations within specific health professions (Nilsson, Eriksén, & Borg, 2014), (Nilsson, Eriksén, & Borg, 2016) or with specific geographical focus (e.g. Turan & Palvia, 2014). A common trait of these and other studies is however the exclusive focus on already completed implementations. No attention is offered to the effect of pending implementations, which corresponds with the observation made by Greenhalgh et al. (2009) in their comprehensive review of reviews that very few studies applied a prospective view on the implementation of HIT. *“There appears to be surprisingly little peer-reviewed research on how interpretivist approaches might be used proactively and explicitly to shape the effective implementation and use of EPR systems, especially in large-scale programs”* (p.752) and they conclude that *“Prospective, theory-driven primary studies of large-scale EPR systems are urgently needed”* (Greenhalgh et al., 2009, p. 768)

No such studies appear to have been conducted since the calls made by Greenhalgh et al (2009) and Lluch (2011) and Ben-Zion et al (2014) whom yet again reviews the literature on adoption of EHR.

Part II

In part 2 of this review, attention turns to the concept of *anticipation* and the development of the analytical / conceptual framework of the dissertation. Early analysis of interview data indicated patterns in the ways clinicians prepared for the pending organizational changes. Further data collection, more in-depth theoretical studies and ongoing structuring and analysis of data e.g. using Nvivo strengthened the proposition and confirmed the presence of patterns to the point where it was possible to establish the theoretical /conceptual framework presented below. The analytical framework consists of *anticipation* as the overarching concept. Following the initial introduction and discussion of the concept of anticipation, each anticipatory element (Sensemaking, Positioning and Scripting of the future) is introduced and discussed. Particular attention is offered to Positioning Theory because this is the main source of untapped explanatory power in relation to anticipation.

2.5 – Anticipation

Anticipation is defined as “*a feeling of excitement about something that is going to happen*” or “*the act of preparing for something*” (Merriam-webster, 2016), and is as such characterized by a sense of positivity or optimism. It is not entirely dissimilar to the concept of *expectation*, which is defined as “*a belief that something will happen or is likely to happen*” (Merriam-webster, 2016). The difference is in the nuance, with anticipation e.g. having a stronger element of the unknown about it. The expectation is typically more specific and something that can be externalized e.g. “I expect you to do this!”, whereas the anticipation is vague and more internal of nature. The difference between the two can be reduced to a difference in attitude. Anticipation represents hope and expectation entails an assumption of entitlement.

In the case of Sundhedsplatformen it makes sense to uphold this distinction and to talk about anticipation rather than expectations. No doubt expectations exist in abundance in the organization. Clinicians e.g. expect the system to perform better, result in new

workloads, changing procedures etc. They in a sense feel entitled to this by virtue of the importance of their work. These are specific beliefs that something is going to happen, and they may get disappointed or not. The primary interest of this dissertation is however the pre-implementation preparation of clinicians and the more vague and internal feelings prior to the change. Focus is on the mental preparation and mental action in anticipation of Sundhedsplatformen and relating more generally to how it may or may not transform everyday life in the clinic. The question is what are the anticipatory action clinicians engage in relation to the pending organizational change induced by Sundhedsplatformen?

The concept of anticipatory action is drawn from the work of Anderson (2010). He writes that *“anticipatory action is a seemingly paradoxical process whereby a future becomes cause and justification for some form of action in the here and now”* (p.778). The proposition of this dissertation is that clinicians of Sundhedsplatformen engage in three distinct types of anticipatory action; Sensemaking, Positioning and Scripting of the future. In order to assemble a coherent conceptual and theoretical framework each of the three anticipatory elements is presented in this section, but first attention is turned to the notion of ‘anticipatory action’.

“Anticipatory action perplexes us, or at least it should, because it invites us to think about how human geography engages with the taken-for-granted category of ‘the future’” (p.777-778). As is evident in this quote Anderson’s focus is the social science branch of human geography, and even though this particular dissertation is focused on the narrow setting of organizations, the perspective of anticipatory action is well suited because it allows to engage in a systematic way with what Anderson strikingly calls the taken for granted category of the future.

According to Anderson (2010) this taken-for-grantedness is a mistake caused by an assumption of a linear temporality. Anderson argues that we are misled by the idea *“that the future is a blank separate from the present or that the future is telos towards which the present is heading”* (p.778). The keyword here is ‘blank’ – the future is not a blank canvas, but already ‘colored’ by the present. As such the future is already in the present, and *“to understand how anticipatory action functions we must understand the presence of the future, that is the ontological and epistemological status of ‘what has not and may never happen’”* (Anderson, 2010, p. 778).

Anticipatory action consists of or is assembled by Styles, Practices and Logics;

- Styles are defined as, *“a series of statements through which ‘the future’ as an abstract category is disclosed and related to. Statements about the future condition and limit how ‘the future’ can be intervened on.”* (p.779). Styles can as such been seen as discursive frames applied by individuals in an effort to gain or maintain some kind of control of an otherwise uncontrollable future.
- Practices in term are defined as what gives *“content to specific futures, including acts of performing, calculating and imagining. It is through these acts that futures are made present in affects, epistemic objects and materialities.”* (p.779)
- Logics, finally, are defined as *“a programmatic way of formalizing, justifying and deploying action in the here and now. Logics involve action that aims to prevent, mitigate, adapt to, prepare for or preempt specific futures.”* (p.779)

Combining these three elements, Styles, Practices and Logics, provides a vocabulary allowing to inquire or articulate the presence of the future in the now, through statements, materialities and policies and programs. Of particular interest in this connection are ways in which possible futures are made present through various practices, including calculation, imagination and performance (Anderson, 2010, p. 784).

Calculations represents bets on possible futures made present through numbers. It is e.g. charts, tables and diagrams used to present anything from the forecast of the business plan to the climate models of future weather. The second way of making the future present in the now is essentially by making it up, through what Anderson calls acts of creative fabulation in which future events e.g and states of affairs or persons are imagined as if they were actual and real (p.785). With this rather loose approach the aim is not to present the most accurate picture but rather to present a future that moves and mobilizes (p. 785) which bares striking similarities to what Weick (1989) referred to as ‘disciplined imagination’. Following Andersen (2010) the scenarios can be thought of as tools to think with and subsequently be used to make interventions. The final practice suggested by Anderson to make the future present is through performance, which includes forms of acting, role playing, gaming or pretending (p.786). The idea is that by feeling the stress of a situation (simulated or real) on your own body is very different from reading about it in a report. Feeling the ‘heat’ if a system fails and having to make crucial decision based on the available information is very different from reading statistics about possible future situations or simply imagining it. Anyone who has been

exposed to communication training in front of spotlights and a rolling camera can testify that it is anything but a normal conversation. Sitting in the hot chair of a crisis is very different from talking about it.

The concepts presented by Anderson (2010) are useful for the description and aid in the analysis of Sundhedsplatformen. One of the characteristics of the practices described above are the closeness to existing theories. Imagination as described above bears striking similarities to the notion of (prospective) sensemaking of Weick and when talking performance, the similarities to the theatrical Goffmanian concepts are noticeable. *“Practices based on performance include a series of techniques that have their origins in the realms of theatre, drama and play, most notably exercises (Anderson, 2010), war games (Der Derian, 2001) and simulations”* (Anderson, 2010, p. 786). The missing link in terms of theoretical grounding, I suggest has to do with the effect on institutionalized rights and responsibilities of the actors. Positioning theory fills this gap. More on this in a moment.

This concludes the section on anticipation specifically and leads into the first of the three elements of anticipation – Sensemaking.

2.6 - Sensemaking

In the field of organization studies the introduction of ‘sensemaking’ is commonly ascribed to Weick (1979, 1995). An early use of the concept is found in ‘The Social Psychology of Organizing’ in which he writes, that *“Most efforts at sensemaking involve interpretation of previous happenings and of writing plausible histories that link these previous happenings with current outcome”* (Weick, 1979, p. 13). On the surface the concept of sensemaking is remarkably simple in that *“Sensemaking is what it says it is, namely, making something sensible. Sensemaking is to be understood literally, not metaphorically”* (Weick, 1995, p. 16). We essentially make sense of our impressions and we do it non-stop. It might be this fundamental simplicity of sensemaking that causes Weick to be reluctant to express grander ambitions on behalf of sensemaking, as he argues that the concept is *“best described as a developing set of ideas with explanatory possibilities, rather than as a body of knowledge”* (Weick, 1995, p. xi). It is almost as if Weick is making an effort to downplay the theoretical status of sensemaking as he explains that it should be thought of as a set of heuristics rather than as an algorithm (p.xii). Later he goes on and argues that sensemaking should be conducted through the

use of *disciplined imagination* (Weick 1989, 1995), which has not gone unnoticed. Basbøll (2010) makes a strong argument against this method and argues that misreading and actual plagiarism makes the work of Weick resemble poetry and makes it scientifically questionable (Basbøll, 2010, p. 163). However, despite the methodological critique of Weick I maintain the use of the Sensemaking as part of the approach to analyzing individuals in organization – not so much as an actual theory but rather as a conceptual apparatus that can aid in explaining phenomena.

Sensemaking is about how people construct sensible events and how they structure the unknown. Sensemaking is dealing with how, why and with what people make sense (Weick 1995, p. 4), and the ability or inability to making proper sense of incoming signals. The latter is vividly described in the cases of the Tenerife disaster (Weick, 1990) and Mann Gulch (Weick, 1993). Ring and Rand sees sensemaking as a more personal activity and suggests defining sensemaking as “*a process in which individuals develop cognitive maps of their environment*” (in Weick 1995, p.5), which corresponds well with the understanding and purpose of this dissertation. The individual perspective fits well with individual interviews that forms an essential part of the data for the dissertation.

Weick (1995) lists seven properties of sensemaking, describing it as a process that is;

1. Grounded in identity construction, which means that the sensemaker, through sensemaking is engaged in a continuous process of redefinition of the self. This continuous redefinition “*coincident with presenting some self to others and trying to decide which self is appropriate*” (Weick, 1995, p. 20), which means that identity creation happens in relation to others.
2. Retrospective – the retrospectivity is described as the perhaps most distinguishing characteristic of the present conceptualization of sensemaking. It essentially means that sensemaking is done by observing what has happened and establish some meaning after the fact. “*People can know what they are doing only after they have done it*” (Weick, 1995, p. 24)
3. Enactive of sensible environments which points out that individuals through sensemaking are themselves co-creators of the environment they inhabit. Weick follows Follett (1924) and writes that people receive stimuli as a result of their own activity. “*As we perform a certain action our thought towards it changes and that changes our thought*” (Follett (1924) in Weick, 1995, p. 33)
4. Social – which is highlighting the fact that humans are not isolated but always in one way or another part of some kind of sociality. Even when no one is around. “*Conduct is contingent on the conduct of others, whether those others are imagined or physical present*” (Weick, 1995, p. 39)

5. Ongoing, meaning that it never actually starts or stops. It is pure duration since individuals are always in the middle of something. *“To understand sensemaking is to be sensitive to the ways in which people chop moments out of continuous flows and extract cues from those moments”* (Weick, 1995, p. 43)
6. Focused on and by extracted cues which are *“simple familiar structures that are seeds from which people develop a larger sense of what may be occurring”* (Weick, 1995, p. 50). Extracted cues are in other words the observation that individuals pay particular attention to and inscribe with some meaning
7. Driven by plausibility rather than accuracy is the final of the seven properties of sensemaking. It underlines the constructivist nature of sensemaking in that there is in fact not an objective reality to be ‘sensed’ accurately. *“The strength of sensemaking as a perspective derives from the fact that it does not rely on accuracy and its model is not object perception. Instead, sensemaking is about plausibility, pragmatics, coherence, reasonableness, creation, invention, and instrumentality”* (Weick, 1995, p. 57)

Numerous scholars have continued to use and build on the concept of sensemaking in subsequent years. Previously in the chapter reference was made to Barley, Orlikowski and obviously Weick himself, whom have all made use of sensemaking. In health studies examples include e.g. Jensen, Kjaergaard and Svejvig (2009) whom explores the potential of using institutional theory with sensemaking theory to study IS implementation in organizations. They use an empirical study of the implementation of an EHR system in a clinical setting as their case. Sensemaking is applied because of its strong explanatory power in relation to the interplay between action and interpretation at the micro- level where meaning is created (T. B. Jensen et al., 2009, p. 345). This is a clear pointer to property 5 above which emphasizes the close relationship between thought and action.

In one of the latest publications of Weick (2015) focuses is on the relationship between ambiguity, uncertainty and simplification. He argues for the acceptance or even increasing ambiguity when it occurs in organizations rather than simplifying matters. Complexity and ambiguity should not be simplified out of existence, because simplification dilutes the richness of information and knowledge in the otherwise ambiguous situation. This is e.g. completely in line with property 7 above in that sensemaking does not strive for accuracy and the ambiguous situation is characterized by the inability to obtain accurate understanding matters. Plausibility is good enough. In short it appears that the fundamentals of sensemaking as outlined in the seven properties above essentially are unchanged.

In relation to the prospective use of sensemaking Weick writes “*Occasions for sensemaking should vary as a function of how far into the future a line of action extends, the availability of news, the capability for scanning, the tolerance for risk, the design of the news-collecting structure, and the ease of movement towards sources of news*”, (Weick 1995, p. 97). Even though Weick considers the future as relevant it is, still only concerned about the sensemaking. How do I make sense of what is happening? Looking ahead to the interviews of the dissertation Sensemaking is an important component. It lays the foundation of the anticipation, but does not account for what is going on alone. This is where Positioning theory have explanatory power to take over.

2.7 - Positioning theory – emerging perspectives

Before moving into the details of positioning theory, a brief pause is required to address *why* positioning theory has been chosen for the analysis? Why is positioning theory an advantageous approach to studying organizational implications of pending introduction of new technology in the health sector?

Positions vs. Roles

At first glance the conceptual framework of Goffman (1959, 1986) lends itself well to the study of the experiences of individuals in organizations. In the introduction to ‘Frame Analysis’ Goffman explains that “*This book is about the organization of experience – something that an individual actor can take into his mind - and not the organization of society*” (1986, p. 13). In that sense it is comparable to the approach taken in this study. Focusing on experience and not the organization of society. This theoretical approach would result in a study of relationships as roles and the hospital as the frame of the study. This is however in contrast to an essential aspect of this study, which has to do with *anticipation* of coming changes. Not just the past and present but also possible futures. It might be argued that when Goffman describes how islanders engage in facework and puts on a performance when approaching the house of a neighbor (Goffman, 1959), it is a case of anticipatory performance. It is a face and performance put on for the sake of a pending encounter. It is however very different from what the individuals of this study is engaged in when asked about their anticipation of the future with Sundhedsplatformen. The analytical approach of Goffman is e.g. focused on the impressions given and given off and the prospective perspective is absent. A crucial aspect of this study has to do with ways in which individuals try to make prospective

sense of pending changes. In that sense, frame analysis and facework is ill suited for the analysis because it focuses on the concrete behavior of individuals and not their anticipation.

An essential difference between the conceptual apparatus of Goffman and the concepts of Positioning Theory has to do with the distinct between roles and positions

The term Role is defined as "*equivalent to specialized capacity or function, understanding this to occur both in offstage, real life and in its staged version*" (Goffman, 1986, p. 129). From a Goffmanian perspective one would in other words talk about the role of the doctors, nurse and secretary. While this view of actors may suffice in certain contexts, it neglects the dynamics of real life, in which individuals cannot simply be reduced to a static role.

In his later work Goffman acknowledge that there is something other than roles going on. "*Some unofficial weight is almost always given to capacities defined as officially irrelevant, and the reputation earned in one capacity will flow over and to a degree determine the reputation the individual earns in his other capacities. But these are questions for refined analysis*" (Goffman, 1997, p. 52). What Goffman himself appears to be acknowledging here, is a limitation in his own conceptual apparatus. It is not just a role that defines the individual, but e.g. also reputation that is carried over. The Goffmanian concept of the role is in other words too static and appears insufficient to account for relational mechanics of the encounters of this dissertation. Much has changed in the relationships the clinical staff members, and it is exactly the ability to see individuals as consisting of more facets and being relationally defined that makes positioning theory useful. It seems more appropriate to analyze the interview patterns as positions and episodes.

A position is defined as "*a complex cluster of generic personal attributes, structured in various ways, which imping's on the possibilities of interpersonal, intergroup and even intrapersonal action through some assignment of such rights, duties and obligations to an individual as are sustained by the cluster*" (Harré & Langenhove, 1999, p. 1). In contrast to the fixed position of the Goffmanian role the position allows for taking into account the contingencies of everyday life, experience, interpersonal relations etc. The relationship between a doctor and nurse and between a nurse and a secretary is not a

singular relationship between two fixed roles, but better understood as contingent positions.

Positioning theory, defined as the *“study of local orders as ever-shifting patterns of mutual and contestable rights and obligations of speaking and acting”* (Harré & Langenhove, 1999, p. 1), is chosen as the perspective because of the explanatory power with regards to what appears to be preemptive positioning by the clinical staff members. Generally, the interviews come across as varied attempts to position selves and others on the changing landscape of hospitals. New organizational conditions are lurking in the horizon and the clinical staff whom I have been interviewing are preparing for the changes that are coming.

In the following I first revisit the origins of the concept of position and positioning. I will then move on to a more thorough presentation of positioning theory as a theoretical field. The purpose of this presentation is to prepare the grounds for the subsequent analysis of the entire corpus of data of the dissertation

Early use of ‘Positioning’ – Hollway (1984)

According to Langenhove and Harré (1999, p.16) the use of ‘position’ and ‘positioning’ were first introduced in social sciences by Hollway (1984). The subject of Hollway’s study was on how *“day to day practice and the meaning through which they acquire their effectivity may contribute to the maintenance of gender difference [...] or to its modification”*. (Hollway, 1984, p. 1) The concept – positioning – is used to describe how women and men relate and position themselves and each other in relation to the discourses that are ‘controlling’ relationships within and between genders. A key question posed by Hollway is *“how is it that people take up positions in one discourse rather than another?”* (p.7). The question is particularly related to the male sexuality and the tendency, according to Hollway, for heterosexual men to take up the subject position in discourse of male sexual drive.

Another idea introduced by Hollway is the notion of ‘investment’. In later work on positioning theory, e.g. Langenhove and Harré, *investment* appears to have slipped out of the conceptual apparatus. In the concepts of Hollway ‘investment’ is something that people make in taking up certain positions in discourses. Implicitly in this conceptualization is that an individual can expect some reward or payoff. The choice may be conscious or unconscious, and the point is that investment offers some kind of

satisfaction. By 'investing' in a position one gets something in return, which however may well be in contradiction with other resultant feelings. One may in other words make an unconscious choice of accepting a position imposed by another party in order to enjoy the benefits from this, but at the same time experience negative feelings because of the choice.

Hollway sums up the essence of her work in saying that "*The point that I have been at pains to stress is that discourses coexists and mutual effects and that meanings are multiple. This produces choice, though it may not be simple or conscious.*" (Hollway, 1984, p. 8) This appears to be exactly what we are observing amongst the interviewees – multiple discourse coexisting.

Establishing the field (Davis and Harré, 1990)

With the first articulation of the main concept we move on to what might be thought of as a broader, more general and in a sense contemporary use of positioning theory. While maintaining a focus on aspects relating to gender and more broadly on feminist critical theory Davies and Harré (1990) pushes on in the theoretical development in what appears to be an attempt to generalize the concept of position and positioning. The main interest of Davis and Harré is to develop the concept of positioning in contrast to the concept of 'role', which is seen as too static, formal and ritualistic aspects (Davies & Harré, 1990, p. 1) to account for and capture the dynamics of real life encounters and observations.

One of the main concepts Davis and Harré in their elaboration of positioning theory is 'discourse'. "*In this context a discourse is to be understood as an institutionalized use of language and language-like sign systems.*" (Davies & Harré, 1990, p. 2). Discursive practices in term are "*all the ways in which people actively produce social and psychological realities*" and as pointed out by Hollway, Davis and Harré also stresses the fact that discourses can compete with each other or they can create distinct and incompatible versions of reality. "*To know anything is to know in terms of one or more discourses*" (Davies & Harré, 1990, p. 2)

Discursive meaning-making

"*Positioning theory focuses on understanding how psychological phenomena are produced in discourse*" (Harré & Langenhove, 1999, p. 4). Discourse can be thought of as the language and the mental frame through which we make sense of the world we

inhabit. Meaning cannot be created in a vacuum. Discourse cannot be escaped. Humans make sense through and with discourse.

The classic example of discursive power is the question of whether a person is a terrorist or a freedom fighter (Hastrup, 1992, p. 48). Whether one perceives a person as a terrorist and the actions of a person as terrorism is essentially a question of discourse. The killing of newspaper writers can from within one discursive frame be honorable and justified. An act performed by freedom fighter in the pursuit of a higher cause.

The same act can from another discursive perspective be seen as a barbaric act and an onslaught against the very pillars of society. The paradox is that both parties can actually be right at the same time. The opposed views of the meaning of the act can be right at the same time within the confines of their own discursive logic. Discourses can be thought of as different languages, and if an individual meet with a person speaking a language she/he does not understand or speak, it does not matter how well a point in case is argued. The other will not be able to understand the inherent logic of the discourse from within which the argument is created. In the case of the terrorist / freedom fighter the discursive chasm has to do with the opposing parties having been formed by different / opposing ethics which in term has caused them to develop differing moral codes which in term has resulted in discourses where the underlying logic, moral and ethics are hidden or forgotten

In relation to the themes identified in the interviews of the dissertation and looking ahead to the more elaborate data analysis it can be noted how discourse relates to the concept of identity. Frazer writes that *"'actors' understanding and experience of their social identity, the social world and their place in it, is discursively constructed. [...] their personal-social identity, can only be expressed and understood through the categories available to them in discourse."* (Frazier in Davies & Harré, 1990, p. 5). In essence, this means that one cannot be outside discourse, and since a dominant, institutionalized discourse is very hard to disrupt it becomes virtually impossible to 'wipe the slate clean' and establish new ways of thinking. No matter how desirable this may be, starting over in terms of organizational identities is not really an option. You must work with what you have.

One of the main arguments put forward by Davis and Harré is that *"the constitutive force of each discursive practice lies in its provision of subject position"* (p.6). It is in other

words the capacity of a discourse to assign or point out possible and appropriate positions to individuals that gives it its strength. The person who 'owns' the discourse or with the power to define the dominant discourse in a sense holds the power to push the discourse in between one self and other subjects. In this way the location of power becomes blurred. It becomes unnecessary to order people around because the discourse in a sense dictates 'how things are done around here!'

The taken-for-grantedness offered by discourses also has the consequence that individuals inevitably come to see the world from the position which they have taken or been assigned by others. This world view includes the images, metaphors, story lines and concepts that are made relevant within that particular discursive practice in which they are positioned (Davies & Harré, 1990, p. 6). It might be said that the adoption of a position within a discourse, regardless of it has been chosen by one self or has been assigned by others, offers the individual a pre-packaged and coherent view of the world. While this at first glance may appear to be limiting and restraining in terms of individual initiative, it frees the individual of the burden of having to invent entirely new ways of acting e.g. in an organizational context. This in term frees the individual to focus on the tasks at hand. When moving in a territory for the first time it is faster to pick up someone else's map and guidebook then to write it yourself as you move ahead.

From a discursive perspective the notion of individuality is to a wide extent a question of 'choice' of position rather than some core of 'real' self. *"Who one is is always an open question with a shifting answer depending upon the positions made available within one's own and others' discursive practices and within those practices, the stories through which we make sense of our own and others' lives."* (Davies & Harré, 1990, p. 6)

The multiplicities of 'self'

According to Davies and Harré (1990) the development of selves follows a five step process;

1. Learning of the categories which include some people and exclude others, e.g. male/female, and in the clinical setting this could include doctors, nurses and secretaries.
2. Participating in the various discursive practices through which meanings are allocated to those categories
3. Positioning of self in terms of the categories and story lines. This involves imaginatively positioning oneself as if one belongs in one category and not in the other

4. Recognition of oneself as having the characteristics that locate oneself as a member of various sub classes of dichotomous categories and not of others
5. All four processes arise in relation to a theory of the self-embodied in pronoun grammar in which a person understands themselves as historically continuous and unitary. (Davies & Harré, 1990, p. 7)

Positions in term are identified by isolating the parts of the conversations, and in the case of this dissertation, the interviews in which the interviewees position them-selves and others. It is essentially a question of pinpointing the positions individuals take up in what story lines and how they position others. Some of this positioning may be made explicit, by referring to self or others. However, the positioning may also be implicit. A particular position may not be referred to directly but still be there as the obvious and inevitable opposite to what is actually being described. If the position of victim is made explicit, this can be seen as an implicit reference to a position as villain. If the position of *young* is explicated by an actor, this implicitly refers to dichotomous position of someone as *old*.

The positioning may according to Davis and Harré include one or more of the following characteristics;

1. *The words the speaker chooses inevitably contain images and metaphors which both assume and invoke the ways of being that the participants take themselves to be involved in.*
2. *Participants may not be aware of their assumptions nor the power of the images to invoke particular ways of being and may simply regard their words as 'the way one talks' on this sort of occasion.*
3. *The way in which 'this sort of occasion' is viewed by the participants may vary from one to another. Political and moral commitments, the sort of person one takes oneself to be, one's attitude to the other speakers, the availability of alternative discourses to the one invoked by the initial speaker (and particularly of discourses which offer a critique of the one invoked by the initial speaker) are all implicated in how the utterance of the initial speaker will be heard.*
4. *The positions created for oneself and the other are not part of a linear non-contradictory autobiography (as autobiographies usually are in their written form), but rather, the cumulative fragments of a lived autobiography.*
5. *The positions may be seen by one or other of the participants in terms of known 'roles' (actual or metaphorical)*

(Davies & Harré, 1990, p.10)

One of the noticeable characteristics mentioned in the list above is that a position is unlikely to be part of traditional narrative with a beginning, middle and end (BME), but that it is rather a fragmented story made up along the way.

Taking stock of the field (Harré & Lagenhove, 1999)

When talking about contemporary positioning theory the main influencers are Harré and Langenhove. It is particularly “Positioning Theory” from 1999 that stands as a landmark in the continued development of positioning theory as a field. The purpose of the book is to *“bring together a number of theoretical explorations and applications of positioning theory as an exploratory scheme to understand and study discourse and its relation to different psychic and social phenomena.”* (Harré & Langenhove, 1999, p. 2)

As described above a position is defined as *“a complex cluster of generic personal attributes, structured in various ways, which imping’s on the possibilities of interpersonal, intergroup and even intrapersonal action through some assignment of such rights, duties and obligations to an individual as are sustained by the cluster”* (Harré & Langenhove, 1999, p. 1). This means that the rights, duties and obligations that individuals subordinate to are predetermined by the position that one has chosen or the position that one has been ascribed by others.

This leads us back to one of the main insights suggested by positioning theory already described by Davies and Harré (1990). Positions are relational. No matter what context an individual is in – the position obtained is always in relation to some other position. Harré and Langenhove comes with the example that in order for one to be positioned as ‘powerful’, someone else must be positioned as ‘powerless’. Positioning is however not isolated to operating at the level of the individual. It is equally applicable at the level of groups. Tan and Moghaddam (1999) uses the term ‘intergroup positioning’ to refer to *“the process by which individual persons or groups of persons position themselves and other individuals on the basis of group membership”* (p.183). The intergroup positioning and group affiliation is made by using linguistic devices such as ‘I’, ‘we’, ‘us’ and ‘they’, and keeping the relational nature of position in mind it is not necessary to mention a group to position it. It can simply be done by referring to one’s own group and thus implying the opposite position for the other.

Logical and possible positions - Harré and Moghaddan (2003)

An essential element of positioning and as such at the heart of the explanatory force in the positioning theory is the applicability in the description and analysis of social encounters through a repertoire of acts/actions that limit or constrain behavior in social situations. Harré and Moghaddan (2003, p. 4) distinguish between actions that logically possible and those that are socially possible. While an almost unlimited range of actions are logically possible, including running naked through the hallways of the university or perhaps just the secretary taking a blood sample on a patient. Both are for all practical purposes possible and would as such be considered logical possible. But taking the social context into consideration neither can be considered socially possible. Running naked through the hallways of the university is not socially possible because it breaks fundamentally with the acceptable behavior of being at a university. In the concepts of positioning theory, it would not conform with the rights or duties of any known position in a university setting. In another social setting a position may exist where the running-around-naked would be considered a right and as such socially possible.

The other example, a secretary taking a blood sample on a patient, is not socially acceptable in the clinical context. The secretary does not have the right or duty to perform this act, as opposed to the nurse or the doctor whom both have the right and in certain situation the duty to perform the act.

In the conceptualization of positioning theory these two very different examples points to how *“a position implicitly limits how much of what is logically possible for a given person to say and do and is properly a part of that person’s repertoire of actions at a certain moment in a certain context, including other people”* (Harré & Moghaddam, 2003, p. 5). This implicitly means that the positioning of oneself or of someone else affects the repertoire of acts that are available.

Emotions in positioning

Another important aspect of positioning and the rights and duties associated with positions, has to do with emotions. If an individual (self or other) does not live up to the rights and duties associated with a position this will likely result in an emotional reaction. If my right to do or get something is not fulfilled I might get angry, or if another person does not fulfill the duties associated with a certain position I might get disappointed or frustrated. Emotions as such share the central properties of Positions, and embody the moral values and judgements of a culture (Parrott, 2003, p. 30).

One of the characteristics of emotions is that it is about something. For example “to be angry about something is to perceive it as having been the result of wrongdoing by another person” and since positions are rarely defined in isolation but relative to other position “*expressing the anger assigns that person [ed. the wrongdoer] a place within the local moral order and places other people in complementary places of having justifiable complaints*” (Parrott, 2003, p. 31). Anger must have a target guilty of transgression and therefore blameworthy. Emotions may in other words play an important role in relation to positioning effort of individuals in the same way emotions play a crucial role in connection with sensemaking. Sandberg and Tsoukas (2015) e.g. writes that “*Negative emotions are likely to be frequently involved in sensemaking, as the latter typically occurs when routine activities are interrupted, and, therefore, the certainty and ‘ontological security’ routines offer are broken. Negative emotions are particularly salient in crisis situations and in organizational change*” (Sandberg & Tsoukas, 2015, p. 17).

Positioning theory in the analysis of Organizational Change (2009)

In what is probably the most directly comparable to the present study, Zelle (2009) sets out to explore the application of positioning theory in the analysis of organizational change. In the conference paper Zelle observes that the potential of positioning theory to build bridge between various levels social analysis (individual, institutional and societal) has not been tapped into yet (Zelle, 2009). Zelle argues that through the analysis of positions and positioning it is possible gain deeper insight into links and relationships that could otherwise only be speculated about, because they span across micro, meso and macro aspects of society.

A central premise of Zelle’s use of positioning theory is that organizational change increases the demand for sensemaking and interpretation and that applying positioning theory in the analysis of organizational change can aid in understanding how individual identity is affected by organizational change. By applying sensemaking in the analysis of organizational change it is possible to “*analyze how identity is presented in positions as well as how positioning or the practice of taking positions shapes identities and in turn behavior*” (Zelle, 2009, p. 1)

In 2009 Zelle observed that only very few studies had approached organizational change using positioning theory, with Boxer (2001, 2005) as the exception. A subsequent comprehensive searches of academic data bases, has confirmed this status. Zelle’s

(2009) observation that the full potential that positioning theory may offer to the analysis of organizational change remains underexplored in the current literature remains.

2.8 – Scripting the Future

The third and final element of anticipation is Scripting, or more accurately scripting the future. The use of ‘script’ in this dissertation is inspired by Barley (1986) whom defines script as the mechanism that link the institutional realm to the realm of action (Barley, 1986, p. 83). He explains that it is useful to think of institutions as being enacted through scripts, which in term is an understanding of the concept that draws on the work of Goffman (1983). Barley and Tolbert suggests that “*scripts encode the social logic of what Goffman called an ‘interaction order’*” (Barley & Tolbert, 1997, p. 98). Barley explains that “*scripts appear as standard plots of types of encounters whose repetition constitutes the setting’s interaction order*”. In the world of institutions, hospitals e.g., actions and interactions are not ‘free’ or invented each time they are initiated. Scripts are already in place. Scripts that predetermine rights and wrongs and do’s and don’ts in the confines of the institution. “*Scripts can therefore be viewed as behavioral grammars that inform a setting’s everyday action*” (Barley, 1986, p. 83), which is similar to Gioia and Sims (1986) , who explains that “*A script supplies knowledge about expected sequences of events and the guides one’s behavior so that it is appropriate to the given situation*” (Sims & Gioia, 1986, p. 11).

In the context of anticipation, the script should be seen as a way for individuals to lay out a narrative pattern in the form of a script that functions as a way out of the present situation and into an anticipated future. A script is characterized by the duality of the knowledge about events and the built-in appropriate behaviors that in combination alleviates the ‘pain’ of uncertainty. The script is as such closely related to the concept of antenarrative (Boje, 1991, 2001) in that it also offers a bet on a possible future. In contrast to the antenarrative however the script also contains guide to behavior. In connection with anticipation individuals do not just tell stories. They inscribe themselves and their action in a script. “*The scripts, which are dynamic webs of structured knowledge oriented around event sequences, then serve as a basis for action that further facilitates meaning construction and sensemaking processes*” (Sims & Gioia, 1986, p. 12).

In anticipation, I suggest, the notion of script is related to possible futures. So rather than dealing with the here and now of the institution, scripting in anticipation is about the plots of the future. The interview situation is in a sense the interviewees moment of scriptwriting, in realization that the existing scripts will no longer be adequate following the introduction of Sundhedsplatformen. The standard plots of past scripts have to be rewritten or redefined because the introduction of Sundhedsplatformen demands this. In the case of Sundhedsplatformen and in the anticipation of the organizational changes imposed by the new HIT, scripting the future is a way for individuals to layout a future in which they see themselves, based on the initial sensemaking and positioning.

The sensemaking and positioning serves as the foundation upon which the vision of the future is scripted. Once the interviewees have seen what they think by articulating it they can conclude by scripting a future.

Summary of literature review

This concludes the literature review. In part one of the review the essentials of organizational changes and specifics of the influence of IT was in focus. The main conclusion in relation to the focus of this dissertation was a) that technology and organizations needs to be studied in conjunction to render an adequate image of the organizational mechanisms at work, and b) that the pre-implementation phase of large scale IT implementations specifically and organizational change generally is severely understudied. No work of consequences is identified.

In the second part the theoretical / conceptual framework required to conduct such a study was described. Using anticipation as the umbrella concept the three anticipatory elements used by organizational members during the pre-implementation phase was described. Sensemaking, Positioning and Scripting of the future makes up the cornerstones of the framework to be used in the subsequent analysis.

3 – Research method & data gathering

1. Research method
2. Data gathering
3. Data overview

A defining characteristic of this dissertation is the extensive immersion of the author. As a researcher I have not been standing on the sidelines and observed from the outside. It has not simply been a matter of observing practitioners doing their jobs and subsequently attempts to deciphering it. Rather I have been an active members of the organization and participated in the development of Sundhedsplatformen. On one hand this has offered unique advantages in terms of access and inside understanding, but at the same time presents potential methodical issues of 'going native' and the risk of developing blind spots with regards to aspects being taken for granted. This is one of the dilemmas dealt with in this chapter.

The chapter is structured as a gradual move from overall methodical considerations of how to study pending organizational change and the anticipation of pending change in an organization, towards considerations of the role of the researcher. A pertinent question is e.g. how my presence in project may have co-created the field of research. Both in quite direct ways as author of 'official documents' from Sundhedsplatformen on behalf of the program and in subtler ways acting as the curious (and trusting) researcher asking questions behind closed doors. This is followed by considerations about collection of data.

The final section of the chapter offers an overview of the data and the types of data that makes up the empirical foundation of the dissertation. The data both consists of formal data, in the form of transcribed interview and 'official' documents and more informal or unstructured data gathered or perhaps even absorbed while being part of the organization. By the end of the chapter the reader should have an appreciation of the challenges meet and solution found in what is best described as a constructivist research journey guided by data and a continued refinement of the analytical approach.

3.1 – Research method

As hinted to in the last sentence above and in the introduction, one an important source of inspirations in terms of overall approach to the research has been Grounded Theory as developed by Glaser and Strauss (1967) and subsequent refinements and operationalization of the method by Silverman (2011a) and Charmaz (2014). At the heart of the thinking of grounded theory is the idea that rather than having a fixed research question upfront guiding the research endeavors, one should let the data drive the research. As such I have experienced and agree with Silverman in saying that *“in qualitative research, it often makes sense to begin without a clearly defined problem and to gradually work towards a topic by confronting data with the simple question ‘what is going on here?’”* (Silverman, 2011a, p. xiv) By working this way the research question will be analytically defined rather than picked at random in a given setting. In the particular context of this dissertation it would have been relatively easy to pick some “corner” of the pending large scale IT implementation and start analysis from some predefined theoretical perspective. Numerous theoretical angles could be chosen to investigate as many empirical problems. The timescale and size in terms of budget, organizations involved, people, professions and management levels presents a variety of possible research angles on the case of Sundhedsplatformen. While this quite likely would have rendered something that could confirm an existing theory, it is less likely that it would allow access to issues identified as pertinent in this dissertation.

The dissertation is not an attempt to develop a full blown grounded theory. With the literature review of the previous chapter in mind, and the theoretical framework consisting of existing theoretical perspectives, the method prescribed by grounded theory has not been followed strictly. The methods suggested by the grounded theorists has however served as an inspiration in the continued work with data and theory and the interaction between the two, which is also why the following section is included to outline the methodical influence of the grounded theory.

Types of grounded theory

Grounded theory is defined as *“a method of qualitative inquiry in which researchers develop inductive theoretical analyses. The purpose of grounded theory is theory construction, rather than description or application of existing theories”*, (Charmaz and Bryant in Silverman, 2011a, p. 67).

Grounded theory comes in three overall flavors; Constructivist, objectivist and postpositivist.

One of the defining characteristics of the *constructivist* grounded theory is the acceptance and recognition of the role of the researcher. The researcher is not perceived as an objective entity external to the observed. The role and the actions of the researcher plays an active role forming the data generated, e.g. in connection with interviews.

The objectivist grounded theorist in contrast emphasizes positivist empiricism with researcher neutrality while aiming for abstract generalizations independent of time, place, and specific people (Glaser in Charmaz, 2011, p. 365). Inherent in this view of the world is the classical positivist notion of a reality residing in what is observed, as if the observed data contains *Truth* irrespective of the observer. I agree with Charmaz (2011) in saying that we cannot assume that participants overt statements represent the most significant data and that most, if not all people makes use of strategic rhetoric in order to manage an impression. (Charmaz, 2011, p. 365)

The postpositivt version of grounded theory is characterized by the hallmarks of postpositivism which include an understanding of reality as fluid, evolving, and open to change (Charmaz, 2011, p. 365)

Uniting the three and spanning across epistemological differences is a shared commitment to *“conceptualizing qualitative data through analyzing these data, constructing theoretical analyses, and adopting key grounded theory strategies”* (Charmaz, 2011, p. 365). Kathy Charmaz concludes her chapter in the Sage Handbook of Qualitative Research by saying that *“Constructivist grounded theory is and will be a method for the 21st century”*, (Charmaz, 2011, p. 374).

Working with Grounded Theory

Silverman (2011a) identifies three aspects that are essential to working with grounded theory;

- Coding through memo-writing
- Theoretical sampling
- Generating theories grounded in your data

In the following section I will go through these three aspects and illustrate how this method has informed my own work with data and literature.

Coding through memo-writing

Coding is essentially about separating, sorting and synthesizing of data. Charmaz (2006 in Silverman, 2011a) says that through coding “*we attach labels to bits of data to distil it and give us a handle for comparing data*”. This is important, or even necessary, in order to work with qualitative data because of the often intangible nature of the data.

Qualitative data does not have the inherent order of quantitative data, which offers readymade ‘handles’ to structure an analysis around. These handles have to be made and this is where memo-writing comes into play.

The coding through memo-writing as presented by Silverman and Charmaz takes its starting point in the data. This might be field notes or transcriptions of interviews. My own memo-writing has taken me on a slight detour compared to this method, in that memo-writing usually started from the literature and was used that as steppingstone moving into the data. Using the image of Charmaz coding started by using the handles offered by the literature to structure the initial sorting and synthesizing of data. As such the work has been a truly hermeneutic process with ongoing dialogue between details and totality and between theory and practice.

In parallel with this literature based memo-writing I have conducted the actual coding of the interviews. This coding has followed the recommendations of Silverman/Charmaz to strike a balance between mere repetition of the explicit content and categories used by the participants and on the other hand coding based on concepts drawn from the literature. The ‘trick’ is to find a middle ground and start moving towards the theoretical end of the spectrum and thus towards the theory development which is the ultimate goal of the grounded analysis.

Theoretical sampling

Theoretical sampling is the second of the defining strategies of grounded theory as defined by Silverman (Silverman, 2011a, p. 70). Theoretical sampling involves “*gathering new data to check hunches and to confirm that the properties of the grounded theorists’ theoretical category are filled out.*” (Charmaz and Bryant in Silverman, 2011a, p. 71)

It is in other words the step following the initial sorting, structuring and coding of the data. By saturating the categories identified as conceived in the memo-writing the

researcher is building a case for the actual theory construction. Charmaz e.g. is using initial memo-writing describing account of an interviewee *“to build a grounded theory based on Erving Goffman’s idea about how we present ourselves [...] Using Goffman, we might theoretically sample from among the many situations in which people present versions of who they are, for example job selection interviews.”* (Silverman, 2011a, p. 71)

Developing grounded theory

The final aspect of grounded theory is the actual theory development. The theory development is in essence the continued and iterative process of refinement and comparison of data, codes, categories and theoretical concepts. *“Through comparing data with codes and codes with codes, grounded theorists can decide which codes to treat and test as tentative theoretical categories”*. (Charmaz and Bryant in Silverman, 2011a, p. 72)

Now, this process of back and forth and continued comparison does not offer a finite ending point. The data gathering and theory development should however stop when adding new data and developing new categories does not add to the picture or produces new insights. This is the point of theoretical saturation. (Silverman, 2011a, p. 72)

The overall goal is to be able to move from grounded substantive theory, which is specific to the concrete study towards a grounded formal theory which is saturated to a point where it can be applied to other settings.

Initial hypothesis

In contrast to the method described above this dissertation started with a clear idea of what the interesting problem was. The dissertation in fact started in a most un-grounded manner with a predetermined theoretical direction and an anticipation of what might be found in the organization. Quickly however, it became clear that the expected findings did not materialize. Prior work as consultant / practitioner had let me to expect to find narratives, structuralist patterns and actantial roles, in organizational interactions, but I was disappointed. They were nowhere to be found.

Despite the open-interview-approach, intended to encouraging the interviewees to share experiences and essentially to tell stories, the transcripts at best contains fragments of stories. Very little of the elaborate narratives that are neatly structured with a beginning, middle and an end characteristic of a ‘traditional’ narrative. Following the logic of Gabriel (and Boje) a great number of stories could otherwise be expected,

because of the amounts of information that clinical staff are expected to navigate in. *"The more people are buried in a mind-numbing avalanche of information, the greater the importance of stories: Stories make experience meaningful, stories connects us with one and other"* (Boje and Dennehey 1993 in Gabriel, 2000, p. 18).

The interviews of this dissertation are more akin to what Boje (1991) observed in his classic study of an office-supply firm where *" stories hardly ever feature as integrated pieces of narrative with plot and complete cast of characters; instead, they exist in a state of continuous flux, fragments, allusions, as people contribute bits, often talking together"* (Gabriel, 2000, p. 20).

Gabriel (2000) argues that organizational stories requires a different kind of reading than mythological stories. *"The stories lack the sweeping grandeur, narrative complexity, or overwhelming emotional charge of ancient Greek, native American, and other myths"* (Gabriel, 2000, p. 23), which is exactly what I have observed in the interviews from hospitals with clinical staff. Gabriel continues; *"Their characters can be interesting, unusual, or even brilliant, but they lack the towering presence of true heroes"* (Gabriel, 2000, p. 23).

On the one hand it might be that organizational members (at hospitals) have simply become able to better navigate the *'mind-numbing avalanche of information'*. It could be that in the present day it is simply the world they and we live in. On the other hand, it could be argued that hospitals may be a unique kind of organization, where narratives only unfold sparsely. It would seem that there are not entirely surprising commonalities between the research organizations observed by Gabriel and the hospitals of this study. *"Factual accounts were common in the research organizations I studied, where members prized the factual accuracy of their work and appeared generally reluctant to deviate from facts,"* (Gabriel, 2000, p. 27).

In hindsight it is clear that I had preconceived idea of what problems might be found in the research setting. It was based on personal prior interest and experience. In principle preconceptions could also have been based on stories circulating in the public arena. Silverman is refereeing to later as the problem of common-sense assumptions (Silverman, 2011a, p. 30), which is the potential mistake made by researchers when taking e.g. the common-sense in the public debate at face value and set out to

investigate a phenomenon which at closer inspection may in fact be misguided diagnosis.

Silverman observes that *“it is usually necessary to refuse to allow our research topics to be totally defined in terms of the conception of ‘social problems’ as recognized by either professional or community groups”* (Silverman, 2011a, p. 32). Even though I had the good fortune of not having the topic for my dissertation dictated by the funding organization, it was only after a period of doubt and hesitation that I allowed to let the data speak for it-self. Rather than trying to fit data into a predefined framework I followed the guiding principles of the grounded approach, which is essentially what Silverman is suggesting.

3.2 – Data Collection

Before proceeding to the actual overview of the data of the dissertation, the following sections goes into additional methodical aspects of gathering empirical data. Where the section above focused on grounded theory as a general approach to gathering and working with data, the following is more hands-on and focused on getting access to people to interview and other practical aspects.

As briefly described on the introduction the dissertation is to a wide extend based on interview data, which takes us into the realm of qualitative data, and I will start this section by briefly touching on the feud between qualitative / quantitative researchers.

Qualitative vs. Quantitative

When designing research method, the starting point must be the intention and purpose of the particular piece of research. One will have to interrogate the research question and through this determine the best way to proceed. In this case the purpose is to come to a better understanding of the implications of pending implementation of HIT amongst the clinical staff.

To a researcher with quantitative preferences an obvious approach would be to conduct a study based on data gathered in questionnaires asking people for their attitudes about what has happened and what is to come. Provided the questionnaires were properly designed it could result in quantifiable and statistically valid results about the attitudes of doctors, nurses and secretaries. These are the type of quantitative results that make headlines in news media because the traditional positivist grounding is perceived as

proper science. It makes for better news stories to be able to say that “78 % of Danish doctors think...” It is perceived as objective, generalizable and it can be replicated. *“Positivist methods assumed an unbiased and passive observer who collected facts but did not participate in creating them, the separation of facts from values, the existence of an external world separate from scientific observers and their methods”* (Charmaz 2014, p.6)

While the positivist thinking underlying quantitative research including questionnaire surveys is useful for many purposes, it has clear limitations with regards to people’s attitudes. I agree with Knorr-Cetina whom observes that *“survey research based on attitude data generally rests on the assumption that human conducts can be described and predicted from variables which characterize individual actors”* (Knorr-Cetina, 1981, p. 9). I do not believe this to be the case and rather subscribe to the constructivist perspective outlined by Chamaz (2014), *“The constructivist approach perspective shreds notions of neutral observer and value-free expert. Not only does that mean that researchers must examine rather than erase how their privileges and preconceptions may shape the analysis, but it also means that their values shape the very fact that they can identify”*, (Charmaz 2014, p.13). This raises the question of my presence in the very project I am studying.

Getting access

An ever existing issue in relation to conducting (good) qualitative research is the question of how to gain access. It is a question of how to get access to organizations, people and thus ultimately access to data. The question that is always on the researchers’ mind is how to get into the “engine room” and study “real” people, processes, interactions, practices etc. in the natural setting and preferably not to influence too much on the situation in question.

Hastrup (1992) writes that in the world of science reflexivity has in term been seen as a problem and at times as the solution to solving scientific dilemmas, and when working in the field, as an anthropologist reflexivity is an unavoidable/inevitable part of the praxis. *"It is a condition embedded in the anthropological project"* (Hastrup, 1992, p. 53) Even though this dissertation is not officially termed an anthropological project the active participation of the writer and the demand for ongoing reflexivity vis-a-vis colleagues

and the organization as such, de-facto creates a chain of anthropological moments that it could well be described as such.

The gathering of data through open interviews is by its very nature anthropological in approach. It is not just a matter of obtaining factual data from an informant, but rather an opportunity together with the interviewee to work through a slice of reality to create a coherent and joint understanding. In this process the reflexivity is essential.

"Reflexivity requires attention to place of both subject and object, and in addition one's own place in the communication. Reflexivity in anthropology is in other words not a question of examining how 'I' am, but about how the interaction between the anthropologist and the others influence the empirics of which both are a part.", (Hastrup, 1992, p.54)

My entire stay at Sundhedsplatformen has been characterized by the reflexivity described above. In the beginning I saw it as a problem. I asked myself how this could ever become proper science with myself right in the middle of things? However, by acknowledging the inevitability of reflexivity in scientific process it has become clear that the periods where I was 'just' working in the team - as one of the guys - in fact has provided me with invaluable insights and understanding of the world of clinicians that I could not have obtained in any other way. I have become an insider and gradually became one of the experienced colleagues. Someone to go to with questions that required an extended, historical knowledge of the project and the project organization.

Researchers influence on the situation they study. No matter if it is the doctor's consultation (Silverman) or the humble huts of North-Atlantic islanders (Goffman). The presence of a researcher and of any other actant influences a situation. Kirsten Hastrup addresses this sublimely in "Det antropologiske projekt".

Unlike many other researchers, 'getting access' was a negligible problem in my case. By the very nature of the agreement made between the researcher, CBS and the two regions access was de-facto granted from the start and I was given largely free hands to design my research while acting as communication consultant in the project.

The agreement between CBS and the two co-funding regions identified two main areas of responsibility to be handled in duration of the PhD. On the one hand I was assigned as the in-house communication consultant for Sundhedsplatformen. This job consisted of

supporting the organization with all communication related tasks, including text writing, analysis and general communication consulting / advising in the program. Gradually this part of the job came to include a wide range of general organizational function including e.g. practicalities in connection with events and meetings. As a result of this position, learning about doctors, nurses and secretaries to a lesser degree became a matter of studying them, but rather a matter doing work with them and produce materials directed at them. I would not sit a distance and observe them doing their work and subsequently try to decipher meanings. I was colleague and work in the project as a communication consultant required quick development of a sensibility to characteristics of clinicians. An example of the required sensitivity dates back to 2013 and early 2014 when a number documents were published from the region talking about the 'Production' of the hospitals, meaning e.g. the number patients handled during a specific period. Many clinicians reacted negatively to the concept of 'Production' when articulating what happens at hospitals. In their view the work involved curing and caring for patients and it seemed like a degradation if it was simply seen and talked about as 'production'. In contrast to the view of the clinicians, talking about 'production' makes good sense to administrators. On higher levels of administration, hospitals are organization to be managed by non-clinicians like any other organization. Coming from a non-clinical background – perhaps a business school - talking about 'Production' is not laden with negative or inhuman connotation. It is simply what large organizations do. It is a good example of the importance of choosing concepts, metaphors and images of organizations (Morgan, 1986) carefully in order to convey messages as intended and not e.g. invoke negative responses.

During the entire three years I have been an integrated member of the organization and in time becoming one of the 'old' team members with extended organizational memory. As such I have enjoyed the organizational status of an insider, quite similar to the position of full-fledged organizational member, described by Gioia and Chittipeddi in the classic 1991 study. My position as an insider *"provided formal legitimacy as well as access to informants and information that enriched the ethnographic effort"* (Gioia & Chittipeddi, 1991, p. 437). In the case of this dissertation the appointments were made in advance and were de-facto in effect when I stepped into the organization. While at the same time I have been able to venture into the field wearing the 'researchers hat' and thus only to a lesser extent been seen as the errand boy of top management. A

continuous effort has been made not misuse this dual position. It has been essential not to betray the confidence of the interviewees, which is e.g. done by never disclosing names of interviewees to the management of the project. While conducting interviews I have always informed the interviewees of the dual role and asked for permission to record interviews.

The special status of Sundhedsplatformen as a strategic regional project in Capital region has also made it reasonable and perhaps even expectable that some kind of research is conducted in order to examine organizational readiness and implications of the project. The sheer size of the project and implication in the health sector in the region it could be considered negligent not to have a research dimension included. As an interviewee explained my participation in the project – as a researcher – was an indication of the significance of the project and how things were different in this project (Doctor 1 [41]).

It was however in the role as communication specialist that many organizational members came to know me. I was e.g. on stage representing the communication strategies of Sundhedsplatformen. Many organizational members probably did not know of my PhD-role. To sum up I have on the one hand I have acted as the researcher from CBS. There has been no secrecy about this but it has on the other hand not been advertised widely. On the other hand, I have been the in-house communication specialist.

An inherent ethical concern of the dissertation is related to situations where I have had casual conversations with colleagues and only later realized the significance of what was said. At the time it may just have been lunch-time talk that the time appeared to be irrelevant to my research. When the episode late in the research was recalled and documented in a memo, the ethical concerns related to using knowledge obtained without prior agreement was handled by anonymizing the interviewee, department and other aspects that might compromise the interviewee.

Making appointments

In order to conduct formal interviews, I have had to make appointments with the relevant clinical staff members. In the case of the two oncology departments included in this study, this involved getting approval from the relevant managers. During one such preliminary meeting at Herlev Hospital I was given an approval to talk to selected medical secretaries, nurses and doctors, but also advised that what I would get from the

various participants would be much of the same stuff. I should expect repetitions and I was warned that it quite frankly might get boring. I informed them that I considered repetitions interesting and the appointment was made.

It is interesting that I am being cautioned that the dealings of a hospital clinic involved in the lives and deaths of patients may be considered boring repetitions. It is however completely in line with the observations made by Chambliss. *“Sometimes routinization goes beyond mere commonplace into an attitude of detachment, unconcern, or sheer boredom – one of the more common emotions of the nurse’s life, to the surprise of laypersons. Indeed, one of the most frequent questions nurses asked me during my research was, ‘Aren’t you bored?’”* (Chambliss, 1996, p. 29)

Interviewing

After having established contact with the departments and individuals the road was paved to gather data. As mentioned above a main source of data for the dissertation has been interviews with clinical staff in the two regions. In the section ‘Data Overview’ below is a detailed overview of the specific interviews that has been conducted and the consideration with regards to sampling including types of questions asked.

The first two interviews were conducted after I had only been in the project a few weeks in Q4 of 2013. The interviewees had previously had an introduction to the possible future HIT-system through participation in so called ITX lab-tests in which scenarios and patient flows were simulated on live subjects to assess the fit of the solutions of the last three bidding companies. The third interview was conducted after a couple of months, and subsequent interviews during planned trips to hospitals in the following months.

The first interview of the research project took place at a McDonald’s restaurant north of Copenhagen. It was a matter of practicality. The respondent, a young doctor from Region Sealand, had suggested it as a convenient place to meet, because it was late in the afternoon and conveniently placed on the way home for both of us.

The McDonalds restaurant was not exactly a textbook location for an interview. It was noisy with people constantly walking by. At the time I did not think much of it, since I was used to open offices spaces from past jobs. I was new to the project and thought that the informality was ‘refreshing’. Nothing like what might be expected from a doctor. The location of the interview was in hindsight interesting because it may have

revealed something about the respondent and his view of me (the researcher), himself (the doctor/respondent) and the project as such. This can be considered the first theme or 'take-away' from the interview and it resulted in a heightened awareness of the interview location in later interviews.

Rather than seeing the variation in location as a methodological problem I agree with Mishler (1986) in saying that "*Variations among interviewers and across interviews are not viewed here as errors but as significant data for analysis,*" (Mishler, 1986, p. 52). So, rather than pretending to be able to eliminate 'noise' and variations between the interviews through very structured interviews in a laboratory like setup, the variations are embraced and used as a source of information.

The second interview took place in connection with the so-called 500-clinicians presentations. The respondent (Nurse 1) had previously participated in the same ITX-test video as Doctor 1. In contrast to location of the first interview, the second interview was conducted on a work location. It was, however again unconventional location, namely in the break / lunch area in front of the auditorium where the presentations were held. The choice of location was at matter of opportunity. We were both at the location and the respondent thought it would be convenient to talk there.

The third interview was conducted with a medical secretary. Following the interviews with the doctor and nurse this third interview was conducted to ensure early input from all three groups of clinicians in preparation of the continued work. The interview was conducted in a large meeting room at the hospital (in Region Sealand) with a secretary whom had had early involvement in Sundhedsplatformen.

Subsequent interviews were conducted in anything from cubicle-like offices with no windows to large conference rooms with dark wood, dimmed lighting and a full treat of food and beverages. The surroundings in which the interviews take place can be seen as a way for respondents to stage the interview and thus to frame them self to the interviewer. Does the respondent want to present her/himself as informal, important, in control, unconcerned, and what does this allude to in relation to the question addressed in this dissertation – how organizational members are affected by the looming introduction of new HIT?

In some cases, the location of an interview may be considered a coincidence rather than a matter of active and conscious choice. It may be, as in later interviews that I just sat next to the respondents' desk because it was more practical to talk with them there. However, the fact that I never choose or dictated a location, and that alternatives were possible it is a factor to be taken into consideration.

The interviews of the dissertation can be described as intensive interviews, described by Charmaz (2014) as *"a gently-guided one-sided conversation that explores research participants' perspective on their personal experience with the research topic"* (Charmaz, 2014, p. 56). The extended interview sample below, taken from the Nvivo transcription illustrates exactly how the interview often resembles a monologue more than an actual interview. The interviewer starts with a simple and open ended question, and asks a clarifying question halfway encouraging the interviewee to continue talking.

Nvivo section	Time	Quote	Speaker
8	3:54,7 - 4:06,0	But, how is it? GS and OPUS are, if I have understood you correctly, the systems from where you get information?	Interviewer
9	4:06,0 - 4:52,8	Exactly. We use GS a lot as mentioned, and they have probably already shown you parts of it in the ambulatory. But is it correct that we use GS for viewing – we get many pre-bookings, as they are called, where the patient has not been informed what they are being offered yet. Then it is important that we go in a see when the patient is informed about it, so we can prepare letters to handed out in the wards. So we use GS. We also use it to enter new appointments for controls after treatments and other things. It is a system that we use a lot and we obviously also use OPUS a lot. We kind of have to go in and check the patients. Is all the information correct in the system?	Nurse 4
10	4:52,8 - 5:06,7	In GS you also get the information about when the HA-treatment course is open. This is where the 'meter' starts running in relation to cancer treatment packages starts ticking. So this is quite important information.	Nurse 4
11	5:06,7 - 5:40,6	But, this thing about throats just came at one point and it is very, very important, because just one day past due is not good enough. It is really... And, you can say it is not a disadvantage, but we are kind of last. We are the last step, or what you might call it. So if the treatment course end in two days, well, then we have two days, and that is just too bad. Then we have to hurry a lot, but we are kind of the once pulling the last threats and make sure that appointments are kept.	Nurse 4
12	5:40,6 - 5:43,2	And this is regardless of how much time everybody else have used?	Interviewer

13	5:43,2 - 5:59,5	Exactly. A deadline is a deadline. So we use our phone a lot and <i>'Now, we need to get some dates in'</i> , but that is just how it is and we are the ones that need to hurry a lot.	Nurse 4
14	5:59,5 - 6:46,7	This is one of the reasons why this has been chosen. Our department is the only one using nurses to booking appointments for cancer treatment. That is with actual radio-therapy education. It requires that you have background knowledge. There might be details that makes it possible to put the treatment on hold, but it requires professional knowledge to asses this. We cannot involve a doctor each time a lab-result is not there on time or something. We would have time for nothing else. So it is actually one of our core service, is to be able to asses this. Can it be on standby for two days and still do all that is needed and make the relevant notes about it.	Nurse 4
15	6:46,7 - 7:06,4	You might say that, that you need to know, and this is going to sound very eehmm... not childish, but you really need to understand what you read in OPUS. What exactly does it mean when the biopsy result has not arrived, or - you really need to understand what you are reading, because it can have a huge influence on the patient's treatment.	Nurse 4

In other examples the interviewer more directly guides the interview and sets the agenda and explores specific topics. This depends on the specific interview, situation, sentiment and number in the sequence of interviews. Was it e.g. conducted early or later in the data gathering process. In the example below it is e.g. also evident that having a prior experience from the IT industry and conceptual understanding of the software enables me to be conversant even with limited clinical insight.

Nvivo section	Time	Quote	Speaker
14	5:26,6 - 5:33,9	And the X-ray image and the notes about image, how do they fit together?	Interviewer
15	5:33,9 - 6:19,6	Well, you know, this machine just crashed, so it does not run OPUS-images in OPUS. There is something wrong with the memory in it. I have to run it through what is called 'Eyesight' – do you know what that is? (Interviewer: No) Well, Eyesight is the module inside OPUS, a Philips-module for images and image descriptions are stored in Eyesight. That module is a part of OPUS at the moment, and this machine for some strange reason is not able to handle it. This means that I have to all the time... I have asked for a new machine, because how much time can you waist one something like this!?	Doctor 4
16	6:19,6 - 6:29,1	And typically you would then take a look through OPUS down into Eyesight and pull it out that way, but now you have to push OPUS out of the way and do it directly?	Interviewer

17	6:29,1 - 7:09,9	I have to do it directly, because – and then it shuts down every second time, so therefor I have to, because it is only open for a certain amount of time, then I have to sit nicely and wait each time it opens. Well, that is a detail.	Doctor 4
----	--------------------	---	----------

It is important to reiterate that the first interviews were all conducted prior to the final selection of Epic. It was in other words at a time when very little had been decided and only the overall strategic ambitions had been communicated. Never the less the interviewees relate to the possible futures that they are themselves describing as if it was already there. The fact that very little has actually been decided does not change anything. The anticipated future appears to be as real as the present and its ability to shape attitudes and call for positioning of self and others is strong.

Early data analysis

In keeping with the recommendation of Silverman the early phases of data collection consisted of both formal interview and a more general exploration of the field (Silverman, 2011a, p. 61). The purpose of this initial exploration is to form an understanding of what elements or aspects of the empirical landscape are most relevant and how they are related. This in term will prevent a premature speculative generation of hypothesis to be tested.

The analysis of interviews has been conducted initially as an intensive analysis on a limited data set. Specifically, the initial analysis is focused on the interviews conducted during Q4 2013. This is followed by a broader analysis of the entire data set (extensive analysis) looking for additional themes to be explored. One of the pitfalls to be avoided when conducting a qualitative study is anecdotalism, which is what happens e.g. when snippets of interviews are be extracted as evidence of the points one is trying to make. Anecdotal examples make for poor evidence if it is not supported by or based on ‘proper’ or more systematic analysis of a wider body of data. Anecdotalism can seriously undermine sense of reliability of a qualitative study and the antidote according to Silverman is to deal with contrary cases. (Silverman, 2011a, p. 21).

All interviews have been transcribed in their entirety similarly to the examples above. False starts, ‘Freudian slips’ and pauses have been included in the transcriptions to the extent they have be determined to carry some kind of meaning, such as hesitation or doubt. It can obviously be discussed to what extent a false start is to be interpreted in

one way or another or if an additional meaning should be read into it at all, there for the analysis will follow the advice given by David Silverman with regards to including the questions asked when presenting answers/quotes by respondents. (Silverman, 2011a, p. 63)

3.3 - Data overview

The data of this dissertation can be split in two overall categories. The formal data primarily consists of interviews conducted with clinical staff members, but also 'official' documents e.g. about strategic direction and purpose of Sundhedsplatformen. The informal data is essentially everything else, including conversations at lunch, atmosphere at events, remarks made at the coffee machine, or what Becker (1998) calls all the quick exchanges made while participating and observing ordinary activities. It is essentially all the stuff that make up everyday life in the organization. In the following an overview of the two main categories of data is presented.

Formal data – Interviews

As described earlier the dissertation is distinctly qualitative. The main data of the dissertation are the interviews conducted from the start of the project in September 2013 until the first 'go-live' of Sundhedsplatformen at Herlev Hospital in May 2016. In the early days of the research project the interviews were conducted in opportunistic way. Opportunities arose to meet and talk and interviews were conducted in order to gain knowledge and give the research project direction. Once the initial interviews had been conducted and early work on analysis had been conducted the approach to interviewing got more structured. Interview trips were planned and appointments were made with relevant clinical staff members in the two regions.

Sampling

Selection of whom to interview and what aspects of organizational reality to examine is essential and the sampling plays an important role. Sampling is essentially a question of how to choose and what to choose in pursuit of pieces to the puzzle that will eventually offer answers to question of the dissertation. Selection of interviews for the dissertation was done taking into consideration four defining aspects of the case of Sundhedsplatformen.

Sundhedsplatformen is implemented in (1) two regions. Region Sealand and Capital Region. In the two regions are (2) 19 hospitals. The implementation will have a direct effect on three major groups of employees at the hospitals; (3) Doctors, Nurses and Secretaries. And Sundhedsplatformen will affect (4) all clinical areas. These are the four dimensions taken into consideration in the research generally and specifically in relation to the sampling of interviewees.

In the model below the main categories are presented as circles. Interviews are planned in order to ensure coverage across all dimension. The interviews are conducted in both regions and with all three groups of clinicians. For practical reasons it has not been possible to gather data at all hospitals, which is why three hospitals has been selected; two in Capital Region (Herlev and Hillerød) and one from Region Sealand (Næstved). Also for practical reasons not all clinical areas have been covered. Therefore, sampling has been done in a way to ensure both coverage of one clinical area (Oncology) across hospitals and region and to ensure representation of several clinical areas in one hospital (Hillerød). Oncology was selected as a suitable clinical area to focus on across hospitals/regions. One of the characteristics of cancer treatment (Oncology) is the extensive use of technology. Almost all aspects of the treatment course involve technology and the oncology staff is used to using technology when dealing with patients and colleagues. The model below gives a visual representation of the sampling and the overlapping areas in which the variations are found;

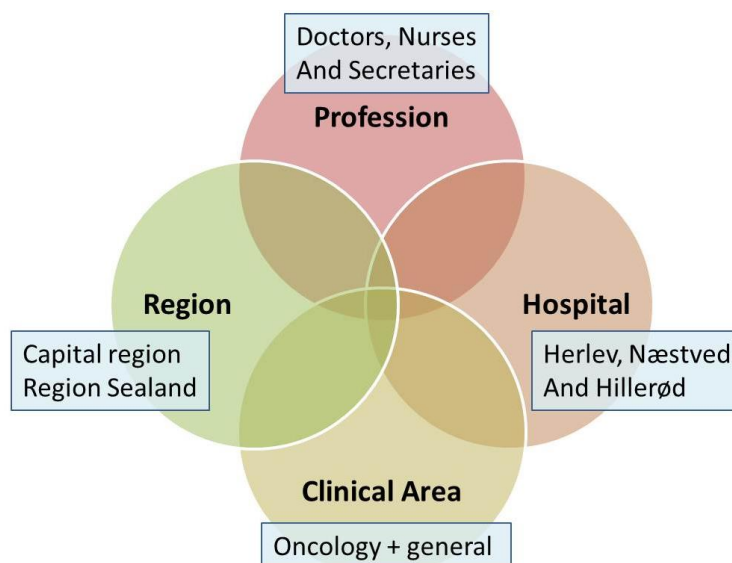


Figure 3.1: Interview sampling

Interviews

The interviews of the dissertation were conducted in four overall rounds. First round consisted of interviews were conducted in 2013. These interviews were open and explorative in nature and made possible from opportunity rather than deliberate planning. The main consideration was to ensure an interview with each of the three groups of clinicians. Three subsequent interview trips were completed offering more formalized data and to explore the themes identified in the pilot interviews. All interviews were recorded as audio files and subsequently transcribed in Nvivo.

Overview of interviews:

Alias	Profession	Dep.	Location	Date
D1	Doctor		Reg. Sea.	2013 Sep. 09
N1	Nurse		Riget	2013 Sep. 10
D2	Doctor		Herlev	2013 Dec. 5
S1	Secretary		Roskilde	2013 dec. 17
S2	Secretary	Onkologi	Næstved	2014 aug. 21
N2	Nurse	Onkologi	Næstved	2014 aug. 21
N3	Nurse	Onkologi	Næstved	2014 aug. 21
D3	Doctor	Onkologi	Næstved	2014 aug. 21
S3	Secretary	Onkologi	Herlev	2014 sep. 15
S4	Secretary	Onkologi	Herlev	2014 sep. 16
D4	Doctor	Onkologi	Herlev	2014 sep. 16
N4	Nurse	Onkologi	Herlev	2014 sep. 17
S5	Secretary	Onkologi	Herlev	2014 sep. 18
D4	Doctor	Onkologi	Herlev	2014 sep.24
S6	Secretary		Hillerød	2014 okt. 29
D5	Doctor	Obstetrik	Hillerød	2014 nov. 20
D6	Doctor	Akut	Hillerød	2014 nov. 27
N5	Nurse	Fysioterapi	Hillerød	2014 nov. 27
N6	Nurse	Intensiv	Hillerød	2014 nov. 27

Additional interviews have been conducted to increase understanding of Sundhedsplatformen. Additional early interviews were conducted as open and

exploratory conversations. An Interview was conducted in June 2014, in order to secure the historical details and origins of Sundhedsplatformen.

In total 21 formal interviews was conducted prior to the implementation of Sundhedsplatformen. The interviews varied in length between 20 minutes and 1½ hour and were all conducted as open interviews consisting of two elements. First parts of the interview were focused on past experiences with HIT and technology implementations. Second part of the interview focused on expectations about the coming Sundhedsplatformen. As such the interviews were deliberately loosely structured allowing the interview to take the direction that manifested itself strongest in the situation. Interviews were initiated with an invitation to tell about current job and the role of Health IT. During the interviews interviewees were asked to elaborate on issues relating to past implementations of HIT and concerns about the pending implementation of Sundhedsplatformen. Another guiding principle in the interviews was to pursue relational aspects of technology and technology implementations. During interviews the interviewees were encouraged to elaborate on relational aspects of technology use and implementations. This included questions about the involvement of other clinicians and causes of identified issues.

Formal data – Documents

A second source of formal data for the dissertation are documents relating to Sundhedsplatformen including;

- Recommendations from early investigations into collaboration between the two region
- Functional requirement specifications
- Final contract between the two regions and EPIC Software (including Appendix)
- Strategies descriptions and Vision statements at various stages of the project

In addition to the formal documents above the ongoing correspondence within the program and to external stakeholders, including clinicians at hospitals, politicians and administrators in the two regions and the public.

Informal data - Everyday observations

Due to the terms of the contract under which the dissertation has been written, I enjoyed a status as organizational member and ordinary colleague at Sundhedsplatformen. I was part of the everyday organizational life. The stay at Sundhedsplatformen started on September 1st 2013. It was in the very early days of the

program prior to signing of the contract with EPIC. At the time the organization consisted of approximately 15 people in the Copenhagen office and fewer than that in Ringsted. I entered the organization at a time when focus was on reviewing and evaluating 5 bids from vendors to provide the solution.

The first activity I was asked to perform was to develop a stakeholder analysis, which could help the program in forming an overview of who to take into account in relation to the continued work on Sundhedsplatformen. The stakeholder analysis was based partly on previous overviews of stakeholders and partly on a new round of interviews and reviews and organizational documents. Apart from generating an overview of all the potential stakeholders, a main feat of this first work was to structure stakeholders in major groups according to influence and proximity to the Sundhedsplatformen project. This structure has informed the thinking about stakeholders through-out the project.

I was in other words not an external observer but participated in department meeting representing communication and worked together with the other organizational members on equal terms. On weekly department meetings 'communication' was a fixed item on the agenda and in step with the general progress of the program the tasks and responsibilities changed. The phased implementation model of Epic (introduced in the next chapter) is a good indication of the major phases the job of internal communication consultant has gone through.

As a researcher the status of insider is privileged. Rather than being an outsider trying to understand the inner workings of an organization I was part of the group. As such a significant source of knowledge about the health sector and Sundhedsplatformen stems from simply being part of the team. The everyday observations made by being there with doctors, nurses and medical secretaries and by performing tasks on Sundhedsplatformen may at the time have seemed of little or no significance. Conversations during lunch, remarks made at the coffee machine, research made to solve a task and casual talk at social events. In addition to the field notes about events and observations the continues stream of meeting minutes has served as valuable sources of insight. During the course of everyday life in the organization colleagues also shared experiences and told more elaborate stories from past jobs.

Informal data - Hospital war stories

In the following I will recap some of the more memorable stories as told by colleagues in the organization and as examples of informal data that has informed the dissertation.

Story 1 - Helicopter:

This is a story told by a nurse during everyday conversation at the first offices of Sundhedsplatformen on Blegdamsvej in Copenhagen. From the office it was possible to look across the street to Rigshospitalet which is the largest hospital in Denmark. On the roof of Rigshospitalet is a helipad, which was established and taken into use in 2007 following a donation from the A.P. Møller foundation. (A.P. Møller Fonden, n.d.) Prior to establishing the helipad helicopters were, as today, used to transfer trauma patients and other acute cases to Rigshospitalet for specialized treatment. In the past landing had to take place in Fælledparken which is a public park, just next to the hospital. Fælledparken has large open grass areas which made it suitable as a landing site, once it had been cleared and secured by police.

In the story the young nurse explains how she and her colleagues could stand on an upper floor of Rigshospitalet and prepare for reception and surgery of the patient. From the windows it was possible to observe how things progressed on the ground and to follow the transfer of the patient from the helicopter to the ambulance and onwards to the hospital. While the helicopter was in-bound with the patient, the crew at the hospital would get information and updates on the condition of the patient in order to prepare. However, this information combined with experience about survival also enabled the hospital crew to determine the likelihood of the patient making it all the way to them. The nurse thus explained that sometimes they could stand and look at the park in the distance and determine that the patient was not going to make it. Because of their experience with injuries, time and progress, the inbound patient was likely to be dead on arrival and therefore no rush to break open all the sterile equipment, since it would probably not be needed after all.

Story 2 - Bleeding:

This story is told by a nurse with several years of experience from trauma and acute care. She told the story, in a very light hearted manner, during a lunchbreak in the small kitchen-like cafeteria at Blegdamsvej.

It is in all its simplicity the story is about how she aided a patient to the bathroom. The patient had had surgery performed and this was the first time out of bed after surgery. While at the bathroom the surgical wounds break up, which causes a severe bleeding. As the story goes, the nurse sat on top of the patient whom was by now laying on the floor in the bathroom, blood pouring out. The nurse explains how she tries to stop the bleeding by putting literally all her weight on, while at the same time trying to call for help. This story was told not just to me, but to a group of colleagues.

Story 3 – Suicide:

This story is told by a nurse whom had previously worked at Rigshospitalet. Since Rigshospitalet is the hospital with the most advanced clinical specialties it is also a hospital where patients are sent to as a last resort. As a consequence, it is also at hospital that people are told that further treatment will be of no use. It is a place where some patients are told that they are dying.

This story is about an in-patient who has reached a state where no further treatment is available. The patient has been informed of this by the physician. The patient is essentially dying and is aware that during the final stages the body will essentially deteriorate. Later on that same day, the nurse explains, the patient commits suicide by throwing him-self from the top floor of the hospital and landing right in front of the entrance to the hospital. She elaborated that sometimes people do get very bad news from the doctors and, even though there is a risk of suicides, it is not really an option to lock people up and put bars on the windows to prevent it.

Story 4 – Skyllemarie

A very experienced nurse, whom had worked in many different locations one day told me the story of Skylle-marie – Washroom Marie – from a dark corner of the health sector. The outline of the story is similar to the one find in the excerpt from the journal of nurses in Denmark - *Sygeplejersken* (1999).

“I sat down and put my hand on her stomach to find out, if her misery was related to contractions. It was, but I got a shock, when I felt how big her stomach was. I had been told that the patient was believed to be in week 21-22, but when I touched her I assessed that she was at least in week 24-25 and that the baby had to weigh about 7-800 grams. It was a very slime woman, and the child in her stomach was very much alive. It started

spinning for me. What should I do if the child comes out alive? The woman gave birth to a child at 800 grams. It was alive. It had a heart beat and breathed and moved.

I hurried and wrapped the child in cloth and went to the washing room and left it between a couple of trays. It is an old procedure, that we used in the past when women gave birth to a baby already dead or had early spontaneous abortion. The dead baby was found by someone else a couple of hours later. By then I had gone home because I could not stand it” (Vesterdal, 1999)

The story above is not the one I was told, but contains similar elements and similar ethical dilemmas. So even though the story is unusually disturbing it is by no means unheard of.

Story 5 - Anesthesia:

During lunch one day 3-4 people came to talk about the use of morphine. I was sparked by one of the participant’s story of knee surgery and how he had been administered a small dose of morphine like drug to relax during the surgery which was performed under local anesthesia. It was a playful comment about how great it felt and that would be the drug of choice if it came down to it. But, nothing serious. In itself this was just casual boyish lunch-time-talk – however, after this comment a couple of the nurses talked about administering morphine in the clinical setting. This was more serious and in peculiar unfinished sentences. “have you tried...?”. In the situation there was something unsaid going on. It was not about own use. It was rather about the knives-edge that anesthesiology is sometimes on. At the time I did not think of it, but subsequently recalled it when hearing about how anesthesiologists are the ones suspending people between life and death.

Recap of warstories

The five examples of war stories retold above are very different. They are told by different people and have taken place at different hospitals. They do however have one thing in common – death. The knowledge of and familiarity with death and near death experiences seems to be like an unspoken and perhaps unconscious bond tying clinical staff together. It is not something that needs to be talked about, but it is there or it is absent either in flesh and blood or in notes of a medical record. It is always there in some way or form, but not in a tragic or dramatic way as observed by Chambliss, “*The ambience of nursing units is not tragic, but mundane and businesslike. The work of*

nurses and aides is largely repetitive and is carried on largely in a habitual manner ... For the most part, nursing personnel seem to be hardly perturbed at the graphic conditions of their patients ... When they enter the presence of a sorely afflicted patient, their countenance are not likely to betray more than a flicker of emotion" (Chambliss, 1996, p. 30).

All the stories - and story 5 'anesthesia' in particular exhibits the same kind of economic, almost code-like language used by close knitted groups. Orr (1996) observed this amongst photocopy repairmen, and despite operating in entirely different spheres, the similarities are striking. *"The conversation of a closely cooperating group can be quite cryptic when members are sharing information about work; They are considering a well-defined field which can be discussed with considerable economy, verging on code."* (Orr, 1996, p. 70).

The war stories, the casual talk at the coffee machine, the formal documents and intensive interviews have all added to the understanding that allows for the detailed analysis of interviews in the next chapter.

4 – About Sundhedsplatformen

- Context and content

1. On context and content
2. Strategies for digitization of the health sector
3. The road to Sundhedsplatformen
4. What is Sundhedsplatformen
5. Anticipated benefits

4.1 - On context and content

This chapter contains a description of the development leading up to the implementation of Sundhedsplatformen and a summary of the content of Sundhedsplatformen. The purpose of the chapter is to provide an overview of the political and functional decisions that has formed Sundhedsplatformen and outlined direction and goals of the project, and even though the focus of the dissertation is on anticipation amongst organizational members, there are good reasons to maintain historical and political sensitivity (Silverman, 2011b, p. 35). On the one hand it is important because lessons can be learned from it. It has been said, that if we forget our past we are destined to re-live it, which in the case of large complex IT projects seems more like the rule than the exception. EFI, PoISag, Amanda are all examples of large public sector IT projects marred by exploding budgets, missed deadlines and inadequate functionality. Ample lessons are ready to be learned.

On the other hand, history is important in order to get a proper understanding of how the field of Health IT has evolved. All interviewees of the dissertation have some firsthand experience with new technologies being implemented in their organizations, and it has as such contributed to forming their view of the field and primed them for what is coming. Sundhedsplatformen is not created in a vacuum. Neither in terms of history, technology or social relations and all these aspects factor in to the equation of the anticipation of Sundhedsplatformen.

The chapter consists of two main elements that contributes to a more nuanced understanding of how decisions of the past and views of development has lead up to the present day status of Sundhedsplatformen;

- Public/governmental reports, strategies and visions for the Danish health sector
- Internal documents containing the reasoning behind and decisions regarding the development and management of Sundhedsplatformen

In combination these two elements offer an overview of the context and the content, which in turn has aided in forming a preconception of what is to come with Sundhedsplatformen.

4.2 - Strategies for digitization of the health sector

Not a year has passed without a new strategy or vision for the health sector. Shifting governments, governing bodies and administrative units have produced a steady stream of reports containing visions for the health sector and the role of IT. It is however remarkable how similar these reports are despite the explosive development in technology. One might think that in step with technological development and implementation of new technology in hospitals things would change significantly. Increases in computer power, network speed and storage capacity ought to alleviate ails of the past. Developments in software, the ability to make systems 'talk' together and public access to the internet ought to improve things. It seems however that very little has changed in terms of the role intended for technology in the health sector.

Restructuring of the regions

The recent history of the Danish health sector can be split into the time before and after January 1st, 2007. In 2007 the governmental structure went through a significant transformation in which 14 counties were merged into 5 Regions and the 270 municipalities were merged into 98 new and larger municipalities. The focus of this dissertation are the two regions of eastern Denmark, Capital Region and Region Sealand, which constitutes 2,6 million people or approximately half of the Danish population. A main responsibility of the 5 regions is to operate and manage the hospitals based on the regulations and within the financial boundaries issued by the national authorities. Part of this task includes maintaining and developing IT-infrastructures supporting the needs of the hospitals.

On a national level the development in HIT entered a new phase in 1996, when the Ministry of Health and hospital owners / management initiated formal cooperation to stimulate the use of EHR (Høstgaard & Nøhr, 2004, p. 7). As a result of this work the so

called EPJ-Observatoriet (EHR observatory) was established in 1998 by the Danish Ministry of Health as one of 14 programs to be granted financial support under the HEP-program. The HEP-program (Handlingsplan for Elektroniske Patientjournaler / Plan of action for Electronic Health Records) was initiated to *“optimize the quality, service and cooperation within the Danish health sector through the promotion of development, implementation and use of EHR”*, (Høstgaard & Nøhr, 2004, p. 10).

The main activity of the EHR-Observatory from 1998 and onwards has been to review existing EHR related projects (including projects at hospitals in Hvidovre, Gentofte, Herlev and Roskilde) and the findings has been published in annual reports (e.g. Andersen, Nøhr, Vingtoft, Bernstein, & Bruun-Rasmussen, 2002; Vingtoft et al., 2000).

In 1999 the Ministry of Health published *“National strategi for IT i sygehusvæsenet 2000 – 2002”* (National Strategy for IT in hospital / health sector 2000 – 2002) (Sundhedsministeriet, 1999). This strategy replaced the HEP-program and was tasked with identifying IT initiatives at the national level that could serve to realize the overall goals of the health sector, which included securing;

- High quality in the medical professions
- Clear communication and short waiting lists
- High satisfaction amongst users
- Better information about service and quality
- Efficient use of resources

(Sundhedsministeriet, 1999)

The list of goals above resembles an echo of today’s Health IT strategies and the 1999 document continues to state that *“in order for EHR to contributing to reach the overall targets, one of the determining factors, is some level of standardization. Standardization is important, because a uniform structure in the data content is a prerequisite for sharing and exchange of data between IT systems, integration of systems and in order for data to be useable for all relevant purposes, including clinical research and development of quality”* (Sundhedsministeriet, 1999, p. 6).

Analogous to the observation in the literature review on OCD, that *standardization* is fundamental in many organizational change and development initiatives, *standardization* plays an essential role in the effort to create an efficient health sector. The 1999 strategy also contains a section on IT and organizational change and below is a

lengthy exert from the strategy, which again goes to illustrates that many of the thoughts that are found to guide the work on Sundhedsplatformen are in fact not really new.

“The health sector and hospitals are organizations in constant states of change. IT plays and crucial role in this change process on several levels. [...] IT both prerequisites and results in change. Optimal IT utilization thus requires that the implementation is taking into consideration organizational aspects. If this does not happen, it is unlikely that the benefits of IT can be achieved. Workflow analysis, which maps current routines and examines what should be maintained and what should be changed, ought to be central in connection with the implementation of new IT solutions. Experience from existing EHR projects shows that the successful introduction of EHR requires a strong and well organized involvement of employees, which e.g. involves thorough information. Involvement is crucial for ‘change readiness’ of the employees.” (Sundhedsministeriet, 1999, p. 35)

In 2003 the National Board of Health (Sundhedsstyrelsen) working under the Ministry of the Interior and Health (Indenrigs- og Sundhedsministeriet) published “National IT Strategy 2003-2007 for the Danish Health Care Service” (Sundhedsstyrelsen, 2003) in which it says that *“A targeted and efficient use of modern information technology in the Danish health care service is essential in order to meet society’s increasing demands as well as the political objectives of high quality, information, influence and participation in the health care service.”*, (Sundhedsstyrelsen, 2003, p. 5). In addition to the standard focus of increased efficiency and quality, it is particularly interesting to note the emphasis on *influence* and *participation*, implicitly referring to the involvement of patients. This is an early pointer to the present day emphasis of patient empowerment.

The overall purpose of the 2003 National IT Strategy is described as an effort to establish a common framework for the digitization of the health care service during the period 2003–2007. The strategy emphasizes that *“It is essential to the application of information technology in the health care service that correct information is available at the right time and place to health care professionals, citizens and authorities alike.”* (Sundhedsstyrelsen, 2003, p. 8) It is thus clearly emphasized that paper based records are out and electronic records are in. Even though Denmark already at the time was one

of the presumably most digitized countries in the world the reality is that paper based patient records back then and still are being used and necessary in various clinical areas.

To sum up the 2003 strategy was developed in order to;

- Contribute directly to the improvement of quality, service and coherence in patient care.
- Ensure better communication between all parties in the health care service.
- Contribute to the fast and safe access of the individual citizen and/or patient to his own health record as well as to information concerning service and quality of health care.
- Be instrumental to better administration and management of the health care service.
- Ensure coordination with the political goals concerning digitization of the public sector in Denmark.

Once again the list of aims is strikingly similar to the objectives defined for Sundhedsplatformen in 2013. In other words – 10 years on and we are merely looking at adjustments. One remarkable difference, however is the addition of ‘decision support’, which potentially will play a significant role in the future Sundhedsplatformen.

In 2012 the Ministry of Health published yet another document (officially labelled a ‘Brochure’) – “eHealth in Denmark” (Sundhedsministeriet, 2012) – and on the surface there are virtually no changes. *“The vision for the health care system in Denmark is to provide coherent clinical pathways through the various parts of the health care system, focusing on the needs of patients and high quality of treatment. One of the main prerequisites for establishing a coherent and cooperating health care system is to ensure that all health care professionals dealing with a patient have easy access to relevant patient information where and when it is needed. This strengthens the base for decision making and enhances patient safety.”* (Sundhedsministeriet, 2012, p. 3)

The purpose of the 40-page document is to *“illustrate, Denmark has come a long way already. Several international studies rank Denmark among the leading countries when it comes to uptake of ICT solutions in the health care sector.”* (Sundhedsministeriet, 2012, p. 3). The document points out three ways in which well-functioning eHealth may offer benefits to the people involved;

- Improved flexibility and effective ways of organizing treatment, leading to improved quality and safety in treatment and care.

- Enabling more individualized treatment by empowering patients and involving them in their own treatment.
- Better working conditions for employees in the health and welfare sectors by improving workflows and reducing time spent on gathering information about a patient from other parts of the health care sector. This allows doctors and nurses to devote more time to patients.

While the first two bullets are repetitions of previous priorities (Quality, safety, empowerment) the third point is new in that it emphasizes the importance of the clinical staff. New technology is no longer just about economy and patients, but also about the staff using the tools. With this last emphasis on the staff, HIT strategies have in a sense reached the present day level of detail and scope which includes attention to working conditions of clinical staff. In short – the proper use of technology should result in increased efficiency, better use of resources, allowing staff to spend more time with patients etc., and while most of this has been the ambition for decades the question remains, if anything has changed with the pending introduction of Sundhedsplatformen? Is anything different this time around?

4.3 – The road to Sundhedsplatformen

The implementation of Sundhedsplatformen takes place in the eastern part of Denmark, consisting of the Capital Region of greater Copenhagen (Region Hovedstaden) and Region Sealand (Region Sjælland). The two regions are serviced by 17 hospitals and an additional 54 health related institutions. The primary implementation of Sundhedsplatformen is initially covering hospitals with a possibility e.g. to include GP's at a later stage. The two regions employ 44,000 people in the health sector including doctors, nurses, secretaries and other clinical and administrative staff and an additional 9000 people in other non-health related areas.

The origins of Sundhedsplatformen can be traced back to a series of meetings and associated soundings and consultations during the second half of 2011 and beginning of 2012. The formal reason for initiating the work to update HIT in the two regions, was the pending expiration of existing contracts on core elements of the HIT infrastructure with IT solution providers. Action was required in both regions. The initial and formal discussion of a possible joint HIT project can be traced to a videoconference between the two regions on June 16th 2011. At the conference participated clinicians and representatives from IT departments in the two regions and the purpose of the video

conference was to give a mutual briefing on the status and plans going forward with regards to 'Clinical Information'. At the meeting it was decided to recommend to initiate the work for a tender for EHR modules (110616 – møde ml RH og RS vedr. Klinisk Information). This was in other words prior to any decision to opt for an integrated HIT suite.

Work on the pre-analysis into the possibilities to update the HIT was started in July 2011 and included presentations made by major Danish and international solution providers, site visits in Denmark, Europe and the USA. On December 8th 2011 the initial work was concluded with a 24-page report, which was presented to the steering committee and essentially outlining the scope of Sundhedsplatformen as it is being implemented today.

On the joint steering committee meeting on January 24th 2012, at which leaders from both regions were represented the conditional agreement was made to complete a joint call for tender for what was later to become Sundhedsplatformen. (Styregruppemøde, Referat, January 24th 2012). The conditional agreement was based on a pre-analysis of main clinical and technical requirements in the two regions, status of various solutions available in the market, international research into the field of Health IT (Anbefaling_foranalyse_Sundhedsplatform_1.0.pdf).

A combination of factors has made the joint project feasible. On the one hand both regions were, as mentioned above, faced with an immediate requirement to renegotiate contracts on core elements of the Health IT infrastructure. By joining forces, the two regions would have greater purchasing power thereby a possibility to get improved price/quality. On the other hand, the two regions have a history of offering treatment across regional borders. The oncology department in Næstved in Region Sealand e.g. sends patients for treatment at Rigshospitalet in the Capital Region. The proximity and specializations at the major hospitals in the Capital Region makes it reasonable for Region Sealand hospitals to be closely aligned with hospitals in the Capital Region.

One of the questions frequently asked in connection with presentations of Sundhedsplatformen to external audiences, is why it has not just implement it in the entire country at once? Denmark is a small country, so why only two regions? While this might be good idea, the counter question is - who should decide? It should be kept in mind that in the political landscape of Denmark the regions are relative sovereign entities, used to running their own 'business' with own budgets etc. As mentioned

earlier Denmark is split five regions whom has responsibility for administrating the Danish hospitals. The three other Danish region (North, Mid and South) have already performed some modernization of the local HIT infrastructure, and implemented some level of second generation HIT. This has however been done on an individual regional level. Sundhedsplatformen is as such the first large scale cross-regional EHR implementation in Denmark, which is less trivial then it appears.

The cross-regional character of Sundhedsplatformen also underlines the importance of standardization. In order to be able to work in one system across regional boundaries, working procedures etc. must be standardized. From a clinical point of view, Sundhedsplatformen can be seen as an extension of the cross-regional cooperation through introduction of standardized clinical content and work flows, which in term might facility employee mobility.

Procurement phase of Sundhedsplatformen

Following the formal decision to proceed with the joint project in January 2012, came a two-year intensive tendering process. Through a process of dialogue meetings and software risk assessments, the initial eight candidates to deliver the new HIT–

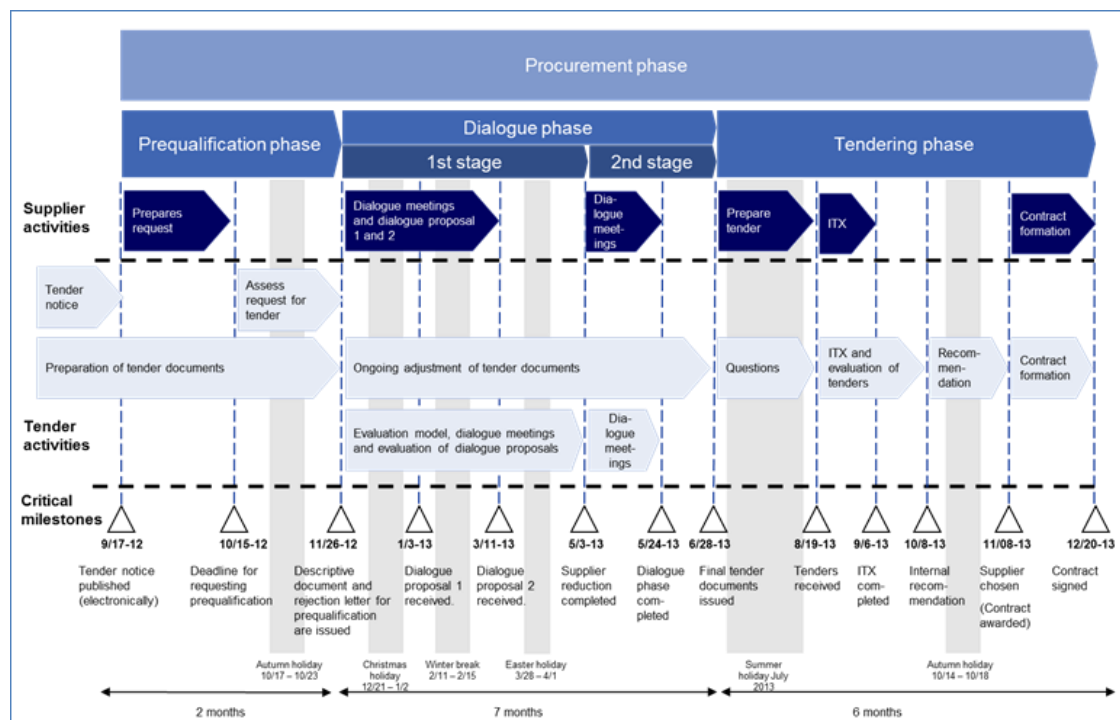


Figure 4.1: Procurement phase of Sundhedsplatformen

infrastructure was reduced to five pre-qualified candidates. In the next phase the remaining five candidates were reduced to three tenders through evaluation against the

functional requirements specification of Sundhedsplatformen. The three remaining vendors were tested at the Danish IT experimentarium (ITX) by clinicians during Q3-Q4 2013. During the ITX simulations the offered solutions were assessed by health care professionals in selected clinical scenarios. Prior to the simulation, the supplier had time to introduce the participants to the relevant parts of the solution, after which the simulation was carried out during a number of days and concluded with questionnaires and interviews.

The systems of the last three bidders were also evaluated by approximately 500 clinicians at hospitals in the two regions. The '500-clinician-evaluation' as they were called, consisted of initial presentations and walkthrough of predefined scenarios by each vendor. This was followed by Q&A session during which the clinicians could ask detailed questions relating to their specific area. The 500 clinicians represented a broad spectrum clinical and professional areas, with participants from both regions. In the subsequent questionnaire based evaluation of the presented solutions, clinicians could rank the solution in relation to how well it would satisfy the needs of their clinical area.



Photo 1: Grand auditorium at Rigshospitalet during the 500-clinician evaluation, October 2013

The evaluation forms of the 500 clinicians were included as a component in the final evaluation of incoming bids.

Summing up the schedule of the procurement phase can be split in an initial prequalification phase during the Q3 and Q4 of 2012. This was followed by a dialogue phase in two stages from Q1 2012 through Q2 2013. This leads up to the actual

tendering phase in Q3-Q4 of 2013. The diagram below illustrates the progression of selection process leading to the selection of EPIC as the provider of Sundhedsplatformen. The contract was signed by EPIC, Region Sealand and Capital Region on the topfloor of Herlev Hospital, which would later turn out to be the first hospital to go live with the solution.

About EPIC

EPIC is a US-based software company specialized in integrated health IT solutions. EPIC has implemented and supports more than 350 healthcare systems, mainly in the USA. EPIC based solutions have 250.000 users worldwide and approximately 68 percent of all hospitals that have achieved HIMSS Stage 7. EPIC is an unusual company described by Forbes Magazine (Moukheiber, 2012) as a company that does not need marketing. The customers come to them and are selected. *“At the beginning of each year, Faulkner commands her tiny salesforce to select customers based on whether they are fit to work with Epic—making it a privilege”* and the article continues *“Epic has accomplished this [success] in a decidedly old-fashioned way. Its electronic health record is based on a 44-year-old programming language called MUMPS (Massachusetts General Hospital Utility Multi-Programming System). It is essentially a closed platform, which makes it challenging and costly for hospitals to interface Epic with clinical or billing software from other companies for the purpose of merging patient information [...] But this is the stodgy world of health care. The health care industry likes tried and tested systems”* (Moukheiber, 2012).

The scope and final design of Sundhedsplatformen has undergone several iterations since the signing of the contract. A main reason for the change in scope is the implementation methodology of Epic. Rather than presenting a final and fixed solution in advance Epic offers a framework of integrated modules that makes up the complete solution. The specifics of the solution are worked out in collaboration between Epic and the customer based on site visits at hospitals and validation workshops with clinicians. Site visits consists of Epic visiting selected hospitals to observe the procedures and note differences between the local clinical practice and in their basic setup. Then Epic adjusts the basic setup of the system to be aligned with the observed differences. The adjusted basic system configuration is validated in subsequent validation sessions at which 250 clinicians from all clinical areas and professions participate. In total the EPIC

implementation methodology consists of the seven phases illustrated in the model below.

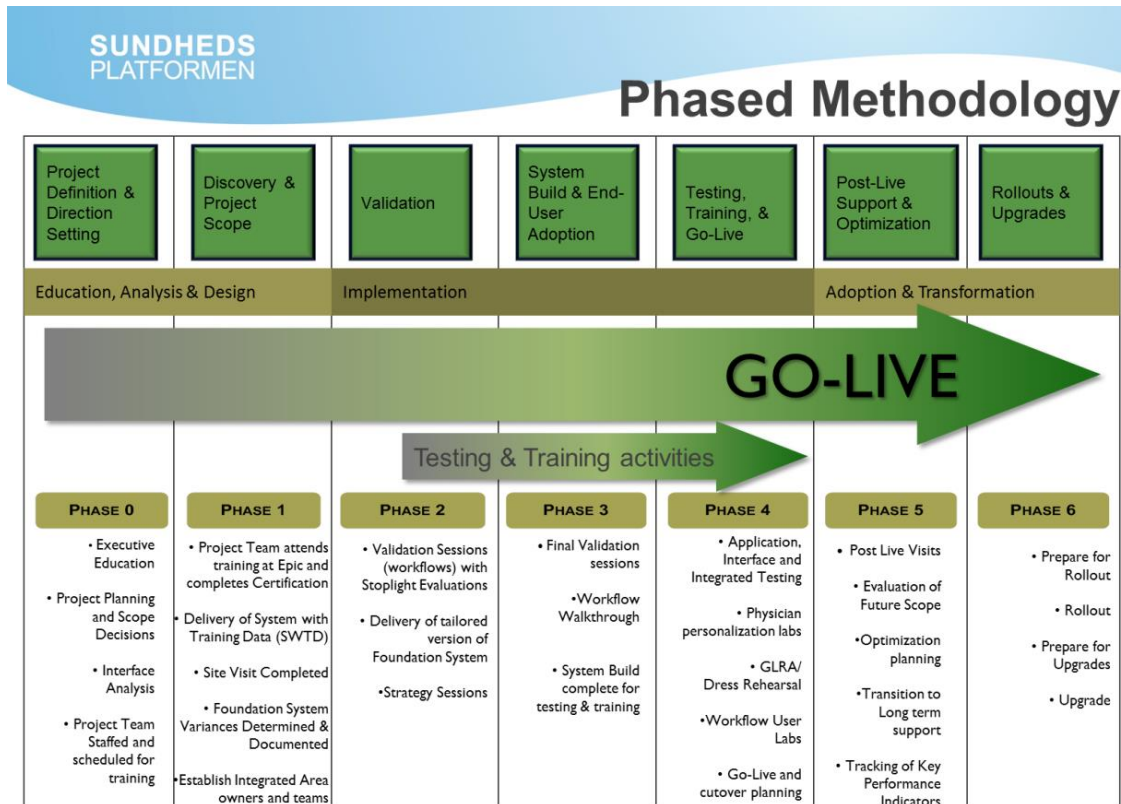


Figure 4.2: Phased development methodology of Sundhedsplatformen

One of the notable aspects of ‘the road to Sundhedsplatformen’ considering the primary research question of the dissertation is the extended period that has gone before the systems is actually put into production. From January 2012 to May 2016 it has been 4½ years during which organizational members have had plenty of time to talk about, thinking about and anticipate what was coming. Several hundreds of secretaries, nurses and doctors have been directly involved, and those who have not been part of the project all know someone, who knows someone whom has been part of it.

4.4 – What is Sundhedsplatformen?

This section contains an overview of the content of the future Sundhedsplatformen. The overview is based on the description from the formal contract signed by Capital Region, Region Sealand and EPIC, and the associated functional requirement specification. The contract is located in Sundhedsplatformens Sharepoint based document repository (Accessed Dec. 1st 2015). Several adjustments have been made to the contract since

January 1st 2014, but none that are of consequence to this dissertation. The overview focuses on the following aspects;

- Strategic goals of Sundhedsplatformen (Bilag 0, Forretningsbehov og strategiske mål)
- Functional requirements specification for Sundhedsplatformen (Underbilag 3-1, Kravspecifikation)
- Solution description by EPIC (Underbilag 3-3, Løsningsbeskrivelse)
- Standardization and organizational implications

Before moving on to the overview however, it is necessary to consider the status of the contract in relation to the main interest of the dissertation. The research question is; *How do organizational members react to an extended anticipatory phase prior to pending major organizational change?* The obvious question is whether the contents of the contract is known to organizational members and it is obviously not. Not directly at least. The specific content of the contract will largely be unknown to the future users. Only a limited number people will have had access to reading the contract. This does however not remove the need to go further into the contract. The contract can be seen as the source of all subsequent communication. It represents as condensed version of the messages later transmitted to both internal and external audiences.

An overview of the contract is vital because it serves as the foundation of cooperation and subsequent formal and informal communication between the involved parties. The future users of Sundhedsplatformen will have generalized knowledge or insights into the implications of Sundhedsplatformen deriving from the department meetings, newsletters, regional websites, conversations with colleagues which can all be traced back to the principles set forth in the contract.

Strategic goals of Sundhedsplatformen

The formal strategic goals of Sundhedsplatformen are described in Appendix 0 (Bilag 0). On the overall level the two regions require *“a standard framework solution with broad functionality meant to support the clinical and administrative core processes and workflows in healthcare. The solution must be based on a flexible and user-friendly framework of one or more tools for creating standardized configuration of Clinical and Administrative content”* (Sundhedsplatformen, Bilag 0, p.3). In order to ensure the required efficiency in patient treatment and higher quality in treatment the solution must provide the following;

- *One record for patients across hospitals, regions and sectors*
- *Allowing the patient to actively participate in their own treatment - Patient Empowerment*
- *To support paperless workflow with a powerful tool for e.g. structured clinical documentation, process support and clinical quality support*
- *To gather information about each patient, in order to ease the access to patient health data for all health professional personnel across sectors*
- *To reuse the information about patients and their treatment to the continuous improvement of quality and resource utilization in relation to treatments*
- *To ensure easy access to all information on Sundhedsplatformen relative to the need for information in the broad sense*
- *To improve the support of complicated and lengthy treatments, including chronic patient*

(Sundhedsplatformen, Bilag 0, p.3)

The two regions require an IT solution that supports the above listed objectives and provide opportunity to bring hospitals in both regions to level 7 on the EMR Adoption Model of HIMSS (HIMSS Europe, 2016). It is estimated that the current IT solution places hospitals in both regions at level 5. The two regions expect that Sundhedsplatformen will be used for many years, and therefore wants a strategic partnership with the vendor, ensuring that the solution for Sundhedsplatformen continues to develop in line with the needs in general in health care. This means that rather than just buying software and hardware to be installed it is the intention to maintain a relationship with the vendor. This in term also reflects the strategy of EPIC.

The strategy is inspired by Gartner Group's distinction between 'Five Generations of EHR', and it is the stated ambitions of the two regions in time to develop towards an EHR functioning as an intelligent mentor (Generation 5) for the clinical staff (Sundhedsplatformen, Bilag 0, p.4).

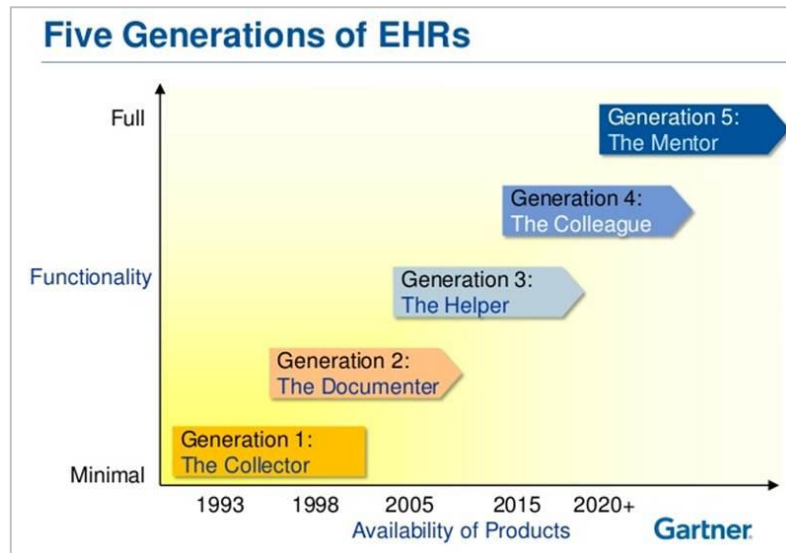


Figure 4.3: Gartner Group, five generations of EHR.

In order to achieve the level of functionality through digitization the solution is required to be closely tied together with a wide variety of clinical processes rather than just digitizing the existing processes consisting of unstructured documentation in stand-alone-systems. Overall the system is required to handle the following processes in relation to treatment of patients;

- Start patient course
- Diagnostic considerations
- Planning of treatment
- Treatment and documentation
- End patient course
- Cross area processes

(Sundhedsplatformen, Bilag 0, p.6)

In effect this list of areas to be covered by Sundhedsplatformen involves the main actors of this dissertation (Doctors, Nurses and Secretaries) at all stages.

Second generation Health IT

Sundhedsplatformen can be considered a second generation Health IT infrastructure. Where first generation infrastructures largely consisted of isles of IT mirroring existing paper-based workflows, Sundhedsplatformen is essentially an attempt to update / transform the health sector through introduction of an integrated new technology platform. The new Healthcare platform will replace major systems including Opus

Workplace, GS!Open, Digital Dictation, systems for medication and booking and several other specialty-specific IT systems.

From a clinical point of view one of the major aims of Sundhedsplatformen is to improve patient safety. In a way patient safety is the holy grail of the health sector. Discussion of functionality, economy, administration and other areas of the health sector are guided by an underlying interest in ensuring and defending patient safety. New technological initiatives must pass the implicit or explicit patient safety bar in order to be approved. Increased standardization is one of the ways in which patient safety is pursued. In Sundhedsplatformen the electronic documentation will support the standardization of clinical practice, process and increase the quality of documentation by striving to increase the completeness, accuracy, readability and accessibility of patient records.

Ultimately Sundhedsplatformen is aiming at ensuring that the patient course is coordinated with all dependencies between the current activities of patient care in relation to time, resources and necessary results from other initiated treatment. This should according to the plans lead to better planning and utilization of resources, including personnel.

Another of the leading motives in the development of Sundhedsplatformen is an ambition to improve patient satisfaction and satisfaction amongst employees. One way of doing this is to offer a better overview of treatments. Standardization of what is shown in the IT system, when a patient is in treatment, is expected not only to improve the quality of the documentation supplied, but will also enhance the experience of overview and quality of the clinical work of doctors, nurses and other clinical staff.

One of the main ways to improve satisfaction amongst patients is to increase the so called patient empowerment in the form of possibilities for greater involvement of patients in their own treatment and health as such. This is sought through allowing access to updated information on their own patient record, increased possibility for booking times for treatment and the ability to enter personal/health related information on their own.

One of the main ways Sundhedsplatformen is intended to improved satisfaction amongst clinical staff is by eliminating double entry of information, through streamlined workflows and improved overview and real-time access to information on the patient as

well as recommended treatment. All of this is expected to result in clinical staff having more time with patients, which is thought to help both patient and employee satisfaction.

In summary the major gains of Sundhedsplatformen can be presented as below, with a split between economic and non-economic gains

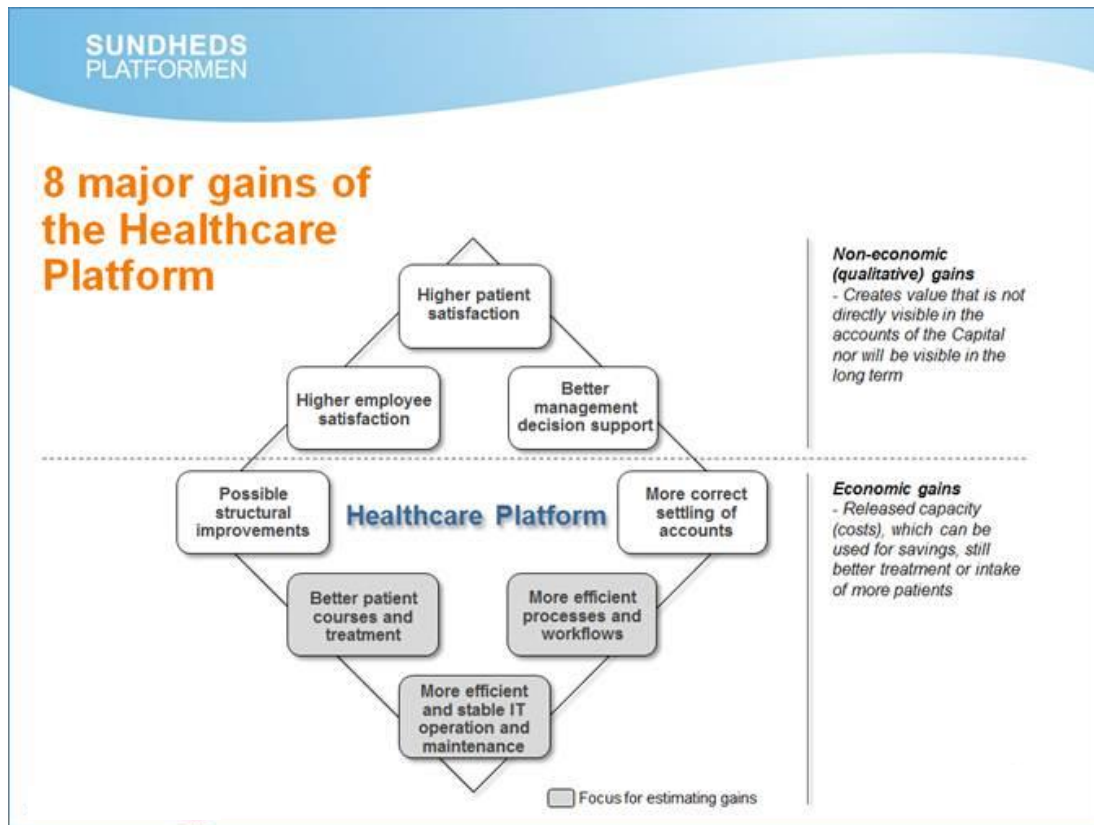


Figure 4.4: Gains of Sundhedsplatformen

Fully implemented Sundhedsplatformen aims to;

- Support paperless workflows with tools that support structured, clinical documentation, processes and quality control
- Increased productivity through improved options for planning and use of resources
- Improved treatment quality due to improved clinical overviews and decision support
- Improved management due to improved overviews and reporting tools
- Easy access to patient health data for all medical actors across the health sectors
- Reuse of patient health data as well as treatment data for continuous optimization of quality and use of treatment resources
- Improved support of complicated and lengthy treatment flows

Standardization

A keyword in the description of strategic goals of Sundhedsplatformen is standardization. Standardization is seen as an essential way to ensure a persistent high quality of care and treatment.

“To ensure a persistent high quality of treatment for all patients, the patient course must be planned and completed based on standardized workflows and documentation. The solution must support health personnel in;

- *Choosing the right treatment course for each patient*
- *Supporting in optimizing the planning of the treatment course*
- *Supporting the correct documentation of the completed treatment”*

(Sundhedsplatformen, Bilag 0, p.7).

Treatment, planning and documentation, which constitutes the essence of clinical work is essentially being standardized. The strategic ambition also explicitly extends to the decision-making of the clinical staff. *“With intelligent knowledge based functionality the solution must support the health professionals in making the right decisions at the right time and to ensure that health personnel are continually notified about the need for corrective actions based on incoming results”* (Sundhedsplatformen, Bilag 0, p.7).

The essence of the strategy can be summed up in saying that both decisions and activities following the implementation to a wide extend will be supported/guided/dictated by standards in Sundhedsplatformen. Sundhedsplatformen will prompt personnel to initiate certain actions and the subsequent documentation is also standardized and required to complete an activity

Content of Sundhedsplatformen

The chart below offers an overview of the content of Sundhedsplatformen. Marked with green color (to the left) are elements included in Sundhedsplatformen. Marked with yellow color (top right) are existing regional systems that are not included in Sundhedsplatformen, but integrated with Sundhedsplatformen. Marked with red(ish) color (bottom right) are national registers and national infrastructure with which Sundhedsplatformen exchange data

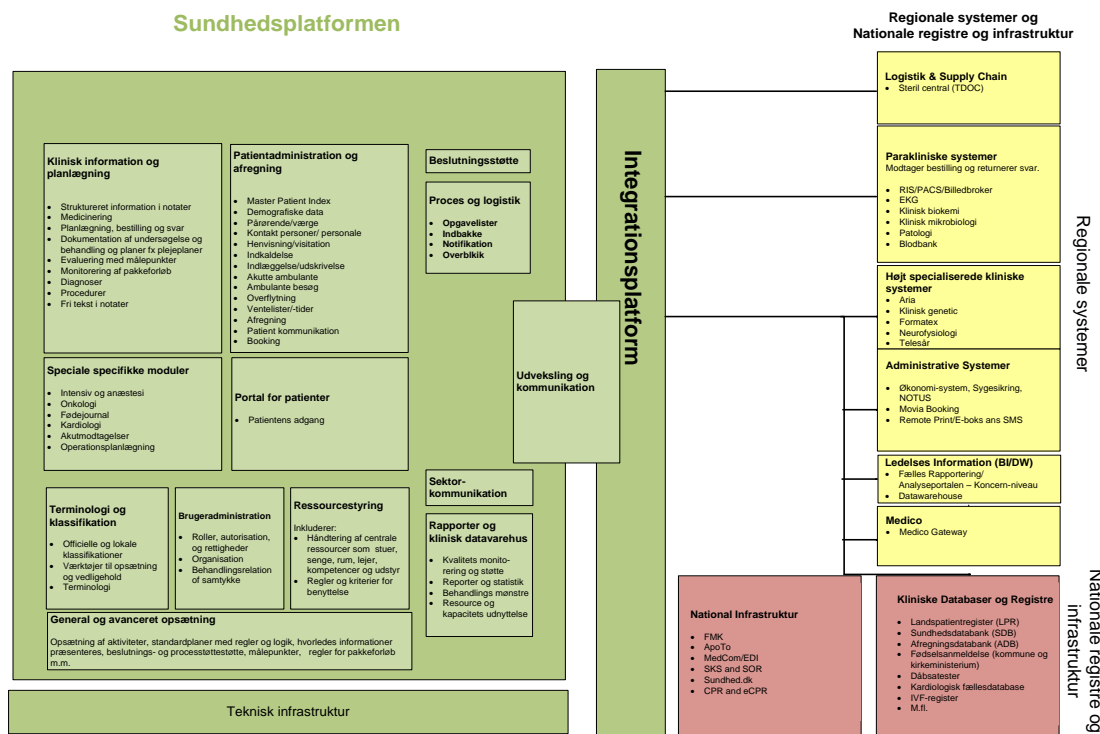


Figure 4.5: Schematic overview of content of Sundhedsplatformen

It is not the purpose of the present dissertation to go into detail of the various elements of Sundhedsplatformen. The overview merely serves to illustrate the all-encompassing reach of the new HIT, which again underlines the importance of standards and potential to alter the working conditions for organizational members.

4.5 - Anticipated benefits

In addition to a strategic intents described above and in addition to the methodology developed by Epic and the program management of Sundhedsplatformen, an additional measure has been put in place to ensure the realization of the potential and the benefits promised by the new HIT.

This section reviews so-called 'benefit realization concept' (*Implementering i bund - Koncept for Gevinstrealisering i Sundhedsplatformen Bilagssamling*), which contains a detailed analysis of the expected results of the implementation. The analysis is done approximately halfway between the project initiation in January 2014 and the first go-live at Herlev Hospital in May 2016.

"The Benefit-realization-concept is dealing with the combined realization of economical, qualitative and patient-experienced benefits in treatment following implementation and

use of Sundhedsplatformen. The concept defines the overall frame and principles for how the benefit realization is to be conducted and in appendixes it lists the initiatives that are to operationalize the concept.” (p.3)

The need to focus on benefit realization in broad terms is based on the conviction that it is inadequate to ensure the outcome of the program merely in financial terms. In order to be a success the benefits realized in the program must include workflows and processes, which is only possible through concrete changes in hospitals and hospital departments. *“Only when employees work in a different way, will changes happen.” (p.4)*

The responsibility of changes is placed with two primary groups. Department managers and middle-managers are responsible for implementing the actual changes and hospital management and regional leadership (Koncernledelse) is identified as responsible for managing the processes. The benefit realization is essentially a question of leadership.

In order to support the change process driving the benefit realization four areas are identified;

- **Introduction:** A solid introduction to the ideas [of Sundhedsplatformen]
- **Clear goals and plans:** Determination of clear goals, communication, plans and deadlines
- **Help / tools:** Establishing data based help (it-based tools), enabling measurement of individual indicators
- **Education:** Education of department- and middle-managers

Tying the various elements together is the focus on data-driven management, though which it should e.g. be possible to determine / measure if initiatives have the desired effect. In the model below taken from the ‘benefit realization concept’ it is clear how a strict hierarchical structure and increasing levels of detail in data is seen as the way to ensure success.

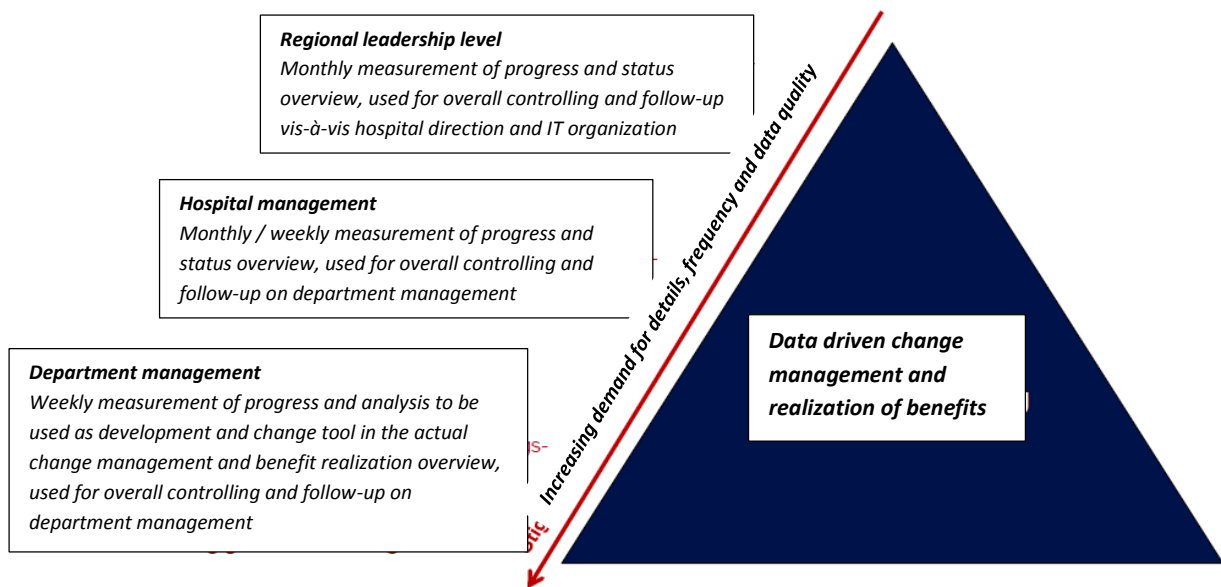


Figure 4.6: Benefit realization of Sundhedsplatformen

The model illustrates the use of indicators at various management levels. In the ‘benefit realization concept’ it is emphasized that feedback should be possible between the levels in the hierarchy. The model however is clearly structured in a traditional hierarchy, characterized by command and control and scientific management thinking. While this is not entirely surprising, considering it is a public sector organization and as such logically rounded by the bureaucratic structures in the public sector, it is in stark contrast to the practice of intensive involvement of clinical staff e.g. through the 500-clinician meeting and the ITX lab-tests. It would seem that the concept assumes that successful implementation is merely a question of describing, instructing and monitoring well enough and then to allow for feedback, mostly in order for it to appear to be trustworthy.

Summary

As mentioned above one of the characteristics of the case of Sundhedsplatformen is the enormity of the project. The number of people involved. The timespan involved. The scope of the change and the potential implications to the future users. In the most hectic phases, program director Gitte Fangel, described the project as resembling whitewater rafting, leaving only room for crude maneuvering once things have been set in motion, because of the complexity and scale of internal and external forces causing the project to move forward or downstream. It is notable how the distinction between

the episodic or continuous organizational change to a wide extent has dissolved. Distinctions between planned and unplanned and between episodic and continuous blurs as the project progresses. As noted in the literature review the umbrella construct of Organizational Change and Development (OCD) appears better suited to describe the ongoing situation. One of the consequences of the scale of the project has been that it has been virtually impossible for any individual to get a detailed understanding of the project. Some have had significant knowledge about details and other an overview at a higher level. Messages to stakeholders from Sundhedsplatformen have by necessity been at certain level of abstraction, in order to be understandable to a wider audience. And if the devil is in the detail, this has due to the complexity rarely if ever been brought to the attention of the wider organization.

The perhaps most important conclusion to be drawn from the overview of context and content of Sundhedsplatformen is that the pre-history of Sundhedsplatformen does not just goes back to the signing of the contract in 2013 or even to the first meeting between the regions about the project in 2011. For clinical staff at the hospitals the history of organizational change extends decades back influenced by a steady flow of strategies and visions for the area. Anybody working in hospitals will have been exposed to local hospital realization of visions from authorities. While it might be thought, that this would have caused a 'change fatigue' in the organization, causing upfront resistance to Sundhedsplatformen, the analysis in the next chapter illustrates the reaction to pending change is not that simple. As explained in several interviews – this time it is different.

The case however also reveals what appears to be an inherent conflict between open and involving approach to work on the project and the demand to demonstrate accountability. On the one hand clinicians have been invited in, at virtually all stages in the project to test, give feedback and validate content and processes. The core team working to transform the generic core system of EPIC into a solution specifically designed to the Danish condition all have clinical background, which e.g. means that the people working on the anesthetics module of Sundhedsplatformen actually had clinical experience from anesthetics. This is in contrast to the command and control approach introduced in the 'benefit realization concept' which to a wide extent foresees the post implementation reality of hospitals being required to be run within tight budgets and being able to continuously to account for status on key measuring points.

5 - Analysis

1. Introduction to analysis
2. Categorization of themes
3. Thematic analysis
 - a. Sensemaking
 - b. Positioning
 - c. Scripting the future
 - d. Culture
4. Recurring patterns – the Anticipation Cycle
5. Anticipating organizational change

5.1 - Introduction to analysis

Following the presentation of theories and concepts relating to anticipation and organizational change in chapter two and following the presentation of the case of Sundhedsplatformen in chapter 4, the elements required to perform the analysis are ready. Theory, data and background. This chapter contains the main analysis of the dissertation.

The main question of the dissertation is ***How do organizational members react to an extended anticipatory phase prior to pending major organizational change?*** This question can be answered by examining the views presented in the interviews and observations made in the organization with theories and taking into consideration the background of the pending implementation of Sundhedsplatformen. By doing this it is also possible gradually to approach the second question of the dissertation; ***Does anticipation amongst organizational members facilitate or obstruct pending organizational change?***

The analysis is broken into parts, corresponding with the three proposed analytical components making up anticipation, as presented in the literature review. Sensemaking, Positioning and Scripting of the future. This analytical structure allows for the detailed analysis of anticipation. In addition to the three concepts/theories the interviews also contain a fourth category containing meta-themes which is indirectly explicating the otherwise taken-for-granted understandings of the institutionalized organization with highly resilient basic underlying assumptions (Schein, 2010) acting as an invisible hand on everyday practice at hospitals where Sundhedsplatformen will be implemented.

The chapter starts with an overview of the themes and sub-themes identified in the data. The themes are categorized and fitted into the anticipation themes and the distribution is presented in matrixes – one per profession – to further clarify patterns in the data. This is followed by what can be seen as a horizontal analysis which is also structured in accordance with the theoretical /conceptual framework of anticipation. This means that the analysis cuts across all of the data of the dissertation focused respectively on sensemaking, positioning and scripting.

Following the analysis, the chapter takes a closer look at what can be described as underlying cultural/organization assumptions expressed during the interviews. These are themes that are not directly related to the pending implementation of Sundhedsplatformen, but rather aspects relating specifically to hospitals as institutions and organizations and as such addressing the second proposition as presented in the introduction.

The last part of the chapter gradually moves towards a synthesis of the findings into a single theoretical model that accounts for the relationships between the themes, micro-narratives and anticipatory actions of professions and relational changes resulting from the pending implementation.

5.2 – Categorization of themes

In the following section the themes identified in the interviews are categorized in an order to identify patterns. The purpose of the detailed presentation is to get analytical ‘handles’ (Charmaz, 2006) on the data as described in the method chapter. At first glance the thematic codes from the interviews appear to be a mixed bag of individual and organizational concerns. The open interviews have been conducted with three different professions and are focused on past experience with technology and anticipation of the future. A mixed bag is to be expected. On closer inspection however a pattern emerges. In the following section an overview and description of the codes applied to the interview data is presented. The interviews have all been transcribed verbatim and coded in Nvivo. The codes have subsequently been clustered in anticipatory themes. Three themes are relating specifically to the anticipation of the pending implementation and a fourth category containing meta-themes relating to the hospital as institutions and organizational setting.

Sensemaking

The first group of responses can be seen as attempts to make sense of what is happening. The interviewees are making sense of pending changes based on their experiences, knowledge of the current organizational practice. It is worth noting that even though the actual implementation of Sundhedsplatformen is still in the future, the sensemaking relating to it is very much in the now. The sensemaking themes below are good examples of cues extracted by the clinicians in what Weick (1995) calls prolonged puzzles “*that defy sensemaking, puzzles such as paradoxes, dilemmas, and inconceivable events*” (p.49). The pre-implementation phases of Sundhedsplatformen was characterized by doubts about threats, possibilities and organizational implication, and still sense had to be made. Sensemaking is based on the experiences of the past and the present and relating to;

- **Past experiences:** Past experiences with bad technology is the code applied in all the situations where interviewees talk about experiences with the implementation and use of bad HIT solution. It is a relatively broad code including both past and more recent experiences.
- **Normalization:** Normalization is closely related to ‘bad technology’ but not exclusively. It is the code applied when interviewees ‘iron out’ identified problems. Normalization is used in the anticipatory phase to defuse actual or anticipated potential issues related to HIT, but also to other areas.
- **Standardization:** The standardization code is relating to the experiences of organizational members to standardization of work processes. It comes in two variations. As part of the sensemaking, standardization is either seen to have negative consequences or positive consequences and it can be related to the level of the individual, the department or to the profession.
- **Uncertainty:** During the initial anticipatory phase uncertainty concerning what the future might bring can be expressed in several ways. As was the case with standardization it can be related both to the individual level, to the level of the department or immediate work group or the level of the profession.

Positioning

The second category of themes/responses are relating to the ways in which interviewees are positioning self and others in anticipation of Sundhedsplatformen. It can be seen as efforts to bolster existing positions or identify new positions with desirable rights, duties and responsibilities. Positioning effort are relating to;

- **Age:** On the surface age is used to position self or others as either old or young, and equally important it is used as a way to point to the experience or

inexperience and it is used to hint at the ability to adapt to the new technology and 'new times'.

- **Economic rationality:** Demonstrating economic sensibility is used as a way to demonstrate rationality. By positioning self as someone paying attention to the economic side of Sundhedsplatformen the interviewees are adding an extra facet to the image presented and supporting a desired position.
- **Uniqueness:** Pointing to uniqueness as part of positioning efforts is done in three different ways. The interviewees either point to the uniqueness of themselves, their department or the profession. Uniqueness is thus covering a range of different ways of positioning self and others and drawing attention to the associated rights and responsibilities of particular positions.

Positioning can be seen as a way for individuals to bridge the gap of uncertainty they are facing. The particular uncertainties faced by the interviewees are closely related to sensemaking that they have engaged in.

Scripting the future

The final category of themes/responses are about looking forward and articulating and scripting possible futures. Based on the sensemaking and positioning the interviewees articulate 'solutions' to a post-implementation scenario and making bets at what the future with Sundhedsplatformen will be like focusing on;

- **New possibilities:** The bright look at the future is characterized by attention on the new possibilities offered by the new HIT. New possibilities are closely related to standardizations and the possibility of getting rid of the bad technology identified in the sensemaking.
- **Rebellion:** Another view of the future identifies the need to rebel against the changes. Potential implications of the pending change are seen as unsatisfactorily and cause interviewees to see some kind of rebellion as a solution. It is not necessarily in contrast to the positive view of the new possibilities. The two can act in parallel.
- **Victim:** The victim-code I applied where the interviewee sees nothing but a bleak future. The new possibilities of HIT are not seen as positive and there is no way to work around the problem. The interviewee is a victim in a future with Sundhedsplatformen.

Institutional / Cultural themes

The institutional / cultural themes are not directly related to the pending implementation of Sundhedsplatformen. They can rather be seen as meta-themes

relating to the institutional context within which the research is conducted. These are themes relating to the special organizational setting of a hospital relating to;

- **Hierarchy:** Hierarchy is brought up in various contexts. Either it is used to point to the presence of a hierarchy in the organization or to the absence of any notable hierarchy. In any case it is not strictly related to pending introduction of Sundhedsplatformen.
- **Involving clinicians in SP:** The development of Sundhedsplatformen has been characterized by extensive involvement of clinicians. This is noted and coded in the interviews.
- **Loyalty:** The interviewees demonstrate their loyalty to colleagues and to the hospital as such in several ways, but typically by avoiding to pass blame. Loyalty is closely related to Normalization code in Sensemaking.
- **Sacrifice:** Some interviewees express the need to make sacrifices in order to make everyday life in the clinic work. A primary motive is the safety and interests of the patients. Sacrifices are typically made in the interest of patients
- **'We find a solution':** The final institutional /cultural theme is related to situations where something is not going according to plan but 'somehow' a solution is found. Problems can both be caused by poor processes, bad technology or human errors, but at the end of the day - 'we find a solution'.

Summary of Codes and Themes

In the overview above the themes are sequentially structured, not entirely unlike the sequential structure of sensemaking of Weick (1995) (Disruption, Bracketing, Resolution) and organizational change of Lewin (1947) (Unfreeze, Change, "Refreeze"). In the interviews however the elements more often emerge as fragments, clusters of arguments or short bursts of institutional logic. More on this in the analysis below.

The chart below contains an overview of the interviews and the associated codes extracted from Nvivo. When a cell is marked (1) it indicates that the interviewee on at least one occasion has been coded. No marking means indicates that the theme has not been observed during the interview.

#

5.3 - Thematic analysis

In this section the themes of the dissertation are analyzed and findings from the interviews are elaborated. The purpose of this in-depth analysis is to confirm and further develop the identified themes and to identify generalizable patterns of the organizational implications of pending technology implementations. This in term can be used/tested in wider organizational contexts. By applying the analytical framework of anticipation to the interviews it is possible to get a more detailed image of the mechanisms at work in the anticipatory pre-adoption phase of Sundhedsplatformen.

Sensemaking

The first *logical or sequential* step of anticipation is the initial sensemaking. In relation to sequence Weick makes the point that *“the feeling of order, clarity, and rationality is an important goal of sensemaking, which means that once this feeling is achieved, further retrospective processing stops”* (Weick, 1995, p. 29). According to Weick it should in other words be expected that once the clinical staff members have made satisfactorily sense of the past they can look ahead to the present and the future, and that it will not be necessary to look backwards again. The retrospective dimension engrained in anticipation makes it a critical phase to include in the effort to analyze organizational member’s attempts to look ahead. It is in other words not just a retrospective understanding of sensemaking but also a distinctly sequential understanding of the concept.

Karl Weick describes the task of sensemaking as closely resembling the activity of cartography. *“There is some terrain that mapmakers want to represent, and they use various modes of projections to make this representation”* and as such we can think of the interviewees of this dissertation as mapmakers looking out on the landscape of IT use and implementation. This is what they make sense of when asked to describe past experiences. First theme of sensemaking has to do with ‘bad technology’.

Past experiences (with bad technology)

When asked to describe experiences with implementation and use of HIT the interviewees generally find it bad, inadequate or simply ridicules. Even though this has nothing to do with Sundhedsplatformen, since it has not been implemented yet, it constitutes an important feature in the organizational landscape they look at and make

sense of. Many comments are related to the (lack of) speed of the HIT systems or more generally to the availability of the systems;

- *"... you cannot transfer patients found in one system to the other, so it is extremely slow", Doctor 2*
- *" ... and then when you add shifts between systems, then it really gets heavy", Doctor 2*
- *"Nobody admits that the system is running slow like hell – unstable, yes, down time", Doctor 1*
- *"There are so many mouse clicks in OPUS. I really hope the Sundhedsplatformen will save time here, because it takes a really long time", Nurse 3*
- *"We have to open many systems, and it takes time because they work slow", Nurse 6*

A variation of the 'bad technology' theme is found with Doctor 1's whom argues the technology is okay, if it only runs fast enough. It should be noted here that he is working at a hospital in Region Sealand – not Capital Region, and that the existing infrastructure is more up-to-date and generally considered to be better than in Capital region. This view of Sundhedsplatformen and the possible implications of it is alluding to another aspect that needs to be taken into consideration. Doctor 1 appears to be viewing Sundhedsplatformen as a technology project at this point. He sees it as a matter of better or worse response times in the system and about what facilities the software is offering to the user. It is a good example of the conceptualization of HIT as a physical object rather than a social object (Barley, 1986), and a view that to a wide extent reflects how Sundhedsplatformen was conceptualized in the early pre-implementation phase. An example of this was during an early meeting in the steering committee of Sundhedsplatformen in late August 2013 it was discussed whether Sundhedsplatformen ought to have its own mission/vision to support the work. This was rejected by leading members of the steering committee with reference to the fact that a hospital had just installed a DKK 1bn particle accelerator/canon for cancer treatment, which certainly did not require a mission. Implicitly, it was perceived as a piece of technology like any other technology in the health sector, and there for did not need a mission/vision. The social dimension is clearly neglected and the view of technology more resembles the functionalist view of change.

Another example of the technology/software focused perception in this phase is the analogy that Doctor1 is making to the shift from an early text based word-processing application (WordPerfect 5.1) to a more modern word-processing application with

WYSIWYG (What-You-See-Is-What-You-Get) capabilities. *“Well, you could also sit and write your Ph.D. in WordPerfect 5.1. That’s what I did! [about WP5.1]. And then came WYSIWYG and I thought ‘Wow, this is smart’. I had never.. I had never actually missed it, but that was simply because I did not know it existed. So you just found ways around in a simpler system, and that is where we are now”* (Doctor 1, [30]). Doctor 1 perceives the pending implementation of Sundhedsplatformen first and foremost as a software upgrade – not as a fundamental organizational transformation. It is in other words not something that threatens him neither personally or professionally and is again completely different from Barleys (1986) treatment of technology as a social rather than a physical object.

During 2014 this view is completely reversed and Sundhedsplatformen is being explicitly positioned as an organizational transformation – not a technology project, clearly illustrated in the first short video update published by Sundhedsplatformen. In the video, head of the steering committee Svend Hartling explains *“Sometimes I am being asked, ‘is it an IT-system?’ and I have to say no! Sundhedsplatformen is in fact an organizational project. It is the implementation of modern technology all the way out into the core service, which is the close contact to the patient”* (SP Internal Video 1, 2014). In the terms of Barley (1986) the leadership conceptualization of technological structure at this early stage turns from one of entity to one of process.

Regardless of the exposure to the pending system early / anticipatory conceptualization of the pending technology upgrade of the clinicians appears to be focused on the material and practical aspect of the change rather than the organizational implications. This is in contrast to the official view, as well represented in visions and strategies from public authorities and from the program itself, which gradually turns attention and conceptualization to one of process and organizational implications and sociality. This discrepancy in sensemaking in relation to the pending change contains a significant potential for conflict once the reality of the change hits the organization.

Another type of reaction to the bad technology is best described as emotional outbursts that appear to be evading the rational filter of the clinicians;

- *“Then they took the concept from CSC which is running now, which can best be described as text editor component running on top of the patient administrative system, which can be used for nothing. You can’t even search the texts. It is completely – absurdly bad!”, Doctor 2*

- *"So, if you transfer a patient within 5 kilometers between hospitals, they cannot see each other's notes. It is completely insane!"*, Secretary 1
- *"It would be so great not having to register in two different systems. It is completely mad!"*, Secretary 2
- *"I think it is double work, and mistakes can easily happen. It requires great coordination between the [profession] and us each time a treatment is cancelled or changed. Then we need to know, because we need to update the system, and yes it is completely crazy (galimatias) in 2014. Completely."* Secretary 2

It is interesting to observe the bursts of emotion when explaining the HIT amongst this group of otherwise rational and composed clinicians. Weick (1995) explains that *"Negative emotions likely occur when an organized behavioral sequence is interrupted unexpectedly and the interruption is interpreted as harmful or detrimental"* (p. 47). The emotional reactions of the clinicians when describing the bad technology can be explained as reactions to the interruption of the clinical practice. It is however equally typical that it is merely outbursts – nothing extended, which indicates ways to remove or circumvent the interruption. Weick (1995) explains that the negative emotion should become more intense, the longer the interruption lasts, and this does not seem to be the case. The clinical staff seems always to be able to find a solution. There seems to be something – an institutionalized attitude to simply sorting out things or remove or circumvent the problems encountered. This something, hidden in the underlying assumptions guiding the clinical staff, is investigated further below.

Wrapping up the overview of the bad technology theme is the comment made by Secretary 4, when I left the hospital on one of my interview trips, *"Already today you have been given insights into how absurd it is and that we are still dependent on a bloody fax machines. We must talk to each other across the hospitals. It just does not work!"* Secretary 4

It is obvious that the initial sensemaking of the interviewees is influenced by the experiences of bad technology. The pattern of existing IT being perceived as inadequate is clear, but the subsequent reaction is less obvious and more curious.

Normalization of problems

During most interviews (exemplified above) problematic aspects of current technology was a theme. When asked to give examples of specific use of the current systems attention quickly turned to limitations in the current technology and situations during which the technology had caused problems. An example of this is in the quote from

Secretary 2 about bad technology above, whom explains how it is necessary to enter in data twice because the systems are not properly connected, and concludes that it completely crazy.

When describing the situation, the interviewee explains what is happening as completely crazy, but there is however an equally clear pattern in the interviews in that after having 'let out steam' and complained about the technology, the interviewees tend to downgrade problems and normalize problems.

Weick (2012) argues that the concept of normalization is closely related to the dominant stories in organization that serve to "*[fix] the associative connotations of some of the central concepts' that are needed to label and make sense of 'organizational events such as good leadership, employee, consultant or project. It is the mobilization and deployment of these very same associative connotations that occurs in the organizational practice of 'normalization.'*" (p.144). And while resilience of dominant stories may have a positive effect e.g. in the form of stability, the consequences can also be catastrophic, as was the case in the run up to the explosion of the space shuttle challenger, during which "*technical anomalies that deviated from design performance expectation were not interpreted as warning signs but became acceptable, routine and taken-for-granted aspects of shuttle performance*" (Vaughan, 2005 in Weick, 2012, p. 144).

The experiences clinicians have with bad technology above are examples of 'organizational events' that clinical members make sense of through normalization. The bad technology in a sense has become acceptable and normalized. Essentially they are saying that it is not really that bad. We deal with it. Using the example of the secretary 2 above what in one sentence was described as crazy in the next it is downplayed as not really a problem;

"What goes wrong... Well, nothing really goes wrong, because all that happens is that things are not connected. For instance, if we are not told when patients stop treatment early. That is an example. Then we catch it. Nothing really happens, which has catastrophic conse... , but things can happen that we do not know about" (Secretary 2, [43])

It is an example of more or less un-reflected/emotional reactions (“it is crazy!”) that escapes rational and reflected sensemaking. This in turn is followed by a more rational and solution oriented sensemaking focused on how to cope with the situation. Although on another scale there is noticeable similarity to the normalization of the extreme situations of death and trauma in hospitals as described by Chambliss (1996). In order to deal with the “insane” it must be normalized.

The same can be observed in the following sequence where Doctor 2 explains the process of handing out medicine in his department;

- Doctor 2, 3 [4]: *And then the nurse must go to the patient and make sure that it is the patient, that she has just identified and give the medicine. And it is completely bizarre. It makes no sense and it needs to be done because it has been decided that it must be done everywhere.*
- Interviewer [5]: *And you laugh about it afterwards?*
- Doctor 2 [6]: *Well, yes – we have to we have had to accept it after much resistance. We have tried to argue against it.*
- Doctor 2 [7]: *It is an example of a detail. It is not like it is the norm. It is the worst case, but it is not the general picture.*

The doctor at first identifies something as completely bizarre and then when he is subsequently asked about a reaction it is immediately downplayed as quite unusual. It is explained as an example of a detail, but not something seen often. There seems to be an urge to downplay the incident.

In addition to the explanation offered by Weick and Vaughan above, both Positioning Theory and the Institutional/Cultural themes later in the chapter can shed light on normalization, which illustrates the dynamic nature of the anticipatory phase. It is not governed by a simple sequential logic but appears to skip back and forth.

Positioning theory offers a good explanation for why clinicians downgrade the emotionality of their response. Parrott (2003) observes that “*one way of positioning oneself is to display the emotions that are characteristic of one’s position*” (p.29). An exaggerated emotional response is entirely unbecoming for a clinician, from whom we expect rationality and coolness under pressure. The war stories in previous chapter are good examples of the circumstances under which the coolness was kept. Chambliss (1996) also contains gory examples of emotions kept in check.

In order to understand the normalization, we can also look ahead to the institutional / cultural themes of *loyalty* and *finding a solution* in the next section. The problems identified in the initial sensemaking are transformed during the interview as part of the conceptualization of the anticipatory phase. They are normalized in order to be contained in the institutionalized frame of the hospital, which in term appears to be maintained by an underlying and largely unspoken loyalty to the hospital and the colleagues. It seems that the clinicians generally speaking do not want to position anybody as blameworthy to use the concept of Parrott (2003). No wrongdoer is identified, which appears as a way to demonstrate loyalty to colleagues and the system. The emotion expressed by the clinicians are more that of irritation, which in positioning terms is closely connected to anger. *“Irritation conveys much of the feeling and motivation of anger without implying the existence of an objective moral transgression”* (Parrott, 2003, p. 35). So, where actual anger would require someone to be blamed for the problem the irritation indicates a personal idiosyncrasy rather than an objective wrongdoing by someone. (Parrott, 2003) Rather than blaming someone for problems there appears to be a collegial loyalty and the will to find a solution are investigated further later in this chapter.

Standardization

In addition to the ‘Past experience w. bad technology’ and the tendency to ‘Normalize’, a prominent theme in the initial sensemaking has to do with the consequences of standardization. Even though Sundhedsplatformen and the actual standardization has not been implemented yet, it is a good example of how the anticipation of the future makes it real in the now. Anderson (2010) calls it the presence of the future in the now. The pending standardization is as such part of the organizational landscape the clinicians are making sense of even if it still only lurking in the horizon.

Perception of pending standardization are either negative or positive and e.g. has to do with the anticipation of how changes may affect the autonomy of the health professionals and limit their room to maneuver (negative) or how it may improve clinical work processes (positive).

Example of positive anticipation of standardization;

- *“On the one hand, we have wishes for the new application. We would like it to fit into our workflow, which means that you would like to influence the design to fit*

our needs. On the other hand, it is my experience that sometimes it is healthy go through your own workflow and say 'Okay, I have this new application. It offers new tools. I have not had access to them before, so perhaps I should look at what new tools the system offers [...] Could it be that things could be done in smarter ways by using the new tools?' [Doctor 3, 2-3]

This approach bears striking resemblance to the view presented by Bloomrosen et al (2010), in that focus is on the opportunity for re-evaluating the processes offered by the new technology, and the pending implementation is therefore not perceived as a threat. In contrast to this, the following examples illustrate the negative anticipation of standardization;

- *"Our doctors come down each morning, out to the secretaries. Take their referrals, and quickly discusses who is one today's agenda, and 'He called in sick today' or something. That little ping-pong dialogue, just makes things easier in case of an emergency and you really need the doctor for something. We should not retract from each other. Another example is since all that e-mail has come. Now I almost write a mail to the secretary instead of walking out there. And it is fine in certain situations, but we really must remember to also talk to each other"* [Nurse 2, 30-31]
- *" If I have to start being secretary for myself, well. That would make me sad, because then it would just look like the rest of central administration who sits with two-finger-technique and gets nowhere. [...] I am just saying, I hope it is not going to be like that, because then my work effort.. possible work efficiency will radically decrease. It must not be at the expense of what I have to do. If it does that, then we need two of me, and that is hard to get"* [Doctor 4, 49-50]

The two examples above are illustrative with regards to the difference in concern about the pending standardization between professions. The Doctor is concerned as clinical specialist and argues that there are not many professionals like him and as such Doctor 4 is a good example of the powerful professional described by Berg (2001), whom cannot simply be told to change their work pattern. The Nurse is concerned about the working relation in the department and how the standardization will cause distance between colleagues.

One of the distinctions between the negative and the positive anticipation is that the positive is focused on the new technical facilities offered by the solution. The negative is focused on organizational implications including autonomy and collaboration. It is also noteworthy how a core function in Sundhedsplatformen is the assignment of patients to

individual nurses and almost echoing the scientific management ideals of Taylor. This is e.g. seen in the way that the technology dictates the rhythm of the work through alerts. The autonomy to arrange work amongst colleagues is reduced.

With one exception neither positive nor negative consequences of standardization are mentioned by secretaries. Secretary 1, mentions it, but on behalf of the doctors who can expect to document more themselves and, which is likely to become a problem for them (Secretary 1, 37). For herself it does not appear to be an issue either way. Considering the nature of the work of the secretary this is however not surprising. Following standards, standardizing data and handling more or less standardized data in and out of the department is the essence of the secretarial work. This is exactly what is being described by the secretaries during interviews. The standardization imposed by Sundhedsplatformen does not appear as an issue to this profession, in contrast to the views expressed by doctors. Amongst doctors an even spread of positive and negative outlook on the coming standardizations is observed. The negative view typically has to do with the potential threat of standardizations threatening the professional autonomy of the doctor, whereas the positive outlook has to do with how standardization may facilitate better clinical processes. In between secretaries and doctors are the nurses amongst whom the negative view of the pending standardization is dominating. The negativity mainly has to do with how standardization has the potential to disrupt the existing practice amongst nurses

Uncertainty

The final element of sensemaking is uncertainty. Uncertainty could in fact equally well have been presented as the first element since sensemaking to a wide extent is about alleviating uncertainty. Referring to Weick, Jensen et al (2009) observes that *“Although sensemaking is an ongoing process, the need to make sense is intensified in circumstances where organizational members face new or unexpected situations, where there is no predetermined way to act, and where a high degree of ambiguity or uncertainty is experienced”* (T. B. Jensen et al., 2009, p. 345). And while this may be the case in certain situation, it is noteworthy that the uncertainty in the case of the pending Sundhedsplatformen is not a significant theme. Two doctor express uncertainty, but as general remarks about the changes. They are not related specifically to themselves and does not indicate insecurity. A possible explanation for this absence of uncertainty may be that this study is focusing on the anticipation phase. Changes has not been

implemented yet, which is in stark contrast to the case of Jensen et al. (2009) whom observed that *“The doctors’ enactment of the EPR system shows a high degree of ambiguity and uncertainty since their work responsibilities are questioned and challenged. The doctors’ cognitions (i.e., thoughts and interpretations about the EPR system) and actions (i.e., comply with the system or work-arounds) are related in practice. Some of the doctors’ enacted practices reinforce existing structures.”* (T. B. Jensen et al., 2009, p. 351). This underlines the importance of distinguishing between reaction to pending implementations and system that are already in use.

Amongst secretaries the sense of uncertainty is different, which is not surprising since it is to a wide extent are the ‘manual’ tasks performed by the secretaries that are to be automated. Following the implementation of Sundhedsplatformen the job associated with transcribing doctor’s notes from audio-files into the EHR will be made redundant. Doctors will be required to enter their own notes into the system through standardized templates. An example of this uncertainty and how it is being dealt with is found in the opening of interview with secretary 3.

Secretary 3 is commenting on the modules that are included in the first wave of Sundhedsplatformen and which ones are optional for later phases and concludes that *“Well, in that case we are at least not the first ones to get kicked out”* (Secretary 3, [2]), followed by loud laughter. Implicitly in this comment is the uncertainty, but also an example of humor being used to defuse the immediate threat. In the spirit of the grounded approach of the research project this is an obvious ‘thread’ to pull in order to see how deep it goes and I ask;

- Interviewer: *“But is that really how you think about it?”* (Secretary3, [3])
- Secretary 3: *“Well actually – you think a lot, because you don’t know very much, so you think a lot of thoughts. And all along we have thought that it will be a really good tool. Then you start hearing that there are more ... doctors will do a good deal themselves, administratively, and nurses will be taking some too, and then you start thinking ‘what is going to be left for us?’”* (Secretary3, [4])

So despite the defusing laughter the threat and uncertainty is still there. Particularly interesting is how this sensemaking is taking place almost two years before the go-live on the hospital. This does not matter. The rumors and ‘thinking’ makes it real. Secretary 3 continues;

- Secretary 3: *“So of course one starts thinking. Then you start hearing øøøh, from different hospitals that e.g. if a leading medical secretary resigns the position is not filled by a new secretary. A department-nurse is put in charge of the secretaries. And then you start hearing about [another hospital], that lots of savings are being made, where they are saying ‘well, medical secretaries will be made redundant in time, so you can start with them ...’. So you hear things, but when you are sitting in your own reality and look at how much we are sitting with, it is hard to believe it, but still some will think ‘what!?’”* (Secretary3, [5])

The sensemaking of the secretary contains clear elements of uncertainty which needs to be coped with in one way or another. This brings us to the next aspect of anticipation and how to cope with the uncertainty through positioning.

Positioning

The next *logical* step of anticipation, but again not necessarily the actual step in a specific case, is the use of positioning as a way to explicate actual or desired positions in the organizational landscape. It should be noted that the positioning effort does not necessarily follows as a direct consequence of the initial sensemaking, but can be the starting point end point of an argument.

The following is an example of how the anticipatory elements may connect, starting with a simple example of sensemaking and moving into positioning, illustrating how the respondent gradually appears to become clearer about his own ideas as he talks.

Various themes materialize in his reflections which appear as a case of thinking out loud.

(Doctor 1, [49])

Quote	Sub theme	Anticipatory theme
<i>' Well, if we are assuming that they are choosing the solution I hope for</i>	It is a technology project	Sensemaking
<i>' The essence of my job will not change, because there are still patients that needs to be healed or done less sick, but I think it will become a bit more fun '</i>	Uniqueness of profession. Changes are not going to make much difference to me because of the importance of my job. Doctors heal patients, and no 'tool' is going to change that	Positioning
<i>'And I think it will change, or be significant in the introductory phase that it is young doctors who will be</i>	Age matters - and unlike other colleagues I am not old	Positioning

<i>the experts, much more than the old doctors. It has never been like this before'</i>		
---	--	--

In one line of thought, the respondent use one premise and idea after the other as stepping stones in his own clarification of what he really thinks. He starts his thinking/clarification process with the importance of technology and moves through reflections about the importance/uniqueness of his own profession and his own personal position in the pending changes and ends up identifying age as one of the aspects that will play into the equation of implementation, adoption and organizational implications of the new technology.

Age

As exemplified above a recurring theme in the interviews with clinicians is age. Age of self and age of others. In this analysis age is placed under positioning because it is a strong and illustrative example of a stereotype. Harré and Langenhove (1999) explains that *“Stereotypes have to be treated as rhetorical devices that people use in order to position themselves and others”* (p.137). A cultural stereotype, which is of interest in this connection can be defined as *“generalized expectations about how others are motivated, behave, feel, etc. Such expectations are said to be applied called upon to judge others (Stewart et al., 1979:13)”* (Harré & Langenhove, 1999, p. 128). In contrast to the self-stereotypes, which are generalizations from one’s own behavior to that of others, cultural stereotypes are defined by ‘generalized expectations’ which aligns it closely with the concepts of anticipation. Inherent in a cultural stereotype is an expectation / anticipation about the other.

In the case of age this stereotype has to do with the ability to adapt depending on age. The stereotypical perception of the older generation is that it will have a hard time adapting to change, whereas the someone younger will find it easier. Whether this is true or not is from a positioning perspective irrelevant. There is no single true or correct representation. The stereotypical view of the age of self and others is real to the user, and it corresponds with the generational rift identified by Lluich (2011) and the potential clash between older generations of clinicians and the Generation Y clinicians whom may be the organizational change agents.

Age is not used extensively, but rather like subtle hints to bolster one's own position. The example below is from the last part of interview with Doctor 6, which was one of the late interviews of the dissertation. The question is probing for specific reaction to the standardized processes of Sundhedsplatformen which will essentially guide users through the system.

- Interviewer [19]: *“Well, now we are coming to the slightly guiding questions, because I would think to my-self that if I am sitting with my professional expertise in some field, and then some system comes around and instructs me that I have to do A, B and C. Would I resist or would I just say that it is fine. Being guided through or...?”*
- Doctor 6 [20]: *“I think it depends on your age. I think that those who did not grown up in the IT age are likely to have significant resistance. I would imagine that. To them it is unfamiliar. For us who has grown up in the iPhone age, we will probably think ‘Well, that’ fine’ and we do that as long as it tells us... Well, it should obviously not guide us in our profession - that makes us upset, but as long as it is process matters, I only see it as a help. So it all depends. It is the profession that will make us protest, and there will undoubtedly come mega protests because it introduces decision support. The suddenly if you have pneumonia and then the system says so and so. Believe me – it will be a drama, because each hospital has their own ways of doing it and now someone tells us to do it in the same way. There will be drama, but it is in the professional area”*

There is in other words a difference between being guided in aspects relating to process and in questions relating to profession. In essence Doctor 6 argues that the older generation will object to being guided regardless, but the younger (the iPhone generation) will have no problem in being guided in the processes. Both will object if being dictated in matters of their profession.

Nurse 1 makes the same observation, *“Specifically the older generation or those with a bit more experience, I think will have a problem being guided through the system that dictates the sequence of your activities and how to do things, and when to do them”* (Nurse 1, [12]).

In the case of Nurse 6, age is also mentioned as parameter to be taken into account.

- Interviewer [23]: *“You say you are optimistic regarding Sundhedsplatformen. Then I think, that with these rather mixed experiences, what do you base the optimism on?”*

- Nurse 6 [24]: *“Well, in the beginning I thought ‘No, now we have just got SIS to work here and people are happy with it’. Personally, in our department things are okay at the moment. I think it is going to be tough. We are a large group of experienced nurses, and also a good deal getting close to retirement and it is going to be tough for them. It (Sundhedsplatformen) is a huge system with completely new work processes and ways of thinking. We are not used to this click-system. We are used to free-text, although within anatomical boxes, but... I think it is going to be really good the more I see of it”*

The issues envisioned by Nurse 6 have to do with the limitations put upon the nurses with regards to writing free-text. In the new system the possibility to act as autonomous professionals and write notes in exactly the way they want is limited. Nurses will have to follow standardized formats and process when entering notes, which according to Nurse 6 will be a particular problem for the older generation.

The reference to age found in the interview with Secretary 1 is different. Unlike the profession focus above the secretary focused on age as a personal characteristic. Either someone could be too young and thus inexperienced or too old and not able to keep up with the changing demands.

The use of age to position self and others shows how a speech act establishes a storyline that inevitably positions one self and others as having certain competencies, rights, duties and responsibilities. Age could also be included in a story that would position age as an advantage because of the experience it entails. In the concrete cases the speech acts clearly establish storylines which entails the age position as a matter of more or less able to adjust to a future with Sundhedsplatformen. This is a good example of the dynamic nature of ‘Positioning’ compared to more static ‘Role’, which would not to the same extent be able to accommodate and explain short-term alterations to situational behavior. Positioning theory does this by explicating the workings of Storyline, Speech acts and positions in relation to age.

Uniqueness

Another recurring theme and probably the most important way clinical staff is dealing with the scenarios of their own sensemaking is through positioning as unique. There is as such nothing unusual in the claim to uniqueness. Martin et al. (1983) found that individuals prefer to think of themselves as unique beings, and in a similar vein

“occupational subcultures, such as doctors make claims to unique competence in order to justify autonomy and freedom from oversight” (Martin et al., 1983, p. 438).

In the case of the three profession however, the claim to uniqueness is stated in very different ways. On the individual level, on department level and on profession level.

As described in the example by Martin et al. above a common way for doctors to position selves and thus implicitly others, is to emphasize the uniqueness of the profession. They are well aware of the pending changes in technology and resulting consequences to work processes. The standardization will require them to enter notes directly into EHR's which has previously been done by secretaries. And while this may give rise to some concern on a practical level, it does not pose a threat to their self-perception. As Doctor 1 explains; *“The essence of my job will not change, because there are still patients that needs to be healed or done less sick, but I think it will become a bit more fun”* (Interview, Doctor 1, [49]). This is an example of a *Logic* as an anticipatory action *“that aims to prevent, mitigate, adapt to, prepare for or preempt specific futures”* (Anderson, 2010)

Several other examples of the emphasis of the profession are found in the interviews;

- *“ [The patients] expect that when they are driven across the country to get to someone... We have a couple of national specializations and I am responsible for one of them, and people obviously should not come here to be told something that they already knew”* (Doctor 4, [23])
- *“None of us knows exactly what our tasks will be in relation to the IT-system. But there are a lot of core services that remain the same, e.g. the patient still needs surgery and they need to give birth to a child. This is not going away! But the way it is documented will be different”* (Doctor 5, [7])
- *“Well I think that nurses are more oriented towards details and think it must be correct. I must do it right. Whereas doctors are a bit more like, ‘Well, it is the treatment of the patient that is in focus and then we will have to see how we can fit the other things in!’ I think they [nurses] are more keen on getting things filled out correctly and in the right ways”* (Doctor 6, [27])

All the examples above are confirming the institutionalized view of the Doctor as the ‘healer’, whom because of the importance of the work and the uniqueness of the profession perceive themselves to be less impacted by the pending change. As explained by Frazier in the literature review (Davies & Harré, 1990) the social identity of individuals is discursively constructed and in the case of the doctors above this discursive

construction is very robust and coherent. The position provided by the discourse has a strong and distinct storyline that makes it unique vis-à-vis the other professions, which is completely in accordance with the five step process for the development of selves as proposed by Davies and Harré (1990).

Equally, to what was e.g. observed in interview with Doctor1, Secretary1 uses the interview situation as a gradual move from initial sensemaking, through positioning to describing a possible future. The interview with nurse 1 is also a good example of the anticipation not following a neat sequential pattern. Immediately when the interview started, Secretary 1 made an effort to establish her own position as unique. She stressed that because of her position as 'flying secretary' (a term used for secretaries that are moved around to various hospitals depending local needs), IT SuperUser and employed by the local hospital management in relation to Sundhedsplatformen. It seemed to be important to establish herself as different from the 'ordinary' secretaries. "*We (flying secretaries) have become a kind of consultant, who are able to go out into departments and 'clean things up'*" (Secretary 1, [32]). The uniqueness expressed by the medical secretary is different from the uniqueness alluded to by the Doctor 1 above. The uniqueness of the secretary is a personal matter. She is talking about her own personal qualities and uniqueness and not the profession or the department.

Another subtle hint made by Secretary 1, in the opening of the interview has to do with the demands put on her. When explaining how she has also working for the hospital management she adds a loud sigh (Secretary 1, [5]), as to express an attitude of being asked to do too much, but something that she is able to cope with – because of her uniqueness. She is willing to make the sacrifice. Secretary 1 has also been asked to join her manager in meetings about Sundhedsplatformen, which is being articulated as a way for her to come out with her message – not the message about Sundhedsplatformen as such, but *her* message (Secretary 1, [8]), which someone else would have to carry on out in the organization.

Another way the individual uniqueness is expressed is through the stressing that she has seen how this will change working condition in the future. Not everybody understands the implications of the changes that are coming. "*[...] it seems to me as if many still don't know about this – this project – and that it will affect their everyday life*

fundamentally – for the better according to, and it will change so many work tasks. Especially for medical secretaries” (Secretary 1, [6]).

Unlike the others, Secretary 1 has seen it coming and particularly seen the change coming for the secretaries. She herself sees it as a change for the better, which is once again a way of underlining her personal uniqueness. *“It seems to me that there are many who does still not realize what is happening in this project, and that it will fundamentally influence everyday practice for the better according to me, but it will change so many work tasks. Particularly for the medical secretaries, because we are not going to do the things we are today. Not at all.” (Secretary 1, [6])*

#

Similarly, to Doctor 1 and Secretary 1 above Nurse 1 is positioning herself as unique. This is however in yet another way, as it is an example of positioning takes place on a departmental / group level. According to Nurse 1 the first important consequence of the coming Sundhedsplatform is that work related activities will likely be more controlled or dictated by procedures embedded in the technology than what is the case today. Procedures will be standardized, which will spark reaction. *“[...] some will come to ‘stritte’ [slang for resistance]. Well I think that we are going to be enormously controlled by this. You can pull out data drill down to what each individual is doing” (Nurse 1, [2]).*

Nurse1 is not saying that they will not use the new system, only that it will be used in their own way. They will go beyond the system – turn in another direction. This is an example of how the uniqueness of the nurses is presented and how their special circumstances require or even forces them to find a way to deal with the change. By going their own way, they cope with the change and get on with the job. Autonomy is maintained despite the inevitable standardization of Sundhedsplatformen. Another example of the perception of uniqueness on a profession level amongst the nurses is expressed in the way tasks are taken in by the group. According to Nurse 1 one of the potential problems of the future system is that it to a wide extent assigns responsibility to individual patients to individual nurses. This is not how they work.

“ [...] the system is designed so that you have your own patients – you are given your own tasks. And this is not necessarily how we work. [...] We don’t think like that. We know too well that when an experienced nurse does rounds with a new nurse, then it is

the experienced one that has the overview. She cannot just leave the responsibility to the new nurse. It does not work like that!" (Nurse 1, [12+15]). So when Nurse 1 explains how they 'actually' do their work, regardless of organization and technology is *"it may also reflect the way a given line of work has come to be defined and practiced relatively independent of technology, managerial mistakes, or organization structure (Silverman, 1970). What is deviant organizationally may be occupationally correct (and vice-versa)"* (Van Maanen & Barley, 1984, p. 6)

For the nurse the collective approach to task solving appears to play an important role. This is in stark contrast to the more individualized, systematic and measurable setup of the coming system. One of the dominant themes of the interview with Nurse 1 is in other words how the new technology will affect the everyday work of the nurse and how she foresees they will cope with it.

In the case of Secretary 3 the initial sensemaking resulted in a sense of uncertainty. In an effort to alleviate the uncertainty of the sensemaking Secretary turns to positioning medical secretaries as unique, unlike what was observed with secretary1 whom were positioning herself as unique. The focus was on the individual, secretary3 is emphasizing the medical secretaries as a group. *"We are actually very skilled, which I say without blushing, but we are a very skilled group, but we have very little to document it with"* (Secretary 3, [6]). While this might appear to be disconfirming the notion of secretaries focusing on individual uniqueness, it is explained by the circumstances of this particular interview. Unlike other interviews secretary3 was not alone during the interview. She was sitting across from a colleague in a small shared office. True to the initial strategy to allow interviewees to choose the interview location. In this case the two colleagues agreed that doing it in the shared office.

To summarize the positioning of the doctors is best described as Moral positioning. They are pointing to the rights and duties of their profession as they have been institutionalised within society. In contrast to this we have the secretaries whom appear to be engaging in Personal positioning *"which refers to one's individual specific properties or life experiences rather than a generic role"* (Harré & Langenhove, 1999, p. 21).

Later in the analysis it is shown how the clinicians in general refrain from putting each other in a bad light. In what appears as loyalty between clinical staff member's

interviewees does not explicitly positioning others adversely. However, by positioning oneself in a desired position the opposite / binary position is automatically assigned to the other (Harré & Langenhove, 1999). So, when the doctor positions her/himself as performing a unique and very specialized tasks, it is implicitly said that someone else ordinary and perform mundane tasks.

When a secretary positions him/herself as being entrusted with special responsibilities it implies that someone else is not being trusted. If someone else is positioned as old and not as ready to adapt, one self is positioned as young and able to cope with change. *“if someone is positioned as incompetent in a certain field of endeavor they will not be accorded the right to contribute to discussions in that field”*, (Harré & Langenhove, 1999, p. 1)

Through the positioning the individuals essentially appear to be saying; I am special, I am flexible and I am rational / not emotional. *“Common skills, common risks, and common adventures form the basis for a communal identity by promoting interaction with those others who “know the score” and thereby increase the probability that members of such occupations will consider themselves to be unique”* (Van Maanen & Barley, 1984, p. 25) The doctors and nurses all share this self-understanding which in term causes them to feel unique. Unlike the secretaries whom must rely on the individuality for uniqueness.

It is however also a way to refuse other the rights and responsibilities of other positions. So, if a secretary in an attempt to secure a future job suggests taking over some of tasks (rights and responsibilities) of nurses it is not just a matter of performing tasks, but a more fundamental rebellion against the institutional order of the hospitals. More on this later in the analysis.

Rationality

The final way clinicians are positioning themselves is through demonstrating responsibility with regards to economy of Sundhedsplatformen and the hospital in a broader sense. It is a subtle theme – merely mentioned as a logos side-remark supporting the distinctly ethos oriented positioning associated with the various types of uniqueness above. The interviewee demonstrates responsibility towards the system and an understanding of the constraints lived under. It is not just expertise (Ethos) victimization (Pathos), but also economic rationality (Logos)

Demonstrating **economic rationality** as a way to position self is found in in three instances in the data as a way to underline the trustworthiness rationality of the interviewee. It is as such not a dominant theme. It may however also be understood in terms of the overall theme of loyalty to the system. By demonstrating economic sensibility, the interviewee is implicitly demonstrating loyalty to the system by advocating spending money wisely. Secretary1 e.g. argues that making a road-tour around hospitals in the region would be a relatively cheap way of informing future users of Sundhedsplatformen compared to taking out 500 clinicians which had already been done (Secretary 1, [53]).

Summing up the section it can be determined that the claims to uniqueness is different depending on the position of the individuals but it is a uniform reaction in defense of rights, duties and responsibilities or pursuit of new ones. The efforts described above by clinical staff to position themselves in preparation of the pending HIT implementation are examples and symptoms of a more general organizational struggle. On the one hand it is a struggle between the demand for standardization driven by Sundhedsplatformen and deeply engrained desire to maintain autonomy amongst clinicians. On the other hand, the struggle has to do with the relationship between the individual and the collective. Traditionally doctors have been individualistic experts curing the patients as opposed to nurses who have been part of a group of nurses caring for the patients. Both groups however have enjoyed a high degree of autonomy with regards to planning and execution of tasks.

Scripting the future

Throughout interviews and across hospitals and professions the notion of possible futures is a theme. Once the interviewees have 'mapped the terrain' through initial sensemaking and after having assessed actual and desirable positions of self and others, the next logical or sequential step is to look ahead through scripts of possible futures. In the literature review reference was made to Barley (1986) whom defined scripts as the mechanism that link the institutional realm to the realm of action. Explained differently Martin et al. (1983) writes that scripts specify "*a set of characters or roles and a causally connected sequence of events, sometimes with optional branches for alternative story components and events*" (Martin et al., 1983, p. 441). Martin further suggests that a script is to be understood as "*the skeleton of a story, what remains when the nonessential details have been stripped away*" (Martin, 1983, p.441), which corresponds

well with the anticipatory scripts observed in this dissertation. When looking ahead to the future the interviewees cannot script more than the skeleton of a story because very little is known in the anticipatory phase. The anticipatory scripts of the future are simple elaborations on the sensemaking and positioning already performed or to be performed subsequently.

The interviews reveal three main types of scripts;

- New possibilities – the new HIT is perceived as an opportunity and generally seen as presenting new and positive possibilities when taken into use in the clinic.
- Rebellion – the new HIT is seen as a potential threat to existing rights, responsibilities, routines and processes and calls for a rebellion to maintain a desired position.
- Victim – as is the case with rebellion, in Victim is perceived as a threat, but with no way out of the problems. The interviewee sees him / herself as a victim of circumstances.

New possibilities

When looking ahead to the future with Sundhedsplatformen the interviewees in general are positive. The interview with Doctor 1 is a good example of this, but also another example of the non-linear and non-sequential order of the anticipation process. After a few moments of small-talk Doctor 1 in a sense ‘interrupted’ the interview before it was even started. He had two points that he wanted to make before starting on the ‘actual’ interview.

First of all, he wanted to make it clear that he felt that he had sounded negative the ITX-test video in which he had participated. He stressed that if he had only been asked a few days later after having tested the system from one of the other vendors he would have been much more positive. It was not in an apologetic tone he distanced himself from comments made in the video, but rather with what appears to be sincere enthusiasm about the system he had tried out later.

“If I had been interviewed after I had seen Epic, I would have been much more excited. It was very early. Personally, after I have through it all – particularly Epic – I am much more thrilled and see great possible progress” (Doctor 1 [4]).

This comment in a sense captures the doctors’ sentiment of what is to be expected by the future system. Positive anticipation and new possibilities is expressed through Styles

(statements) and Practices (imagination) (Anderson, 2010), and all but one specifically point to the positive new possibilities of the future with Sundhedsplatformen. It is the script or the skeleton story of a bright future.

- " Well, this is just in a completely different league of software and with completely different possibilities than I thought before" (Doctor 1)
- " I am very, very optimistic about what we are getting. If this is not good, then nothing will be good. It is without a doubt the best of what we have seen and probably the best in existence." (Doctor 2)
- " Yes, absolutely. Under all circumstances I think it is going to be better. It is going to be much better than it was." (Doctor 5)
- " Yes, it is going to be really good [...] But because the software is from one company, they have fundamental interest in parts being able to communicate across, which does not exist in the present systems. That is what makes me optimistic." (Doctor 6)

The parallel to the initial sensemaking is clear. The anticipation of new possibilities as described in the scripts of the future has a significant overlap with the prospective sensemaking of the initial sensemaking. This however, yet again confirms the non-sequential nature of the anticipation phase. The overlap is an indicator a cyclical structure where it can be hard to clearly distinguish where sensemaking starts and scripting stops and determine where positioning gradually turns into scripting. Bévort and Suddaby (2015) explains the connection between sensemaking and scripting by saying that "*Sensemaking is the process which individuals use to infuse scripted action with meaning*" (Bévort & Suddaby, 2015, p. 5). In connection with anticipation I suggest a different mechanism. Sensemaking and positioning are the processes which individuals use as foundation for scripting possible futures. The difference is found in the difference between scripts as preexisting or evolving schemas in the conceptualization of Barley and Tolbert (1997) and Bévort and Suddaby (2015) and scripts anticipating and relating to a possible future.

The anticipation of new possibilities amongst nurses is more dampened and even more so amongst secretaries where it is tied with an apparent urge to rebel against the pending changes. Most of the future script writing is in the new possibilities theme and those that are not appears not to have been able to successfully make sense of the changes or to position themselves vis-à-vis the coming changes.

Rebellion

An alternative or rather a possible addition to seeing a bright future with new possibilities is the rebellion.

First theme of interview with nurse 1 was that of resistance to change. I introduced the theme in order to test preliminary assumption about reactions and how the first reaction I had been exposed to appeared not to follow the expected pattern of reluctance or even resistance to change. Nurse1's reaction to this opening of the interview confirmed or reiterated themes identified in the first interview with Doctor1. The first important consequence of the coming Sundhedsplatform as identified by Nurse 1 is that work activities will likely be more controlled or dictated by procedures embedded in the technology than what is the case today. Procedures will be standardized, which will spark reaction. *"[...] some will come to 'stritte' [slang for resistance]. Well I think that we are going to be enormously controlled by this. You can pull out data drill down to what each individual is doing"* (Nurse 1, [2]). And later in the same interview; *"Specifically the older generation or those with a bit more experience, I think will have a problem being guided through the system that dictates the sequence of your activities and how to do things, and when to do them"* (Nurse 1, [12]).

An interesting detail of this passage has got to do with the specific wording of the consequence. Nurse 1 is refereeing to it as *'stritte'*, meaning that it will cause peoples hackles to rise. She is presenting it as a natural reaction that one can do very little to fight. It is in other words not a matter of active resistance but almost an instinct like reaction, which one cannot be blamed for. Implicitly in this view of the order of the medical ward and the life of a nurse is an understanding of how things should be or even how they are at a quite fundamental level. It appears that the independence and individuality of the nurses in how the nurses go about doing their job is seen as essential. This cannot or should not be changed by procedures dictated by new technology, which becomes clear the following passage.

"I actually think that what will happen is that we will use the system as we can, and then we will go beyond it. We will not use the function that are offered – not initially anyway" (Nurse 1, [22]).

Nurse 1 is not saying that they will not use the new system, only that it will be used in their way. They will go beyond the system – turn in another direction. This is an example

of how the uniqueness of the nurses is presented and how their special circumstances require or even forces them to find a way to deal with the change. By going their own way, they cope with the change and get on with the job.

” [...] det er faktisk også det jeg lidt tænker på, at folk vil vende sig lidt imod. Og jeg tror egentlig måske også det der vil ske er at vi vil bruge systemet som til det det kan, men så vil vi vende os ud over det. Altså, vi vil ikke bruge de funktioner, som det giver - ikke første omgang i hvert fald [...] det er jo derfor der kommer de her opgave ting op og det tror jeg simpelthen det vil vi jo ignorere.” (Nurse 1)

In the interview with Secretary 1 the conversation also quickly turns to future. She is aware that things are changing and as noted above that the everyday work tasks are changing – particularly for the secretaries. But rather than accepting the fate secretary 1 is looking for new opportunities. Similarly, to what was observed during the interview with Doctor1, Secretary1 uses the interview situation as a gradual move from initial sensemaking, through coping strategies and onwards to describing a possible future.

(Secretary 1, [6])

Quote	Sub theme	Sensemaking Cycle
<i>' [...] It seems to me that there are many who does still not realize what is happening in this project, and that it will fundamentally influence everyday practice '</i>	Uncertainty caused by pending change	Sensemaking
<i>'for the better according to me, but it will change so many work tasks. Particularly for the medical secretaries, because we are not going to do the things we are today. Not at all. '</i>	Uniqueness of individual. I am different then my colleagues / I can cope with the change	Positioning
<i>'So we have to go out and seize the labor market to find new tasks and perhaps get trained in new areas'</i>	Secretaries are required to break with institutionalized roles, through a rebellion against tradition	Scripting the future

Secretary 1 explains how secretaries will have to go out and steal (jobs) and reinvent their own tasks and perhaps change the education of the medical secretary. *“Our profession drowns if we do not find something else to do”* (Secretary 1, [44]).

The future foreseen / scripted by secretary1 also entails new requirements to new hires, when older colleagues, whom are not able to cope with the changes, are being 'phased out'. "[...] *it is no use hiring a little scared lamb, if that person thinks that it is about a desk and just sit there and write. It is over!*" (Secretary 1, [43]) As was the case with Doctor1 and Nurse1, Secretary 1 points to age as factor, but also the inexperience of new hires, which is yet another example of the indirect positioning of self as experienced and thus better able to cope with changes. Not everybody understands the implications of the changes that are coming.

The rebellion code was also observed in interview with secretary 6. "*It is really good that both OPUS and GS is being abolished. It's really good. Let's start over again. I just think it is a pity, that we are not considering how it might be made even more patient minded and more minded on the health staff, e.g. by getting fora in which patients can be discussed – the individual patient without it being made a big thing.*" (Secretary 6). The rebellion in this example may not be immediately obvious. It is however found in the way the secretary wants to be part of the clinical discussion which is otherwise reserved for doctors and nurses. It is a subtle rebellion against the institutionalized limitations in rights and responsibilities of the secretary.

In common for these three examples (Secretary 1, secretary 6 and nurse 1) are the interviewee's wishes or even aspiration to rebel against future rights and responsibilities. Based on the initial sensemaking and subsequent positioning the interviewees foresee a future in which the rights and responsibilities of their jobs is not satisfying. The two first examples are explicit in the sense that they want something other than what is on offer. Secretary 1 is ready to go and steal the tasks of other (demanding new rights and responsibilities) and Nurse 1 deals with the system in her own way (refusing new responsibilities). In the case of Secretary 6 the rebellion is more subtle than the others. Secretary 6 essentially wants the right to be part of a clinical discussion from which she has previously been excluded.

They are not happy with the changes imposed on them through the standardization and subsequent re-distribution of tasks. They do however not capitulate as victims, but rather aspire to re-script a desirable future in which they have an acceptable position.

Victim

The victim code is only used on very few occasions in the interviews. One secretary, one nurse and one doctor is coded with 'Victim' and on closer inspection it is in fact only the nurse to whom it truly applies. In the case of Doctor 1 the position as victim is used jokingly and in the case of secretary the victim position is combined with 'Rebellion', which in effect offers a way out of the issues which is not there for 'true' victims. Despite the scarce use of the code it is interesting as an extreme case of a reaction to new HIT.

The case of Nurse 2 is as such particularly interesting as the case of new HIT turning users into victims. On the surface the interview is not characterized by any kind of hopelessness as might be thought when talking about victimization. It is only through the coding the theme emerges. The sentiment of the interview encounter as such was positive. A possible contributing factor to the upholding of a brave face of the interviewee can be that Nurse 2 has a leading position in the department. Leadership demands firmness in the face of anxiety, but in the last part of the interview and following several examples of troublesome past IT experiences, the victimization as a theme materializes.

Nurse 2 gives several examples of the negative consequences of standardized work processes, including a reduction of face-to-face communication amongst colleagues [29] [30], e.g. because of increased use of email [31] [33].

"Technology or not, there are just days when things don't work out and there are days when the patient course is bumpy for one reason or another, and this is when we must remember to talk together. [...] But I think you are right. That is the way we go regardless of what.. We can talk about it as much as we like, but it is!" (Nurse 2, [36])

Nurse 2 is essentially saying that the development is unfortunate and will cause working relations to suffer, but that it just how it is, and this attitude of resignation interestingly coincides with the absence of efforts to position herself. No positioning of self or others is made and thus no claim to existing rights and responsibilities is made. Throughout the interview past and present issues are identified but no apparent way out is articulated, leaving only the position as victim open.

As a final twist to the case of Nurse2, she in the end turns Normalization of the problem. As observed in other interviews, there is a tendency to straighten things out and normalize after having let out steam about all the problems.

“That is the way it goes. We just still need to learn to communicate and respect each other. But there is also a lot of good in getting a common system that speaks together. Well, there is a lot of good in it. It makes good sense and now it is together with Capital Region and all, so we don’t have to send faxes – something as old fashioned as fax and paper. It is completely crazy. And if we a lucky we can get the two systems to talk together, which will save us a lot manual work” (Nurse 2, [38])

In addition to summing up the interview, by normalizing problems and identifying the positive aspects of standardization, the comment above also points ahead to the pervasive themes relating to the hospital as an institution in general terms.

Cultural / Institutional themes

With conceptual inspiration from Edgar H. Schein the fourth group of themes are gathered under the umbrella of Culture. Schein explains that one of the characteristics of culture is that it is *“the deepest and often unconscious part of a group and is therefore less tangible and less visible”* and *“after it has developed, it covers all aspects of a groups functioning. Culture is pervasive and influences all aspects of how an organization deals its primary tasks”* (Schein, 2010, p. 16). The fourth group of themes is exactly characterized by often unconscious and pervasive views of what the organization is about.

This section is however not about organizational culture as such, and the reference to Schein does not mean that the analysis suddenly subscribes to the functionalist views found in Schein’s work. In this section I merely lean on Schein in the effort to conceptualize what is observed in the interviews. *“Culture can be thought of as the foundation of the social order that we live in and the rules we abide by”* (Schein, 2010, p. 3), which is a good enough and broad definition to start with, and it works both in relation to professions and in relation organizations such as hospitals.

The Cultural themes are not secondary to the three themes above. Rather they are pervasive in the sense that they allude to aspects of a more general nature. They are the aspects of the interview and research that points more fundamental aspects of hospitals as institutions. Not just reactions to pending technology change. The themes articulate and point to the unique cultural characteristics of hospitals as organizations, and can as such be seen to describe the institutional and cultural mechanisms behind the

anticipatory activities above. In order to analyze the themes, I will therefore make brief theoretical de-tour around organizational cultural theory.

Hospitals as organizational cultures

A question that warrants some consideration, which was also pointed out in the first chapter of the dissertation, has to do with hospitals as a setting for a research project. How are we to think of hospitals and does it even make sense to think of it as 'one' entity? In the seminal 'Boys in White', Becker et al. (1961) observes that organization researchers in general tend to rely on organizations being alike. "*We assume that organizations can be compared with one another no matter how different their avowed purposes may be*" (Becker, 1961, p. 15). And while hospital can obviously be located geographically and the formal organizational structure can be described, the question is whether it e.g. make sense to think of doctors, nurses and medical secretaries as coherent groups? Or are they too diverse for this to make sense?

The purpose of this section is to offer an additional perspective on the analysis of interviews. It is for instance interesting how several doctors during interviews find opportunity to discretely point to the fact that they are better paid than everyone else, and that it therefore would be silly to perform 'low-wage' tasks. On the most obvious level this might be seen as a practical consideration. Resources should be used in the most sensible way. There may however also be an aspect relating to how the doctor see them-selves. Their professional identity. And finally, a comment like this might also allude to aspects on an overall organizational level, which could then be investigated through the use of theories about organizational culture. This section briefly outlines and applies this perspective.

In addition to starting definition by Schein above culture can be defined in a number of ways, and the way one chooses to go ultimately depends on the fundamental assumption of what culture is. Martin (2002) lists a range of possible definitions of culture, of which one is particularly relevant and suitable for the study of a hospital setting. "*Culture does not necessarily imply a uniformity of values. Indeed, quite different values may be displayed by people of the same culture. In such an instance, what is it that holds together the members of the organization? I suggest that we look to the existence of a common frame of reference or a shared recognition of relevant issues*" (Feldman in Martin, 2002, p. 58).

One of the characteristics of a hospital is the diversity of jobs and specializations required to keep the organization working properly. All the way from the unskilled laborers cleaning sheets, to employees in the canteen through to the laboratory workers responsible for analyzing test and nurses dealing directly with patients, to the doctors whom in turn are a very diverse group of people. The question is - what do they have in common, that might constitute a 'culture' that may be analyzed as such?

With the very different tasks, pay grades, educations and responsibilities it is likely that one will encounter the 'very different values' referred to above. The question therefor is what might be the common frame of reference? Despite the diversity, something needs to be shared in order to establish what we might call a culture, and in case of hospitals the answer appears to be quite simple.

During my months at hospitals and working together with clinical staff, I have observed a common element across all levels and professions - the patient. No matter what a person does in a hospital the uniting element is the patient and 'calling' to help the patient. During interviews with various clinical staff and managers the element that keeps coming back, placed at the center, is the patient and the needs of the patient. The question is whether the patient is sufficient as a common frame of reference or shared relevant issue to make it meaningful to study and understand hospitals as cultures, and thus explain the underlying / pervasive themes as expressions of a particular hospital culture. Can the 'Loyalty' and 'We find a solution' identified in the interviews below be explain as manifestations of a particular hospital culture? And if so does that prevent the findings from being generalizable?

In the early parts of the research project, and while preparing to gather data in hospital departments I was expecting or perhaps rather hoping to find metaphors. Alvesson (2013) e.g. writes that *"Metaphors are seen as important organizing devices in thinking and talking about complex phenomena. We never relate to objective reality 'as such' but always do so through forming metaphors or images of the phenomenon we address"* (p.16), and he continues; *"A metaphor is created when a term is transferred from one system or level of meaning to another and thereby illuminating central aspects of the latter and shadowing others"* (p.17).

However, during interviews there was a remarkable absence of use of metaphors. It seems that clinical staff in their description of clinical work life abstains from using

metaphors. Doctors and nurses are being concrete when describing their experiences. There are virtually no metaphors that can be used to 'decipher' the deeper levels of the organizations and the organizational culture. Clinical staff does not fantasize – they are specific. Descriptions are factual and does not venture into elaborate metaphor driven narratives. In contrast to the observation of Alvesson that *“Metaphors can thus be seen as a crucial element in how people relate to reality”* (Alvesson, 2013, p. 18), the interviews from the hospitals does not contain any metaphors through which doctors, nurses and secretaries can be deciphered. This points to the need to be cautious when applying an analytical approach. Hospitals, yet again, appear to be different kinds of organizations, then the 'standard' organization presumed in much organizational research, which exactly calls for additional research. A different kind of organizational analysis is required.

Returning to the initial question of this section; can and should a hospital be considered and studied as a culture? Will such a perspective offer a better understanding of the institutional / cultural themes identified in the interviews?

It certainly can, but requires specific view of what constitutes an organizational culture that allows for organizational inconsistencies and ambiguities as we find it the differentiation perspective (e.g. Barley's CT-scanner study) or fragmentation perspective (Meyersons, Social worker study). Seen strictly from an integrative view it is likely that a hospital should not be defined and studied as a culture but rather as a collection of disparate subcultures. Schein writes; *"It does not make sense therefore, to think about high and low consensus cultures, or cultures of ambiguity or conflict. If there is no consensus or if there is conflict or if things are ambiguous, then, by definition, that group does not have a culture"*, (Schein in Martin, 2002, p. 98).

In conclusion, if we are to consider hospitals as cultures it implies that the organizational story stating that "we help people" and the physical surroundings that constitutes the physical part of the hospital has enough cultural stickiness to make up the culture. If, on the other hand, ambiguity that is also part of the hospital reality is perceived to be fragmenting and thus depriving the hospital of a shared core of meaning then it is either not a culture or only a culture from a certain perspective, which takes us back to proposition of that hospitals are fundamentally different kinds of organization requiring a different kind of analysis. More on this in the next chapter.

Loyalty to colleagues

The first of the institutional / cultural themes identified is found in the majority of the interviews and has to do with reactions to problems caused by technology and the subsequent procedural problems or problems related to collaboration between colleagues. In contrast to the analysis above with focus on problems caused by inadequate technology, these are the problems related to collaboration between people. The general trend in the interviews is that the clinical staff expresses what can best be described as a loyalty towards each other. If a problem is caused by another person e.g. it in general is downplayed and black-boxed as something that “just happens” in “the system”. An example of this is in interview with Secretary 2 when asked for reasons for miscommunication and errors in data;

- Secretary 2: *“Yes, and then again there is the problem of communication not working properly”* [49]
- Interviewer: *“How not working? What are you thinking?”* [50]
- Secretary 2: *“Well, it can be [sigh] ... it can both be, well [laughter] it can both be us secretaries and it can be the nurses, but by and large it is the nurses, I would say who forgets”* [51]
- Interviewer: *“Why is that?”* [52]
- Secretary 2: *“Well, I don’t know why they forget it! It is probably... They are probably busy with treatment and you get away from it, and we just sit and keep an eye on things and may be better at picking up mistakes”* [53]

The interviewee makes an effort to not place blame, even though it cannot be entirely avoided, and the interviewee makes an effort to make rational explanation on behalf of colleagues that could otherwise be placed in a bad light. Similarities with the normalization described in the section non sensemaking are obvious. Clinicians do not want to position each other as blameworthy to use the concept of Parrott (2003). In contrast, however, to what was observed with regards to reaction to problems caused by technology (emotional response followed by normalization) the problems caused by individuals are immediately normalized and black-boxed as a fact of organizational/clinical life.

A similar reaction/loyalty can be observed in the case of Doctor 2, illustrating that it is not reserved for secretaries but pervasive across interviews. The interviewee is asked for a specific example of when processes breakdown;

- Doctor 2: *“What I am experiencing is [...] that our anesthesia registration doesn’t run at all. It still runs on paper, and then the idea is that when everything is done then it should be scanned so it is stored as a scanned document, but the work flow doesn’t really work, so quite often there is information missing”* [39]
- Interviewer: *“What happens in that workflow?”* [40]
- Doctor 2: *“Well, what happens [...] something mysterious happens making them disappear on the way to scanning [Interviewer laughs], and how that happens – when we are trying to trace what happens, then we can’t eeehm it is difficult to see a pattern in it, but it is just a fact that we are missing information much more than we did in the past.”* [41]

In the case of Doctor 5 normalization is also used as a way to stay loyal towards colleagues [36]. Doctor 5 is explaining that mistakes inevitable will happen when information is transferred from one system to another, and that since mistakes happens elsewhere it is ok that it happens here. The secretaries whom are implicitly the source of the faulty transfer of data from one system to another are not to be blamed.

Loyalty to colleagues is pervasive in the organization. It is explicated in the sense that the members of the organization do not say that they are loyal, but rather demonstrate it though use of institutionalized or cultural logic of the organization.

Hierarchy

Another of the institutional / cultural themes present in the interviews is that of hierarchy. At first glance it is not a dominant theme and the relevance of it is toned down or simply ignored. During interview with Doctor 1 the interviewer brought up the concept of hierarchy. It was not a topic brought up by the interviewee, but rather an early test of my own hypotheses about possible implication of the introduction of new technology – that it would influence the hierarchy between doctors, nurses and medical secretaries. This shot down by the responded as an outdated view of the relationship between doctors and nurses;

- *“I think that the relation between doctors and nurses is very different then people usually imagines. It is not like in the old days. It is completely different. Very different. And that is just good. It has become much more modernized. It is not as hierarchical as many tend to think. I actual fact I think there is a stronger hierarchy internally amongst nurses and internally amongst secretaries then between doctors and nurses [...] There are no elbows between doctors and nurses. We kind of run in each our parallel hierarchies”* (Doctor 1, [69 and 71])

Attempts to emphasize that traditional hierarchies are a thing of the past fits well with the common notion of Denmark being very egalitarian and with little power distance (Hofstede). In contrast Chambliss (1996) observes more obvious hierarchy turf battles, which could be explained by the empirical context of the research.

Does this mean then that it is no longer relevant to think and talk about hierarchies in Danish organizations and that scientific management and bureaucracies are a things of the past? Absolutely not. Both are alive and well and as Cheney et al. (2010) observes *“When we look closely at what’s happening today in supposedly post bureaucratic organizations, we find that bureaucracy continues – though perhaps in new forms or under new guises”* (Cheney et al., 2010, p. 2). An example of this is e.g. found in Doctor 4 whom explains that;

- *“There are lots of logistics around the secretariat. I would run away screaming if I should do that. I simply do not think it is fun. And I don’t think we are good at it. We don’t use our time appropriately, if I am to sit and book appointments. You can do anything. You can also take out the garbage. I don’t mind doing that, but I will not get much done”* (Doctor 4, [61])

Doctor 4 is essentially saying that he does not mind doing the secretarial work, but that it would prevent him from doing his actual work. It is not a matter of him being too high in the hierarchy to do some dirty work, and he continues; *“And therefore I also think that .. one also need to look at the cost of employees. In fact, secretaries are ‘cheap’ compared to me. It is a bit silly to make savings on secretaries”* (Doctor 4, [62])

To further strengthen his position, Doctor 4 makes the rational argument that it is a bad use of resources similar to what was observed under positioning where the economical rationality is used implicitly to position selves favorably. Stated differently - in an egalitarian culture it is appropriate to make a rational argument for hierarchical differences because it is a way to avoid wasting money, even if it more likely a defense of the institutionalized rights and responsibilities associated with organizational position.

A similar underlying argument is found with Nurse 4 whom is working with tasks that at other hospitals are performed by secretaries. Nurse 4 is making an effort to differentiate her-self from and the secretaries that for all intents and purposes perform similar tasks. This is done without referring directly to hierarchies, but rather by making a rational argument about better insights into clinical matters, that are however similar to the

arguments made by secretaries performing comparable tasks. The relevance and influence of hierarchical differences are not explicated by the clinical staff, but are still a part of the institutional and cultural fabric of the organization. Hierarchical differences are part underlying assumptions informing an unspoken understanding of ‘how things are done around here...’.

“We find a way”

Amongst the institutional /cultural themes one in particular stands out – ‘We find a way’ in combination with the subsequent theme of ‘Sacrifice’. In an extract above Doctor 1 explains how he started using WordPerfect 5.1 many years ago and how it offered new possibilities that he had not thought about in the past. This particular comment does however also contain a remark that in the situation did not seem important. Doctor1 in the end explains how one must find ways to get around the system. This is the first mentioning of what appears to be a more general theme – “We find a way”- theme or Coping-theme. As becomes apparent in subsequent interviews the coping theme appears to be present as a more or less hidden, implicit way of thinking and acting across locations and professions and as such points to a more general aspect of studying hospitals as organizations.

A good example of the “we-find a solution”-attitude is in interview with Doctor 2, when talking about the shortcomings of the existing technology and how it at times prevent him from performing his job properly.

- Interviewer: *“But it sounds almost as if – despite all the challenges laid out in front of you by the system and perhaps by management, that somehow you manage?!”* [8]
- Doctor 2: *“Yes, well that is what we do! [...]”* [9]
- Interviewer: *“ [...] Just like that!?”* [10]
- Doctor 2: *“Yes, that is just how it is! – You know, we [laughter] we a reused to working in such a system, but øøøhm, it is not that bad, but it is just annoying.”* [11-12]

Doctor 2 find the systems and the errors annoying but finds solutions. The example also has a clear reference to Normalization and Loyalty themes above in the no blame is placed. It is just how things are.

Another example of a deeply engrained aspiration to make things work out is in interview with Doctor 3, again in response to the inadequate existing systems. *“What we*

typically do is to sit with both systems up. In that way you can read both in OPUS and read in our own system and then you check if they correspond. Do things add up? So it is double-entry book-keeping. That how you do it. You find a solution [...]" (Doctor 3, [30-31])

The 'we find a solution'-attitude in more general terms have also pervaded the work in Sundhedsplatformen. Organizational members have gone the extra mile to make deadlines which has ultimately resulted in reaching the first go-live of the system on time at Herlev Hospital. There is a sense of a willingness to make sacrifices to make things work out, which is also the last of the pervasive cultural themes manifesting themselves in the interviews.

Sacrifice

In the early phases of Sundhedsplatformen many questions were unanswered. This was both regarding functionality, but perhaps equally important about what would become of individual clinicians in a future with Sundhedsplatformen. This uncertainty caused frustration and in the case of Secretary 1 the frustration is triggering another noticeable reaction. There is a sense having to make sacrifices and being a victim of circumstances. An example of this combined sacrifice/victim reaction is found when the attention turns to future affiliation to the project Secretary1 describes how she also needs to move on, but that the lack of clear messages from the program management prevents her from doing so. She explains how she really wants follow the project to the end. As if to say that she is willing to make sacrifices to see it happening. *"[...] I skipped education because of this and now it will be another year before I can start education because I have to apply for funding. So I stand in a bit of a vacuum"* (Secretary 1, [21]).

In an effort to stress the sacrifice / victim position Secretary 1 also points to the sacrifice being made with regards to the family. It is emphasized that it is not just a personal sacrifice, but also involves the family.

"It has also got consequences for the family. Because they too need to accept that there are certain periods, where I cannot pick up the kids and drive to whatever. So it is important someone else is supporting. And because it is - well, it is probably still - the woman who needs to leave early and drive home and pick the children. It is like at our home. And, sure I get all the support I need, so it is not like that, but things still need to fall into place" (Secretary 1, [23]).

In one sentence the interviewee explicates how the entire family is victimized because of the sacrifices she has to make. She is committed to the cause – creating Sundhedsplatformen and thus a better healthcare system is – and able to do it because of the support she enjoys both at work and at home. The latter comment is once again articulating the uniqueness of her as an individual because it is being stressed that she, unlike others is able to cope with the changes. It is not a matter of profession or department, but her as an individual. Later in the interview Secretary 1 is looking ahead to future activities, but still circling around the sacrifices required to make Sundhedsplatformen happen. Secretary 1 suggests forming teams consisting of individuals ‘whom are willing to pull out a month of their working life’ and make a road tour and explain what is coming (Secretary 1, [48]). This is being presented as a sacrifice that she is willing to make.

Another implication of the uncertainty and the sacrifices required, has to do with the relationship with colleagues, which introduces a new theme in the analysis which has to do with Loyalty. It is essentially a question of whether colleagues can thrust you to be there;

“And it is also hard to your colleagues. When are you there and when are you not there? Can we count on you? Some of my colleagues say ‘Well, we don’t count on you. The starting point is that we do not count on you – it’s best like that, because then we don’t get disappointed and it is just great if you come” (Secretary 1, [28]).

5.4 - Recurring patterns – the Anticipation Cycle

One of the essential findings of the analysis above is that the anticipatory actions of the interviewees follows a cyclical pattern. The sensemaking, positioning and scripting does not simply follow a sequential flow, but is rather cyclical in nature. It is what I call the **Anticipation Cycle**.

Taking a step back and seen from a strictly logical perspective the anticipation of organizational members is sequential. Logically individuals initially engage in sensemaking in order to determine the features of the organizational landscape, which is logically followed by an effort to position self and others in the landscape. This sequence is logically concluded by the scripting of possible futures based on the sensemaking and scripting. In reality however the Anticipation Cycle is not a linear

sequence, but exactly a cycle that can be entered anywhere – it is a cycle and not a sequence. The interviewees do not make sense, position or script their future in an orderly and structured way. Beginning, middle and end appear in fragments and in practice individuals skip around in the cycle and make sense, position and script depending on what is required in the situation to create or maintain a coherent organizational presence of the self.

Below are several examples this cycle, broken down to the simplest version consisting of the skeleton (Martin et al., 1983) in order to clearly illustrate the cyclical nature of anticipation. The paragraph column refers to what section in the interview. The column titled ‘micro narrative fragment’ contains just that – the ‘micro narrative fragment’ or the *skeleton* version of the statement from the interview. In the column titled ‘Anticipation Cycle Code’ is the code that corresponds to the themes described above and the number refers to the logical sequential order of the statement. 1) Sensemaking, 2) Positioning, 3) Scripting and 4) Cultural themes

Nurse 6

In the case of Nurse 6 the Sensemaking cycle does not start with the identification of bad technology. The interviewee describes the activities associated with receiving the patient in the departments and through this points to the uniqueness of the department. They had tried out different technologies for entering data but because of their special requirements as a department they had to do something different than other hospitals. Nurse 6 in other words starts the Anticipation Cycle by positioning the department as unique, but quickly turns to the limitations of the technology. If we break down the story of Nurse 6 and fit it into the template of the Anticipation Cycle it looks like this;

Nvivo Paragraph	Micro narrative fragment	Anticipation Cycle Code
13	We are a unique department, with special technological requirements	Uniqueness of Dep. (2)
15	So far the technology has not served our purposes	Past experiences w. bad technology (1)
16	But it is actually okay now	Normalization (1)

16	For some reason we did not get the tools that were actually available (Blackboxing the problem)	Loyalty (4)
20	Bad technology may cause errors in the entered data, e.g. in a late night shift	Past experiences w. bad technology (1)
22	But we find a way of dealing with it	'We find a solution' (4)
24	The increase in standardization may be a problem to the older colleagues	Age of others (2)
24	But I think it is going to be good	New possibilities (3)

When the interview is broken down into its Anticipation Cycle components it becomes apparent that the utterances of the interviewee are not strictly sequential, but rather fragmented. It does however also show that the interviewee completes the Anticipation Cycle, including initial sensemaking, positioning and scripting the future. A similar example is found with Doctor 1

Doctor 1

The case of Doctor 1 the interviews starts with the identification of the new possibilities offered by the new system. This is immediately contrasted with the inadequacy of the existing technology (Sensemaking). Doctor 1 refers to the uniqueness of his profession to underline the negative consequences the existing technology, but ends up ironing it out by finding simple solution to the wasted time. He sends people for a walk until the system come back online. Less than 3 minutes into the interview the Anticipation Cycle is completed for the first time. Not in an orderly sequential way but as fragments. This pattern is repeated several times in the interview.

Nvivo Paragraph	Micro narrative fragment	Anticipation Cycle Code
4	I think the new technology is going to be great	New possibilities (3)

5	Because the existing technology is bad and slow	Bad technology (1)
6	In my profession you can't do anything without technology	Uniqueness of profession (2)
6	So sometimes I asked people to go for a walk instead of waiting	'We find a solution' (4)
22	In other hospitals I have seen they do things in smart ways	Positive standardization (1)
26	The new technology is simply smarter	New possibilities (1)
27	Sure you can run a hospital with what we have to day	Normalization (1)
30	When using old technology you simply find you ways around it	'We find a solution' (4)
34	At first I was skeptical about this new technology – something new from “above”	Uncertainty (1)
34	And in the past we have found was around problematic new initiatives	'We find a solution' (4)
37-39	This time it is different because clinical staff members are involved	Involving clinical staff (4)
49	Looking ahead to the future, my job is not going to change	Uniqueness of profession (2)
49	But the older Doctors will get challenged	Age (2)
50	Young Doctors will be the experts	Age (2)
53	Collaboration in departments will change	Standardization (1)
54 - 59	Because all communication is done in the system – it becomes easier	Standardization (1)

67 - 69	Relationships between profession might change, but hierarchies are more within professions	Hierarchy (4)
	But it is probably between ages the big rift will come	Age (2)

Nurse 1

In the case of Nurse 1, the Anticipation Cycle starts by confirming that she does not see the future Sundhedsplatform as a threat, but as the interview progresses this turns out not to be the case. Immediately after the 'positive' opening she points out the negative consequences of future standardization of workflows which characterizes the remainder of the interview.

Nvivo Paragraph	Micro narrative fragment	Anticipation Cycle Code
2	I think we are going to be controlled by the new HIT	Negative Standardization (1)
4	The transparency of the system exposes individuals	Negative Standardization (1)
12	Particularly the older generation will resist	Age (2)
12 - 13	The individualized lists is a problem	Negative Standardization (1)
12	This is not how we work	Rebellion (3)
15	This is not how we nurses think	Uniqueness of Profession (2)
22	So we are going to use the system in our way	Rebellion (3)
27	If the system dictates tasks that we disagree with we will simply ignore it	Rebellion (3)

33	Nursing in these systems becomes very standardized	Negative Standardization (1)
33	And Danish nurses are just more holistic	Uniqueness of Profession (2)
36	On the one hand we are very good at using prose when describing observations	Uniqueness of Profession (2)
36	But on the other hand the new system has the potential to enrich our vocabulary	Positive Standardization (1)
41	So it is going to be a fantastic system	New possibilities (3)

It is notable that the interview with nurse 1 does not contain any references to the cultural themes. It is strictly focused on technology and implementation. This can however be explained by the special circumstances under which the interview was conducted. The interview was conducted during a break of an event specifically focused on the last three candidates to win the contract for Sundhedsplatformen, which appears to have influenced the focus of the interview. Would this have been different if it had been conducted in an office at a hospital? Possibly, but rather than seeing it as a problem it is included as an extra source of information. Locations matter, but the fundamental mechanism of the Anticipation Cycle is still in operation. In other words, the Anticipation Cycle is real. It is however not a neatly structured sequence of steps.

It can be thought of as an arena of resources available to individuals in their efforts to maneuver a constantly changing organization that rearrange what only moments before seemed like robust points to navigate by. Rights and responsibilities associated with organizational positions, when new technologies standardize work. What previously was tasks reserved for skilled professionals is increasingly being performed by others because the technology makes it possible and because efficiency makes it desirable.

With the presentation of the three elements making up the Anticipation Cycle it is possible to sum up and present the Anticipation Cycle as a formal and structured model. By combining the three existing analytical approaches into a coherent model, makes for

a better foundation which is better suited to describe and analyze the interviews than the individual theories.

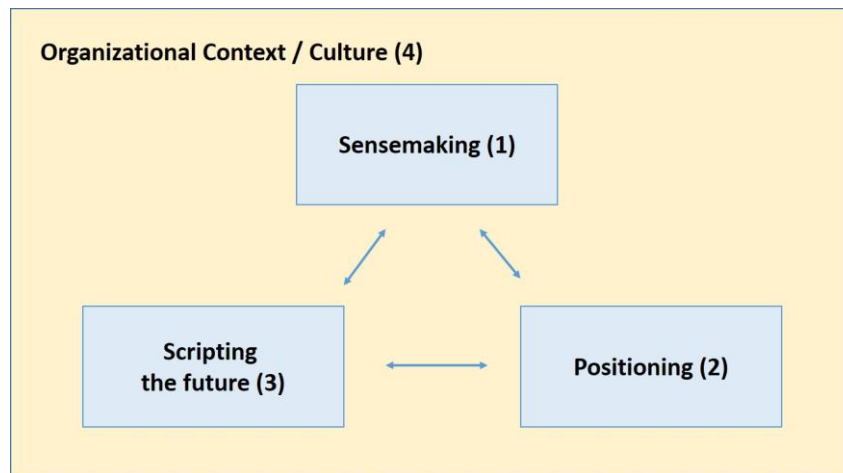


Figure 5.1: The Anticipation Cycle

Sensemaking is happening when individuals are looking outward on what is transforming the organizational landscape. Individuals make sense of the pending changes by adjusting their inner organizational map by taking into account the new features of the organizational landscape. Positioning is happening when individuals are looking inwards in an effort to assess and renegotiate the ability of self and others to cope with and navigate the new organizational landscape. If, in other words the initial Sensemaking does not managed to protect the institutionalized rights and responsibilities of the group or individual adequately, positioning of self or others can help in securing the rights and responsibilities or alternatively identify a new / alternative position that offers equally attractive rights and responsibilities

By making sense and positioning self and others in desirable ways the ground is laid for scripting a future with a suitable position for one self. If on the other hand the individual has not managed to make sense of the changes in a way that leads to resolution or positioning self with desirable rights and responsibilities it can turn out to be virtually impossible to script a desirable future. Lack of future turns individuals into victims. In contrast a future based on a 'successful' sensemaking and on identification of a suitable position (either the same as now or a new one) leads to a brighter future with new possibilities.

Applying the concepts of the Anticipation Cycle to the interviews makes it possible to identify and to perform a more granular analysis of pertinent themes, then would be

possible with the individual theoretical approaches. The Anticipation Cycle allows for a broader spectrum of analysis than what is possible if only applying the individual theories. Sensemaking offers retrospective insights into and ways of describing certain aspects of organizational life, and positioning theory and the concept of scripting offers insights into other aspects of organizational life. In combination the three concepts constitute what I call the Anticipation Cycle which is a framework for the analysis of the anticipatory phase preceding the implementation of Sundhedsplatformen.

5.5 – Anticipating organizational change

Quick recap. The main question of the dissertation is;

- How do organizational members react to an extended anticipatory phase prior to pending major organizational change?
- Does anticipation amongst organizational members' act as an enable or barrier to pending organizational change?

A preliminary conclusion is that anticipation of organizational change is not passive. Organizational members engage in anticipatory actions including sensemaking, positioning and scripting of the future. As described above this is not an orderly and sequential process but rather occurring in a cyclical pattern in which the organizational members shift back and forth in efforts to prepare for the pending organizational change.

The interviewees seem to use the interview situation to enact possible futures and to position themselves in relation to what might come. As such the interview functions as sensemaking (Weick, 1995) moments in which interviewees inscribe themselves into possible futures by defining and redefining themselves in relation to others in accordance with the acceptable performance of their current position. The future demands change, but one must move or redefine in accordance with existing rules.

The interviews of the dissertation can to a wide extent be seen as sessions in which interviewees attempt to write, what in Goffmanian terms could be described as early drafts of the script for the future play. The involved doctors, nurses and secretaries are using the interviews to try out ideas of content for their roles in the future play. It is not without reluctance, because the previous play has been put on for ages and the content of the roles has reached institutionalization where they are taken for granted.

It is as if the clinical staff tries to fit the new technology into the play in a way that allows them to continue playing the role as previously – and why? Why not change? Because the role of being nurse, doctor or secretary is so deeply rooted and the identity it gives such an engrained part of the actors own identity. Perhaps the two are inseparable. Being a doctor is not something that one simply put on like a uniform or costume. It is not just a mask that covers the real face of the real person. It is a mask / role but there is nothing behind. One can put on another mask, but that does not cover something more real (Goffman, 1959). The role is real. The role of the doctor is the real doctor.

The looming introduction of Sundhedsplatformen can be seen to create a frame (Goffman, 1986) within which activities, roles and responsibilities are being interpreted. It is within this new frame we should understand the reactions of the interviewees. Inherent in the frame of Sundhedsplatformen is also the notion of technology per definition representing progress. We find this view well represented in the numerous Health IT strategies published over the years, and Sundhedsplatformen makes the same promise of a better future. Using the Anticipation Cycle it can be argued that a new dominant storyline is emerging, not just in the views presented in the official documents, but also amongst interviewees who agree to a storyline essentially stating that Sundhedsplatformen represents progress.

An essential function of anticipatory actions is the defense of current and future organizational positions. The actors are employing various strategies to defend their position in the organization or in Goffmanian terms they perceive to be the defining characteristics of their current role. What are the things that makes them what they are and how are they defended?

Doctors defend their position referring to the uniqueness of the tasks they perform. *“The acts that I perform are so important that a new stage prop/technology does not really change anything”*

Nurses find ways to circumvent the new technology and thus to evade the intrusive character of the new technology. *“If it does not fit with how we do things, we will find ways around it.”*

Secretaries seem to know that their role is undergoing more fundamental changes and are searching for new roles or to redefine the performance of their current role to stay in the play. *“Well, we might have to pick up some of the acts of the other players”*.

In all three cases we are seeing various strategies for coping with changes.

What in the past may have seemed like set in stone – institutionalized ways of acting in the context of the hospital – is now up for renegotiation, simply because it is required in order to realize the potential of Sundhedsplatformen. If on the contrary rights, duties and obligations do not change according to the demands of the new Health IT, Sundhedsplatformen is likely to fail in realizing its potential. The clinical staff members are trying to inscribe themselves into possible and desired futures.

From an overall point of view Sundhedsplatformen results in pushing activities which up till now have been seen to require the insight and experience of a clinical specialist, into the domain of standardized processes and thus essentially reducing the professional ‘value’ of the task. In positioning terms, the value or prestige of the rights and responsibilities associated with certain tasks is reduced because of the move from the domain of the individual specialist to the domain of the standardized process. For the doctors of the study this does, perhaps surprisingly, not represent a problem. The standardization and moving of activities to the process end of the spectrum is welcomed because it is seen to free up resources to perform the tasks, and in positioning terms exercise the rights and responsibilities that constitutes the essence of being a doctor.

In contrast to this we find the nurses whom are expressing concerns about the consequences of standardization. An important argument is e.g. that standardized charts are not able to capture the variations in conditions from one patient to the next. *“We cannot put our patients into boxes”*. This direct interaction with the patient and the ability to sense and capturing subtle changes in conditions constitutes are core of the nurse self-understanding, which is seen to be reducing the professional value because the standardization transfers it from the professional domain to the process domain.

Amongst the secretaries the pending changes – the push towards increased standardization – is hardly mentioned. It is as if they are saying ‘Yes, it will be fine not having to document so much’, and as such it is not seen to affect the essence of being a secretary. Their work is still about controlling, coordinating and following the processes

to ensure availability of accurate data and a smooth flow of the day-to-day operations of the department.

Autonomy / Standardization-model

The Autonomy/Standardization-model (AS model) below is a 2x2 matrix derived from the analysis of Sundhedsplatformen. The AS-model depicts the relationship between Standardization and Autonomy on one axis and the continuum of clinical specialization from low to high on the other axis. There are obvious similarities between the AS-model and Perrow's (1967) model described in the literature review. They are both 2x2 models concerned about standardization in organizations, but where Perrow is focusing on the nature of tasks to be performed, the nature of technology and e.g. the number of exceptional cases to be dealt with, the main purpose of the AS-model is to visualize the consequences to individuals of the standardization introduced by HIT. By integrating the main issues identified in the interviews in a single model it is possible to get a schematic overview of the organizational landscape populated by the clinical staff and how the pending changes may impact the landscape. Inspired by Goffman the AS-model can be seen as the *stage* or *arena* of organizational change. This is the stage that the clinical staff is positioned on, and it is possible to place the clinical staff in the matrix according to the narratives of the interviews.

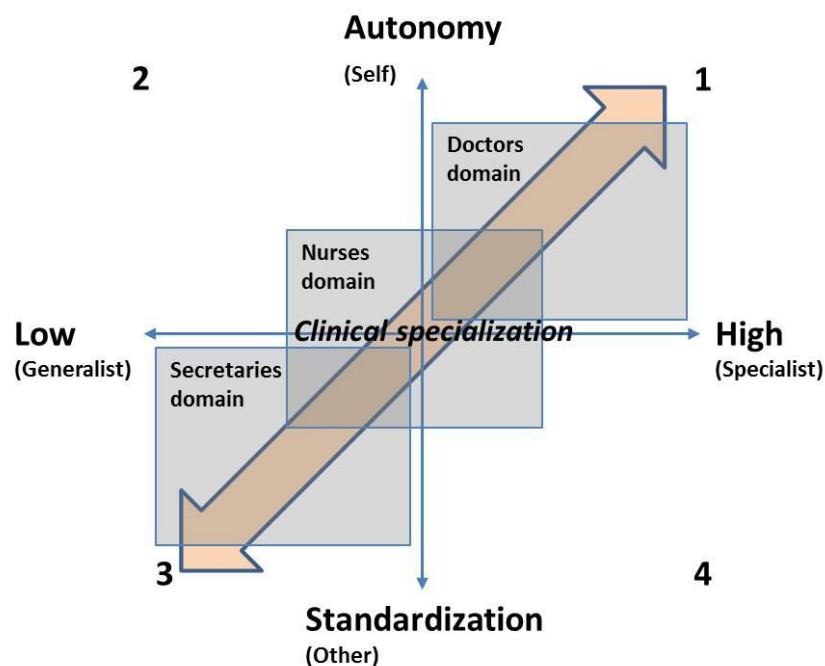


Figure 5.2: AS-model before implementation of Sundhedsplatformen

The x-axis of the model above shows the level of clinical specialization of individuals. Clinicians are distributed depending on their responsibility with regards to Controlling, Caring and Curing;

- The Secretaries domain is characterized by tasks relating to controlling and coordinating. The work of medical secretaries can be described as *“to take care of patient records by ensuring that information is complete, up to date , and correctly coded, while they also carry out information gatekeeping and articulation work”* (Bossen, Jensen, & Udsen, 2014, p. 75). One of the consequences of this hub-like position of the secretary is that the work secretaries has become more tightly coupled with the work of other clinical staff, which has led to task drift amongst professions (Bossen et.al 2014, p. 75). These characteristics place medical secretaries in the quadrant dominated by standardized process work, with some overlap with the next profession – Nurses.
- The domain of the Nurses is predominantly about caring. It is in the broad cross section spanning both administrative tasks and tasks characterized by a high level of clinical specialization we find the nurses. The nurse is required to navigate the dilemmas of the often contradictory demands they are facing. *“The directives conflict: be caring and yet professional, be subordinate and yet responsible, be diffusely accountable for a patients total well-being and yet oriented to the hospital as an economic employer”* (Chambliss, 1996, p. 62). Chambliss concludes by saying that *“Perhaps no other occupation suffers so great a conflict between the practical requirements of the job [...] and the explicitly moral goals of the profession”*(Chambliss, 1996, p.74).
- The main task of doctor is to assist in curing or alleviating ails of the patients. Traditionally Doctors perform more autonomous tasks with a higher level of clinical specialization than the two professions above. In a large scale study of the state of the medical profession in the UK , doctors themselves observed that what made them distinctive as a profession was *“the uniquely complex scientific and analytical approach of the doctor compared to the roles of other health professionals”* (Levenson, Dewar, & Shepherd, 2008, p. xi). Whether this is exactly right or not belongs in a different study, but it is certainly safe to say that in the inter hospital hierarchy doctors are afforded the most autonomy to act as individual specialists. In the interview with Secretary 4 the hierarchy of the clinic is summed up well. *“Well, you know that the chief physician is on top of the hierarchy and then comes the little doctors, as they are called, the junior physicians. It is the kind of thing you can hear patients say – ‘who is working*

today? Well, she is a junior physician. A junior?!' And then after the doctors comes the nurses and then after that we might be lucky to be included. You know, it is something about who is... It is old traditions I think, but it still linkers on" (Secretary 4, 1 [38]).

The y-axis shows the level of autonomy afforded to individuals in their work-practice. If work is very standardized someone else (Doctors) or something else (IT system) decides what tasks to perform. Work follows standardized processes. A high degree of autonomy is in contrast typically afforded to individuals performing highly specialized tasks. Decisions are made by the individual specialist. This axis has to do with the level of external control imposed on the working situation.

In the analysis of interviews, it has been identified that the interviewees are using positioning as a kind of defense mechanism. In the same way Chambliss identifies the 'care', not just as an empirical description of duties, but as a defense of their own importance (Chambliss, 1996, p. 68). Chambliss makes another observation closely related to the framework / model I have develed. "*Nurses' daily work is guided by others: by administrators, some of whom come from nursing; by head nurses who assign them patients; and by physicians, whose detailed orders structure their medical tasks"* (Chambliss, 1996, p.74). In the discussion of ethics associated with clinical work Chambliss suggests seeing doctors as the ones who often *decides* and nurses more often *do* (Chambliss, 1996, p. 87). This perfectly reflects the split between decision making and performing actions of my model.

The line crossing from process/other (Q3) to Profession/self (Q1) is defined as the line of balance on which there is stability between the rights and responsibilities associated with certain levels of autonomy. The upwards movement of individuals is governed by institutionalized professional boundaries that guards the limits of rights and responsibilities associated with various levels. So when secretaries e.g. suggest 'stealing' tasks from nurses, it constitutes a potential violation of the separation of rights and responsibilities. Through specialization (e.g. nurses becoming Stråleterapeuter) and experience it is possible to move towards Q1 and increase the professional autonomy of one self and leave standardized process work to others.

Q2 and Q4 – Inefficient and undesirable

It is not efficient to ask highly specialized professionals to perform standardized, process tasks. In Q4 the use of skilled professional resources is poor, and it can either be seen as a violation of the rights of the individual or imposing responsibilities that are not suitable. In either case it will be experienced as unsatisfactorily if skilled professionals are asked to perform standardized tasks.

In Q2 the processes are inefficient or poorly designed. What are essentially process oriented tasks are left to autonomous individuals to handle rather than being fitted into a standardized process.

It should be noted, that the design and timing of this research project does not allow to say anything about what actually happens. No moves have been seen yet. The changes have not happened yet. It is however possible to describe how the pending changes will affect the organization (the move from the AS-model above to the AS-model below) and through the interviews get an understanding of how organizational members react to this. In the AS-model the domains of the individuals, which are rough delineations of the institutionalized rights and responsibilities associated with professions are fixed and it is the change in the organizational frame that will move as a result of the pending introduction of new technology.

When standardizing through the introduction of new HIT Q3 is made larger. This is in a sense the purpose of introducing new IT. It is an effort to increase efficiency by standardizing activities into streamlined processes which in term can be automated or performed by lower skilled resources. Through the introduction more and more tasks can be fitted into standardized processes of Q3 leaving less space for the inefficient Q2 and Q4. As a consequence, however, Q1 – the domain of the autonomous professional activities has shrunk significantly.

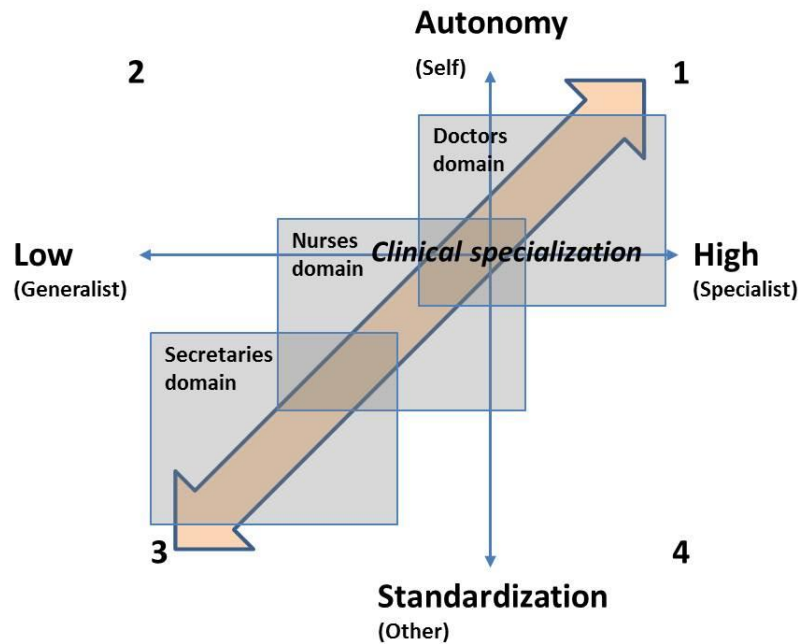


Figure 5.3: AS-model – anticipation of the post-implementation of Sundhedsplatformen

With the introduction of Sundhedsplatformen the autonomy is under pressure by standardization required by the technology in order to realize its potential. New technologies standardize areas of work and organizational life that has previously been domains of autonomous professionals. Therefore, new technology demands redefinition of selves and renegotiation of rights and responsibilities that has previously been taken for granted. Applying the Anticipation Cycle to the AS-model offers insights into how clinicians cope with or rather prepare for the pending changes illustrated in the model. The interviewees are anticipating the changes illustrated in the AS-after-model and in their efforts to protect or identify new positions.

A conclusion is that in order to realize the benefits of increased standardization of processes through the introduction of new HIT, highly skilled professionals will have to specialize further in order to populate the relatively smaller Q1 and/or accept handling standardized process work (Q3). A failure to do this will either result in inefficient use of resources (Q4) or a situation of lingering poor processes (Q2) governed by individuals.

In Q1 work is individualized and in Q3 it is more collaborative in nature. Doctors and nurses will have to accept moving in to Q3 in order to realize the potential for collaboration. It could be argued that it should not be seen as a loss of professional autonomy but rather a precondition for working in a more collaborative way.

Moves into Q3 can be seen as the new normal condition of collaborative working, where following certain standards and processes is the precondition for freeing up resources to operate in Q1. It is not unlikely that doctors and secretaries could develop a common interest in maintaining the separation between tasks performed by the respective groups based on a desire to holding on to tasks. This might involve secretaries joining in on the ward rounds and do the 'typing' on behalf of doctors who deals with patients (e.g. Nurse1, 2 [14]).

Another conclusion is that the sensemaking and the positioning and scripting of the future acts as a kind of buffer between the institutionalized reality of the hospital and the demands from the surrounding world. Hierarchies, demand for autonomy and other aspects are part of reality at hospitals, but it is buffered/screened by normality e.g. imposed through sensemaking and positioning as unique. Clinical staff members are protecting the rights and responsibilities of their current positions in the institutional frame of the hospital organization. The opposition to pending changes that organizational members express to change are in other words better understood as a resistance to having to give up institutionalized rights and responsibilities, which in term means that the key to understanding the complexity involved in organizational change is to understand how the rights and responsibilities of individuals are affected. Coping strategies essentially has to do with maintaining a desired position that incorporates the reality of Sundhedsplatformen.

Studying this now, prior to go live, offers insights not available in the post-implementation study, because positions and actual consequences are still in a fluid state allowing people to do their intrapersonal positioning without regards to solidified structures. The future is still negotiable. Once organizational structures solidify around the new technological reality, the pragmatics of everyday practices comes to dominate. '*We find a way*' and making the necessary sacrifices becomes the order of the day, because of the deeply engrained loyalty to the system.

6 - Conclusion and Reflections

This chapter concludes the dissertation and when these lines are written the development and deployment of the first wave of Sundhedsplatformen has already been completed. On May 21st 2016 Sundhedsplatformen was put in production at Herlev/Gentofte Hospital, and as described in the literature review this is typically where researchers in previous studies of EHR-deployments would have started. This is the point in time when research on the post-implementation phase and the actual organizational changes caused by the new technology could commence. From a research point of view, it is almost as if nothing important happened before the system was switched on. The three years leading up to go-live with Sundhedsplatformen has shown that this is a fundamental misunderstanding.

The irony is that anybody who has worked in an organization, with significant organizational change pending, will know that the talk during lunch or at the coffee machine starts well before any actual changes occur. Whether pending change is caused by new technology, financial cut-backs or ritual, recurring organizational reshuffling is less important. Once the genie is out of the bottle, the pending change becomes part of organizational reality, even if it is still in the future.

This dissertation has presented a theoretical / conceptual framework for the analysis of this pre-implementation phase and as written in the introduction the case of Sundhedsplatformen has offered a unique opportunity to analyze the pre-implementation phase because of the magnitude of the pending change. It has clearly been something else than an intermezzo in between times of normality.

6.1 - Answering the research questions

The dissertation has been structured to answer two main questions;

- **Q:** *How do organizational members react to an extended anticipatory phase prior to pending major organizational change?*
- **A:** The reaction to an extended anticipatory phase by organizational members is an engaging in recurring patterns of sensemaking, positioning and scripting in an effort to cope with the inherent uncertainty associated with the navigation of uncharted organizational landscape. The recurring pattern is described as the

Anticipation Cycle. The Anticipation Cycle offers a view the mechanisms inside the previously black-boxed pre-implementation phase of pending organizational change.

- **Q:** *Does anticipation amongst organizational members' act as an enable or barrier to pending organizational change?*
- **A:** The effect of the Anticipation Cycle to organizational members, appears to be an obscuring of the inevitable effects of organizational change on institutional practices, including reshuffling of institutionalized rights and responsibilities. Stated differently the Anticipation Cycle acts to postpone the realization of potential 'unpleasant' effects of pending changes through a variety of anticipatory actions, including normalization of events and identification of suitable positions.
- The lack of specific details and concrete knowledge in the anticipatory phase, causes organizational members to articulate their own version of the possible future, but one that to a wide extent is disconnected from the harsh realities to come. The self-inflicted, uninformed optimism of organizational members can thus be seen as an enabler, in the sense that it keeps people from engaging in preemptive conflicts about possible future. At the same time, it does however lay down the seeds of future conflicts.
- As a consequence, organizations engaging in large scale organizational change projects initiated by implementation of new IT are faced with a dilemma. On one hand they can leave organizational members in their state of uninformed optimism fueled by intrapersonal motions through the Anticipation Cycle and thus postpone conflicts to the post implementation phase. This is what happens most often. An alternative may be to make an effort to push the pending issues to the surface prior to implementation, and in a sense encouraging resistance to the change in the anticipation phase, with the intention of securing a smoother transition through the actual organizational changes.

Seeds of future conflicts

In addition to the conclusions above the immediate and perhaps most important finding of the analysis is that the seeds for post-implementation conflicts are already laid in the early anticipatory phase of large IT implementations. The anticipatory phase is not simply passive waiting. The main reason is what appears to be a disconnect between the early conceptualization of the pending change of respectively the future users and

official conceptualization of the solution. Future users tend to focus on the practical and material aspect of the change and underestimates the organizational implications. The anticipation is as stated above characterized by an uninformed optimism the clouds realization of a possible brutal future. In contrast the official communication quickly turns attention to the organizational implications, which is understandable, because this is where the potential gains are found. The realization of the organizational implications is out of sync.

The dilemma of when to deal with resistance in connection with org. change does not have a simple solution. It appears to confirm a fundamental condition in modern organization observed by Hatch and Cunliffe (2013) that the field of organizational reality has gradually changed "*as it becomes less a question of managing or leading change and more one of coming to terms with the dynamics of organizing*" (p.269). So, rather than trying control changes one must understand the mechanics and adjust according to them. The negative effects of major organizational changes cannot be 'talked out of existence'. They are a fact of life and organizational members will react to it. Sooner or later. It is however possible to take into account the dynamic and flexible character of organizational relationships, as advocated for in positioning theory.

To illustrate this move to increased flexibility Harré and Langenhove (1999) uses the example of the relationship between a nurse and a patient. "*Whenever a nurse and a patient find themselves in a nursing episode, what they do will not only be understandable in terms of the roles they occupy in that episode but also of the previous conversations and also of the specific dynamics of that one single episode*" (Harré & Langenhove, 1999, p. 6). Similarly, the relationship between the doctor and the medical secretary cannot be fully understood or described by looking at it like roles interacting. One has to take the specifics of the situation into account and rather than seeing it as roles interacting it should be seen as positions formed by all that has gone before and the concrete context in which it happens. From a strict Goffmanian role perspective these influences are not considered, but from the point of view of positioning theory they are likely to influence an episode. "*Any episode has something which cannot be understood by referring to general rules and roles. Knowing of the past and insight into the current conversation are necessary as well*" (Harré & Langenhove, 1999, p. 6).

To sum up the findings it is suggested that the post-implementation resistance often observed in connection with organizational change is a result of the disconnect between the position and associated right and responsibilities individuals have prepared for themselves in the anticipation phase and the actual consequences experienced post implementation.

The resistance to change, that may be observed in connection with introduction of new technology is in other words not simply resistance to change. Resistance to change is better understood as resistance to threats to institutionalized rights and responsibilities.

It has multiple facets and is better understood and handled by using the theoretical framework of the Anticipation Cycle. Glaser and Strauss (1967) argues that the grounded substantive theory should offer the user of the theory a higher degree of 'control' of a given situation and use the example of the dying patient and the ways in which the involved parties try their best to control the interaction of patient, doctor, nurse, relatives. (p.248). An analog to the situation of the pending organizational change the Anticipation Cycle should offer the involved parties a better understanding and control of the situation because it offers a deeper and more advanced insight into the mechanisms at play while organizational members are waiting for the change. The Anticipation Cycle offers better control of pending organizational change.

6.2 - Hospitals - special kinds of organizations

Having completed all the sorting and structuring of data and after having analyzed codes and patterns and after condensing results into models and drawing final conclusions - one question remains to be answered. Are the findings generalizable? It is essentially the question of whether it makes sense to use the findings of this dissertation in other types of organizations or whether hospitals are so special that they require their own approach.

To a smaller or larger degree all interviews of the dissertation makes subtle allusions to an underlying theme of the hospital as a special kind of organization. It is not spelled out by the interviewees that the hospital is special kind of place. The hospital represents the normality to the clinicians, which results in an institutional blindness to the peculiarities of everyday practice. The taken for grantedness of institutionalization covers up the organizational aspects that stands out to the outsider.

Perrow (1967) argued that there is a need for a classification system better capable of encompassing the variation of types of organizations. He writes that *"a better system would be one which conceptualizes organizations in terms of the work that they do rather than their structure or their goals"* (Perrow, 1967, p. 204). Well, hospitals are unlike any other organizations in that what they do *is* their goal! At hospitals they save lives and it *is* their goal. In other types of organizations, they might produce goods, but the goal is to earn money. In an organizational perspective the *raison d'être* of the hospital makes it different than other organizations, which makes it all the more puzzling that hospitals seem to be one of the favorite sites to use as examples when describing what goes on in organizations in more general terms.

Virtually no other types of organizations force existential question on its members in a manner such as the hospital. Virtually no other type of organization deals with life and death in such a direct manner. Hospitals are not like other organizations and seems like poor examples of 'standard organizations'. To most people death is not something to consider in an ordinary workday. *"Discussions of the ethics of life and death pose difficult questions, but the answers given by most people won't matter"* (Chambliss, 1996, p. 5). At hospitals the answers matter. This makes hospitals unlike other organizations. Doctors and nurses are involved in writing 'Do Not Resuscitate' orders and perform late abortions. Chambliss describes the reality of hospitals as abnormal to most people, but that it is transformed into routine to allow for people to be there (Chambliss, 1996, p. 10). In hospitals, as a normal part of the routine, people suffer and die. *"[A] good working definition of a hospital is that place where death occurs and no one notices; or more sharply, the place where others agree to notice death as a social fact only so far as it fits their particular purpose"* (Bosk in Chambliss, 1996, p. 16). By ignoring this special condition in the use of hospitals as 'typical' organization there is a great risk of rendering a distorted image of the inner workings of organizations as such.

It is however understandable that hospitals are favored as settings for conducting organization studies. Hierarchies are clear to see. The power relations of the professional bureaucracy appear to be clear. Departments are responsible for dealing with different aspects of the 'business'. Paper processing, answering phones, ordering supplies. *"There are fights between departments, arguments with the boss, workers going home tired or satisfied"* (Chambliss, 1996, p. 16).

Hospitals bare all the hallmarks of 'ordinary' organizations e.g. characterized by stability. A possible reason for the apparent stability of practice in hospitals may however be found in the fact that doctors in particular shift workplaces relatively often. As part of the training and continued specialization doctors work at numerous hospitals – both in-land and abroad. As a consequence of the rotation the chance for local practices to develop over time is reduced because with each move and entry into a new organization the institutional clock is reset. The actants reverts to the default roles/ positions/ relationships, which might remove or reduce what local variations may have developed. Am I then suggesting that all studies using hospitals or health organizations as their case may be wrong? No, merely suggesting that it be considered carefully before generalizing results. There is a significant potential for further research in a critical review of the studies using hospitals as setting and cases for organizational change studies

6.3 – Suggestions for further research

A way to determine the value or validity of the proposed theoretical framework is to test whether its usefulness in a future situation of pending organizational change. How might the Anticipation Cycle e.g. be used in connection the next implementation of Sundhedsplatformen or in connection with pending organizational change in an entirely different kind of organization?

If a hospital designs communication efforts associated with pending organizational change based on the conceptual framework of the Anticipation Cycle, it should be possible to better take into consideration reactions of organizational members and possible and desirable positions of organizational members. Application of the Anticipation Cycle framework in situations of pending organizational change increases the awareness of the potential reactions of organizational members which in term makes it possible to establish a better informed dialogue.

Further research should investigate patterns of rights and responsibilities in health organizations specifically and organizations generally. Better insights into how organizational members protect and renegotiate right and responsibilities through inter- and intrapersonal positioning can aid in IT implementations that take into account the individuals that are affected.

Further research is also suggested into the applicability of the models of this study in other industries. The question is whether the recurring patterns of the organizational members from the hospital are found in other in other industries or if they are unique to the hospital context. If this is the case it underlines the hospitals as unique settings requiring a special kind of organizational research approach.

In the present study, focus has been on a specifically Danish context. The question is whether the anticipatory action are specific Danish reactions or whether this is generalizable in a wider context. A suggestion for further research is to looking to the applicability of the Anticipation Cycle beyond the Danish borders. The question is whether the reactions to pending change observed amongst Danish clinicians are specific to a Danish context, a northern European realm and whether or patterns emerge in other cultures?

References

- A.P. Møller Fonden. (n.d.). Rigshospitalets Helipad. Retrieved October 10, 2015, from <http://www.apmollerfonde.dk/projekter/rigets-helipad.aspx>
- Alvesson, M. (2013). *Understanding Organizational Culture* (2nd ed.). London: Sage.
- Andersen, S. K., Nøhr, C., Vingtoft, S., Bernstein, K., & Bruun-Rasmussen, M. (2002). *EPJ-Observatoriet: statusrapport 2002*. Aalborg. Retrieved from www.epj-observatoriet.dk
- Anderson, B. (2010). Preemption, precaution, preparedness: Anticipatory action and future geographies. *Progress in Human Geography*, 34(6), 777–798. <http://doi.org/10.1177/0309132510362600>
- Astrup, P., & Fahnøe, S. (2015). Sygeplejersker: Vi spilder 3.600.000 timer om året. Retrieved June 29, 2016, from <http://www.sondagsavisen.dk/job-og-uddannelse/arbejdsliv/2015-01-16-sygeplejersker-vi-spilder-3-600-000-timer-om-aret/>
- Barley, S. R. (1986). Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments. *Administrative Science Quarterly*, 31(1), 78–108. <http://doi.org/10.2307/2392767>
- Barley, S. R. (1990). The Alignment of Technology and Structure through Roles and Networks. *Administrative Science Quarterly*, 35(1), 61–103. <http://doi.org/10.2307/2393551>
- Barley, S. R., & Tolbert, P. S. (1997). Institutionalization and Structuration: Studying the Links Between Action and Institution. *Organization Studies (Walter de Gruyter GmbH & Co.KG.)*, 18(1), 93.
- Basbøll, T. (2010). Softly constrained imagination: Plagiarism and misprision in the theory of organizational sensemaking. *Culture and Organization*, 16(2), 163–178. <http://doi.org/10.1080/14759551003769318>
- Bauman, Z. (2000). *Liquid modernity*. Oxford.
- Becker, H. S. (1961). *Boys in White*. New Brunswick: Transaction Publishers.
- Becker, H. S. (1998). *Tricks of the Trade: How to Think about Your Research While You're Doing It*. Chicago: The University of Chicago Press.
- Ben-Zion, R., Pliskin, N., & Fink, L. (2014). Critical Success Factors for Adoption of Electronic Health Record Systems: Literature Review and Prescriptive Analysis.

- Information Systems Management*, 31(4), 296–312.
<http://doi.org/10.1080/10580530.2014.958024>
- Berg, M. (2001). Implementing information systems in health care organizations: myths and challenges. *International Journal of Medical Informatics*, 64(2), 143–156.
[http://doi.org/10.1016/S1386-5056\(01\)00200-3](http://doi.org/10.1016/S1386-5056(01)00200-3)
- Bévort, F., & Suddaby, R. (2015). Scripting professional identities: how individuals make sense of contradictory institutional logics. *Journal of Professions and Organization*, 0, 1–22. <http://doi.org/10.1093/jpo/jov007>
- Bloomrosen, M., Starren, J., Lorenzi, N. M., Ash, J. S., Patel, V. L., & Shortliffe, E. H. (2010). Anticipating and addressing the unintended consequences of health IT and policy: a report from the AMIA 2009 Health Policy Meeting. *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*, 18(1), 82–90.
<http://doi.org/10.1136/jamia.2010.007567>
- Boje, D. M. (1991). The Storytelling Organization: A Study of Story Performance in an Office-Supply Firm. *Administrative Science Quarterly*, 36(1), 106–126.
- Boje, D. M. (2001). *Narrative Methods for Organizational & Communication Research*. London: London SAGE Publications.
- Bossen, C., Jensen, L. G., & Udsen, F. W. (2014). Boundary-Object Trimming: On the Invisibility of Medical Secretaries' Care of Records in Healthcare Infrastructures. *Computer Supported Cooperative Work-the Journal of Collaborative Computing*, 23(1), 75–110. <http://doi.org/10.1007/s10606-013-9195-5>
- Boxer, L. (2005). Discourses of change ownership in higher education. *Quality Assurance in Education*, 13(4), 344–352. <http://doi.org/10.1108/09684880510626601>
- Burnes, B., & Cooke, B. (2012). *The past, present and future of organization development: Taking the long view*. *Human Relations* (Vol. 61).
<http://doi.org/10.1177/0018726712450058>
- Burton-Jones, A., & Grange, C. (2013). From Use to Effective Use : A Representation Theory Perspective From Use to Effective Use : A Representation Theory Perspective. *Information Systems Research*, 24(3), 632–658.
- Chambliss, D. F. (1996). *Beyond Caring - Hospitals, Nurses, and the Social Organization of Ethics*. Chicago: The University of Chicago Press.
- Charmaz, K. (2011). Grounded Theory Methods in Social Justice Research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (4th ed., pp. 359 – 380). Thousand Oaks, CA 91320 USA: Sage Publications INC.
- Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed.). London: Sage.
- Cheney, G., Christensen, L. T., Zorn, T. E., & Ganesh, S. (2010). *Organizational*

Communication in an Age of Globalization: Issues, Reflections, Practices, Second Edition (2nd ed.). Waveland Press Inc.

- Christensen, P. M. (2013). Udskilningsløb om én milliard. Retrieved February 23, 2016, from <http://borsen.dk/nyheder/avisen/artikel/11/51811/artikel.html?hl=c3VuZGhlZHNwbGF0Zm9ybTtTdW5kaGVkc3BsYXRmb3Jt>
- Clegg, S., & Baumeler, C. (2010). Essai: From Iron Cages to Liquid Modernity in Organization Analysis. *Organization Studies*, 31(12), 1713–1733. <http://doi.org/10.1177/0170840610387240>
- Cummings, S., Bridgman, T., & Brown, K. G. (2015). Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management. *Human Relations*. <http://doi.org/10.1177/0018726715577707>
- Davies, B., & Harré, R. (1990). Positioning: The Discursive Production of Selves. *Journal for the Theory of Social Behaviour*, 20(1), 43–63. <http://doi.org/10.1111/j.1468-5914.1990.tb00174.x>
- Gabriel, Y. (2000). *Storytelling in organizations, facts, fictions, and fantasies*. New York, N.Y: Oxford University Press.
- Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12, 433–448. <http://doi.org/10.1002/smj.4250120604>
- Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Strategies for Qualitative Research*. Transaction Publishers.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. (University of Edinburgh, Ed.) *Teacher* (Vol. 21). Doubleday. <http://doi.org/10.2307/2089106>
- Goffman, E. (1983). The Interaction Order: American Sociological Association, 1982 presidential address. *American Sociological Review*, 48(1), 1–17. <http://doi.org/10.2307/2095141>
- Goffman, E. (1986). *Frame analysis: An essay on the organization of experience*. Boston, MA: Northeastern University Press.
- Goffman, E. (1997). *Interaction Rituals*. New York: Pantheon.
- Greenhalgh, T., Morris, L., Wyatt, J. C., Thomas, G., & Gunning, K. (2013). Introducing a nationally shared electronic patient record: Case study comparison of Scotland, England, Wales and Northern Ireland. *International Journal of Medical Informatics*, 82(5), E125–E138. <http://doi.org/10.1016/j.ijmedinf.2013.01.002>
- Greenhalgh, T., Potts, H. W. W., Wong, G., Bark, P., & Swinglehurst, D. (2009). Tensions and Paradoxes in Electronic Patient Record Research: A Systematic Literature

- Review Using the Meta-narrative Method. *Milbank Quarterly*, 87(4), 729–788.
<http://doi.org/10.1111/j.1468-0009.2009.00578.x>
- Harré, R., & Langenhove, L. Van. (1999). *Positioning Theory, Moral Contexts of International Action*. (Harré Rom & Lagenhove Luk Van, Eds.). Oxford: Wiley-Blackwell.
- Harré, R., & Moghaddam, F. (2003). *The Self and Others, Positioning individuals and groups in personal, political, and cultural contexts*. (R. Harré & F. M. Moghaddam, Eds.). Westport, Conn: Praeger Publishers.
- Hastrup, K. (1992). *Det antropologiske projekt*. København: Gyldendal.
- Hatch, M. J., & Cunliffe, A. L. (2013). *Organization theory: Modern, symbolic, and postmodern perspectives* (3rd ed.). Oxford: Oxford University Press.
- HIMSS Europe. (2016). HIMSS Europe. Retrieved June 26, 2016, from <http://www.himss.eu/>
- Hollway, W. (1984). Gender difference and the production of subjectivity. In *Changing the subject: Psychology, social regulation and subjectivity* (pp. 27–263). London: Methuen.
- Høstgaard, A. M., & Nøhr, C. (2004). *Metodehåndbog i Undersøgelse af forandringsparathed i forbindelse med udvikling og implementering af nye it-systemer inden for sundhedsvæsenet*. Aalborg. Retrieved from www.epj-observatoriet.dk
- Jensen, C. B. (2010). *Ontologies For Developing Things: Making Health Care Futures Through Technology*. Rotterdam: Sense Publishers.
- Jensen, T. B., Kjaergaard, A., & Svejvig, P. (2009). Using institutional theory with sensemaking theory: a case study of information system implementation in healthcare. *Journal of Information Technology*, 24(4), 343–353.
<http://doi.org/10.1057/jit.2009.11>
- Khong, P., Holroyd, E., & Wang, W. (2015). A Critical Review of the Theoretical Frameworks and the Conceptual Factors in the Adoption of Clinical Decision Support Systems. *COMPUTERS INFORMATICS NURSING*, 33(12), 555–570.
<http://doi.org/10.1097/CIN.0000000000000196>
- Knorr-Cetina, K. (1981). Advances in social theory and methodology: toward an integration of micro- and macro-sociologies. In K. Knorr-Cetina & A. V. Cicourel (Eds.), (p. 325). Routledge & Kegan Paul.
- Leonardi, P. M., & Barley, S. R. (2010). What's Under Construction Here? Social Action, Materiality, and Power in Constructivist Studies of Technology and Organizing. *The Academy of Management Annals*, 4(1), 1–51.
<http://doi.org/10.1080/19416521003654160>

- Levenson, R., Dewar, S., & Shepherd, S. (2008). *Understanding Doctors - Harnessing Professionalism*. London. Retrieved from <http://www.kingsfund.org.uk/sites/files/kf/Understanding-Doctors-Harnessing-professionalism-Ros-Levenson-Steve-Dewar-Susan-Shepherd-Kings-Fund-May-2008.pdf>
- Lewin, K. (1947). Frontiers in Group Dynamics - Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, 1(1), 5–41. <http://doi.org/10.1177/001872674700100103>
- Lewis, L. K. (2014). Organizational Change and Innovation. In L. L. Putnam & D. K. Mumby (Eds.), *The SAGE Handbook of Organizational Communication* (3rd ed., pp. 503 – 524). Thousand Oaks, Calif: SAGE PUBLICATIONS INC.
- Lluch, M. (2011). Healthcare professionals' organisational barriers to health information technologies-A literature review. *International Journal of Medical Informatics*, 80(12), 849–862.
- Lorenzi, N. M., & Riley, R. T. (2010). *Managing Technological Change: Organizational Aspects of Health Informatics*. Springer.
- Maney, K., Hamm, S., & O'Brien, J. M. (2011). *Making the World Work Better: The Ideas That Shaped a Century and a Company*. Upper Saddle River, NJ: IBM Press, Pearson plc.
- March, J., & Simon, H. (1993). *Organizations* (2nd ed.). Cambridge, Mass: Blackwell Publishers.
- Martin, J. (2002). *Organizational Culture - Mapping the Terrain*. London: Sage.
- Martin, J., Feldman, M. S., Hatch, M. J., & Sitkin, S. B. (1983). The Uniqueness Paradox in Organizational Stories. *Administrative Science Quarterly*, 28(3), 438–453.
- Martins, L. L. (2011). Organizational change and development. In S. Zedeck (Ed.), *APA Handbook of Industrial and Organizational Psychology, Vol 3: Maintaining, Expanding, and Contracting the Organization* (pp. 691–728). American Psychological Association. <http://doi.org/10.1037/12171-020>
- Merriam-webster. (2016). Anticipation. Retrieved August 4, 2016, from <http://www.merriam-webster.com/dictionary/anticipation>
- Mishler, E. G. (1986). *Research interviewing, context and narrative*. Cambridge, MA: Harvard University Press.
- Morgan, G. (1986). *Images of Organizations*. London: Sage Publications Inc.
- Moukheiber, Z. (2012). Epic Systems' Tough Billionaire. Retrieved August 9, 2016, from <http://www.forbes.com/sites/zinamoukheiber/2012/04/18/epic-systems-tough-billionaire/#103bfbc93047>

- Nilsson, L., Eriksén, S. ., & Borg, C. . (2014). Social challenges when implementing information systems in everyday work in a nursing context. *CIN - Computers Informatics Nursing*, 32(9), 442–450.
<http://doi.org/10.1097/CIN.0000000000000075>
- Nilsson, L., Eriksén, S., & Borg, C. (2016). The influence of social challenges when implementing information systems in a Swedish health-care organisation. *Journal of Nursing Management*. <http://doi.org/10.1111/jonm.12383>
- Orlikowski, W. J. (1992). The Duality of Technology - Rethinking the Concept of Technology in Organizations. *Organization Science*, 3(3), 398–427.
<http://doi.org/10.1287/orsc.3.3.398>
- Orlikowski, W. J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404–428.
<http://doi.org/10.1287/orsc.11.4.404.14600>
- Orlikowski, W. J., & Barley, S. R. (2001). Technology and institutions: What can research on information technology and research on organizations learn from each other? *Mis Quarterly*, 25(2), 145–165. <http://doi.org/10.2307/3250927>
- Orr, J. E. (1996). *Talking about machines, an ethnography of a modern job*. Ithaca, NY: ILR Press.
- Parrott, G. (2003). Positioning and the Emotions. In R. Harré & F. Moghaddam (Eds.), *The Self and Others* (pp. 29–43). Westport, Conn: Praeger Publishers.
- Perrow, C. (1967). A Framework for the Comparative Analysis of Organizations. *American Sociological Review*, 32(2), 194–208. <http://doi.org/10.2307/2091811>
- Sandberg, J., & Tsoukas, H. (2015). Making sense of the sensemaking perspective: Its constituents, limitations, and opportunities for further development. *Journal of Organizational Behavior*, 36(S1), S6–S32. <http://doi.org/10.1002/job.1937>
- Schein, E. H. (2010). *Organizational Culture and Leadership* (4th ed.). Chichester: John Wiley and Sons Ltd.
- Silverman, D. (2011a). *Interpreting qualitative data, A guide to the principles of qualitative research* (Vol. 4. ed.). London: SAGE Publications Ltd.
- Silverman, D. (2011b). *Qualitative research, Issues of theory, method and practice*. (S. David, Ed.). Los Angeles, Calif.: Sage.
- Sims, H. P., & Gioia, D. A. (1986). *The Thinking Organization*. London: Jossey-Bass Limited.
- Sundhedsministeriet. (1996). *Elektroniske Patientjournaler - hvorfor og Hvordan*. København.
- Sundhedsministeriet. (1999). *National strategi for IT i sygehusvæsnet 2000-2002*.

København.

- Sundhedsministeriet. (2012). *eHealth in Denmark*. Copenhagen. Retrieved from <http://www.sum.dk>
- Sundhedsstyrelsen. (2003). *National IT Strategy 2003-2007 for the Danish Health Care Service*. Copenhagen.
- Tan, S.-L., & Moghaddam, F. M. (1999). Intergroup Relations. In R. Harré & L. Van Langenhove (Eds.), *Positioning Theory* (pp. 178–194). Oxford: Blackwell Publishers Ltd.
- Turan, A. H., & Palvia, P. C. (2014). Critical information technology issues in Turkish healthcare. *Information & Management*, *51*(1), 57–68.
<http://doi.org/10.1016/j.im.2013.09.007>
- Van de Ven, A. H., & Poole, M. S. (1994). Explaining development and change in organizations. *Academy of Management Review*, *20*(3), 510–540.
<http://doi.org/10.5465/AMR.1995.9508080329>
- Van Maanen, J., & Barley, S. R. (1984). Occupational communities: Culture and control in organizations. *Research in Organizational Behavior*, *6*, 287–365.
<http://doi.org/10.1108/02621710810871790>
- Vesterdal, A. (1999). MELLEM ET PAR FADE I SKYLLERUMMET. *Sygeplejersken*, (2), 14–19.
- Vikkelsø, S. (2003). *Electronic patient records and medical practice, Reorganization of roles, responsibilities, and risks*. (H. i København & C. B. S. C. B. S. R. D. C. RDC, Eds.). Handelshøjskolen i København;, København.
- Vingtoft, S., Lippert, S., Bernstein, K., Bruun-Rasmussen, M., Kristensen, M., Nøhr, C., & Andersen, S. (2000). *EPJ Observatoriet: statusrapport 2000*. Aalborg: EPJ-Observatoriet.
- Weick, K. E. (1979). *The Social Psychology of Organizing* (2nd ed.). McGraw-Hill, Inc.
- Weick, K. E. (1989). Theory Construction as Disciplined Imagination. *The Academy of Management Review*, *14*(4), 516. <http://doi.org/10.2307/258556>
- Weick, K. E. (1990). The Vulnerable System - an Analysis of the Tenerife Air Disaster. *Journal of Management*, *16*(3), 571–593.
<http://doi.org/10.1177/014920639001600304>
- Weick, K. E. (1993). The Collapse of Sensemaking in Organizations - the Mann Gulch Disaster. *Administrative Science Quarterly*, *38*(4), 628–652.
<http://doi.org/10.2307/2393339>
- Weick, K. E. (1995). *Sensemaking in Organizations*. Thousand Oaks, Calif: SAGE Publications Inc.

- Weick, K. E. (2012). Organized sensemaking: A commentary on processes of interpretive work. *Human Relations*, 65(1), 141–153.
<http://doi.org/10.1177/0018726711424235>
- Weick, K. E. (2015). Ambiguity as Grasp: The Reworking of Sense. *Journal of Contingencies and Crisis Management*, 23(2), 117–123.
<http://doi.org/10.1111/1468-5973.12080>
- Weick, K. E., & Quinn, R. E. (1999). Organizational Change and Development. *Annual Review of Psychology*, 50, 361–86. <http://doi.org/10.1146/annurev.psych.50.1.361>
- Winthereik, B. R., & Vikkelsø, S. (2005). ICT and integrated care: Some dilemmas of standardising inter-organisational communication. *Computer Supported Cooperative Work*, 14(1), 43–67. <http://doi.org/10.1007/s10606-004-6442-9>
- Zelle, G. (2009). Exploring the application of positioning theory to the analysis of organisational change. *Faculty of Commerce - Papers (Archive)*. Retrieved from <http://ro.uow.edu.au/commpapers/574>
- Aanestad, M., & Jensen, T. B. (2011). Building nation-wide information infrastructures in healthcare through modular implementation strategies. *The Journal of Strategic Information Systems*, 20(2), 161–176. <http://doi.org/10.1016/j.jsis.2011.03.006>

TITLER I PH.D.SERIEN:**2004**

1. Martin Grieger
Internet-based Electronic Marketplaces and Supply Chain Management
2. Thomas Basbøll
*LIKENESS
A Philosophical Investigation*
3. Morten Knudsen
*Beslutningens vaklen
En systemteoretisk analyse af moderniseringen af et amtskommunalt sundhedsvæsen 1980-2000*
4. Lars Bo Jeppesen
*Organizing Consumer Innovation
A product development strategy that is based on online communities and allows some firms to benefit from a distributed process of innovation by consumers*
5. Barbara Dragsted
*SEGMENTATION IN TRANSLATION AND TRANSLATION MEMORY SYSTEMS
An empirical investigation of cognitive segmentation and effects of integrating a TM system into the translation process*
6. Jeanet Hardis
*Sociale partnerskaber
Et socialkonstruktivistisk casestudie af partnerskabsaktørers virkelighedsopfattelse mellem identitet og legitimitet*
7. Henriette Hallberg Thygesen
System Dynamics in Action
8. Carsten Mejer Plath
Strategisk Økonomistyring
9. Annemette Kjærgaard
Knowledge Management as Internal Corporate Venturing
10. Knut Arne Hovdal
*De professionelle i endring
Norsk ph.d., ej til salg gennem Samfundslitteratur*
11. Søren Jeppesen
*Environmental Practices and Greening Strategies in Small Manufacturing Enterprises in South Africa
– A Critical Realist Approach*
12. Lars Frode Frederiksen
*Industriel forskningsledelse
– på sporet af mønstre og samarbejde i danske forskningsintensive virksomheder*
13. Martin Jes Iversen
*The Governance of GN Great Nordic
– in an age of strategic and structural transitions 1939-1988*
14. Lars Pynt Andersen
*The Rhetorical Strategies of Danish TV Advertising
A study of the first fifteen years with special emphasis on genre and irony*
15. Jakob Rasmussen
Business Perspectives on E-learning
16. Sof Thrane
*The Social and Economic Dynamics of Networks
– a Weberian Analysis of Three Formalised Horizontal Networks*
17. Lene Nielsen
Engaging Personas and Narrative Scenarios – a study on how a user-centered approach influenced the perception of the design process in the e-business group at AstraZeneca
18. S.J Valstad
*Organisationsidentitet
Norsk ph.d., ej til salg gennem Samfundslitteratur*

– a Field Study of the Rise and Fall of a Bottom-Up Process

19. Thomas Lyse Hansen
Six Essays on Pricing and Weather risk in Energy Markets
20. Sabine Madsen
Emerging Methods – An Interpretive Study of ISD Methods in Practice
21. Evis Sinani
The Impact of Foreign Direct Investment on Efficiency, Productivity Growth and Trade: An Empirical Investigation
22. Bent Meier Sørensen
Making Events Work Or, How to Multiply Your Crisis
23. Pernille Schnoor
*Brand Ethos
Om troværdige brand- og virksomhedsidentiteter i et retorisk og diskursteoretisk perspektiv*
24. Sidsel Fabech
*Von welchem Österreich ist hier die Rede?
Diskursive forhandlinger og magtkampe mellem rivaliserende nationale identitetskonstruktioner i østrigske pressediskurser*
25. Klavs Odgaard Christensen
*Sprogpolitik og identitetsdannelse i flersprogede forbundsstater
Et komparativt studie af Schweiz og Canada*
26. Dana B. Minbaeva
Human Resource Practices and Knowledge Transfer in Multinational Corporations
27. Holger Højlund
*Markedets politiske fornuft
Et studie af velfærdens organisering i perioden 1990-2003*
28. Christine Mølgaard Frandsen
*A.s erfaring
Om mellemværendets praktik i en transformation af mennesket og subjektiviteten*
29. Sine Nørholm Just
The Constitution of Meaning – A Meaningful Constitution? Legitimacy, identity, and public opinion in the debate on the future of Europe
- 2005**
1. Claus J. Varnes
Managing product innovation through rules – The role of formal and structured methods in product development
2. Helle Hedegaard Hein
Mellem konflikt og konsensus – Dialogudvikling på hospitalsklinikker
3. Axel Rosenø
Customer Value Driven Product Innovation – A Study of Market Learning in New Product Development
4. Søren Buhl Pedersen
*Making space
An outline of place branding*
5. Camilla Funck Ellehave
*Differences that Matter
An analysis of practices of gender and organizing in contemporary workplaces*
6. Rigmor Madeleine Lond
Styring af kommunale forvaltninger
7. Mette Aagaard Andreassen
Supply Chain versus Supply Chain Benchmarking as a Means to Managing Supply Chains
8. Caroline Aggestam-Pontoppidan
*From an idea to a standard
The UN and the global governance of accountants' competence*
9. Norsk ph.d.
10. Vivienne Heng Ker-ni
An Experimental Field Study on the

- Effectiveness of Grocer Media Advertising*
Measuring Ad Recall and Recognition, Purchase Intentions and Short-Term Sales
11. Allan Mortensen
Essays on the Pricing of Corporate Bonds and Credit Derivatives
12. Remo Stefano Chiari
Figure che fanno conoscere
Itinerario sull'idea del valore cognitivo e espressivo della metafora e di altri tropi da Aristotele e da Vico fino al cognitivismo contemporaneo
13. Anders McIlquham-Schmidt
Strategic Planning and Corporate Performance
An integrative research review and a meta-analysis of the strategic planning and corporate performance literature from 1956 to 2003
14. Jens Geersbro
The TDF – PMI Case
Making Sense of the Dynamics of Business Relationships and Networks
15. Mette Andersen
Corporate Social Responsibility in Global Supply Chains
Understanding the uniqueness of firm behaviour
16. Eva Boxenbaum
Institutional Genesis: Micro – Dynamic Foundations of Institutional Change
17. Peter Lund-Thomsen
Capacity Development, Environmental Justice NGOs, and Governance: The Case of South Africa
18. Signe Jarlov
Konstruktioner af offentlig ledelse
19. Lars Stæhr Jensen
Vocabulary Knowledge and Listening Comprehension in English as a Foreign Language
- An empirical study employing data elicited from Danish EFL learners*
20. Christian Nielsen
Essays on Business Reporting
Production and consumption of strategic information in the market for information
21. Marianne Thejls Fischer
Egos and Ethics of Management Consultants
22. Annie Bekke Kjær
Performance management i Process-innovation
– belyst i et social-konstruktivistisk perspektiv
23. Suzanne Dee Pedersen
GENTAGELSENS METAMORFOSE
Om organisering af den kreative gørem i den kunstneriske arbejdspraksis
24. Benedikte Dorte Rosenbrink
Revenue Management
Økonomiske, konkurrencemæssige & organisatoriske konsekvenser
25. Thomas Riise Johansen
Written Accounts and Verbal Accounts
The Danish Case of Accounting and Accountability to Employees
26. Ann Fogelgren-Pedersen
The Mobile Internet: Pioneering Users' Adoption Decisions
27. Birgitte Rasmussen
Ledelse i fællesskab – de tillidsvalgte fornyende rolle
28. Gitte Thit Nielsen
Remerger
– skabende ledelseskrafter i fusion og opkøb
29. Carmine Gioia
A MICROECONOMETRIC ANALYSIS OF MERGERS AND ACQUISITIONS

30. Ole Hinz
Den effektive forandringsleder: pilot, pædagog eller politiker?
Et studie i arbejdslederens meningstilskrivninger i forbindelse med vellykket gennemførelse af ledelsesinitierede forandringsprojekter
31. Kjell-Åge Gotvassli
Et praksisbasert perspektiv på dynamiske læringsnettverk i toppidretten
Norsk ph.d., ej til salg gennem Samfundslitteratur
32. Henriette Langstrup Nielsen
Linking Healthcare
An inquiry into the changing performances of web-based technology for asthma monitoring
33. Karin Tweddell Levinsen
Virtuel Uddannelsespraksis
Master i IKT og Læring – et casestudie i hvordan proaktiv proceshåndtering kan forbedre praksis i virtuelle læringsmiljøer
34. Anika Liversage
Finding a Path
Labour Market Life Stories of Immigrant Professionals
35. Kasper Elmquist Jørgensen
Studier i samspillet mellem stat og erhvervsliv i Danmark under 1. verdenskrig
36. Finn Janning
A DIFFERENT STORY
Seduction, Conquest and Discovery
37. Patricia Ann Plackett
Strategic Management of the Radical Innovation Process
Leveraging Social Capital for Market Uncertainty Management
- 2006**
1. Christian Vintergaard
Early Phases of Corporate Venturing
2. Niels Rom-Poulsen
Essays in Computational Finance
3. Tina Brandt Husman
Organisational Capabilities, Competitive Advantage & Project-Based Organisations
The Case of Advertising and Creative Good Production
4. Mette Rosenkrands Johansen
Practice at the top
– how top managers mobilise and use non-financial performance measures
5. Eva Parum
Corporate governance som strategisk kommunikations- og ledelsesværktøj
6. Susan Aagaard Petersen
Culture's Influence on Performance Management: The Case of a Danish Company in China
7. Thomas Nicolai Pedersen
The Discursive Constitution of Organizational Governance – Between unity and differentiation
The Case of the governance of environmental risks by World Bank environmental staff
8. Cynthia Selin
Volatile Visions: Transactions in Anticipatory Knowledge
9. Jesper Banghøj
Financial Accounting Information and Compensation in Danish Companies
10. Mikkel Lucas Overby
Strategic Alliances in Emerging High-Tech Markets: What's the Difference and does it Matter?
11. Tine Aage
External Information Acquisition of Industrial Districts and the Impact of Different Knowledge Creation Dimensions

- A case study of the Fashion and Design Branch of the Industrial District of Montebelluna, NE Italy*
12. Mikkel Flyverbom
*Making the Global Information Society Governable
On the Governmentality of Multi-Stakeholder Networks*
 13. Anette Grønning
*Personen bag
Tilstedevær i e-mail som interaktionsform mellem kunde og medarbejder i dansk forsikringskontekst*
 14. Jørn Helder
*One Company – One Language?
The NN-case*
 15. Lars Bjerregaard Mikkelsen
*Differing perceptions of customer value
Development and application of a tool for mapping perceptions of customer value at both ends of customer-supplier dyads in industrial markets*
 16. Lise Granerud
*Exploring Learning
Technological learning within small manufacturers in South Africa*
 17. Esben Rahbek Pedersen
*Between Hopes and Realities:
Reflections on the Promises and Practices of Corporate Social Responsibility (CSR)*
 18. Ramona Samson
*The Cultural Integration Model and European Transformation.
The Case of Romania*
- 2007**
1. Jakob Vestergaard
*Discipline in The Global Economy
Panopticism and the Post-Washington Consensus*
 2. Heidi Lund Hansen
*Spaces for learning and working
A qualitative study of change of work, management, vehicles of power and social practices in open offices*
 3. Sudhanshu Rai
*Exploring the internal dynamics of software development teams during user analysis
A tension enabled Institutionalization Model; "Where process becomes the objective"*
 4. Norsk ph.d.
Ej til salg gennem Samfundslitteratur
 5. Serden Ozcan
*EXPLORING HETEROGENEITY IN ORGANIZATIONAL ACTIONS AND OUTCOMES
A Behavioural Perspective*
 6. Kim Sundtoft Hald
*Inter-organizational Performance Measurement and Management in Action
– An Ethnography on the Construction of Management, Identity and Relationships*
 7. Tobias Lindeberg
*Evaluative Technologies
Quality and the Multiplicity of Performance*
 8. Merete Wedell-Wedellsborg
*Den globale soldat
Identitetsdannelse og identitetsledelse i multinationale militære organisationer*
 9. Lars Frederiksen
*Open Innovation Business Models
Innovation in firm-hosted online user communities and inter-firm project ventures in the music industry
– A collection of essays*
 10. Jonas Gabrielsen
Retorisk toposlære – fra statisk 'sted' til persuasiv aktivitet

11. Christian Moldt-Jørgensen
Fra meningsløs til meningsfuld evaluering.
Anvendelsen af studentertilfredsheds-målinger på de korte og mellemlange videregående uddannelser set fra et psykodynamisk systemperspektiv
12. Ping Gao
Extending the application of actor-network theory
Cases of innovation in the telecommunications industry
13. Peter Mejlby
Frihed og fængsel, en del af den samme drøm?
Et phronetisk baseret casestudie af frigørelsens og kontrollens sam-eksistens i værdibaseret ledelse!
14. Kristina Birch
Statistical Modelling in Marketing
15. Signe Poulsen
Sense and sensibility:
The language of emotional appeals in insurance marketing
16. Anders Bjerre Trolle
Essays on derivatives pricing and dynamic asset allocation
17. Peter Feldhütter
Empirical Studies of Bond and Credit Markets
18. Jens Henrik Eggert Christensen
Default and Recovery Risk Modeling and Estimation
19. Maria Theresa Larsen
Academic Enterprise: A New Mission for Universities or a Contradiction in Terms?
Four papers on the long-term implications of increasing industry involvement and commercialization in academia
20. Morten Wellendorf
Postimplementering af teknologi i den offentlige forvaltning
Analyser af en organisations kontinuerlige arbejde med informations-teknologi
21. Ekaterina Mhaanna
Concept Relations for Terminological Process Analysis
22. Stefan Ring Thorbjørnsen
Forsvaret i forandring
Et studie i officerers kapabiliteter under påvirkning af omverdenens forandringspres mod øget styring og læring
23. Christa Breum Amhøj
Det selvskabte medlemskab om managementstaten, dens styringsteknologier og indbyggere
24. Karoline Bromose
Between Technological Turbulence and Operational Stability
– An empirical case study of corporate venturing in TDC
25. Susanne Justesen
Navigating the Paradoxes of Diversity in Innovation Practice
– A Longitudinal study of six very different innovation processes – in practice
26. Luise Noring Henler
Conceptualising successful supply chain partnerships
– Viewing supply chain partnerships from an organisational culture perspective
27. Mark Mau
Kampen om telefonen
Det danske telefonvæsen under den tyske besættelse 1940-45
28. Jakob Halskov
The semiautomatic expansion of existing terminological ontologies using knowledge patterns discovered

- on the WWW – an implementation and evaluation*
29. Gergana Koleva
European Policy Instruments Beyond Networks and Structure: The Innovative Medicines Initiative
 30. Christian Geisler Asmussen
Global Strategy and International Diversity: A Double-Edged Sword?
 31. Christina Holm-Petersen
*Stolthed og fordom
Kultur- og identitetsarbejde ved skabelsen af en ny sengeafdeling gennem fusion*
 32. Hans Peter Olsen
*Hybrid Governance of Standardized States
Causes and Contours of the Global Regulation of Government Auditing*
 33. Lars Bøge Sørensen
Risk Management in the Supply Chain
 34. Peter Aagaard
*Det unikkes dynamikker
De institutionelle mulighedsbetingelser bag den individuelle udforskning i professionelt og frivilligt arbejde*
 35. Yun Mi Antorini
*Brand Community Innovation
An Intrinsic Case Study of the Adult Fans of LEGO Community*
 36. Joachim Lynggaard Boll
*Labor Related Corporate Social Performance in Denmark
Organizational and Institutional Perspectives*
- 2008**
1. Frederik Christian Vinten
Essays on Private Equity
 2. Jesper Clement
Visual Influence of Packaging Design on In-Store Buying Decisions
 3. Marius Brostrøm Kousgaard
*Tid til kvalitetsmåling?
– Studier af indrulleringsprocesser i forbindelse med introduktionen af kliniske kvalitetsdatabaser i speciallægepraksissektoren*
 4. Irene Skovgaard Smith
*Management Consulting in Action
Value creation and ambiguity in client-consultant relations*
 5. Anders Rom
*Management accounting and integrated information systems
How to exploit the potential for management accounting of information technology*
 6. Marina Candi
Aesthetic Design as an Element of Service Innovation in New Technology-based Firms
 7. Morten Schnack
*Teknologi og tværfaglighed
– en analyse af diskussionen omkring indførelse af EPJ på en hospitalsafdeling*
 8. Helene Balslev Clausen
Juntos pero no revueltos – un estudio sobre emigrantes norteamericanos en un pueblo mexicano
 9. Lise Justesen
*Kunsten at skrive revisionsrapporter.
En beretning om forvaltningsrevisions beretninger*
 10. Michael E. Hansen
The politics of corporate responsibility: CSR and the governance of child labor and core labor rights in the 1990s
 11. Anne Roepstorff
Holdning for handling – en etnologisk undersøgelse af Virksomheders Sociale Ansvar/CSR

12. Claus Bajlum
Essays on Credit Risk and Credit Derivatives
13. Anders Bojesen
The Performative Power of Competence – an Inquiry into Subjectivity and Social Technologies at Work
14. Satu Reijonen
*Green and Fragile
A Study on Markets and the Natural Environment*
15. Ilduara Busta
*Corporate Governance in Banking
A European Study*
16. Kristian Anders Hvass
*A Boolean Analysis Predicting Industry Change: Innovation, Imitation & Business Models
The Winning Hybrid: A case study of isomorphism in the airline industry*
17. Trine Paludan
*De uvidende og de udviklingsparate
Identitet som mulighed og restriktion blandt fabriksarbejdere på det aftayloriserede fabriksgulv*
18. Kristian Jakobsen
Foreign market entry in transition economies: Entry timing and mode choice
19. Jakob Elming
Syntactic reordering in statistical machine translation
20. Lars Brømsøe Termansen
*Regional Computable General Equilibrium Models for Denmark
Three papers laying the foundation for regional CGE models with agglomeration characteristics*
21. Mia Reinholt
The Motivational Foundations of Knowledge Sharing
22. Frederikke Krogh-Meibom
*The Co-Evolution of Institutions and Technology
– A Neo-Institutional Understanding of Change Processes within the Business Press – the Case Study of Financial Times*
23. Peter D. Ørberg Jensen
OFFSHORING OF ADVANCED AND HIGH-VALUE TECHNICAL SERVICES: ANTECEDENTS, PROCESS DYNAMICS AND FIRMLEVEL IMPACTS
24. Pham Thi Song Hanh
Functional Upgrading, Relational Capability and Export Performance of Vietnamese Wood Furniture Producers
25. Mads Vangkilde
*Why wait?
An Exploration of first-mover advantages among Danish e-grocers through a resource perspective*
26. Hubert Buch-Hansen
*Rethinking the History of European Level Merger Control
A Critical Political Economy Perspective*
- 2009**
1. Vivian Lindhardsen
From Independent Ratings to Communal Ratings: A Study of CWA Raters' Decision-Making Behaviours
2. Guðrið Weihe
Public-Private Partnerships: Meaning and Practice
3. Chris Nøkkentved
*Enabling Supply Networks with Collaborative Information Infrastructures
An Empirical Investigation of Business Model Innovation in Supplier Relationship Management*
4. Sara Louise Muhr
Wound, Interrupted – On the Vulnerability of Diversity Management

5. Christine Sestoft
Forbrugeradfærd i et Stats- og Livsformsteoretisk perspektiv
6. Michael Pedersen
Tune in, Breakdown, and Reboot: On the production of the stress-fit self-managing employee
7. Salla Lutz
Position and Reposition in Networks – Exemplified by the Transformation of the Danish Pine Furniture Manufacturers
8. Jens Forssbæck
Essays on market discipline in commercial and central banking
9. Tine Murphy
Sense from Silence – A Basis for Organised Action
How do Sensemaking Processes with Minimal Sharing Relate to the Reproduction of Organised Action?
10. Sara Malou Strandvad
Inspirations for a new sociology of art: A sociomaterial study of development processes in the Danish film industry
11. Nicolaas Mouton
On the evolution of social scientific metaphors: A cognitive-historical enquiry into the divergent trajectories of the idea that collective entities – states and societies, cities and corporations – are biological organisms.
12. Lars Andreas Knutsen
Mobile Data Services: Shaping of user engagements
13. Nikolaos Theodoros Korfiatis
Information Exchange and Behavior
A Multi-method Inquiry on Online Communities
14. Jens Albæk
Forestillinger om kvalitet og tværfaglighed på sygehuse
– skabelse af forestillinger i læge- og plejegrupperne angående relevans af nye idéer om kvalitetsudvikling gennem tolkningsprocesser
15. Maja Lotz
The Business of Co-Creation – and the Co-Creation of Business
16. Gitte P. Jakobsen
Narrative Construction of Leader Identity in a Leader Development Program Context
17. Dorte Hermansen
“Living the brand” som en brandorienteret dialogisk praxis: Om udvikling af medarbejdernes brandorienterede dømmekraft
18. Aseem Kinra
Supply Chain (logistics) Environmental Complexity
19. Michael Nørager
How to manage SMEs through the transformation from non innovative to innovative?
20. Kristin Wallevik
Corporate Governance in Family Firms
The Norwegian Maritime Sector
21. Bo Hansen Hansen
Beyond the Process
Enriching Software Process Improvement with Knowledge Management
22. Annemette Skot-Hansen
Franske adjektivisk afledte adverbier, der tager præpositionssyntagmer indledt med præpositionen à som argumenter
En valensgrammatisk undersøgelse
23. Line Gry Knudsen
Collaborative R&D Capabilities
In Search of Micro-Foundations

24. Christian Scheuer
*Employers meet employees
Essays on sorting and globalization*
25. Rasmus Johnsen
*The Great Health of Melancholy
A Study of the Pathologies of Perfor-
mativity*
26. Ha Thi Van Pham
*Internationalization, Competitiveness
Enhancement and Export Performance
of Emerging Market Firms:
Evidence from Vietnam*
27. Henriette Balieu
*Kontrolbegrebets betydning for kausa-
tivalternationen i spansk
En kognitiv-typologisk analyse*
- 2010**
1. Yen Tran
*Organizing Innovation in Turbulent
Fashion Market
Four papers on how fashion firms crea-
te and appropriate innovation value*
2. Anders Raastrup Kristensen
*Metaphysical Labour
Flexibility, Performance and Commit-
ment in Work-Life Management*
3. Margrét Sigrún Sigurdardóttir
*Dependently independent
Co-existence of institutional logics in
the recorded music industry*
4. Ásta Dis Óladóttir
*Internationalization from a small do-
mestic base:
An empirical analysis of Economics and
Management*
5. Christine Secher
*E-deltagelse i praksis – politikernes og
forvaltningens medkonstruktion og
konsekvenserne heraf*
6. Marianne Stang Våland
*What we talk about when we talk
about space:*
7. Rex Degnegaard
*Strategic Change Management
Change Management Challenges in
the Danish Police Reform*
8. Ulrik Schultz Brix
*Værdi i rekruttering – den sikre beslut-
ning
En pragmatisk analyse af perception
og synliggørelse af værdi i rekrutte-
rings- og udvælgelsesarbejdet*
9. Jan Ole Similä
*Kontraktsledelse
Relasjonen mellom virksomhetsledelse
og kontraktshåndtering, belyst via fire
norske virksomheter*
10. Susanne Boch Waldorff
*Emerging Organizations: In between
local translation, institutional logics
and discourse*
11. Brian Kane
*Performance Talk
Next Generation Management of
Organizational Performance*
12. Lars Ohnemus
*Brand Thrust: Strategic Branding and
Shareholder Value
An Empirical Reconciliation of two
Critical Concepts*
13. Jesper Schlamovitz
*Håndtering af usikkerhed i film- og
byggeprojekter*
14. Tommy Moesby-Jensen
*Det faktiske livs forbindtlighed
Førsokratisk informeret, ny-aristotelisk
ἦθος-tænkning hos Martin Heidegger*
15. Christian Fich
*Two Nations Divided by Common
Values
French National Habitus and the
Rejection of American Power*

16. Peter Beyer
Processer, sammenhængskraft og fleksibilitet
Et empirisk casestudie af omstillingsforløb i fire virksomheder
17. Adam Buchhorn
Markets of Good Intentions
Constructing and Organizing Biogas Markets Amid Fragility and Controversy
18. Cecilie K. Moesby-Jensen
Social læring og fælles praksis
Et mixed method studie, der belyser læringskonsekvenser af et lederkursus for et praksisfællesskab af offentlige mellemledere
19. Heidi Boye
Fødevarer og sundhed i senmodernismen
– En indsigt i hyggefænomenet og de relaterede fødevarerpraksisser
20. Kristine Munkgård Pedersen
Flygtige forbindelser og midlertidige mobiliseringer
Om kulturel produktion på Roskilde Festival
21. Oliver Jacob Weber
Causes of Intercompany Harmony in Business Markets – An Empirical Investigation from a Dyad Perspective
22. Susanne Ekman
Authority and Autonomy
Paradoxes of Modern Knowledge Work
23. Anette Frey Larsen
Kvalitetsledelse på danske hospitaler
– Ledelsernes indflydelse på introduktion og vedligeholdelse af kvalitetsstrategier i det danske sundhedsvæsen
24. Toyoko Sato
Performativity and Discourse: Japanese Advertisements on the Aesthetic Education of Desire
25. Kenneth Brinch Jensen
Identifying the Last Planner System
Lean management in the construction industry
26. Javier Busquets
Orchestrating Network Behavior for Innovation
27. Luke Patey
The Power of Resistance: India's National Oil Company and International Activism in Sudan
28. Mette Vedel
Value Creation in Triadic Business Relationships. Interaction, Interconnection and Position
29. Kristian Tørning
Knowledge Management Systems in Practice – A Work Place Study
30. Qingxin Shi
An Empirical Study of Thinking Aloud Usability Testing from a Cultural Perspective
31. Tanja Juul Christiansen
Corporate blogging: Medarbejderes kommunikative handlekraft
32. Malgorzata Ciesielska
Hybrid Organisations. A study of the Open Source – business setting
33. Jens Dick-Nielsen
Three Essays on Corporate Bond Market Liquidity
34. Sabrina Speiermann
Modstandens Politik
Kampagnestyling i Velfærdsstaten. En diskussion af trafikcampagners styringspotentiale
35. Julie Uldam
Fickle Commitment. Fostering political engagement in 'the flighty world of online activism'

36. Annegrete Juul Nielsen
Traveling technologies and transformations in health care
37. Athur Mühlen-Schulte
Organising Development Power and Organisational Reform in the United Nations Development Programme
38. Louise Rygaard Jonas
Branding på butiksgulvet Et case-studie af kultur- og identitetsarbejdet i Kvickly
- 2011**
1. Stefan Fraenkel
Key Success Factors for Sales Force Readiness during New Product Launch A Study of Product Launches in the Swedish Pharmaceutical Industry
2. Christian Plesner Rossing
International Transfer Pricing in Theory and Practice
3. Tobias Dam Hede
Samtalekunst og ledelsesdisciplin – en analyse af coachingsdiskursens genealogi og governmentality
4. Kim Pettersson
Essays on Audit Quality, Auditor Choice, and Equity Valuation
5. Henrik Merkelsen
The expert-lay controversy in risk research and management. Effects of institutional distances. Studies of risk definitions, perceptions, management and communication
6. Simon S. Torp
Employee Stock Ownership: Effect on Strategic Management and Performance
7. Mie Harder
Internal Antecedents of Management Innovation
8. Ole Helby Petersen
Public-Private Partnerships: Policy and Regulation – With Comparative and Multi-level Case Studies from Denmark and Ireland
9. Morten Krogh Petersen
'Good' Outcomes. Handling Multiplicity in Government Communication
10. Kristian Tangsgaard Hvelplund
Allocation of cognitive resources in translation - an eye-tracking and key-logging study
11. Moshe Yonatany
The Internationalization Process of Digital Service Providers
12. Anne Vestergaard
Distance and Suffering Humanitarian Discourse in the age of Mediatization
13. Thorsten Mikkelsen
Personlighedens indflydelse på forretningsrelationer
14. Jane Thostrup Jagd
Hvorfor fortsætter fusionsbølgen ud-over "the tipping point"? – en empirisk analyse af information og kognitioner om fusioner
15. Gregory Gimpel
Value-driven Adoption and Consumption of Technology: Understanding Technology Decision Making
16. Thomas Stengade Sønderkov
Den nye mulighed Social innovation i en forretningsmæssig kontekst
17. Jeppe Christoffersen
Donor supported strategic alliances in developing countries
18. Vibeke Vad Baunsgaard
Dominant Ideological Modes of Rationality: Cross functional

- integration in the process of product innovation*
19. Throstur Olaf Sigurjonsson
Governance Failure and Iceland's Financial Collapse
 20. Allan Sall Tang Andersen
Essays on the modeling of risks in interest-rate and inflation markets
 21. Heidi Tscherning
Mobile Devices in Social Contexts
 22. Birgitte Gorm Hansen
Adapting in the Knowledge Economy Lateral Strategies for Scientists and Those Who Study Them
 23. Kristina Vaarst Andersen
Optimal Levels of Embeddedness The Contingent Value of Networked Collaboration
 24. Justine Grøn­bæk Pors
Noisy Management A History of Danish School Governing from 1970-2010
 25. Stefan Linder
Micro-foundations of Strategic Entrepreneurship Essays on Autonomous Strategic Action
 26. Xin Li
Toward an Integrative Framework of National Competitiveness An application to China
 27. Rune Thorbjørn Clausen
Værdifuld arkitektur Et eksplorativt studie af bygningers rolle i virksomheders værdiskabelse
 28. Monica Viken
Markedsundersøkelser som bevis i varemerke- og markedsføringsrett
 29. Christian Wymann
Tattooing The Economic and Artistic Constitution of a Social Phenomenon
 30. Sanne Frandsen
Productive Incoherence A Case Study of Branding and Identity Struggles in a Low-Prestige Organization
 31. Mads Stenbo Nielsen
Essays on Correlation Modelling
 32. Ivan Häuser
Følelse og sprog Etablering af en ekspressiv kategori, eksemplificeret på russisk
 33. Sebastian Schwenen
Security of Supply in Electricity Markets
- 2012**
1. Peter Holm Andreasen
The Dynamics of Procurement Management - A Complexity Approach
 2. Martin Haulrich
Data-Driven Bitext Dependency Parsing and Alignment
 3. Line Kirkegaard
Konsulenten i den anden nat En undersøgelse af det intense arbejdsliv
 4. Tonny Stenheim
Decision usefulness of goodwill under IFRS
 5. Morten Lind Larsen
Produktiviteten, vækst og velfærd Industrirådet og efterkrigstidens Danmark 1945 - 1958
 6. Petter Berg
Cartel Damages and Cost Asymmetries
 7. Lynn Kahle
Experiential Discourse in Marketing A methodical inquiry into practice and theory
 8. Anne Roelsgaard Obling
Management of Emotions in Accelerated Medical Relationships

9. Thomas Frandsen
Managing Modularity of Service Processes Architecture
10. Carina Christine Skovmøller
*CSR som noget særligt
Et casestudie om styring og menings-
skabelse i relation til CSR ud fra en
intern optik*
11. Michael Tell
*Fradragsbeskæring af selskabers
finansieringsudgifter
En skatteretlig analyse af SEL §§ 11,
11B og 11C*
12. Morten Holm
*Customer Profitability Measurement
Models
Their Merits and Sophistication
across Contexts*
13. Katja Joo Dyppel
*Beskatning af derivater
En analyse af dansk skatteret*
14. Esben Anton Schultz
*Essays in Labor Economics
Evidence from Danish Micro Data*
15. Carina Risvig Hansen
*"Contracts not covered, or not fully
covered, by the Public Sector Directive"*
16. Anja Svejgaard Pors
*Iværksættelse af kommunikation
- patientfigurer i hospitalets strategiske
kommunikation*
17. Frans Bévort
*Making sense of management with
logics
An ethnographic study of accountants
who become managers*
18. René Kallestrup
*The Dynamics of Bank and Sovereign
Credit Risk*
19. Brett Crawford
*Revisiting the Phenomenon of Interests
in Organizational Institutionalism
The Case of U.S. Chambers of
Commerce*
20. Mario Daniele Amore
Essays on Empirical Corporate Finance
21. Arne Stjernholm Madsen
*The evolution of innovation strategy
Studied in the context of medical
device activities at the pharmaceutical
company Novo Nordisk A/S in the
period 1980-2008*
22. Jacob Holm Hansen
*Is Social Integration Necessary for
Corporate Branding?
A study of corporate branding
strategies at Novo Nordisk*
23. Stuart Webber
*Corporate Profit Shifting and the
Multinational Enterprise*
24. Helene Ratner
*Promises of Reflexivity
Managing and Researching
Inclusive Schools*
25. Therese Strand
*The Owners and the Power: Insights
from Annual General Meetings*
26. Robert Gavin Strand
*In Praise of Corporate Social
Responsibility Bureaucracy*
27. Nina Sormunen
*Auditor's going-concern reporting
Reporting decision and content of the
report*
28. John Bang Mathiasen
*Learning within a product development
working practice:
- an understanding anchored
in pragmatism*
29. Philip Holst Riis
*Understanding Role-Oriented Enterprise
Systems: From Vendors to Customers*
30. Marie Lisa Dacanay
*Social Enterprises and the Poor
Enhancing Social Entrepreneurship and
Stakeholder Theory*

31. Fumiko Kano Glückstad
Bridging Remote Cultures: Cross-lingual concept mapping based on the information receiver's prior-knowledge
32. Henrik Barslund Fosse
Empirical Essays in International Trade
33. Peter Alexander Albrecht
*Foundational hybridity and its reproduction
Security sector reform in Sierra Leone*
34. Maja Rosenstock
*CSR - hvor svært kan det være?
Kulturanalytisk casestudie om udfordringer og dilemmaer med at forankre Coops CSR-strategi*
35. Jeanette Rasmussen
*Tweens, medier og forbrug
Et studie af 10-12 årige danske børns brug af internettet, opfattelse og forståelse af markedsføring og forbrug*
36. Ib Tunby Gulbrandsen
*'This page is not intended for a US Audience'
A five-act spectacle on online communication, collaboration & organization.*
37. Kasper Aalling Teilmann
Interactive Approaches to Rural Development
38. Mette Mogensen
*The Organization(s) of Well-being and Productivity
(Re)assembling work in the Danish Post*
39. Søren Friis Møller
*From Disinterestedness to Engagement
Towards Relational Leadership In the Cultural Sector*
40. Nico Peter Berhausen
Management Control, Innovation and Strategic Objectives – Interactions and Convergence in Product Development Networks
41. Balder Onarheim
*Creativity under Constraints
Creativity as Balancing 'Constrainedness'*
42. Haoyong Zhou
Essays on Family Firms
43. Elisabeth Naima Mikkelsen
*Making sense of organisational conflict
An empirical study of enacted sense-making in everyday conflict at work*
- 2013**
1. Jacob Lyngsie
Entrepreneurship in an Organizational Context
2. Signe Groth-Brodersen
*Fra ledelse til selvet
En socialpsykologisk analyse af forholdet imellem selvledelse, ledelse og stress i det moderne arbejdsliv*
3. Nis Høyrup Christensen
Shaping Markets: A Neoinstitutional Analysis of the Emerging Organizational Field of Renewable Energy in China
4. Christian Edelvold Berg
*As a matter of size
THE IMPORTANCE OF CRITICAL MASS AND THE CONSEQUENCES OF SCARCITY FOR TELEVISION MARKETS*
5. Christine D. Isakson
*Coworker Influence and Labor Mobility
Essays on Turnover, Entrepreneurship and Location Choice in the Danish Maritime Industry*
6. Niels Joseph Jerne Lennon
*Accounting Qualities in Practice
Rhizomatic stories of representational faithfulness, decision making and control*
7. Shannon O'Donnell
*Making Ensemble Possible
How special groups organize for collaborative creativity in conditions of spatial variability and distance*

8. Robert W. D. Veitch
*Access Decisions in a Partly-Digital World
Comparing Digital Piracy and Legal Modes for Film and Music*
9. Marie Mathiesen
*Making Strategy Work
An Organizational Ethnography*
10. Arisa Shollo
The role of business intelligence in organizational decision-making
11. Mia Kaspersen
The construction of social and environmental reporting
12. Marcus Møller Larsen
The organizational design of offshoring
13. Mette Ohm Rørdam
*EU Law on Food Naming
The prohibition against misleading names in an internal market context*
14. Hans Peter Rasmussen
*GIV EN GED!
Kan giver-idealtyper forklare støtte til velgørenhed og understøtte relationsopbygning?*
15. Ruben Schachtenhaufen
Fonetisk reduktion i dansk
16. Peter Koerver Schmidt
*Dansk CFC-beskatning
I et internationalt og komparativt perspektiv*
17. Morten Froholdt
*Strategi i den offentlige sektor
En kortlægning af styringsmæssig kontekst, strategisk tilgang, samt anvendte redskaber og teknologier for udvalgte danske statslige styrelser*
18. Annette Camilla Sjørup
*Cognitive effort in metaphor translation
An eye-tracking and key-logging study*
19. Tamara Stucchi
*The Internationalization of Emerging Market Firms:
A Context-Specific Study*
20. Thomas Lopdrup-Hjorth
*"Let's Go Outside":
The Value of Co-Creation*
21. Ana Alačovska
*Genre and Autonomy in Cultural Production
The case of travel guidebook production*
22. Marius Gudmand-Høyer
*Stemningssindssygdommens historie i det 19. århundrede
Omtydningen af melankolien og manien som bipolære stemningslidelser i dansk sammenhæng under hensyn til dannelsen af det moderne følelseslivs relative autonomi.
En problematiserings- og erfarings-analytisk undersøgelse*
23. Lichen Alex Yu
*Fabricating an S&OP Process
Circulating References and Matters of Concern*
24. Esben Alfort
*The Expression of a Need
Understanding search*
25. Trine Pallesen
*Assembling Markets for Wind Power
An Inquiry into the Making of Market Devices*
26. Anders Koed Madsen
*Web-Visions
Repurposing digital traces to organize social attention*
27. Lærke Højgaard Christiansen
BREWING ORGANIZATIONAL RESPONSES TO INSTITUTIONAL LOGICS
28. Tommy Kjær Lassen
*EGENTLIG SELVLEDELSE
En ledelsesfilosofisk afhandling om selvledelsens paradoksale dynamik og eksistentielle engagement*

29. Morten Rossing
Local Adaption and Meaning Creation in Performance Appraisal
30. Søren Obed Madsen
*Lederen som oversætter
Et oversættelsesteoretisk perspektiv på strategisk arbejde*
31. Thomas Høgenhaven
*Open Government Communities
Does Design Affect Participation?*
32. Kirstine Zinck Pedersen
*Failsafe Organizing?
A Pragmatic Stance on Patient Safety*
33. Anne Petersen
*Hverdagslogikker i psykiatrisk arbejde
En institutionsetnografisk undersøgelse af hverdagen i psykiatriske organisationer*
34. Didde Maria Humle
Fortællinger om arbejde
35. Mark Holst-Mikkelsen
Strategieksekverering i praksis – barrierer og muligheder!
36. Malek Maalouf
*Sustaining lean
Strategies for dealing with organizational paradoxes*
37. Nicolaj Tofte Brenneche
*Systemic Innovation In The Making
The Social Productivity of
Cartographic Crisis and Transitions in the Case of SEIT*
38. Morten Gylling
*The Structure of Discourse
A Corpus-Based Cross-Linguistic Study*
39. Binzhang YANG
*Urban Green Spaces for Quality Life
- Case Study: the landscape architecture for people in Copenhagen*
40. Michael Friis Pedersen
*Finance and Organization:
The Implications for Whole Farm Risk Management*
41. Even Fallan
Issues on supply and demand for environmental accounting information
42. Ather Nawaz
*Website user experience
A cross-cultural study of the relation between users' cognitive style, context of use, and information architecture of local websites*
43. Karin Beukel
The Determinants for Creating Valuable Inventions
44. Arjan Markus
*External Knowledge Sourcing and Firm Innovation
Essays on the Micro-Foundations of Firms' Search for Innovation*
- 2014**
1. Solon Moreira
Four Essays on Technology Licensing and Firm Innovation
2. Karin Strzeletz Ivertsen
*Partnership Drift in Innovation Processes
A study of the Think City electric car development*
3. Kathrine Hoffmann Pii
Responsibility Flows in Patient-centred Prevention
4. Jane Bjørn Vedel
*Managing Strategic Research
An empirical analysis of science-industry collaboration in a pharmaceutical company*
5. Martin Gylling
*Processuel strategi i organisationer
Monografi om dobbeltheden i tænkning af strategi, dels som vidensfelt i organisationsteori, dels som kunstnerisk tilgang til at skabe i erhvervsmæssig innovation*

6. Linne Marie Lauesen
Corporate Social Responsibility in the Water Sector: How Material Practices and their Symbolic and Physical Meanings Form a Colonising Logic
7. Maggie Qiuzhu Mei
LEARNING TO INNOVATE: The role of ambidexterity, standard, and decision process
8. Inger Høedt-Rasmussen
Developing Identity for Lawyers Towards Sustainable Lawyering
9. Sebastian Fux
Essays on Return Predictability and Term Structure Modelling
10. Thorbjørn N. M. Lund-Poulsen
Essays on Value Based Management
11. Oana Brindusa Albu
Transparency in Organizing: A Performative Approach
12. Lena Olaison
Entrepreneurship at the limits
13. Hanne Sørum
DRESSED FOR WEB SUCCESS? An Empirical Study of Website Quality in the Public Sector
14. Lasse Folke Henriksen
Knowing networks How experts shape transnational governance
15. Maria Halbinger
Entrepreneurial Individuals Empirical Investigations into Entrepreneurial Activities of Hackers and Makers
16. Robert Spliid
Kapitalfondenes metoder og kompetencer
17. Christiane Stelling
Public-private partnerships & the need, development and management of trusting A processual and embedded exploration
18. Marta Gasparin
Management of design as a translation process
19. Kåre Moberg
Assessing the Impact of Entrepreneurship Education From ABC to PhD
20. Alexander Cole
Distant neighbors Collective learning beyond the cluster
21. Martin Møller Boje Rasmussen
Is Competitiveness a Question of Being Alike? How the United Kingdom, Germany and Denmark Came to Compete through their Knowledge Regimes from 1993 to 2007
22. Anders Ravn Sørensen
Studies in central bank legitimacy, currency and national identity Four cases from Danish monetary history
23. Nina Bellak
Can Language be Managed in International Business? Insights into Language Choice from a Case Study of Danish and Austrian Multinational Corporations (MNCs)
24. Rikke Kristine Nielsen
Global Mindset as Managerial Meta-competence and Organizational Capability: Boundary-crossing Leadership Cooperation in the MNC The Case of 'Group Mindset' in Solar A/S.
25. Rasmus Koss Hartmann
User Innovation inside government Towards a critically performative foundation for inquiry

26. Kristian Gylling Olesen
Flertydig og emergerende ledelse i folkeskolen
Et aktør-netværksteoretisk ledelsesstudie af politiske evalueringsreformers betydning for ledelse i den danske folkeskole
27. Troels Riis Larsen
Kampen om Danmarks omdømme 1945-2010
Omdømmearbejde og omdømmepolitik
28. Klaus Majgaard
Jagten på autenticitet i offentlig styring
29. Ming Hua Li
Institutional Transition and Organizational Diversity: Differentiated internationalization strategies of emerging market state-owned enterprises
30. Sofie Blinkenberg Federspiel
IT, organisation og digitalisering: Institutionelt arbejde i den kommunale digitaliseringsproces
31. Elvi Weinreich
Hvilke offentlige ledere er der brug for når velfærdstænkningen flytter sig – er Diplomuddannelsens lederprofil svaret?
32. Ellen Mølgaard Korsager
Self-conception and image of context in the growth of the firm
– A Penrosian History of Fiberline Composites
33. Else Skjold
The Daily Selection
34. Marie Louise Conradsen
The Cancer Centre That Never Was
The Organisation of Danish Cancer Research 1949-1992
35. Virgilio Failla
Three Essays on the Dynamics of Entrepreneurs in the Labor Market
36. Nicky Nedergaard
Brand-Based Innovation
Relational Perspectives on Brand Logics and Design Innovation Strategies and Implementation
37. Mads Gjedsted Nielsen
Essays in Real Estate Finance
38. Kristin Martina Brandl
Process Perspectives on Service Offshoring
39. Mia Rosa Koss Hartmann
In the gray zone
With police in making space for creativity
40. Karen Ingerslev
Healthcare Innovation under The Microscope
Framing Boundaries of Wicked Problems
41. Tim Neerup Thomsen
Risk Management in large Danish public capital investment programmes
- 2015**
1. Jakob Ion Wille
Film som design
Design af levende billeder i film og tv-serier
2. Christiane Mossin
Interzones of Law and Metaphysics
Hierarchies, Logics and Foundations of Social Order seen through the Prism of EU Social Rights
3. Thomas Tøth
TRUSTWORTHINESS: ENABLING GLOBAL COLLABORATION
An Ethnographic Study of Trust, Distance, Control, Culture and Boundary Spanning within Offshore Outsourcing of IT Services
4. Steven Højlund
Evaluation Use in Evaluation Systems – The Case of the European Commission

5. Julia Kirch Kirkegaard
AMBIGUOUS WINDS OF CHANGE – OR FIGHTING AGAINST WINDMILLS IN CHINESE WIND POWER
A CONSTRUCTIVIST INQUIRY INTO CHINA'S PRAGMATICS OF GREEN MARKETISATION MAPPING
CONTROVERSIES OVER A POTENTIAL TURN TO QUALITY IN CHINESE WIND POWER
6. Michelle Carol Antero
A Multi-case Analysis of the Development of Enterprise Resource Planning Systems (ERP) Business Practices

Morten Friis-Olivarius
The Associative Nature of Creativity
7. Mathew Abraham
New Cooperativism: A study of emerging producer organisations in India
8. Stine Hedegaard
Sustainability-Focused Identity: Identity work performed to manage, negotiate and resolve barriers and tensions that arise in the process of constructing or organizational identity in a sustainability context
9. Cecilie Glerup
Organizing Science in Society – the conduct and justification of responsible research
10. Allan Salling Pedersen
Implementering af ITIL® IT-governance - når best practice konflikter med kulturen Løsning af implementeringsproblemer gennem anvendelse af kendte CSF i et aktionsforskningsforløb.
11. Nihat Misir
A Real Options Approach to Determining Power Prices
12. Mamdouh Medhat
MEASURING AND PRICING THE RISK OF CORPORATE FAILURES
13. Rina Hansen
Toward a Digital Strategy for Omnichannel Retailing
14. Eva Pallesen
In the rhythm of welfare creation
A relational processual investigation moving beyond the conceptual horizon of welfare management
15. Gouya Harirchi
In Search of Opportunities: Three Essays on Global Linkages for Innovation
16. Lotte Holck
Embedded Diversity: A critical ethnographic study of the structural tensions of organizing diversity
17. Jose Daniel Balarezo
Learning through Scenario Planning
18. Louise Pram Nielsen
Knowledge dissemination based on terminological ontologies. Using eye tracking to further user interface design.
19. Sofie Dam
PUBLIC-PRIVATE PARTNERSHIPS FOR INNOVATION AND SUSTAINABILITY TRANSFORMATION
An embedded, comparative case study of municipal waste management in England and Denmark
20. Ulrik Hartmyer Christiansen
Following the Content of Reported Risk Across the Organization
21. Guro Refsum Sanden
Language strategies in multinational corporations. A cross-sector study of financial service companies and manufacturing companies.
22. Linn Gevoll
Designing performance management for operational level
- A closer look on the role of design choices in framing coordination and motivation

23. Frederik Larsen
*Objects and Social Actions
– on Second-hand Valuation Practices*
24. Thorhildur Hansdottir Jetzek
*The Sustainable Value of Open
Government Data
Uncovering the Generative Mechanisms
of Open Data through a Mixed
Methods Approach*
25. Gustav Toppenberg
*Innovation-based M&A
– Technological-Integration
Challenges – The Case of
Digital-Technology Companies*
26. Mie Plotnikof
*Challenges of Collaborative
Governance
An Organizational Discourse Study
of Public Managers' Struggles
with Collaboration across the
Daycare Area*
27. Christian Garmann Johnsen
*Who Are the Post-Bureaucrats?
A Philosophical Examination of the
Creative Manager, the Authentic Leader
and the Entrepreneur*
28. Jacob Brogaard-Kay
*Constituting Performance Management
A field study of a pharmaceutical
company*
29. Rasmus Ploug Jenle
*Engineering Markets for Control:
Integrating Wind Power into the Danish
Electricity System*
30. Morten Lindholst
*Complex Business Negotiation:
Understanding Preparation and
Planning*
31. Morten Grynings
*TRUST AND TRANSPARENCY FROM AN
ALIGNMENT PERSPECTIVE*
32. Peter Andreas Norn
*Byregimer og styringsevne: Politisk
lederskab af store byudviklingsprojekter*
33. Milan Miric
*Essays on Competition, Innovation and
Firm Strategy in Digital Markets*
34. Sanne K. Hjordrup
*The Value of Talent Management
Rethinking practice, problems and
possibilities*
35. Johanna Sax
*Strategic Risk Management
– Analyzing Antecedents and
Contingencies for Value Creation*
36. Pernille Rydén
Strategic Cognition of Social Media
37. Mimmi Sjöklint
*The Measurable Me
- The Influence of Self-tracking on the
User Experience*
38. Juan Ignacio Staricco
*Towards a Fair Global Economic
Regime? A critical assessment of Fair
Trade through the examination of the
Argentinean wine industry*
39. Marie Henriette Madsen
*Emerging and temporary connections
in Quality work*
40. Yangfeng CAO
*Toward a Process Framework of
Business Model Innovation in the
Global Context
Entrepreneurship-Enabled Dynamic
Capability of Medium-Sized
Multinational Enterprises*
41. Carsten Scheibye
*Enactment of the Organizational Cost
Structure in Value Chain Configuration
A Contribution to Strategic Cost
Management*

2016

1. Signe Sofie Dyrby
Enterprise Social Media at Work
2. Dorte Boesby Dahl
*The making of the public parking attendant
Dirt, aesthetics and inclusion in public service work*
3. Verena Girschik
*Realizing Corporate Responsibility
Positioning and Framing in Nascent Institutional Change*
4. Anders Ørding Olsen
*IN SEARCH OF SOLUTIONS
Inertia, Knowledge Sources and Diversity in Collaborative Problem-solving*
5. Pernille Steen Pedersen
*Udkast til et nyt copingbegreb
En kvalifikation af ledelsesmuligheder for at forebygge sygefravær ved psykiske problemer.*
6. Kerli Kant Hvass
*Weaving a Path from Waste to Value:
Exploring fashion industry business models and the circular economy*
7. Kasper Lindskow
*Exploring Digital News Publishing
Business Models – a production network approach*
8. Mikkel Mouritz Marfelt
*The chameleon workforce:
Assembling and negotiating the content of a workforce*
9. Marianne Bertelsen
*Aesthetic encounters
Rethinking autonomy, space & time in today's world of art*
10. Louise Hauberg Wilhelmsen
EU PERSPECTIVES ON INTERNATIONAL COMMERCIAL ARBITRATION
11. Abid Hussain
On the Design, Development and Use of the Social Data Analytics Tool (SODATO): Design Propositions, Patterns, and Principles for Big Social Data Analytics
12. Mark Bruun
Essays on Earnings Predictability
13. Tor Bøe-Lillegraven
BUSINESS PARADOXES, BLACK BOXES, AND BIG DATA: BEYOND ORGANIZATIONAL AMBIDEXTERITY
14. Hadis Khonsary-Atighi
ECONOMIC DETERMINANTS OF DOMESTIC INVESTMENT IN AN OIL-BASED ECONOMY: THE CASE OF IRAN (1965-2010)
15. Maj Lervad Grasten
*Rule of Law or Rule by Lawyers?
On the Politics of Translation in Global Governance*
16. Lene Granzau Juel-Jacobsen
SUPERMARKEDETS MODUS OPERANDI – en hverdagssociologisk undersøgelse af forholdet mellem rum og handlen og understøtte relationsopbygning?
17. Christine Thalsgård Henriques
In search of entrepreneurial learning – Towards a relational perspective on incubating practices?
18. Patrick Bennett
Essays in Education, Crime, and Job Displacement
19. Søren Korsgaard
Payments and Central Bank Policy
20. Marie Kruse Skibsted
Empirical Essays in Economics of Education and Labor
21. Elizabeth Benedict Christensen
*The Constantly Contingent Sense of Belonging of the 1.5 Generation
Undocumented Youth
An Everyday Perspective*

22. Lasse J. Jessen
Essays on Discounting Behavior and Gambling Behavior
23. Kalle Johannes Rose
*Når stiftertiljen dør...
Et retsøkonomisk bidrag til 200 års
juridisk konflikt om ejendomsretten*
24. Andreas Søeborg Kirkedal
*Danish Stød and Automatic Speech
Recognition*
25. Ida Lunde Jørgensen
*Institutions and Legitimations in
Finance for the Arts*
26. Olga Rykov Ibsen
*An empirical cross-linguistic study of
directives: A semiotic approach to the
sentence forms chosen by British,
Danish and Russian speakers in native
and ELF contexts*
27. Desi Volker
Understanding Interest Rate Volatility
28. Angeli Elizabeth Weller
*Practice at the Boundaries of Business
Ethics & Corporate Social Responsibility*
29. Ida Danneskiold-Samsøe
*Levende læring i kunstneriske
organisationer
En undersøgelse af læringsprocesser
mellem projekt og organisation på
Aarhus Teater*
30. Leif Christensen
*Quality of information – The role of
internal controls and materiality*
31. Olga Zarzecka
Tie Content in Professional Networks
32. Henrik Mahncke
*De store gaver
- Filantropiens gensidighedsrelationer i
teori og praksis*
33. Carsten Lund Pedersen
*Using the Collective Wisdom of
Frontline Employees in Strategic Issue
Management*
34. Yun Liu
Essays on Market Design
35. Denitsa Hazarbassanova Blagoeva
The Internationalisation of Service Firms
36. Manya Jaura Lind
*Capability development in an off-
shoring context: How, why and by
whom*
37. Luis R. Boscán F.
*Essays on the Design of Contracts and
Markets for Power System Flexibility*
38. Andreas Philipp Distel
*Capabilities for Strategic Adaptation:
Micro-Foundations, Organizational
Conditions, and Performance
Implications*
39. Lavinia Bleoca
*The Usefulness of Innovation and
Intellectual Capital in Business
Performance: The Financial Effects of
Knowledge Management vs. Disclosure*
40. Henrik Jensen
*Economic Organization and Imperfect
Managerial Knowledge: A Study of the
Role of Managerial Meta-Knowledge
in the Management of Distributed
Knowledge*
41. Stine Mosekjær
*The Understanding of English Emotion
Words by Chinese and Japanese
Speakers of English as a Lingua Franca
An Empirical Study*
42. Hallur Tor Sigurdarson
*The Ministry of Desire - Anxiety and
entrepreneurship in a bureaucracy*
43. Kätlin Pulk
*Making Time While Being in Time
A study of the temporality of
organizational processes*
44. Valeria Giacomini
*Contextualizing the cluster Palm oil in
Southeast Asia in global perspective
(1880s–1970s)*

45. Jeanette Willert
*Managers' use of multiple
Management Control Systems:
The role and interplay of management
control systems and company
performance*
46. Mads Vestergaard Jensen
*Financial Frictions: Implications for Early
Option Exercise and Realized Volatility*
47. Mikael Reimer Jensen
Interbank Markets and Frictions
48. Benjamin Faigen
Essays on Employee Ownership
49. Adela Michea
*Enacting Business Models
An Ethnographic Study of an Emerging
Business Model Innovation within the
Frame of a Manufacturing Company.*
50. Iben Sandal Stjerne
*Transcending organization in
temporary systems
Aesthetics' organizing work and
employment in Creative Industries*
51. Simon Krogh
Anticipating Organizational Change

TITLER I ATV PH.D.-SERIEN

1992

1. Niels Kornum
Servicesamkørsel – organisation, økonomi og planlægningsmetode

1995

2. Verner Worm
*Nordiske virksomheder i Kina
Kulturspecifikke interaktionsrelationer ved nordiske virksomhedsetableringer i Kina*

1999

3. Mogens Bjerre
*Key Account Management of Complex Strategic Relationships
An Empirical Study of the Fast Moving Consumer Goods Industry*

2000

4. Lotte Darsø
*Innovation in the Making
Interaction Research with heterogeneous Groups of Knowledge Workers creating new Knowledge and new Leads*

2001

5. Peter Hobolt Jensen
*Managing Strategic Design Identities
The case of the Lego Developer Network*

2002

6. Peter Lohmann
The Deleuzian Other of Organizational Change – Moving Perspectives of the Human
7. Anne Marie Jess Hansen
To lead from a distance: The dynamic interplay between strategy and strategizing – A case study of the strategic management process

2003

8. Lotte Henriksen
*Videndeling
– om organisatoriske og ledelsesmæssige udfordringer ved videndeling i praksis*
9. Niels Christian Nickelsen
Arrangements of Knowing: Coordinating Procedures Tools and Bodies in Industrial Production – a case study of the collective making of new products

2005

10. Carsten Ørts Hansen
Konstruktion af ledelsesteknologier og effektivitet

TITLER I DBA PH.D.-SERIEN

2007

1. Peter Kastrup-Misir
Endeavoring to Understand Market Orientation – and the concomitant co-mutation of the researched, the researcher, the research itself and the truth

2009

1. Torkild Leo Thellefsen
*Fundamental Signs and Significance effects
A Semeiotic outline of Fundamental Signs, Significance-effects, Knowledge Profiling and their use in Knowledge Organization and Branding*
2. Daniel Ronzani
When Bits Learn to Walk Don't Make Them Trip. Technological Innovation and the Role of Regulation by Law in Information Systems Research: the Case of Radio Frequency Identification (RFID)

2010

1. Alexander Carnera
*Magten over livet og livet som magt
Studier i den biopolitiske ambivalens*